APPENDIX 1-A:

Notice of Preparation

CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK OGAWA PLAZA, SUITE 3315 • OAKLAND, CALIFORNIA 94612-2032

Department of Planning and Building (510) 238-3941

Strategic Planning Division FAX (510) 238-6538

TTD (510) 238-3254

NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) FOR THE PROPOSED OAKLAND COLISEUM AREA SPECIFIC PLAN

The City of Oakland's Department of Planning and Building is preparing a Draft Environmental Impact Report (DEIR) for the proposed Oakland Coliseum Area Specific Plan (the Project), and is requesting comments on the scope and content of the DEIR. A detailed Project Description is attached. The DEIR will address the potential physical environmental effects that the Project may have on each of the environmental topics outlined in the California Environmental Quality Act (CEQA). The City has **not** prepared an Initial Study, and all CEQA topics will be addressed in the DEIR. The City of Oakland is the Lead Agency for the Project and is the public agency with the greatest responsibility for approving the Project and carrying it out.

This notice is being sent to Responsible Agencies and other interested parties. Responsible Agencies are those public agencies, besides the City of Oakland, that also have a role in approving or carrying out the Project. When the DEIR is published, it will be sent to all Responsible Agencies and to others who respond to this NOP or who otherwise indicate that they would like to receive a copy. Responses to this NOP and any questions or comments should be directed in writing or via email to:

Devan Reiff, AICP
City of Oakland
Department of Planning and Building - Strategic Planning Division
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA, 94612
Phone: (510) 238-3550 or the Strategic Planning hotline, (510) 238-7299
Fax: (510) 238-6538
E-mail: dreiff@oaklandnet.com
Project website: www.oaklandnet.com/coliseumcity

Comments on the NOP must be received at the above mailing or e-mail address by **4:00 p.m. Monday, May 20, 2013.** Please reference **Case Numbers ER13-0004** and **ZS13-103** in all correspondence. In addition, comments may be provided at EIR Scoping meetings to be held before the Oakland City Planning Commission and the Landmarks Preservation Advisory Board:

CITY PLANNING COMMISSION	LANDMARKS PRESERVATION and ADVISORY BOARD
EIR SCOPING MEETING	**EIR SCOPING MEETING**
May 1, 2013, 6:00 p.m.	**May 13, 2013, 6:00 p.m.**
Oakland City Hall, Hearing Room 1	**Oakland City Hall, Hearing Room 1**
One Frank H. Ogawa Plaza	**One Frank H. Ogawa Plaza**
Oakland, CA 94612	**Oakland, CA 94612**

Comments should focus on discussing possible impacts on the physical environment, ways in which potential adverse effects might be minimized, and alternatives to the Project in light of the EIR's purpose to provide useful and accurate information about such factors. There will be numerous other opportunities to comment on the Project itself at noticed public meetings regarding the Oakland Coliseum Area Specific Plan.

PROJECT TITLE: Oakland Coliseum Area Specific Plan

PROJECT LOCATION: The Specific Plan area is located in East Oakland, and covers an area of approximately 800 acres bounded by 66th Avenue to the north, San Leandro Street on the east, Hegenberger Road on the south, and San Leandro Bay and the Oakland International Airport to the west. The Plan area includes the Oakland Alameda County Coliseum and Arena and the Oakland Airport Edgewater Business Park.

PROJECT SPONSOR: The City of Oakland

EXISTING CONDITIONS: See attached Project Description.

PROJECT PURPOSE: See attached Project Description.

PROJECT DESCRIPTION: See attached Project Description.

PROBABLE ENVIRONMENTAL EFFECTS: The Oakland Coliseum Area Specific Plan is expected to include, but is not limited to development plans and actions identified in the attached Project Description. The City has determined that environmental review for this Project will require preparation of an EIR pursuant to Public Resources Code Section 21090(a) and CEQA Guidelines Section 15180. The City is requesting public and public agency comments on the topics of analysis that should be studied in the EIR, and is seeking feedback on the potential environmental effects that could result from implementation of the Project. It is anticipated that the proposed Project may have environmental impacts on the following environmental topics, derived from a list of environmental factors contained in the City's list of CEQA Thresholds of Significance. All of the following topics will be evaluated in the EIR:

- Aesthetics, shadow and wind
- Air quality
- Biological resources
- Cultural and historic resources

- Geology and soils
- Greenhouse gas emissions/climate change
- Hazards and hazardous materials
- Hydrology and water quality
- Land use and planning
- Noise
- Population, housing and employment
- Public services and recreation
- Transportation
- Utilities and service systems

It is not anticipated that the Project will have significant environmental impacts on agriculture and forest resources, or mineral resources. Nevertheless, these environmental factors will also be analyzed in the EIR.

The Draft EIR will also examine a reasonable range of alternatives to the Project, including the CEQA-mandated No Project Alternative, a three sports venue alternative, a two sports venue alternative, a one sports venue alternative, a no sports venue alternative, and other potential alternatives that may be capable of reducing or avoiding potential environmental effects.

Scott Miller

April 19, 2013
File Numbers ER13-0004
and **ZS 13-103**

Scott Miller
Zoning Manager
Environmental Review Officer

Attachment: Project Description

OAKLAND COLISEUM AREA SPECIFIC PLAN, PROJECT DESCRIPTION

Project Location

The planning area for the Oakland Coliseum Area Specific Plan ("Plan Area") is located in East Oakland and covers approximately 800 acres. The Plan Area is bounded by 66th Avenue to the north, San Leandro Street on the east, Hegenberger Road on the south, and San Leandro Bay and the Oakland International Airport to the west. The Plan Area includes the Oakland Alameda County Coliseum and Arena and the Oakland Airport Edgewater Business Park. The Plan Area is uniquely served by transit, including the Coliseum BART station and two I-880 freeway interchanges.

Background/Summary

In March of 2012, the Oakland City Council entered into an Exclusive Negotiating Agreement (ENA) with a team of urban designers, architects and developers led by the Oakland-based firm of JRDV Urban International. Pursuant to this Agreement, this design team was to perform certain pre-development work at the Coliseum site and its surroundings, ultimately developing a Master Plan for near-term development of the Coliseum site and a long-term development plan for the surrounding area. After substantial technical work, consultation with the City and numerous other public agencies, and detailed design development, a Master Plan has now been prepared. The Master Plan represents the City's preferred development 'vision' for the area, accommodating up to three new venues for the City's professional sports teams, significant transportation and transit enhancements to the area, and development of new retail, housing and employment space at the Coliseum site and within the immediately surrounding area.

This Master Plan will provide the basis upon which the City will now begin preparation of a draft Specific Plan. The Specific Plan effort will include an exploration of land use regulatory changes, infrastructure improvements and financial feasibility and financing options needed to realize this Master Plan vision. The Specific Plan will also identify alternatives to the Master Plan, considering different development scenarios associated with three sports teams, a two sports team alternative, a one sports team alternative, and an alternative under which no sports teams are able to be retained. Pursuant to the California Environmental Quality Act (CEQA), the City will be preparing an Environmental Impact Report (EIR) to address the potential physical environmental effects of the Specific Plan.

Existing Conditions

The Specific Plan area will be subdivided into several distinct Sub-Areas. The existing land uses within each of these Sub-Areas include the following:

<u>Sub-Area A</u>

The approximately 230-acre Sub-Area A consists primarily of the 120-acre Coliseum site, principally owned by the City of Oakland and Alameda County Joint Powers Authority, and which currently holds the existing Arena and Coliseum sports venues and their associated surface parking lots. Sub-Area A also includes City-owned land, and additional private properties to the east along both sides of San Leandro Street, and the existing Coliseum BART Station. In addition to the existing Arena and Coliseum sports venues, Sub-Area A currently contains approximately 348,000 square feet of primarily light industrial, office and government/utility building space.

<u>Sub-Area B</u>

This Sub-Area is approximately 120 acres in size and contains the northerly portion of the Oakland Airport Edgewater Business Park, northerly of Elmhurst Slough and south of Damon Slough. Currently this Sub-Area contains approximately 1.45 million square feet of primarily light industrial and office space, as well as the City of Oakland Public Works Department's corporation yard.

Sub-Area C

This Sub-Area is approximately 190 acres in size and contains the southerly portion of the Oakland Airport Edgewater Business Park, southerly of Elmhurst Slough and north of Hegenberger Road. Currently this Sub-Area contains more than 2.25 million square feet of building space, more than half of which are office uses, interspersed with light industrial and auto-oriented building space, as well as the existing Wal-Mart store and adjacent retail shopping center off Hegenberger Road at Edgewater Drive.

Sub-Area D

This Sub-Area is approximately 140 acres in size and includes the most westerly portion the Oakland Airport Edgewater Business Park nearest to the Oakland International Airport. This Sub-Area contains approximately 1.13 million square feet of building space including large logistics and distribution businesses and activities, as well as light industrial, hotel, and retail and restaurant uses along Hegenberger Road.

Sub-Area E

This Sub-Area is approximately 120-acres in size, and consists of largely undeveloped open space north of the Oakland Airport Edgewater Business Park, on the westerly or water-side of I-880. A little more than half of this Sub-Area is owned and used by the East Bay Municipal Utility District, with an operating water treatment facility, open storage and a corporation yard; the City of Oakland owns the remaining parcels in this Sub-Area, currently use is primarily as a soccer facility

A summary of the existing land uses within the Plan Area is shown in the following **Table 1**. Maps of the Plan Area are shown on the last pages as **Figures 1 & 2.**

Table 1: Existing Building Space by Land Use Type (building square feet [sf])						
Land Use Type:	**Sub-Area A**	**Sub-Area B**	**Sub-Area C**	**Sub-Area D**	**Sub-Area E**	**Total**
Sports Venues						
Coliseum – • Football • Baseball Arena – • Basketball	 63,000 seats* 35,070 seats 19,600 seats					
Office	82,500 sf	489,900 sf	1,117,700 sf	256,700 sf		**1,946,800 sf**
Light Ind.	147,600 sf	880,950 sf	807,300 sf	26,300 sf		**1,862,150 sf**
Warehouse/ Logistics				855,500 sf		**855,500 sf**
Government/Utility	75,300 sf	15,800 sf		4,000 sf	32,500 sf	**127,600 sf**
Institutional	7,750 sf		8,000 sf			**15,750 sf**
Auto-Related	30,000 sf	59,000 sf	141,000 sf	39,500 sf		**269,500 sf**
Hotel				457,000 sf		**457,000 sf**
Retail / Restaurant	6,950 sf		179,200 sf	17,800 sf		**203,950 sf**
Total	**347,600 sf,** plus Sports Venues	**1,445,650 sf**	**2,253,200 sf**	**1,656,800 sf**	**32,500 sf**	**5,738,250 sf,** plus Sports Venues

*****for the upcoming 2013 NFL Season, the capacity has been temporarily reduced to 53,200 seats

Project Purpose

The Specific Plan is intended to provide both a short-term development plan for the accommodation of up to three new venues for the City's professional sports teams, and a longer term, 25-year planning document providing a roadmap for land use policy, regulatory requirements and public and private investment that coordinates future development in the Coliseum Area to create significant long-term value for Oakland and Alameda County. The Coliseum Area Specific Plan is intended as a comprehensive plan to transform what is currently one of the largest under-developed, inner-urban, transit-served redevelopment opportunities in California. Implementation of the Plan is seen as a critical opportunity to revitalize some of Oakland's most important physical assets, and transform these assets into a center for long-term economic growth.

The Coliseum Area is envisioned to become a transformative, long-term development district for Oakland which will bring in a new job base, increase critical new tax revenue, and establish significant new community value for the residents of the city. The transformation of this area into a thriving, sustainable, healthy and equitable urban showcase for the region is dependent upon a strong vision for the area, linked

to a comprehensive public-private development approach to redevelopment. The following are key objectives around which the Specific Plan will be developed:

1: Retain the existing sports teams, and maximize the economic value for Oakland and Alameda County from these sports facilities.

2: Create a regionally significant Science and Technology District that can act as a catalyst to expand Oakland's ability to attract new businesses and to participate in the Bay Area's dynamic 'innovation economy'.

3: Leverage and enhance the existing transit and transportation infrastructure in the Coliseum Area, and create a model transit-oriented development (TOD) which is consistent with regional growth policies and state law as provided for under SB 375 and AB 32. Such transit-oriented development will increase Oakland's ability to leverage its central position in the Bay Area to capture a bigger share of regional housing growth, job growth and economic investment.

4: Create a vibrant urban mixed-use district in the Coliseum Area which will attract a significant community of new residential and commercial uses. This district will generate activated streets, public spaces that provide an enhanced pedestrian experience, site security and high quality development.

5: Create new open space, Bay access, and natural habitat enhancement, providing public educational and Bay accessibility opportunities for Oakland and Bay Area residents.

The Coliseum Area Specific Plan is intended to foster increased opportunities for new development and economic investment in the area through a land value enhancement strategy, overcoming the existing barriers and realizing the area's full potential. The Plan area is located in the center of the Bay Area and has some of the Bay Area's most valuable core development assets, particularly its regional transit infrastructure. The Plan area also has freeway connectivity, an international airport, water front property and contiguous development opportunity. Leveraging these core assets to their maximizing potential is critical to Oakland's ability to create a viable, long-term center for economic development. The proposed Specific Plan is designed to leverage these existing assets in the Coliseum Area into a comprehensively design mixed-use district that will retain the existing sports franchises and attract sustainable new jobs and economic development.

The Specific Plan also will guide future development of the Plan Area if one or more of the sports teams were to relocate out of the Coliseum Area. The EIR will study the environmental effects of a three team, two-team, a one-team, and a no-team project alternative.

Project Description

As indicated in the background discussion above, a design team led by JRDV Urban International has prepared a Master Plan which envisions near-term redevelopment at the Coliseum site and long-term development plans for the surrounding area. The Master Plan represents the City's preferred 'vision' for redevelopment and economic revitalization of the area, but is only one potential future scenario. Realization of this Master Plan vision is dependent upon many as-yet unresolved factors - including the interest and willing participation of each the privately-owned professional sports franchises, additional investigation into the feasibility of both public and private financing options for various components of the Master Plan, and an assessment of the potential environmental effects associated with this vision, together with identification of mitigation strategies capable of reducing or avoiding any such effects. Current financing strategies assume private financing of each of the new sports venues, with possible public financing assistance to ensure adequate public infrastructure needed to support the ultimate development. The current Master Plan does not represent any commitments of either private or public finances.

With these caveats, City staff has concluded that the Master Plan's vision provides a suitable basis upon which the City will now begin preparation of a Specific Plan. As of the date of this Notice of Preparation, a draft Specific Plan has not yet been prepared. Ultimately, the Coliseum Area Specific Plan will provide a comprehensive, consistent and multi-faceted strategy for development and redevelopment of the Coliseum site and its surroundings, establishing a land use and development framework, identifying needed transportation and infrastructure improvements, and recommending an implementation strategy. As subsequent work on the City's Specific Plan progresses, it is anticipated that the planning and design concepts of the Master Plan will become more detailed and refined, and certain elements of the Master Plan may change. Additionally, per City Council direction established at the beginning of this planning process, the Specific Plan and its associated EIR will carefully consider other possible scenarios for the area under which the City is able to retain only one or two sports franchises, or possibly none. With or without professional sports venues, the Coliseum site and its surroundings remain significant redevelopment opportunities, and options for revitalizing this area and capitalizing on its important physical assets are to be considered, independent of the retention of each or any of the City's sports franchises.

The Specific Plan will provide separate development concepts for each of the Specific Plan Sub-Areas, as described below. Each of these development concepts require further, more detailed planning and analysis, as well as investigation into financing strategies necessary for implementation. None of these Specific Plan concepts currently represent a definitive end-state, or an obligation on the part of either the City or the sports franchises, but are instead a statement of the area's potential.

Sub-Area A

The development concept for Sub-Area A (the Coliseum site), assumes that some, or all of the existing uses within this Sub-Area, including one or both of the existing sports facilities (the Arena and the Coliseum), could be removed and replaced with new development. This new development is envisioned to include the following:

New Sports Venue District: The Specific Plan anticipates construction of new sports venues that will bring a world-class sports experience to the Bay Area. The proposed approach is to create a 21st century "sports district" that is carefully integrated into a dynamic and active urban setting with retail, entertainment, arts, culture, live and work uses - creating sports venues that become part of an authentic urban place. The Plan will accommodate up to three new sports venues, including:

- A new NFL Stadium and multi-purpose Event Center with a seating capacity of approximately 68,000 to 72,000 people. The new Stadium would have a building area of approximately 1.8 to 2.2 million square feet, covering approximately 550,000 square feet of surface area (over 12.5 acres). The stadium is envisioned as an environmentally sustainable building achieving at a minimum a LEED Silver Certification rating.

- A new MLB Ballpark with a capacity of approximately 35,000 to 39,000 seats within a building area of approximately 1.0 to 1.2 million square feet, on a site area of approximately 535,000 square feet (over 12 acres in size). The new ballpark is also envisioned as an environmentally sustainable building, also achieving a minimum LEED Silver Certification rating.

- A new NBA Arena and multi-purpose Events Center with a seating capacity of approximately 18,000 to 20,000 people. The new Arena would be approximately 800,000 to 850,000 square feet in size, located on a site of approximately 210,000 to 250,000 square feet (approximately 5 acres). The preferred site for the new Arena is on the western (water) side of I-880, integrally linked with a pedestrian and transit accessible concourse connection over the freeway connecting to the new Stadium and Ballpark venues. The new basketball arena is also envisioned as an environmentally sustainable building, achieving a minimum LEED Silver Certification rating.

Sports and Entertainment Retail District: The Specific Plan's land use concept will include the creation of a new retail and entertainment district contiguous to the new stadium and ballpark. New retail uses would become "gateway elements" to the new stadium and ballpark, providing a centralized public activity core area, and serving as a catalyst for the project as a whole. This retail and entertainment district is envisioned as a unique regional destination that would be active and publically accessible seven days a week, serving local residents, event participants and the broader City and region's population.

Ball Park Mixed-use District: The area between the new sports venues is envisioned to become a new high density mixed-use neighborhood containing housing, hotel and office uses. Ground floor uses would be regional and neighborhood-serving retail. The area would be designed to integrate into the Sports and Entertainment Retail District and to establish an active urban place that could provide retail, entertainment, arts, and cultural uses, forming an authentic urban place that supports opportunities to live, work and play.

BART Transit-Oriented Development District: The area surrounding the Coliseum BART Station is envisioned to become a moderate- to high-density residential community. The Plan will be focused on creating safe and active public streets with neighborhood-serving ground floor retail uses establishing a high quality sense of place and creating a positive neighborhood identity.

Intermodal Transit Hub: Regional transit connectivity is one of the key elements envisioned to enable and accommodate the planned increase in use of the area. The Specific Plan will recommend ways to increase capacity and improve the passenger experience at the Coliseum BART station. An intermodal transit hub is envisioned that could integrate BART, the Oakland Airport Connector, Capitol Corridor Amtrak, AC Transit and a future local-serving transit system into a single transit hub location. The proposed transit hub is envisioned to connect to the Coliseum site via a new elevated transit and pedestrian connection relocated along the 73rd Avenue right-of-way. This new elevated transit and pedestrian connection could be used as a concourse connection to the new Stadium, Ballpark and Arena through the Sports and Entertainment Retail District. The transit and pedestrian connector may also become a bridge extending over I-880.

Open Space, Parks and Habitat: The Specific Plan will evaluate the feasibility of a significant restoration and rehabilitation of the existing Damon Slough, transforming this drainage facility into functional tidal habitat that helps revive the natural health of the Bay. It is envisioned that an existing parking lot along the south side of 66th Avenue and within the Coliseum Zone could also be removed, and the site restored as part of a created habitat linked to the Damon Slough restoration. This restored open space and habitat area has the potential to become a unique educational resource focused on natural Bay ecology, accessible to the approximately 10 million visitors expected to come to this regional destination every year.

Sub-Area B

The development concept for Sub-Area B (the northerly portion of the Oakland Airport Edgewater Business Park) proposes privately initiated redevelopment of properties throughout the Business Park. This development concept includes the following:

Science and Technology District: The Specific Plan envisions that this northerly portion of the Oakland Airport Edgewater Business Park could be redeveloped as a Center for Science and Technology serving the entire inner-Bay Area. This new Science and Technology Center could offer large floor-plate buildings, within a campus-like setting that is uniquely served by transit. The potential scale of the Science and Technology District could also allow larger corporate and institutional users the opportunity to co-locate and network with smaller partner businesses in a comprehensively planned, high amenity, urban campus location. This new Science and Technology District is envisioned to become a world-class institutional research center for local and international research entities who want locational access to the Bay Area's 'innovation economy'. Potential business sectors that may locate in this District include life sciences and bio-sciences, clean technology and energy research, digital media, and information and

software research. The Specific Plan proposes to create a waterfront-centered, urban technology district with access to the shoreline, parks and recreational facilities, housing and other amenities critical for 'innovation-economy' tenants. The goal will be to integrate this Science and Technology District with a world-class sports and entertainment destination.

Waterfront Community: Oakland's San Leandro Bay waterfront is proposed as a location for the creation of a new residential and mixed-use community that complements the new Science and Technology District. This area would be designed to connect Oakland residents to the Bay. It is proposed that this new Waterfront Community could support a range of residential types and densities, with streets and public spaces activated by retail uses.

Transit Connectivity: The Specific Plan will explore the feasibility of an elevated transit connection continued from Sub-Area A, across I-880. This transit connector should accommodate pedestrian, bike, and transit modes, enabling transit connectivity from the waterfront to BART, and to the potential Intermodal Transit Hub. Such an elevated connection would require permitting from Caltrans, and possibly other jurisdictions.

Shoreline Access and Bay Inlet: The Specific Plan will evaluate the feasibility of creating a more publically accessible waterfront as a catalyst element for remaking the entire Coliseum Area. The waterfront could become both an amenity to the Coliseum Area uses and to the City as a whole. Pedestrian paths, actively used park spaces, and potentially, a new Bay inlet, could all become integrated into a comprehensive waterfront shoreline. One potential scenario of the Specific Plan involves the exchange of the current East Bay Regional Parks mitigation parcels (known as the "Edgewater Seasonal Wetland") adjacent to where Damon Slough enters San Leandro Bay, for a new mitigation wetland site or sites in the area.

Sub-Area C

The Specific Plan will seek to transition Sub-Area C, which is currently a market-challenged business park that includes a mix of light industrial, small office, and some non-profit and government uses, into an extension of the mixed Science and Technology and Business Park. Over time, as the Sub-Area B Science and Technology District becomes established, this adjacent Sub-Area C area is anticipated to transition to similarly related uses which could include advanced technology and other manufacturing, R&D and test-product design and development activities, sales, marketing, professional service and finance uses supporting technology businesses. Smaller science, technology and "green"/"clean" companies seeking less costly space could also locate in Sub-Area C, given its proximity to Sub-Area B. Changes over time in this Sub-Area are anticipated to include new development, most likely lower cost, lower density and more flexible development that would add to the mix of building product types envisioned in Sub-Area B.

Sub-Area D

The Specific Plan will seek to encourage increased Airport-related economic development in Sub-Area D. This area is envisioned to continue to provide locations for businesses that value proximity to the Airport and the I-880 freeway, including large logistics and distribution businesses and activities, as well as hotel, retail, and eating and drinking uses along Hegenberger Road. Adjacency to the development in Sub-Areas A, B and C would have a long-term positive impact on the quality of tenants that want to locate along the Hegenberger corridor. Many of the area's current uses are anticipated to remain. This area has few key development sites, and these sites are anticipated to be used for similar types of uses in the future as exist today.

Sub-Area E

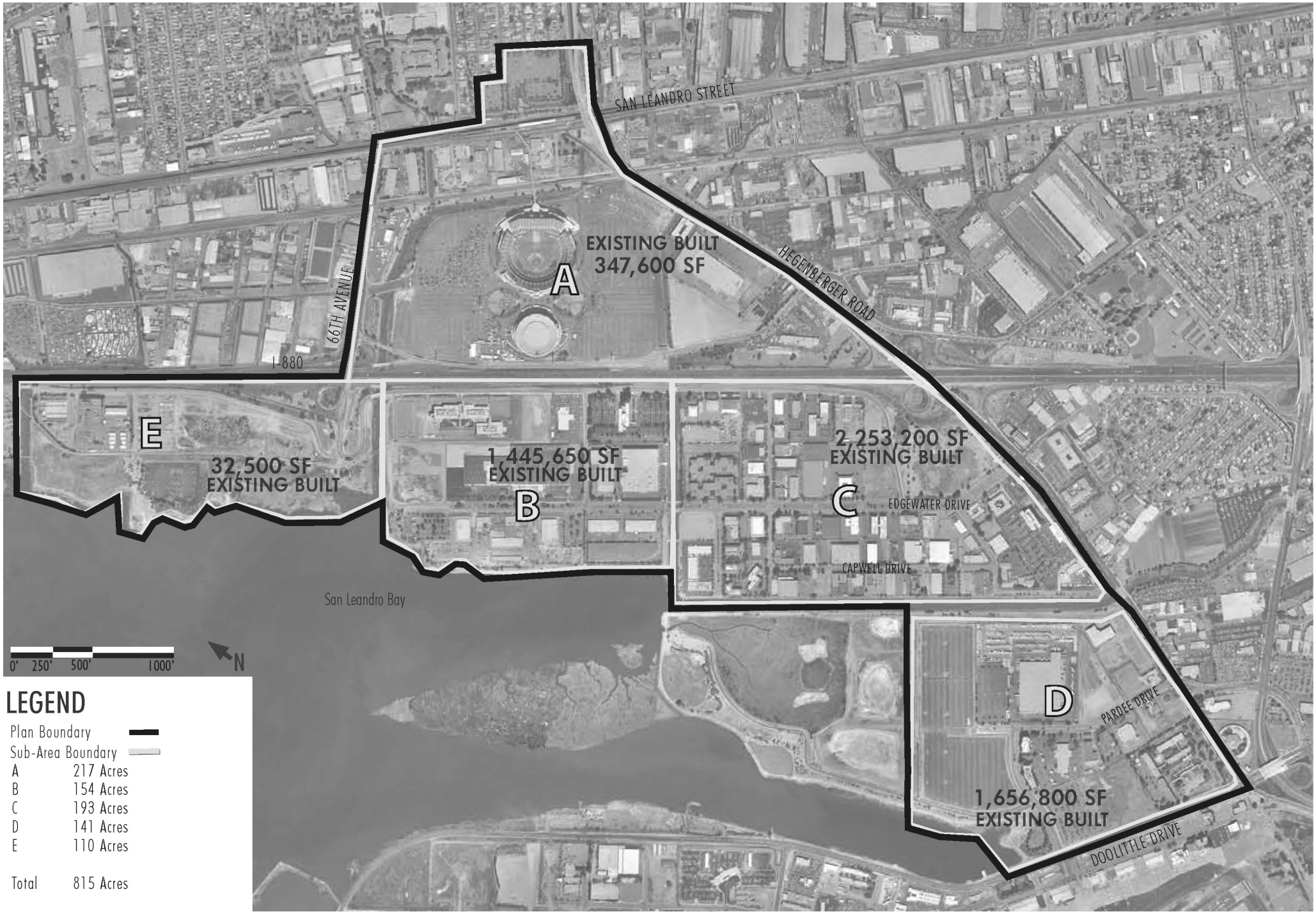
The Specific Plan envisions this area would retain its EBMUD facilities, and that there would be a restoration of existing open space and wildlife habitat.

Summary

A summary of the proposed Specific Plan build-out includes up to three new sports venues totaling nearly 1.7 million square feet of building space or 131,000 seats; just over 14 million square feet of Science & Technology, office, light industrial, logistics and retail space; and 6,370 residential units, as shown in the following **Table 2**. This represents an increase of approximately 8.3 million square feet of new building space within the Plan area. The proposed Specific Plan build-out also includes up to approximately 15,000 parking spaces on the Coliseum site. There are proposed to be nearly 39 acres of new, publically-accessible open space within Sub-Areas A and B, and additional restored open space in Sub-Area E.

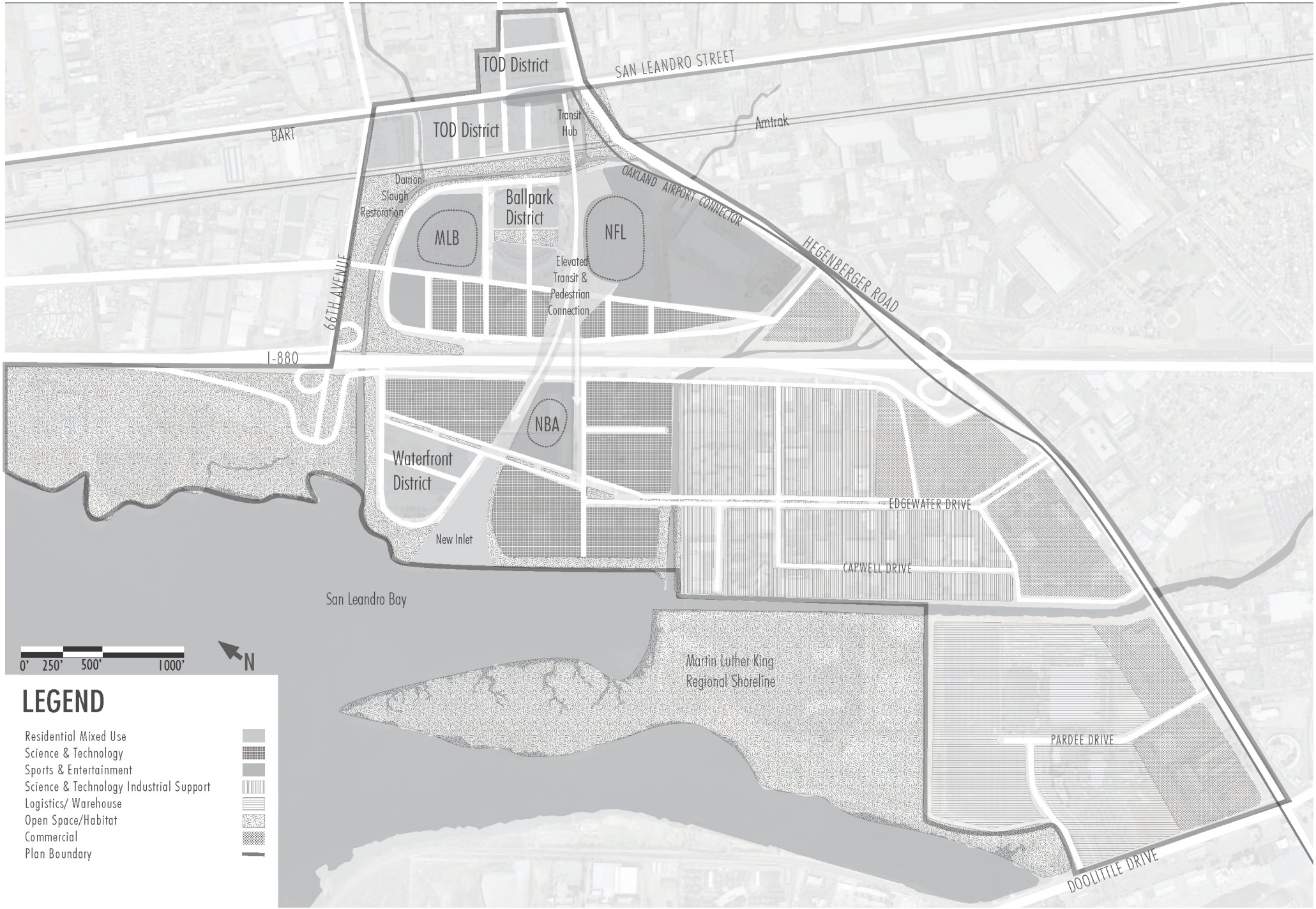
Table 2: Specific Plan Build-out Potential of the Planning Area (building square feet [sf])						
Land Use Type:	**Sub-Area A**	**Sub-Area B**	**Sub-Area C**	**Sub-Area D**	**Sub-Area E**	**Total**
Sports Venues -						
• NFL Football	72,000 seats					72,000 seats
• MLB Ball Park	39,000 seats					39,000 seats
• NBA Arena		20,000 seats				20,000 seats
Office	325,000 sf	980,000 sf	753,100 sf	248,800 sf		2,306,900 sf
Science & Tech.	1,412,500 sf	3,154,000 sf				4,566,500 sf
Science & Tech. Industrial Support			4,275,700 sf			4,275,700 sf
Light Industrial				159,500 sf		159,500 sf
Airport-related Warehouse/Logistics			111,900 sf	970,300 sf		1,082,200 sf
Government/Utility	2,500			23,500 sf	32,500 sf	58,500 sf
Institutional						
Auto-Related			167,000 sf			167,000 sf
Hotel	455,000 sf			457,000 sf		912,000 sf
Retail / Restaurant	225,000 sf		182,200 sf	92,000 sf		499,200 sf
Residential (in units)	4,000*	2,370				6,370 units
Parking spaces (#)	15,050	9,600				24,650
Total	**2,417,500 sf;** plus **4,000 residential units**; plus 2 **Sports Venues**	**4,134,000 sf;** plus **2,370 residential units;**, plus 1 **Sports Venue**	**5,489,900 sf**	**1,951,000 sf**	**32,500 sf**	**14,027,500 sf;** plus **6,370 residential units**; plus 3 **Sports Venues**

*This includes new residential units built on the current Coliseum BART parking lots.



LEGEND

Plan Boundary	
Sub-Area Boundary	
A	217 Acres
B	154 Acres
C	193 Acres
D	141 Acres
E	110 Acres
Total	815 Acres



LEGEND

- Residential Mixed Use
- Science & Technology
- Sports & Entertainment
- Science & Technology Industrial Support
- Logistics/ Warehouse
- Open Space/Habitat
- Commercial
- Plan Boundary

PROPOSED LAND USE
JRDV URBAN INTERNATIONAL CITY OF OAKLAND

APPENDIX 1-B

Responses to Notice of Preparation

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-6053
FAX (510) 286-5559
TTY 711

Flex your power!
Be energy efficient!

May 23, 2013

ALA880709
ALA-880-25.3-26.3
SCH#2013042066

Mr. Devan Reiff
City of Oakland
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

Dear Mr. Reiff:

Oakland Coliseum Area Specific Plan – Notice of Preparation

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Oakland Coliseum Area Specific Plan. The following comments are based on the Notice of Preparation.

Community Planning
The proposed plan will intensify the Coliseum area and will leverage its existing BART station to reduce vehicular traffic. Since this will increase the use of non-vehicular modes, please provide any pedestrian, bicycling and transit performance or level/quality of service measures and modeling pedestrian, bicycle and transit trips that your project will generate for our review. Mitigation measures resulting from the analysis could improve pedestrian and bicycle access to transit facilities, thereby reducing traffic impacts on state highways.

Traffic Impact Study
The environmental document should include an analysis of the impacts of the proposed project on State highway facilities in the vicinity of the project site. Please ensure that a Traffic Impact Study (TIS) is prepared providing the information detailed below:

1. Information on the plan's traffic impacts in terms of trip generation, distribution, and assignment. The assumptions and methodologies used in compiling this information should be addressed. The plan will add significant number of vehicles onto an already saturated Interstate 880. In the trip generation table, any reductions used must clearly be justified through studies.

2. Current Average Daily Traffic (ADT) and AM, PM, Saturday, Sunday and Game Day peak hour volumes on all significantly affected streets, highway segments and intersections.

3. Schematic illustration and level of service (LOS) analysis for the following scenarios: 1) existing, 2) existing plus project, 3) cumulative and 4) cumulative plus project for the roadways and intersections in the project area.

4. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect the State highway facilities being evaluated. Under this analysis, please include, AM, Mid-Day, PM, Saturday, Sunday and Game Day peak hour for our review.

5. The procedures contained in the 2010 update of the Highway Capacity Manual should be used as a guide for the analysis. We also recommend using Caltrans' *Guide for the Preparation of Traffic Impact Studies;* it is available on the following web site:
http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

6. Include transportation demand management strategies for future developments to reduce singular vehicular use. The Draft Environmental Impact Report should include citywide policies to encourage alternative modes of transportation. We recommend coordinating with BART and AC Transit to provide greater service to the targeted areas, providing subsidized transit passes to workers and residents, restructuring parking structures by reducing the parking requirement such as unbundling parking, share parking, provide bicycle parking and necessary infrastructures, and other transportation demand management strategies. The City of Oakland (City) may refer to, "Reforming Parking Policies to Support Smart Growth," an MTC study funded by Caltrans for sample parking ratios and strategies that support compact growth and Transit Oriented Development. Doing so will encourage alternate forms of transportation, reduce regional vehicle miles traveled and lessen future traffic impacts on the state highways.

7. Mitigation measures should be identified where plan implementation is expected to have a significant impact. Mitigation measures proposed should be fully discussed, including financing, scheduling, implementation responsibilities, and lead agency monitoring.

8. We encourage the City to coordinate preparation of the study with our office, and when available, please provide Caltrans with the administrative draft of the transportation study for our review to ensure our comments are adequately addressed.

Improvements to State Facilities

The increase in the number of commercial and office square footage which will significantly impact adjacent state facilities that are already operating at poor levels of service. To ensure the safety of the traveling public, improvements to local and state facilities to accommodate the increase in vehicular traffic should be addressed in the DEIR. Please include how the City will finance improvements on State facilities from impacts generated by the proposed plan. Although facility expansion is limited within the city's boundaries, Caltrans currently has a number of unfunded projects that would improve highway and safety operations. We look forward to coordinating with the City to develop and fund these improvement projects.

We look forward to continuing to coordinate with the City. Should you have any questions regarding this letter, please call Yatman Kwan, AICP of my staff at (510) 622-1670.

Sincerely,

ERIK ALM, AICP
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

PORT OF OAKLAND

May 20, 2013

Mr. Devan Reiff, AICP
Planner III
City of Oakland
Department of Planning and Building
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612

Subject: Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Proposed Oakland Coliseum Area Specific Plan (Specific Plan)

Dear Mr. Reiff:

The Port of Oakland (Port) appreciates the opportunity to provide comments on the City of Oakland's (City) NOP of a DEIR for the proposed 815 acre Specific Plan. As stated in the project description in the NOP, the City has subdivided the Specific Plan area into Sub-Areas A through E: Sub-Area A includes 4,000 new residential units, and Sub-Area B includes 2,370 new residential units. The purpose of the Specific Plan is to provide a short-term plan for up to three new venues for the City's professional sports teams, and to provide a 25-year planning document for land use policy, regulatory requirements and public and private investment that coordinates future development. The City has identified the Coliseum Area as one of the largest under-developed, inner-urban, transit-served opportunities in California.

The Port understands that the City plans to distribute a DEIR for public review in Fall 2013, and to certify the EIR in Spring 2014. Port staff shares the City's interest in retaining and attracting sports teams in Oakland and increasing the economic vitality of the City, and offers these comments as a property owner in the 400-acre Airport Business Park (ABP), the owner and operator of the Oakland International Airport (OAK), and as a Responsible Agency for this project given the Port's planning and permitting authority in the ABP.

1. The majority of the Specific Plan area is within the Airport Influence Area defined by the Alameda County Airport Land Use Commission (ALUC) based on political boundaries, noise contours and flight tracks. As specified in ALUC's *Oakland International Airport Land Use Compatibility Plan (December 2010),* the ALUC is authorized to review the City's Plan for noise and safety compatibility, airspace protection and aircraft over-flights. Please include an analysis of noise and safety compatibility, airspace protection and aircraft over-flights, and provide to the ALUC for their review.

2. Airport operations regularly result in over-flights in residential areas proposed in the Specific Plan, especially over the proposed Waterfront District. Consideration should be given to sound insulation and avigation easements in these areas, and the need to disclose the potential for low-flying aircraft during property sale disclosures. A noise analysis is recommended for the following four flight procedures:

- Downwind arrivals to North Field Runways 27L/R
- Visual Flight Rules departures from North Field Runways 27L/R
- OAK "Salad One" departures during North Field Quiet Hours (10:00 p.m. to 6:00 a.m.)
- "Pattern work" (training flights) performed on Runways 27R and Runway 33.

3. Port staff understands that another goal of the project is to create new natural habitat. In compliance with the Federal Aviation Administration's Advisory Circular 150/5200-33B *Hazardous Wildlife Attractants on or Near Airports*, the Port has developed a comprehensive wildlife hazard management program for OAK. Port staff requests that the City consider the impacts additional wildlife habitat may have to aircraft, and implement measures to discourage attracting species like vultures and geese that pose a serious threat to aircraft.

4. Consistent with the Port's *Land Use and Development Code (LUDC*) dated June 2011, the City's Proposed Land Use Plan shows Logistics and Warehouse use in the ABP interior between Doolittle Drive and San Leandro Creek, and Science and Technology use in the much larger ABP interior between San Leandro Creek and I-880. Note that in addition to 10 million passengers annually, OAK provides for the movement of 555,000 tons of air cargo. The logistics of air cargo are changing as air cargo providers increasingly adopt a multi-modal approach necessitating increased reliance on truck distribution facilities and even ocean-going vessels, such as those calling the Port's seaport. The DEIR should analyze the adequacy of the Logistics and Warehouse acreage to support OAK.

5. OAK is known for its reliability and convenient access. The DEIR should analyze the potential impacts of the proposed Specific Plan on OAK's four main access roads: Hegenberger Road, 98th Avenue, Ron Cowan Parkway and Doolittle Drive.

6. At its inception, OAK was situated far from populated areas to avoid safety and noise conflicts. Over decades, adjacent municipalities have approved residential development in close proximity to OAK. The Specific Plan proposes residential land use in the ABP. Analyze whether the proposed residential land use would result in a conflict with the City's *General Plan* and the Port's *LUDC*. If such conflicts would occur, discuss whether these conflicts would result in significant or potentially significant impacts and any appropriate mitigation that would reduce the impact to a level of insignificance.

7. Property in the ABP is property subject to Tidelands Trust restrictions. Under the Tidelands Trust provisions, residential uses are generally not found to be Trust-compliant. Analyze the relationship of the proposed residential uses to the Tidelands Trust, and any impacts that might arise.

8. The Port has planning jurisdiction in the ABP, and issues development permits for proposed private property development and uses. The Port has received a development permit application to allow General Education land use (schools) in the ABP.. The Port, as Lead Agency under CEQA, is currently administering the preparation of a Draft IS/MND for proposed General Education use in the ABP. Analyze whether the Specific Plan would

conflict with General Education in the ABP, particularly in the proposed Science and Technology Industrial Support area.

9. The Specific Plan proposes development adjacent to San Leandro Bay. Given that projected sea-level rise caused by climate change may impact the Specific Plan area and adaptation measures may be needed, discuss sea-level rise impacts and appropriate mitigation measures.

Thank you for the opportunity to comment on the scope of the Specific Plan DEIR**.**

If you have any questions, contact me at dheinze@portoakland.com or 510-627-1759.

Sincerely,

Diane Heinze
Environmental Assessment Supervisor
Division of Environmental Programs and Planning

Cc: Richard Sinkoff, Port of Oakland, Director of Environmental Programs and Planning
Pamela Kershaw, Port of Oakland, Director of Commercial Real Estate
Kristi McKinney, Port of Oakland, Aviation Director (Acting)/Mgr Aviation Planning and Development
Susan Fizzell, Port of Oakland, Asst. Environmental Planner, Airport Noise and Environmental Compliance Office

MEMORANDUM

TO: **Planning Commission**

FROM: **Landmarks Preservation Advisory Board**

SUBJECT: **LPAB Comments – Coliseum Area Specific Plan DEIR Scoping Session**

DATE: **May 13, 2013**

At a regular meeting on May 13, 2013 the Landmarks Preservation Advisory Board (LPAB) received public comments and commented on the scope of the Draft Environmental Impact Report (DEIR) for the Coliseum Area Specific Plan. The LPAB is advisory to the Planning Commission, which held its own review on May 1, 2013.

At the May 13, 2013 meeting, the LPAB voted unanimously to direct staff to prepare a summary of their comments/recommendations and to forward the summary to the Planning Commission.

Summary of LPAB Comments/Recommendations

1) **Document the historical and cultural significance of the Coliseum and Arena buildings.** Tonight's report covers little of their significance. The original buildings are an amazing piece of mid-century architecture. They are iconic buildings and exceptional examples of structural modernism. They are spectacular at night when lighted. They are noted on many online architectural sites, such as World Architecture. There's a duality between the two buildings and the site as a whole. The buildings as an ensemble are important to study.[1]
2) **Address the potential for retaining both buildings, which the current plans do not consider.** This needs to be rethought. So far, we've only seen options of keeping the Arena. These are two great buildings that could find a new purpose or reuse. The economic viability issues and the sports teams' requirements do not preclude an alternative for reuse of the iconic buildings. There is a way to reach both goals of providing new sports venues, and keeping some of the existing historic buildings that have a long life ahead. This approach would be consistent with economic and sustainable/green issues and would draw people to the City.
3) **Study the following alternatives:**
    a. **Restoration of both the Coliseum and Arena.**
    Restoration of the Coliseum (removal of the Mount Davis addition and

1 Note that the OCHS rating is a Potentially Designated Historic District, an Area of Primary Importance (API). API's appear eligible for the National Register.

restoration of the original design), along with restoration of the Arena (removal of the Oracle signage and entries).

b. **Reuse of both the Coliseum and Arena for the sports, two-venue proposal.**
Reuse as sports venues, with renovation upgrades that meet the current sports teams' standards, if feasible. Study retaining the facade and changing the interior.

c. **Adaptive Reuse of both the Coliseum and Arena.**
Other uses of the buildings should be explored. Proposed activities in the specific plan around the area of the building ensemble may lead to new patterns that suggest new uses. Uses suggested at the LPAB meeting include an Olympic size swimming pool, a sports venue for women's sports, or a sports venue for minor league baseball. Other economically viable uses should be explored.

4) **Analysis should include the existing alterations to the Coliseum and Arena buildings and their impact on the historic status of both the individual buildings and the building ensemble.**
5) **Analysis should include impacts to the Area of Primary Importance if only the Arena is retained.** If only the Arena is retained, the wholeness of the design is gone.
6) **Study the visual and/or structural impacts to the ensemble, should both buildings remain, and to the Arena, if it remains alone, due to proposed development of the Plan.**
7) **Study revision of the proposed plans so that the ensemble can be retained.**
8) **Require that all surface parking lots use permeable pavement.** This is a stormwater management issue with respect to runoff, especially since this is at a low elevation and close to the Bay.
9) **Study the potential competition with the West Oakland Specific Area Plan which proposes similar uses, science and technology.**
10) **Study a Phased Approach.** The current proposed plan appears to be overly ambitious, but perhaps more easily attainable over time.
11) **Archeological investigation and study should include an archeological field survey approach.** The archeological investigation should be in greater depth than a standard records research and consultation with Native American organizations. This is a very large, 800-acre plan. These environments are precisely where you would expect to find early prehistoric artifacts because the same thing that draws people here today, the Damon Slough and access to the Estuary, would have drawn people earlier. The Damon Slough has a higher probability of having cultural artifacts than other areas.
12) **Study the economic benefits/liabilities of sports teams on the City.**

Please contact Joann Pavlinec at (510)238-6344 or jpavilnec@oaklandnet.com for any questions.

Prepared by:

Joann Pavlinec, Secretary to the LPAB
Historic Preservation Planner

Cc: Ed Manasse, Strategic Planning Manager
Devan Reiff, Project Manager

Ref: NOPcomments:ColiseumSpecificPlanMay2013

FW: nop comments from san leandro, case#ER13-0004 and ZS13-103

1 message

Reiff, Devan <DReiff@oaklandnet.com> Mon, May 20, 2013 at 1:14 PM
To: Scott Gregory <sgregory@lamphier-gregory.com>

FYI

Dev an Reiff, AICP

City of Oakland

Planning and Zoning Div ision, Strategic Planning

250 Frank H. Ogawa - Suite. 3315 Oakland, CA 94612

P: (510)238-3550 F: (510)238-6538

From: TLiao@sanleandro.org [mailto:TLiao@sanleandro.org]
Sent: Monday, May 20, 2013 1:12 PM
To: Reiff, Devan
Cc: TLiao@sanleandro.org
Subject: nop comments from san leandro, case#ER13-0004 and ZS13-103

Devan,

Thanks for the opportunity to respond to your recent NOP for the DEIR for the proposed Oakland Coliseum Area Specific Plan (Case ER13-0004 and ZS13-103. Below are some comments/questions from the City of San Leandro regarding the proposal for relevant environmental factors to be addressed in the draft DEIR:

1) Aesthetics

a. Please identify if there will be zoning changes that will increase the height limit particularly in Sub-Area D and appropriate mitigation measures to avoid degrading any existing visual character or quality of the site. The Doolittle corridor represents an important gateway to San Leandro so any height changes that could impact this corridor are important to

2) Air Quality

a. Please identify and analyze impacts or potential impacts on the air quality during the construction phase and after implementation particularly for neighboring communities such as San Leandro.

3) Land Uses/Planning

a. Identify and analyze new land uses, particularly higher intensity ones, allowed in the proposed Specific Plan area particularly Sub-Area D

4) Noise

a. Identify and analyze any major sources of noise during and after construction and impacts on neighboring communities such as San Leandro.

5) Population, housing and employment

a. Identify and analyze any substantial increases to the number of jobs in the Specific Plan area particularly Sub-Area D.

6) Transportation/Traffic

a. Construction-related truck and equipment trips and related damage through City of San Leandro (i.e., Doolittle Drive) should be analyzed.

b. Analyze impacts of any substantial increase to existing vehicular traffic and its impacts on existing traffic and road capacity.

Thanks,

Tom Liao, Planning and Housing Manager

City of San Leandro Community Development Dept.

835 East 14th St.

San Leandro, CA 94577

510-577-6003 (office)

510-577-6007 (fax)

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Patrick R. McGill/UPC Senior Counsel-Real Estate, Law Dept.

May 20, 2013

VIA EMAIL ONLY

dreiff@oaklandnet.com

City of Oakland
Attn. Devan Reiff, AICP
Department of Planning & Building – Strategic Planning Division
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612

Re: Comments to Notice of Preparation of Draft Environmental Impact Report for Oakland Coliseum Area Specific Plan
Case Nos.: ER13-0004 and ZS13-103 ("Project")

Dear Mr. Reiff:

Thank you for allowing Union Pacific Railroad Company ("UP") the opportunity to submit the following comments in response to the City's Notice of Preparation of a Draft Environmental Impact Report ("DEIR") for the Oakland Coliseum Area Specific Plan.

UP is a Delaware corporation that owns and operates a common carrier railroad network in the western half of the United States, including the State of California. Specifically, UP owns and operates rail main lines connecting the San Francisco Bay Area to Sacramento and points east and north, and to Los Angeles and points east and southeast. UP is the largest rail carrier in California in terms of both mileage and train operations. UP's rail network in the Bay Area is vital to the economic health of California and the nation as a whole and its rail service to customers in the Bay Area is crucial to the future success and growth of those customers.

Sub-Area A of the Project surrounds UP's main line tracks. The current train traffic includes freight trains, as well as daily Capitol Corridor and Amtrak Starlight passenger

trains. Nearby at-grade rail crossings near the Project include High Street, 50th Avenue, 66th Avenue, 85th Avenue, and 98th Avenue. UP anticipates that the train volume near the Project area may increase in the near future. UP requests that the City and the Project developers keep in mind that this is a vital and growing rail corridor and must be protected for future growth by not creating uses that limit continued rail use.

Zoning

UP believes that maintaining industrial use areas along existing rail corridors reflects good land use planning. During the preparation of the DEIR, UP requests that a study be performed to examine the Project's risks associated with any proposed residential zoning, commercial zoning, or zoning other than industrial, if any, near railroad property. For example, zoning that allows residential or retail uses near the rail corridor could result in increased pedestrian traffic, vehicular traffic and the likelihood of trespassing on the railroad right-of-way.

Increased Traffic Impact

Rail crossing safety is critical to the public and to UP. Any increase in traffic from the Project may render inadequate the current safety devices in place on the nearby crossings. Additionally, an increase of pedestrian and vehicular traffic may conflict with train operations causing trains to proceed more slowly through the City, and/or make more frequent emergency stops, which would make rail service less effective and efficient. Additionally, train cars may be forced to block at-grade roadway intersections, causing traffic disruptions.

UP requests that the DEIR examine any increase in pedestrian and vehicular traffic and the impacts on the adjacent at-grade road crossings to see if any mitigation measures should be included in the Project. UP suggests that the City assess whether any grade-separations or crossings closures can be incorporated into the Project's development plans.

Noise and Vibration Impact

UP's 24-hour rail operations generate the noise and vibration one would expect from an active railway. UP requests that, as a mitigation measure, the City should require future developers to disclose to the general public the daytime and nighttime noise levels naturally occurring with UP's long-standing freight rail service, as well as the pre-existing and predictably-occurring vibration. These disclosures should note UP's anticipation that train volume will increase in the future. The Project's development plans should also include appropriate mitigation measures, such as construction of sound barrier walls or landscape buffers, and/or use of sound-proofing materials and techniques.

UP appreciates the City giving due consideration to the above concerns, as this proposed Project may result in significant impacts to land use and public safety.

City of Oakland
May 20, 2013

Please give notice to UP of all future hearings and other matters with respect to the Project as follows:

Austin Fearnow
Assistant Manager, Real Estate
Union Pacific Railroad Company
1400 Douglas Street - STOP 1690
Omaha, NE 68179

Please do not hesitate to contact the undersigned if you have any questions or concerns.

Sincerely,

Patrick R. McGill
Senior Counsel – Real Estate
Union Pacific Railroad Company

cc: Austin Fearnow

TRANSFORM

WORLD-CLASS PUBLIC TRANSPORTATION. WALKABLE COMMUNITIES.

May 14th, 2013

Devan Reiff, AICP
City of Oakland
Department of Planning and Building – Strategic Planning Division
250 Frank Ogawa Plaza, Suite # 3315
Oakland, CA 94612

Re: Comments on NOP of Oakland Coliseum Area Specific Plan DEIR

Dear Mr. Reiff,

Thank you for soliciting community input on the NOP of the DEIR for the proposed Oakland Coliseum Area Specific Plan. We are excited to see a vision beginning to come together for the area and are eager to help make the project as successful as it can be for local residents, investors, and the entire region. Thanks also for welcoming TransForm's comments on the NOP. Our purpose as an organization is to help develop the best transportation and land use plans, policies and programs that promote solutions maximizing the three E's of sustainability including Equity, the Economy and the Environment.

There is much to consider in this area and we appreciate that City staff trying to balance the voices that represent all aspects of the community. Ultimately you are helping the community articulate a shared vision for a better future, getting everyone on the same page and charting a concrete plan for future improvements to improve quality of life for existing residents, making the area attractive to future investors, and harnessing the latent economic power of the unique TOD site.

This letter primarily addresses transportation related aspects of the plan that should be taken into consideration within the NOP. This comment letter is organized into two main sections;

1) What TransForm heartily applauds and commends for inclusion in the NOP,

2) What TransForm thinks is missing from the current NOP and should be included.

I. We applaud the following components of the Oakland Coliseum Plan NOP

1) **Prioritizing the area as a TOD Sports / Jobs Center:** We are excited to see the vision call for a TOD project that builds off of the rich transit infrastructure of the area. We also appreciate the strong desire to accommodate current and or future sports teams as an economic generator, a continuation of sentimental traditions that bring priceless value to a community and the community cohesion that can be developed around sports teams. We hope that this vision is maintained as pressures for traditional auto-oriented development

come forward as the area becomes more attractive to investors. Building off of the tremendous transit infrastructure provided by AC Transit and BART will make for a much more walkable community for residents, visitors and future businesses in the area. This will not only reduce Oakland's carbon footprint, but will create a much safer, more livable type of community that will allow for future residents and workers to be less dependent on cars and the expensive, unhealthy , economically draining parking lots and road space needed to support car-oriented development.

2) **Prioritizing Space for Pedestrians**. We are thrilled to see a focus on enhancing the pedestrian experience in the area, and hope to be able to offer input in how the plan can maximize pedestrian safety while creating an attractive area to walk in. It should be noted that some of the most successful business districts in Oakland are places that offer a rich pedestrian experience (the Fruitvale, College Ave., Oakland Chinatown, Old Oakland, etc.).

3) **6,370 Units of New Housing.** Oakland and the Bay Area as a whole continue to grow. The Association of Bay Area Governments have made projections (based on our previous growth over past years) that Oakland can and should accommodate it's "fair share" of growth over the next 25 years. Even without the proposed transit hub, the area is rich with local, regional, and even International transit that will connect future residents in the new housing to an unlimited amount of jobs. Additionally, housing that is built in this transit rich area is less housing that will be needed to be built in the region's precious open space and farmland.

II. This section inventories what we think is missing from the NOP

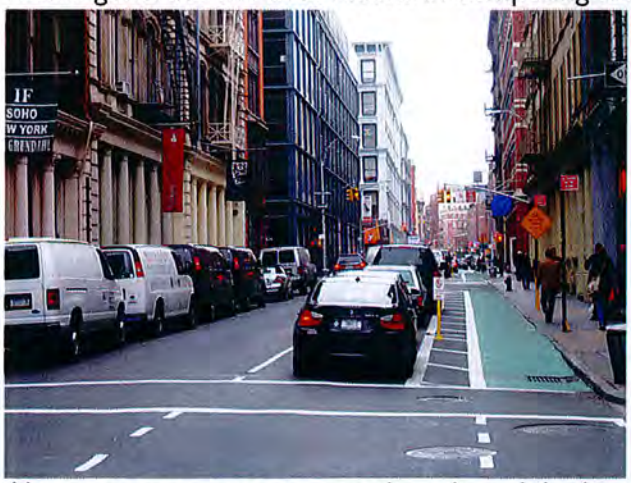
1. Call for the creation of a Parking Benefit District: While there is clearly an effort to minimize the creation of non-stadium related parking, efforts should be spelled out directly to create a Parking Benefits District (PBD) within the planning area. Creating a PBD will result in the best planned and best regulated parking to facilitate a revenue stream for the planning area while always ensuring parking availability. Creation of a PBD should be coupled with creating a parking management plan (see below) and creating "parking maximums" for future projects in the area, requiring the provision of progressive transportation demand management strategies that could include requiring future development to provide transit passes to future tenants in-lieu of constructing costly new parking facilities. The construction of a new parking space can be quite expensive, and alternatives should be allowed, freeing up resources for other community benefits (such as affordable housing). Additionally, revenue streams created from metered street parking within the district could be used to fund infrastructure improvements called for within the plan, or other projects decided upon by local stakeholders. Find more information here; http://www.sonomatlc.org/Parking/PBDs/BusinessPBD/SmallChange-1.htm, and here: Redwood City Example http://shoup.bol.ucla.edu/RedwoodCity.pdf

2. Call for a "Park Once" Parking Management Plan. Identify which places need to include new parking spaces to enable parking availability within a 10 min walk of any location within the plan area. This would result in designating locations where parking should be concentrated and for which resources could be pooled in order to build that parking, the same way that locations are designated and resources pooled for affordable housing.

3. Call for a policy referring to the 85/15 rule of parking management as an Economic Development Policy. 85/15 demand to availability ratio is managing parking (usually through varied pricing) so that one in every seven spaces is always available. This policy is beneficial

because it allows staff to implement the strategy that works best for the community and customizes strategies for performance outcomes. Ultimately this creates parking availability and predictable parking supply. This strategy has to be paired with a parking management plan (see above) that includes maximum parking flexibility, ease of payment and establishing location of free lots or free times. We hope any Specific Plan will include a goal of managing for the 85/15 rule, and will mention cities that have already adopted market pricing for on-street metered parking and coordinate lower priced off-street parking garages, including Pasadena, Santa Monica, Ventura, Redwood City, Walnut Creek, and San Francisco.

4. Include a Bicycle Component in the Plan: We are very concerned that there is no mention of bicycles in the proposed plan or NOP. Bicycles are a key component of facilitating non-motorized local travel, and often a critical tool in breaching that "last mile" between people, transit, and their jobs. Additionally, future pots of funding to pay for street infrastructure will be allotted to "Complete Streets" projects that include good bicycling and pedestrian infrastructure (see images below). Planning ahead for streets to be "complete" would generate the best results in competing for and winning funding for them.



Above are two recent examples where bike lanes are provided with extra safety protection of parked cars. Bike lanes like these should be called for on designated streets early on in the planning process.

We also wanted to reiterate that if parking spaces per unit will be minimized for projects in the planning area, a call should be made for projects to accommodate secure bicycle parking in their design, and increased bicycle use should be expected. It should be anticipated that workers in future jobs located within the site will greatly benefit from being able to quickly, safely, and easily bike between their places of business and any retail that will be within a short bicycling distance. 20 minute walks to a destination are quickly shunned while a safe, 5 minute bicycle ride is a very attractive way to get to a local restaurant for one's lunch hour.

We mention this now because bicycles always seem to be an "afterthought" in TOD projects (such as within the Fruitvale Transit Village and Walnut Creek BART Station TOD's) which results in cities having to redirect future transit and transportation infrastructure funding to pay for them long after they were needed.

6. If any increases in height or density is called for, create a plan that "re-captures" some of the wealth created by any added height or density. "Air rights" are some of the most precious resources the City of Oakland has to address community needs and infrastructure improvements. A "Developer Incentive Program" is currently under development that we hope would allow for greater heights and or FAR densities of projects in exchange for the provision of additional community benefits or infrastructure improvements. Whereas the Coliseum Station Area is likely to attract development in the near future (in addition to the Lake Merritt BART Station Area, West Oakland BART Station Area, Uptown / Broadway Valdez, etc.), it would be inequitable not to require the provision of community benefits in exchange for additional height or density allowances than for what is currently zoned. A plan should be created now for when such a case arises.

Thanks again for your efforts. I would be happy to meet with you to discuss questions or provide additional information as needed to develop the NOP or any other phase of this process. We look forward to seeing this terrific redevelopment opportunity become a reality, and further unlocking the tremendous potential Oakland has as a World Class City.

Sincerely,

Joël Ramos
Senior Community Planner

EBHO

EAST BAY HOUSING ORGANIZATIONS

May 20, 2013

Devan Reiff, AICP
City of Oakland
Department of Plannign and Building
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612

Dear Devan Reiff,

RE: East Bay Housing Organizations (EBHO) response to NOP on DEIR for Oakland Coliseum Area Specific Plan

This letter offers EBHO's response to the Notice of Preparation of a Draft Environmental Impact Report for the proposed Oakland Coliseum Area Specific Plan.

East Bay Housing Organizations (EBHO), a 29-year old non-profit membership organization, is the leading affordable housing advocacy coalition working throughout Alameda and Contra Costa Counties, and is based in Oakland. EBHO's mission is to preserve, protect and expand affordable housing opportunities for the lowest income communities. EBHO's membership includes more than 300 organizations and community leaders including non-profit affordable housing developers, architects, planners, contractors, homeless and housing advocates, residents, service providers, fair housing agencies, tenant advocates, community and interfaith organizations and activists, clergy and congregations, labor unions, environmental organizations, lending institutions, intermediaries and policy organizations, and city and county agencies and staff.

EBHO's recommendations for what to include and study:

At least 25% of the residential units should be affordable to very low income people -- working families, seniors, and people with special needs -- and incorporated into the plan. This should be studied in the EIR to assess how this mitigates for potential air pollution, greenhouse gases, and population, housing, and employment impacts.

Additionally, an analysis of the projected income mix of future jobs created should be conducted to ensure that there us a jobs/housing fit -- meaning that workers at all income levels can live and work in the plan area. A jobs/housing fit will mitigate against increases of greenhouse gases since workers will be able to walk, bike, use transit, or commute short distances to get to work. Moreover, affordable housing should be planned near the BART station since affordable housing residents generally own less cars and use transit more. Increasing transit ridership will reduce greenhouse gases that would otherwise be generated.

Finally, schools, grocery stores, locally serving residential shopping areas, and community facilities should be incorporated into the plan to ensure that the over 6,000 units of housing are adequately served by amenities, and residents will not have to drive to them. A network of walking and bike paths should be incorporated in the plan and studied to ensure that residents can have access to their jobs, amenities and services without needing to drive, and mitigating against traffic, GHGs and air pollution.

538–9TH STREET, SUITE 200, OAKLAND, CA 94607 / (510) 663-3830 (P) / (510) 663-3833 (F) / www.EBHO.org

We support these components of the plan:

- 6370 residential units
- Embracing its role as a Priority Development Area
- Mixed-use vision

We are concerned about the following components:

- Waterfront community: creating a residential & mixed-used community that complements the new Science & Technology District. How is "complementary" defined? Employment for this district would largely depend on highly specialized labor and high wages. What does this mean for employees making median income (janitors, maintenance, etc)? We need to ensure that these employees are housed in the nearby waterfront community.
- Ball Park Mixed-use district: How many of those homes will be affordable? Can we ensure that affordable housing production standards under Redevelopment law apply to the areas that are being considered for residential development? How can we ensure that the retail/ restaurant development that occurs caters to all Oakland residents who will enjoy the space? How can the plan prioritize not only high end shops or formula retail for the sports fans/hotel visitors, but also services that cater to the residents who will live in the (hopefully) affordable homes that will be created?
- In this TOD plan, the City should prioritize creating affordable homes adjacent to transit centers in addition to developing market-rate homes. We need to ensure that low and extremely low-income households can partake in the advantages offered by TOD.

Thank you for your consideration. Please feel free to contact me at 510-663-3830 x 323 or amie@ebho.org.

Sincerely,

Amie Fishman
Executive Director

CAUSA JUSTA
UNITY IS POWER ★ LA UNION HACE LA FUERZA
JUST CAUSE

info@cjc.org | www.cjc.org
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May 17th, 2013

Devan Reiff, AICP
City of Oakland
Department of Planning and Building – Strategic Planning Division
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612
dreiff@oaklandnet.com

Re: Comments on NOP of Coliseum Area Specific Plan DEIR, ZS13-103 and ER13-0004

Dear Mr. Reiff,

Causa Justa :: Just Cause (CJJC) is a housing and immigrants rights organization that builds grassroots power and leadership to create strong, equitable communities. We have a membership base and provide tenant-counseling services to East Oakland residents.

Given the decades of disinvestment in East Oakland, we are hopeful about investment in the area. We'd like to take this opportunity to share a couple of suggestions we have for the plan towards the goal of making sure that the Coliseum Area Specific Plan benefits existing residents and will not lead to further displacement of long-term east Oakland residents.

1. Build low income housing and protect housing in the surrounding area

The plan states that 6,370 units of residential housing is projected to be built in sub areas A and B. A majority, specifically 68.8% of the residents who currently live in the 94621 zip code (where the Coliseum is located) have incomes at $50,000.00 per year, or much less.[1] For an Oakland household to afford the fair market rent on a two-bedroom apartment, the household must make at least $54,440.00 per year[2]. This means that out of the housing developed in the plan, at least two-thirds of it should be low income.

2. Prioritize East Oakland residents for employment opportunities in the area plan

The Coliseum Area specific plan will bring number of different business and job opportunities. Given that approximately 54.5% of the residents in this zip code alone are either not in the labor force, or unemployed[3], it will be critical that 94621 residents be the first trained and hired for stable jobs with living wages.

To benefit the current residents of East Oakland must the suggestions above must be a priority and the impacts of the disinvestment must be taken into consideration to address the needs of the families who have lived there for generations.

Again we thank you for the opportunity to comment early on in the plan and are looking forward to when this same opportunity is afforded to the broader community of East Oakland residents.

Sincerely,
/s Robbie Clark Housing Rights Campaign Lead Organizer, on behalf of Causa Justa :: Just Cause

[1] ACS survey data: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_11_5YR_DP03
[2] *2013 Out of Reach Report*, National Low Income Housing Coalition
[3] ACS survey data: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_11_5YR_DP03

May 16, 2013

To: Ed Manasse, Strategic Planning Manager
Devan Rieff, Project Manager

Department of Planning and Building
Strategic Planning Division
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612

Re: Comments on Coliseum Area Specific Plan EIR Scoping, Case Number ER-13-0004 and ZS 13-103

Dear Strategic Planning Manager Ed Manasse and Project Manager Devan Rieff:

HOPE Collaborative (Heath for Oakland's People and Environment) is pleased to submit a public comment on the Coliseum Area Specific Plan EIR Scoping. HOPE is a community collaborative initiated by the W.K. Kellogg Foundation working to transform the food and fitness environment in the flatlands of Oakland, CA. We are comprised of public agencies, community-based organizations, and community residents working together on policy and systems change efforts in the areas of food systems, built environment, and local sustainable economic development with the goal of improving the health of Oakland's most vulnerable communities through sustainable environmental changes.

We applaud the EIR's inclusion of public health impacts in the scoping including air quality, seismic safety, storm water management, flooding, and groundwater contamination. Land use and planning decisions have the potential to improve and promote health as well as harm it. As such, we recommend the City consider health impacts in vital infrastructure and land use decisions. It is in this spirit that HOPE Collaborative proposes additional elements to be addressed by the EIR that we believe are critical to the development of a plan that is environmentally sound, healthy, and that will contribute to more equitable outcomes for Oakland residents.

(1) **Land Use Plans and Policies**

a. **Alignment with Oakland's Energy and Climate Action Plan**: Include Oakland's Energy and Climate Action Plan (ECAP) goals in the evaluation of proposed land use changes in light of adopted policy documents. Ensure that the plan's projected greenhouse gas emissions align with ECAP goals for emissions reduction. Also, as outlined in Oakland's Energy and Climate Action Plan, "new development in Oakland, including Transit-Oriented Development, has the potential to benefit communities (via economic revitalization, and reduced VMT's), and has the potential to adversely impact communities (via displacement or local environmental impacts). The City will make efforts to plan for new development with consideration of these issues."

b. **Protect Open Space and Urban Agriculture**: Determine the potential impacts of proposed land uses to parcels zoned for agricultural use or open space, specifically in sub-areas A and E which have sites owned by the City, the County, and EBMUD. These sites should be preserved as open space uses. Determine possibilities for public use and/or ownership of these sites, including protection of these sites for urban agriculture.

(2) Public Services and Recreation

a. **Healthy Food Access:** Determine the extent to which proposed land use changes will affect availability of healthy, fresh, affordable food in Districts 6 and 7 which are areas underserved by quality food retail. Explore opportunities for investments that incentivize a diversity of healthy, local and independently owned, food businesses that contribute positively to food access and Oakland's bourgeoning food economy

(3) Transportation/Traffic:

a. **Complete Streets**: Evaluate the potential for land uses to incorporate sustainable design practices that serve residents' daily needs, attract pedestrian and bicycle travel and transit, and discourage use of motorized vehicles.

(4) Additional Issue to address in EIR:

a. **Community Engagement in Plan Development**: The Coliseum Area Specific Plan should prioritize a high level of participation by environmental justice communities and existing residents of District 6 and 7. The EIR should include indicators for public participation and input of existing residents which are predominantly low-income communities and communities of color.

Together, these modifications will ensure an adequate scope for review of environmental impacts. We ask that you strongly consider these proposed additions in the EIR. We are available and happy to partner with you and other City staff to adapt the EIR to include these elements and to support community engagement in the development of the Coliseum Area Specific Plan. Please feel free to contact us with any questions or if we can assist in any way.

Sincerely,

Sabrina Wu, Project Director
HOPE Collaborative

People United for a Better Life in Oakland
Pueblo Unido para una Vida Mejor en Oakland
PUEBLO

Devan Reiff, AICP
City of Oakland
Department of Planning and Building – Strategic Planning Division
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612
dreiff@oaklandnet.com

Dear Mr. Reiff:

PUEBLO would like to focus on the issue of public safety as we consider the proposed plans for Coliseum City. As the letter from EOBHC indicated, one of the concerns of East Oakland residents is safety – not just from criminal offenders but also from the police. East Oakland is one of the areas from which many complaints of police abuse originate, and youth, in particular, have accepted police abuse as 'normal.'

We believe a fundamental component of building a safe and healthy project must include appropriate neighborhood involvement and the promotion of restorative justice practices that offer support to high risk youth that encourages them to stay in school, obtain a diploma or GED and acquire vocational skills.

Open spaces and recreational facilities are of little value if residents don't feel safe being out in the open. Residents will need training in how to protect open spaces and work together to deter those who try to appropriate these spaces for illegal activities. They must also learn how to hold police accountable for racial profiling and how to make use of complaint procedures when police act unprofessionally and unconstitutionally. Resources to support these activities will be essential to ensure that Coliseum City will be a healthy and health-promoting community.

Very truly,

Rashidah Grinage

_____

Rashidah Grinage
Executive Director

EAST OAKLAND BUILDING HEALTHY COMMUNITIES

May 20, 2013

Devan Reiff, AICP
City of Oakland
Department of Planning and Building – Strategic Planning Division
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612
dreiff@oaklandnet.com

Re: Case ZS13-103 and ER13-0004

Dear Mr. Reiff:

Thank you for taking the time to meet with member organizations of East Oakland Building Healthy Communities (EOBHC) during this comment period on the Coliseum City environmental impact report scope, and fore requesting our input.

EOBHC's Workgroup 4 is focused on improving health of residents through systems change in our built environment. Our organizations advocate for neighborhood-level progress in transit, housing, food justice, and land use policy with specific attention to East Oakland.

This spring, more than 50 East Oakland residents came together in our Leadership Academy to share their experiences and learn about policy initiatives in Oakland. They articulated the enclosed Community Planner Principles, which represent their aspirations for their community and a high standard for planners to meet.

Specifically, Leadership Academy participants generated this aggregate vision statement:

> *The dignity of individuals and of our community collectively must be respected in all planning decisions. Help our community provide a safer and healthier place to raise our children, regardless of the challenges we face, and work to keep families off the street by providing cheaper, cleaner and improved housing.*
>
> *All East Oakland residents deserve housing that protects our health rather than compromising it. Protect homeowners. Safer environments. Protection from police.*
>
> *Have fair food in East Oakland. Grow our own food to feed our children, and teach them healthy habits. Ensure stores are clean and the food is fresh to eat. Bring back major grocery chains and healthy options like farmer's markets. Make public gardens free and accessible. Educate people about healthy food and meals, how food affects children. Whenever we go into a restaurant, enjoy the food. People need to feel satisfied by the food.*

All East Oakland residents deserve to have a safe, affordable and clean transit system with appropriate supervision. People must be respected without regard to race, gender and finances. Provide riders with respect and fair treatment, especially those with disabilities. Improve streets so buses can travel smoothly, and be more dependable. Use green energy for transportation, accessible transportation, and help people benefit from the transportation provided to them.

One group should not benefit at the expense of another. We should share benefits and burdens equally.

We call your attention to the last line about share benefits and burdens equally. Oakland's Coliseum Area suffers the worst impacts of pollution and has the lowest income to address the health burdens it is carrying as a result of the region's pollution.

City leaders must pay specific attention to addressing health and equity impacts as this important process begins. Coliseum City joins a list of major development opportunities in Oakland – Brooklyn Basin, Army Base, Lake Merritt – where community residents have engaged to protect neighborhoods and prevent displacement, offer opportunity and make Oakland a better place to live for its current residents.

Setting clear expectations for improved health and equity through transit, housing and food justice policies from the initial project planning stages is critical to the success of this venture. It is critically important that community residents like the participants in our Leadership Academy are consulted and engaged in this process. East Oakland residents are exposed to more toxics than other Alameda County residents and suffer harsher health impacts. The Coliseum City project you are beginning to plan must improve health outcomes, not further burden this community.

However, East Oakland residents do not expect a successful plan to arrive without careful attention and community engagement. Progressive, pro-active policies need to be developed well in advance of any development proposals that will set the table for the best projects to come, and allow the community to see health-producing equitable benefits.

"Status quo" development can harm out communities more than benefits. Plans that maintain status-quo levels of parking, recreate streets that give cars priority over people, create poor-quality jobs, and build housing that directly or indirectly displaces current residents is detrimental and simply unacceptable.

East Oakland is a recognized food desert, underserved by quality food retail offering of healthy, fresh, affordable food. This project offers opportunities for investments that incentivize a diversity of healthy, local and independently owned, food businesses that contribute positively to food access and Oakland's

growing food economy. In addition, the plan for preserve open space on parcels zoned for agricultural use or open space, specifically in sub-areas A and E which have sites owned by the City, the County, and EBMUD. The plan should determine possibilities for public use and/or ownership of these sites, including protection of these sites for urban agriculture.

East Oakland residents have borne the brunt of the housing crisis in foreclosure, displacement, and excessive rent increases. This plan must preserve and increase housing affordability for current residents and specifically prevent displacement. We commend the potential for 6370 new homes, and Oakland's vision to embrace its fair share as a Priority Development Area, provided that displacement risk and affordability issues are effectively addressed. In this transit-oriented development, the City must prioritize affordable homes adjacent to transit centers in addition to market-rate homes. We need to ensure that low and extremely low-income households can share in TOD's advantages.

In defining the waterfront neighborhood while creating a residential and mixed-used community that complements the new Science & Technology District, we ask how "complementary" will be defined? Employment for this district will include highly specialized labor and high wages. Will making median income employees (janitors, maintenance, service) also find housing here? Residents will need more than high end boutiques or formula retail for sports fans, so plan for services that cater to families who will live in these affordable homes.

At least 25% of the residential units must be affordable to very low income people – working families, seniors, and people with special needs. This should be studied in the EIR to assess how this mitigates for potential air pollution, greenhouse gases, and population, housing, and employment impacts.

Additionally, an analysis of the projected income mix of future jobs created should be conducted to ensure that there is a jobs/housing fit – meaning that workers at all income levels can live and work in the plan area. A jobs/housing fit will mitigate against increases of greenhouse gases since workers will be able to walk, bike, use transit, or commute short distances to get to work. Moreover, affordable housing should be planned near the BART station since affordable housing residents generally own fewer cars and use transit more. Increasing transit ridership will reduce greenhouse gases that would otherwise be generated.

Finally, schools, grocery stores, locally serving residential shopping areas, and community facilities should be incorporated into the plan to ensure that the over 6,000 units of housing are adequately served by amenities, and residents will not have to drive to them. A network of walking and bike paths should be incorporated in the plan and studied to ensure that residents can have access to their jobs, amenities and services without needing to drive, and mitigating against traffic, GHGs and air pollution.

The Coliseum City Redevelopment Plan presents a tremendous opportunity to make the area around the Coliseum BART station far healthier for our economy, environment, and community.

We are eager to work with City staff in creating a plan that will lead to prosperity and healthy well-being for all, especially the current residents of East Oakland. We look forward to working with City of Oakland Planning staff to shape a plan that creates good jobs, new housing opportunities for all, reduced air pollution, safer streets, and keeps our sports teams here while attracting new investment.

In summary, we ask that your efforts:

1. protect neighborhoods, offer opportunity and make Oakland a better place to live for our current residents
2. improve health outcomes, not further burden this community
3. develop pro-active policies well in advance of any development proposals that will set the table for the best projects to come, and allow the community to see health-producing equitable benefits
4. determine possibilities for public use and/or ownership of these sites, including protection of these sites for urban agriculture
5. preserve and increase housing affordability for current residents and specifically prevent displacement.

Enclosed please find specific letters from many individual organizations that expand on these topics.

We look forward to your response and meeting with you again as the process moves forward.

Sincerely,

EAST OAKLAND BUILDING HEALTHY COMMUNITIES WORKGROUP 4 – BUILT ENVIRONMENT

Causa Justa :: Just Cause
Communities for a Better Environment
East Bay Housing Organizations
HOPE Collaborative
Oakland Food Connection
PUEBLO
TransForm
Urban Strategies Council

and Alameda County Health Pipeline Partnership

Enclosures

Commented [EB1]: Sharon, if this doesn't feel redundant, I suggest this approach. Because the letter is long, the clear asks/ expectations get a little lost. A summary at the end helps to bring it home. I'm not wedded to it.

APPENDIX 4.1

Shadow Studies

JRDV
Forest City
HKS
AMP

CC COLISEUM CITY and Bay Area Innovation Gateway

Shadow Study

December 2013

1

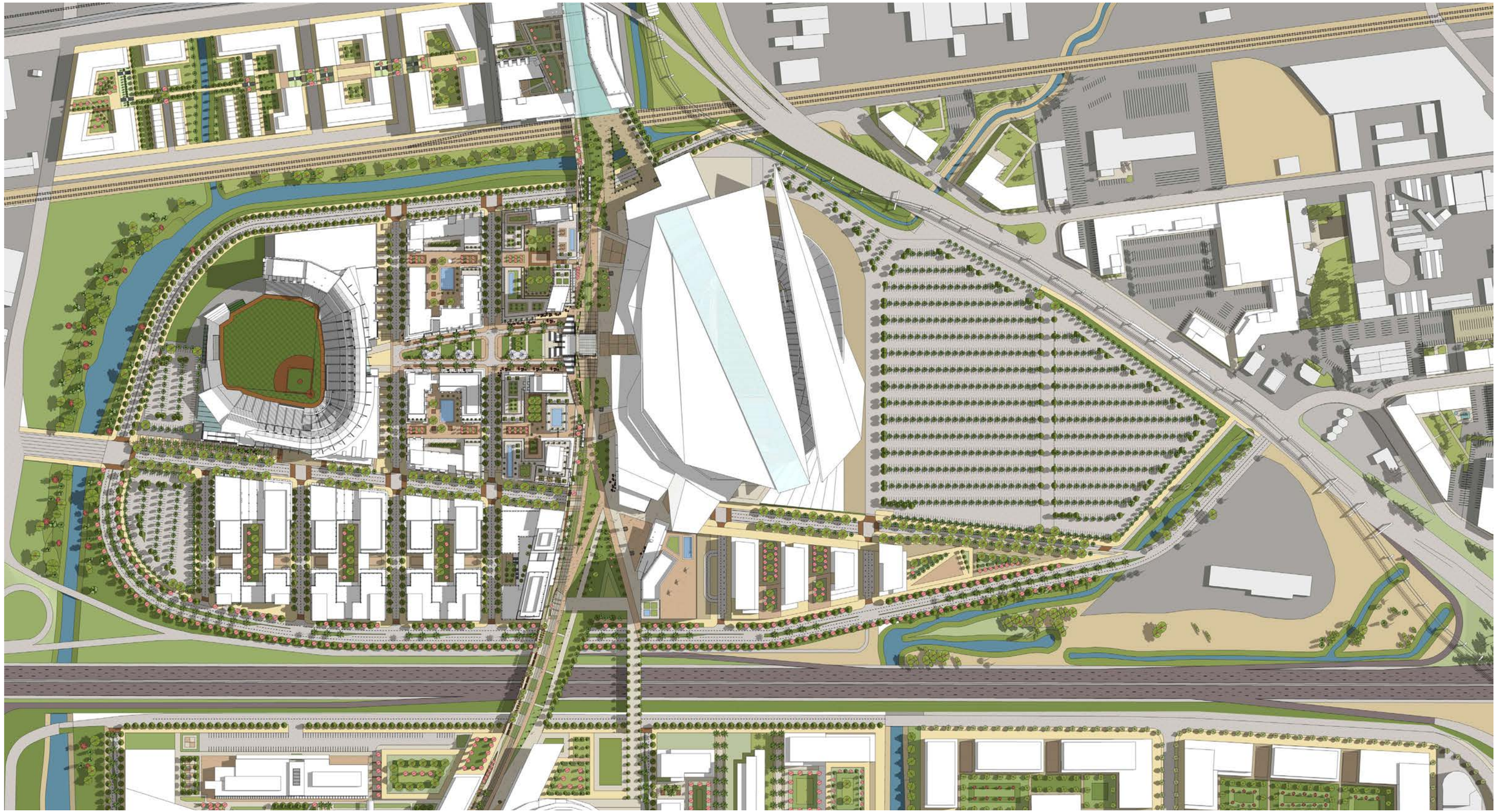
Spring Equinox

Spring Equinox Area AA 9:00 AM

Spring Equinox Area AA 12:00 PM

Spring Equinox Area AA 3:00 PM

Spring Equinox Area A 9:00 AM



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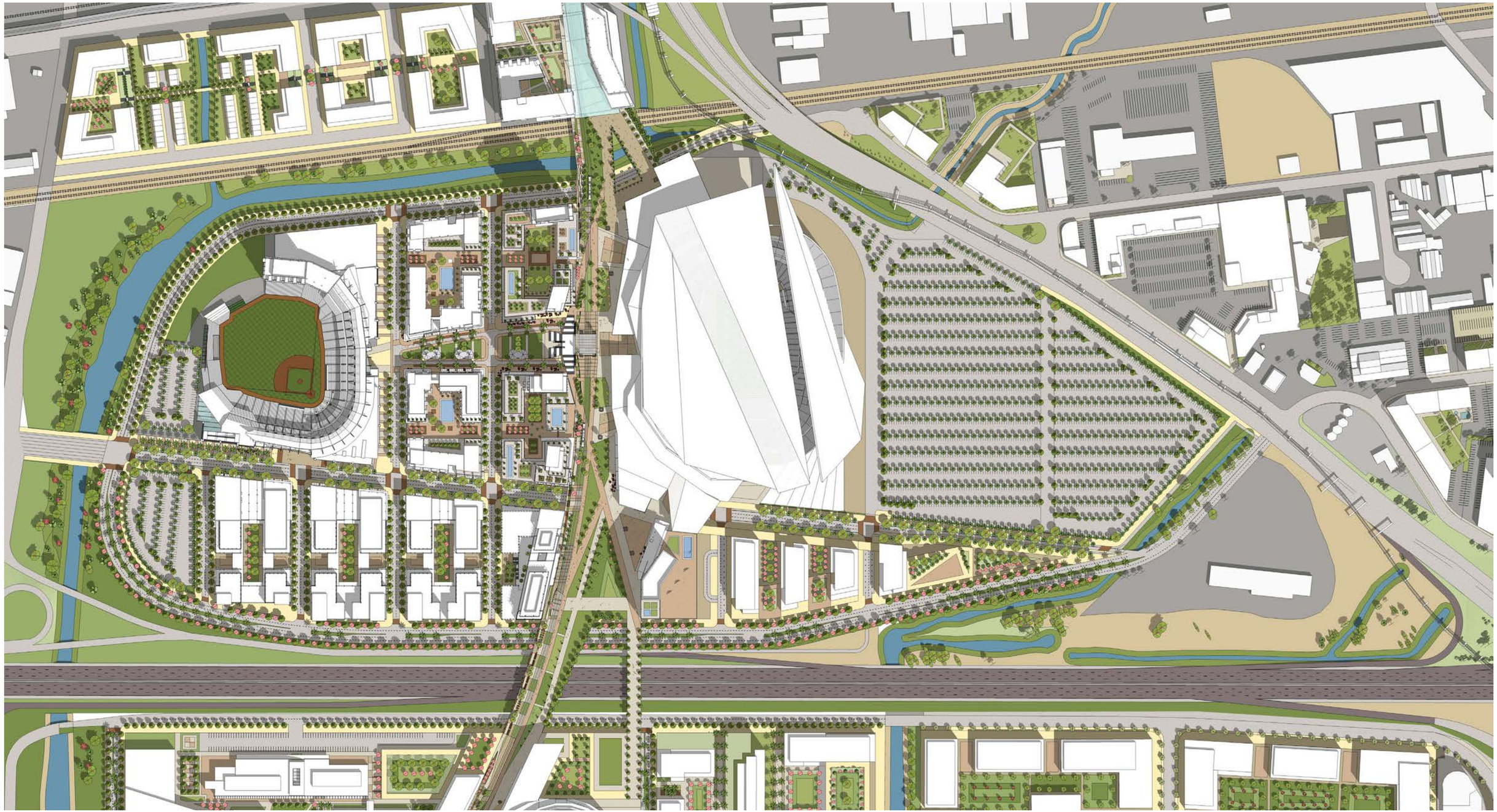

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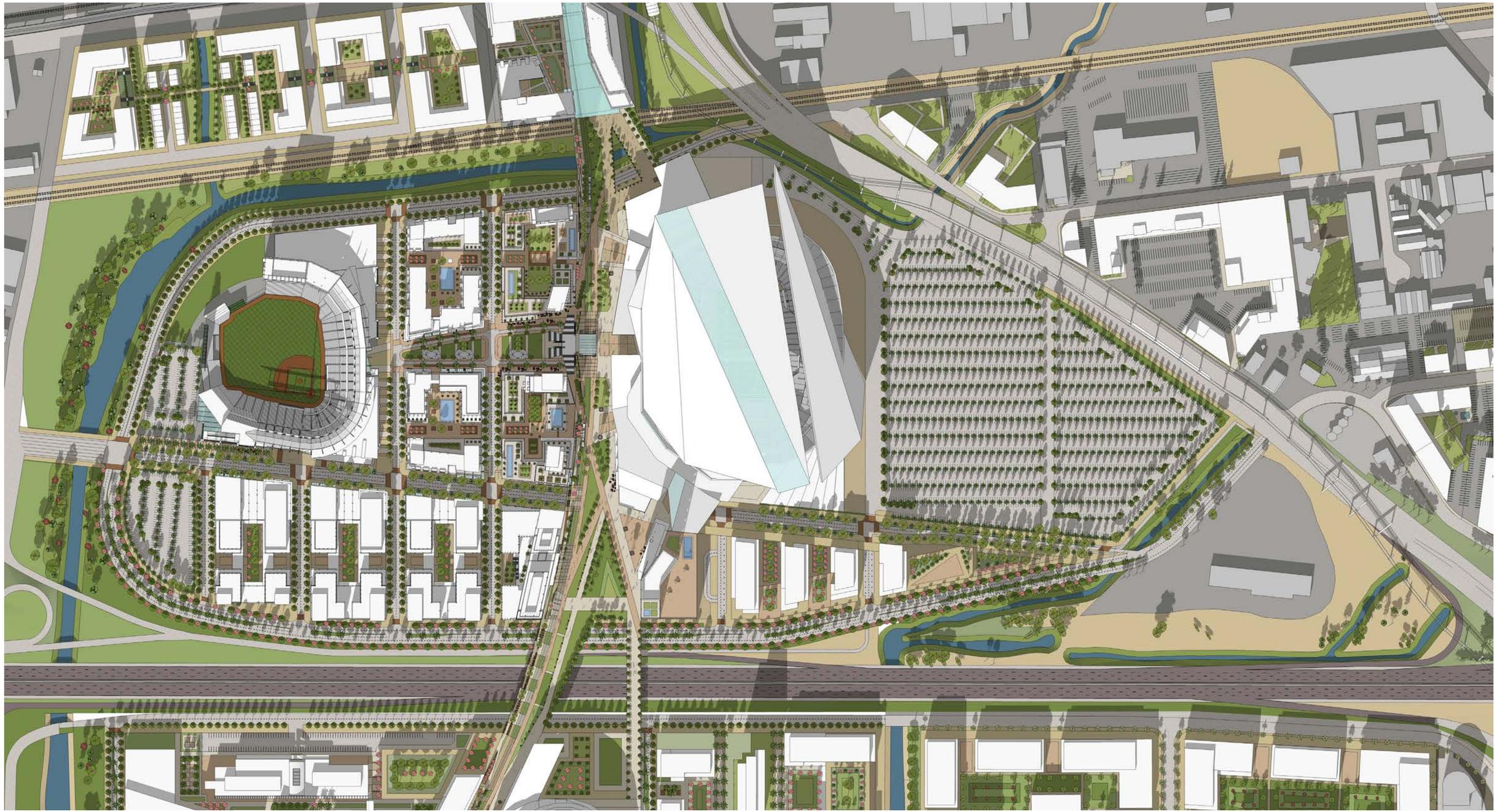

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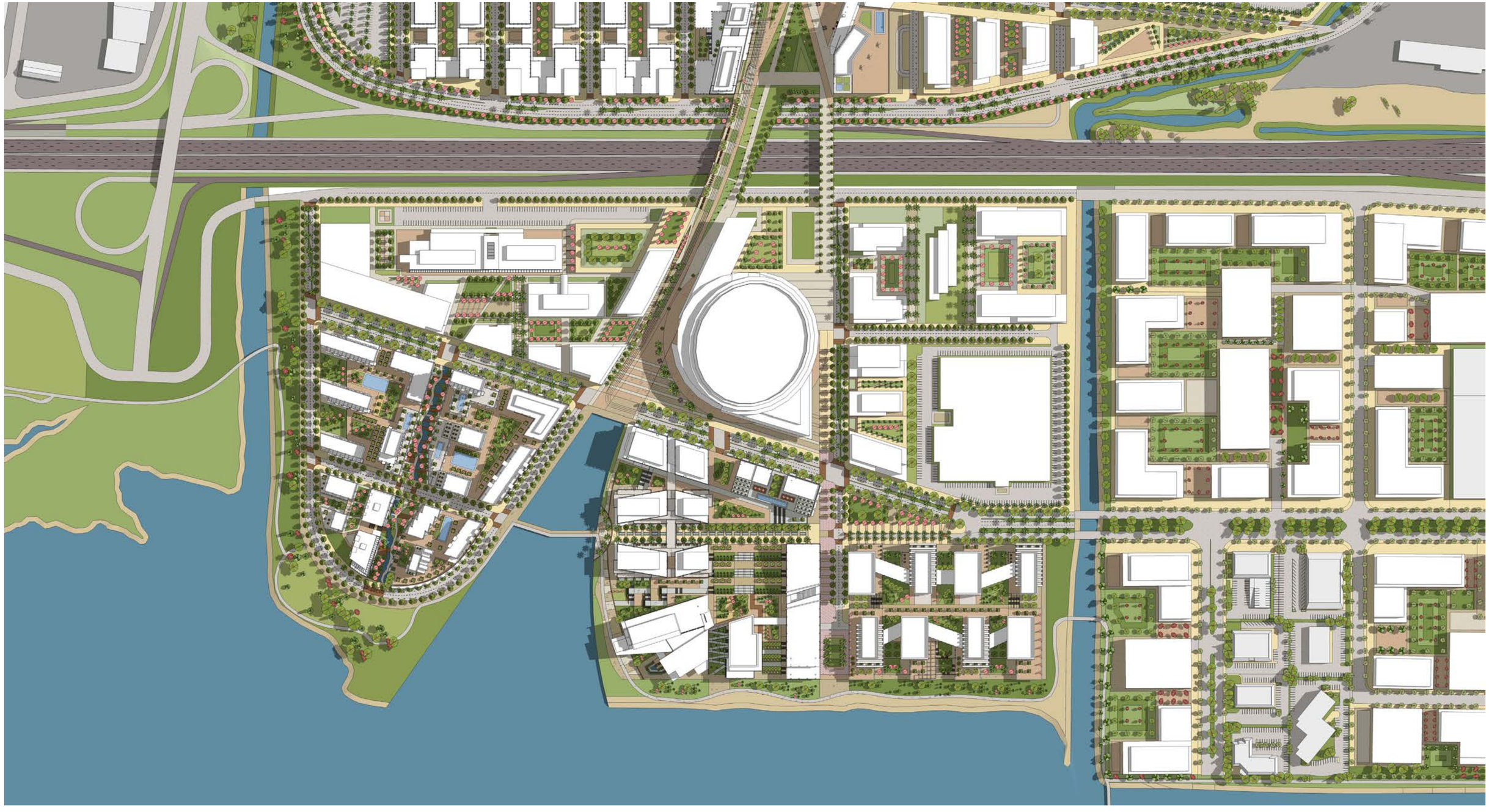

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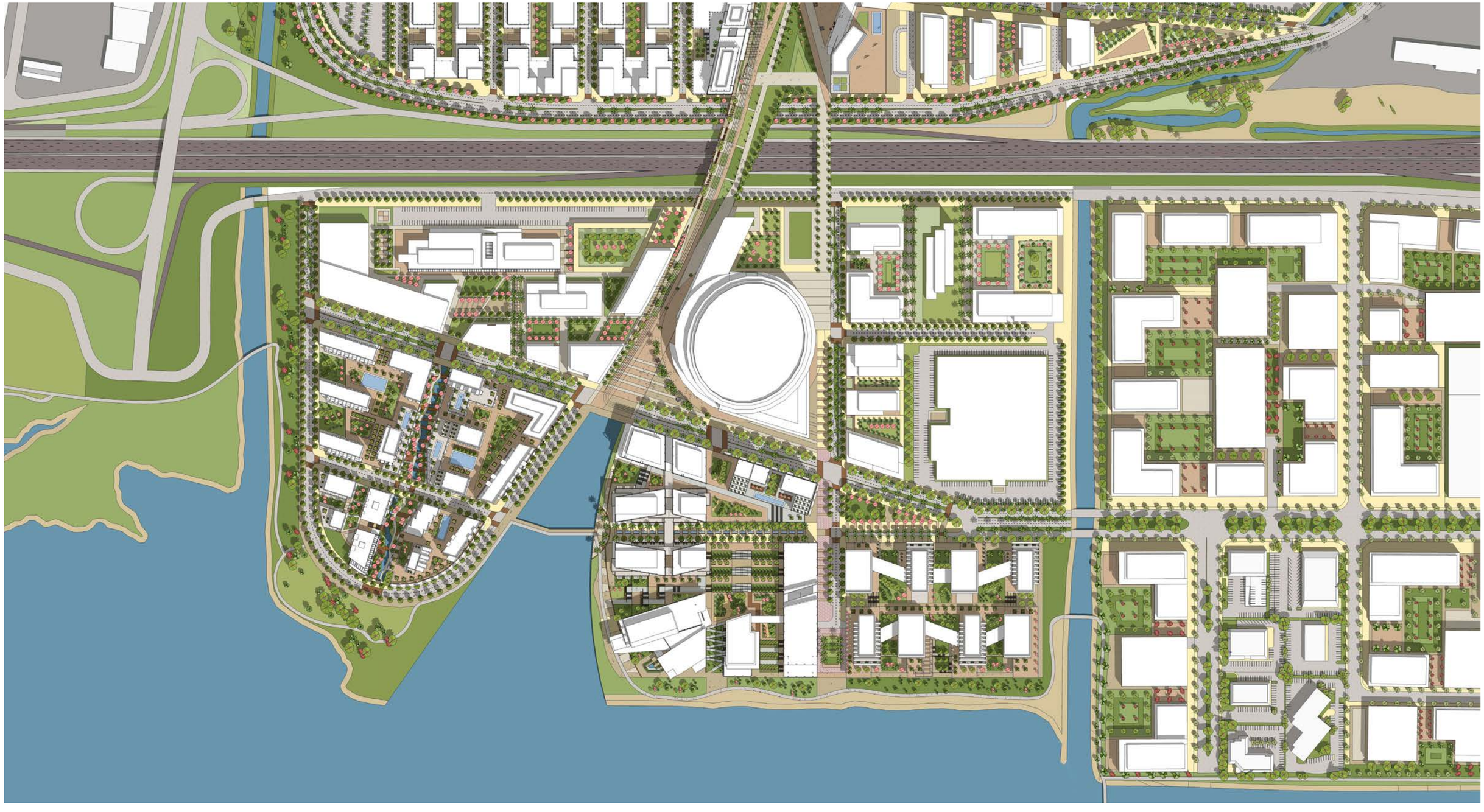

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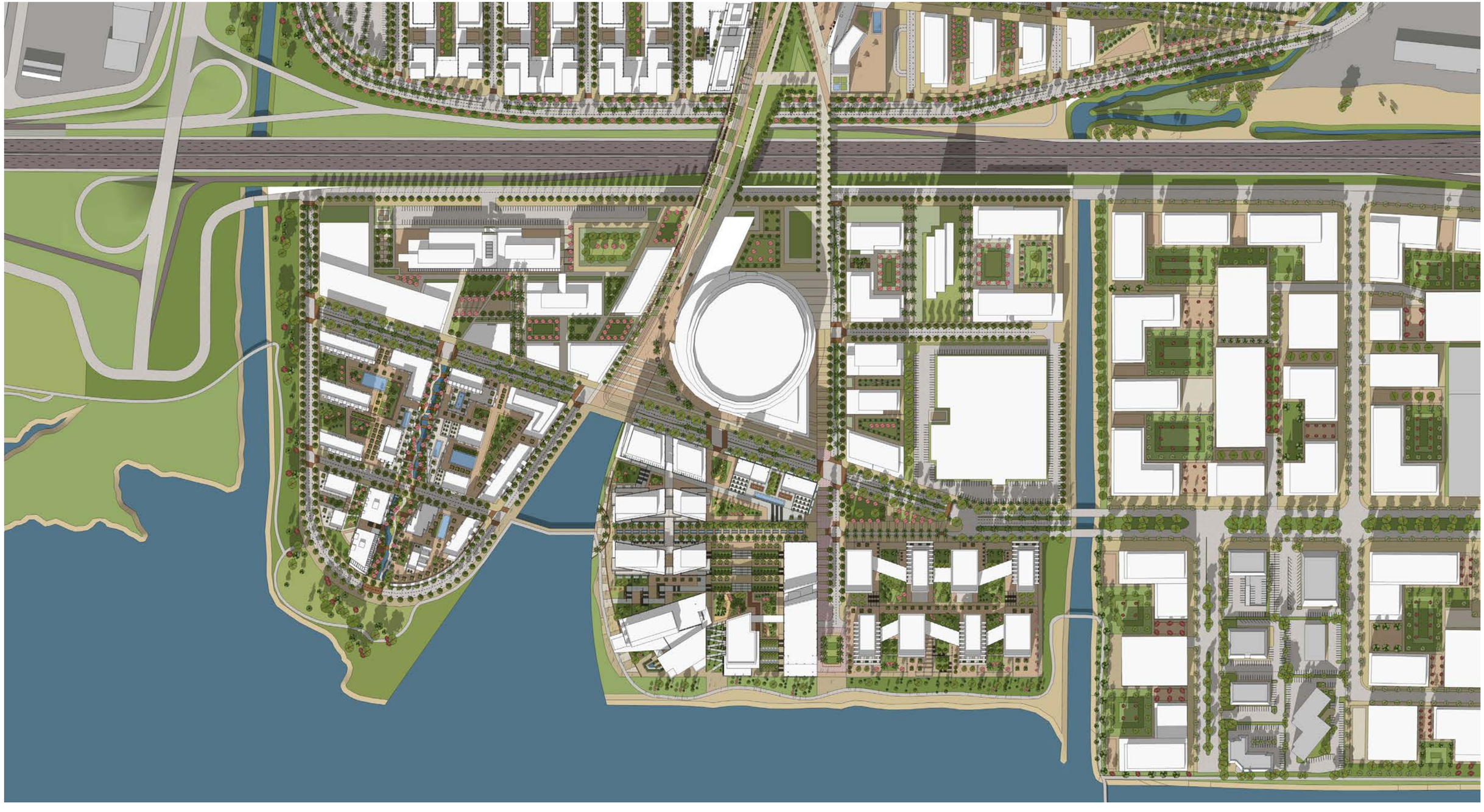

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Summer Solstice

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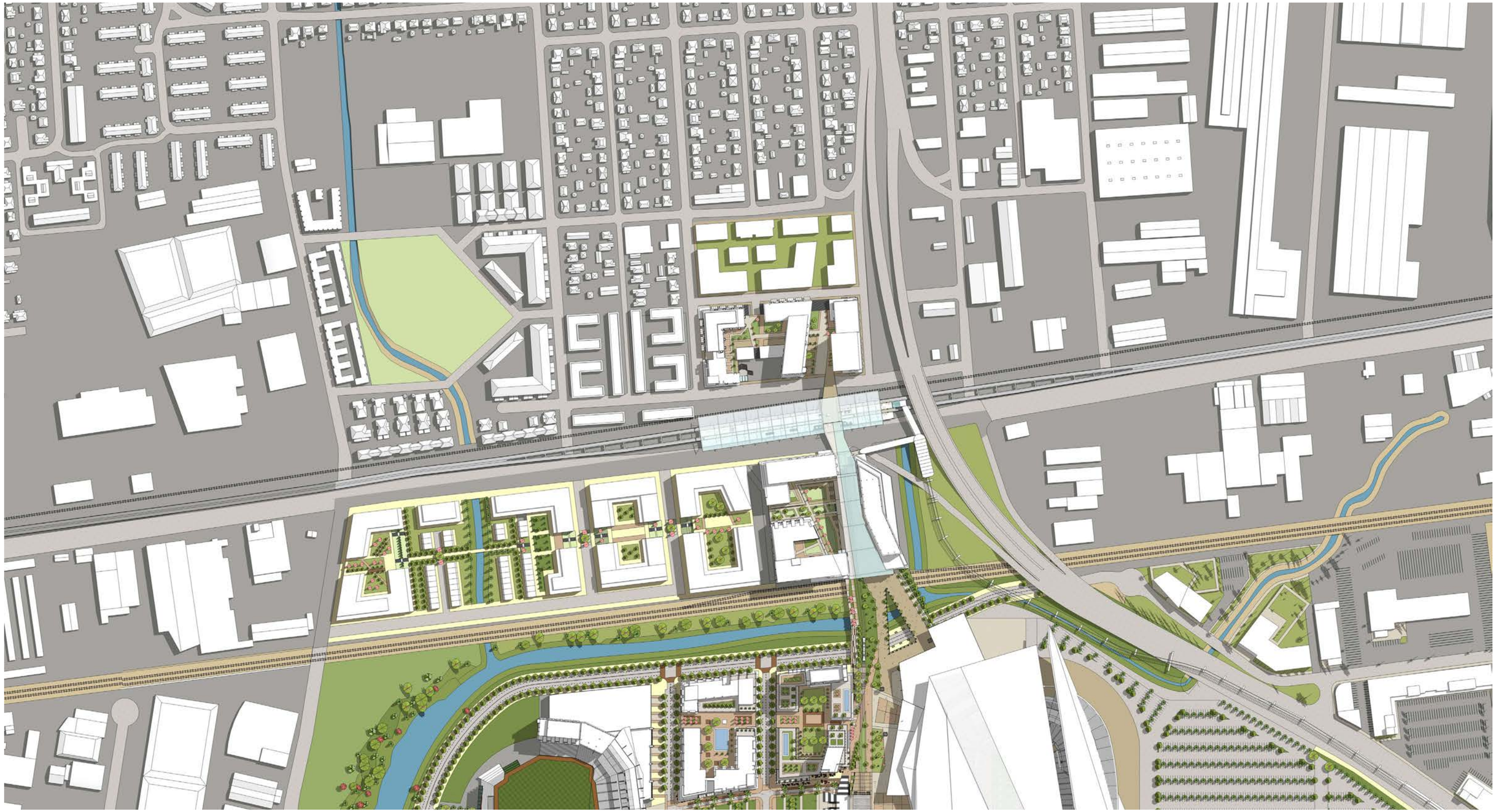

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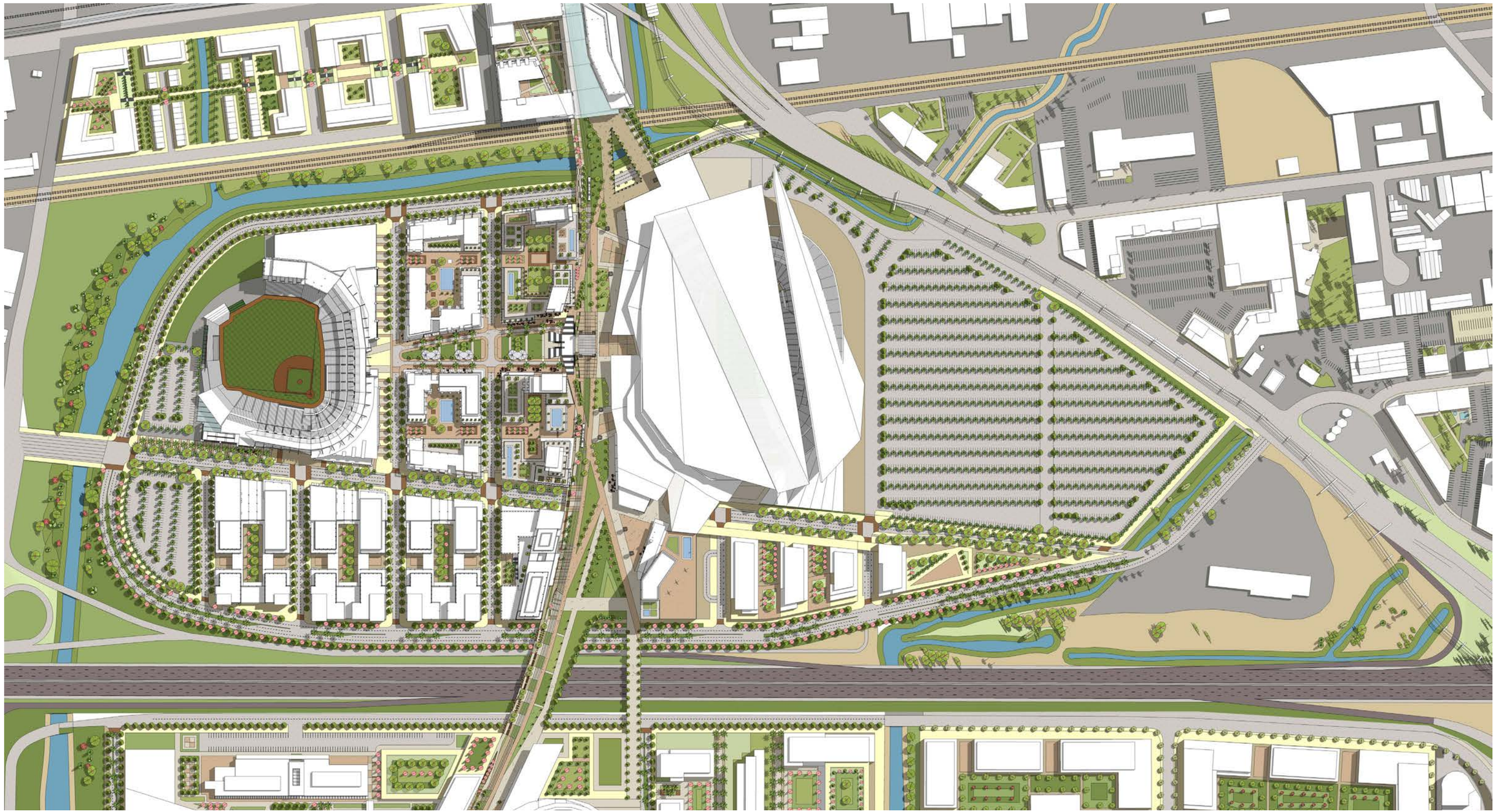

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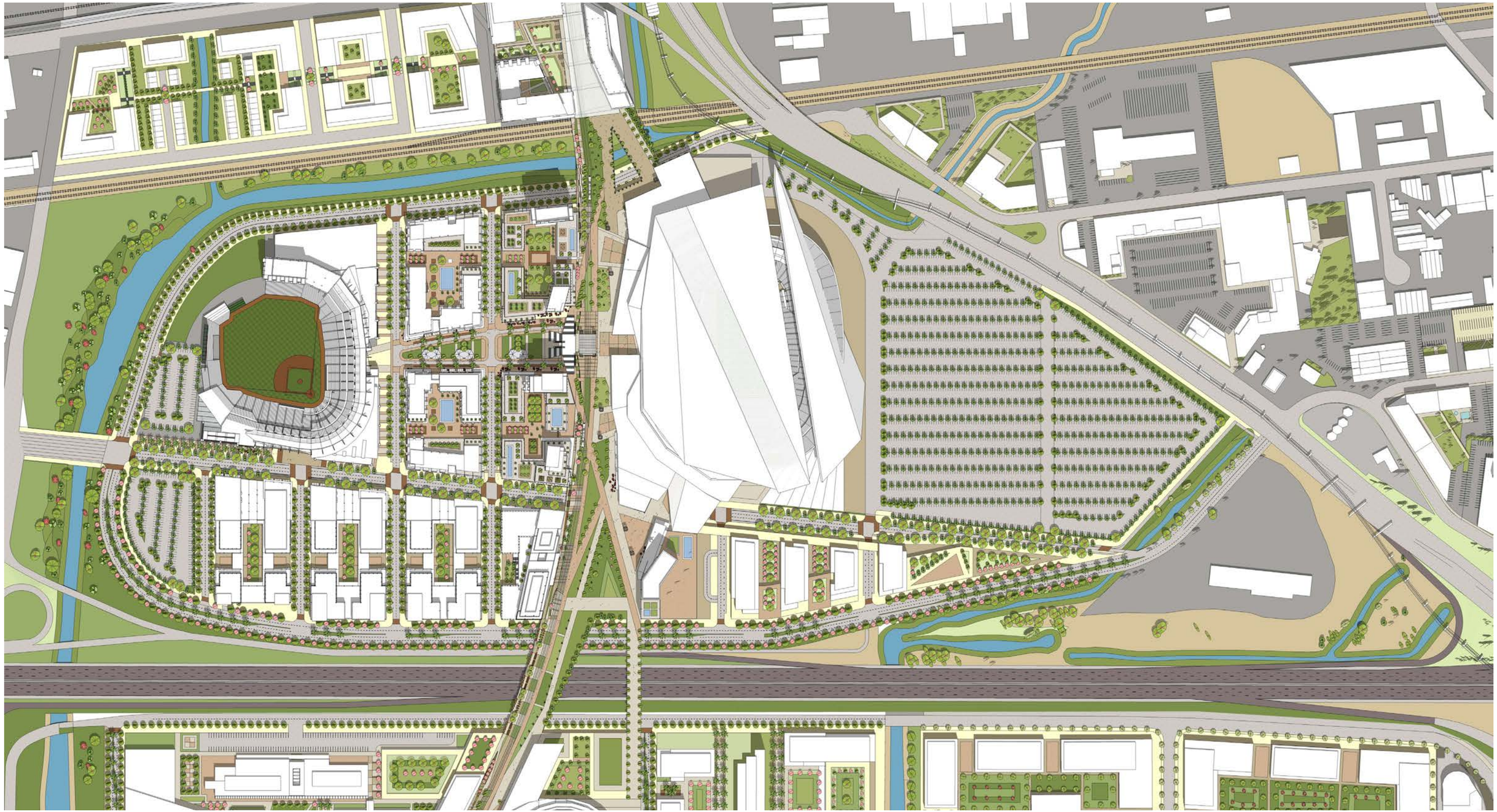

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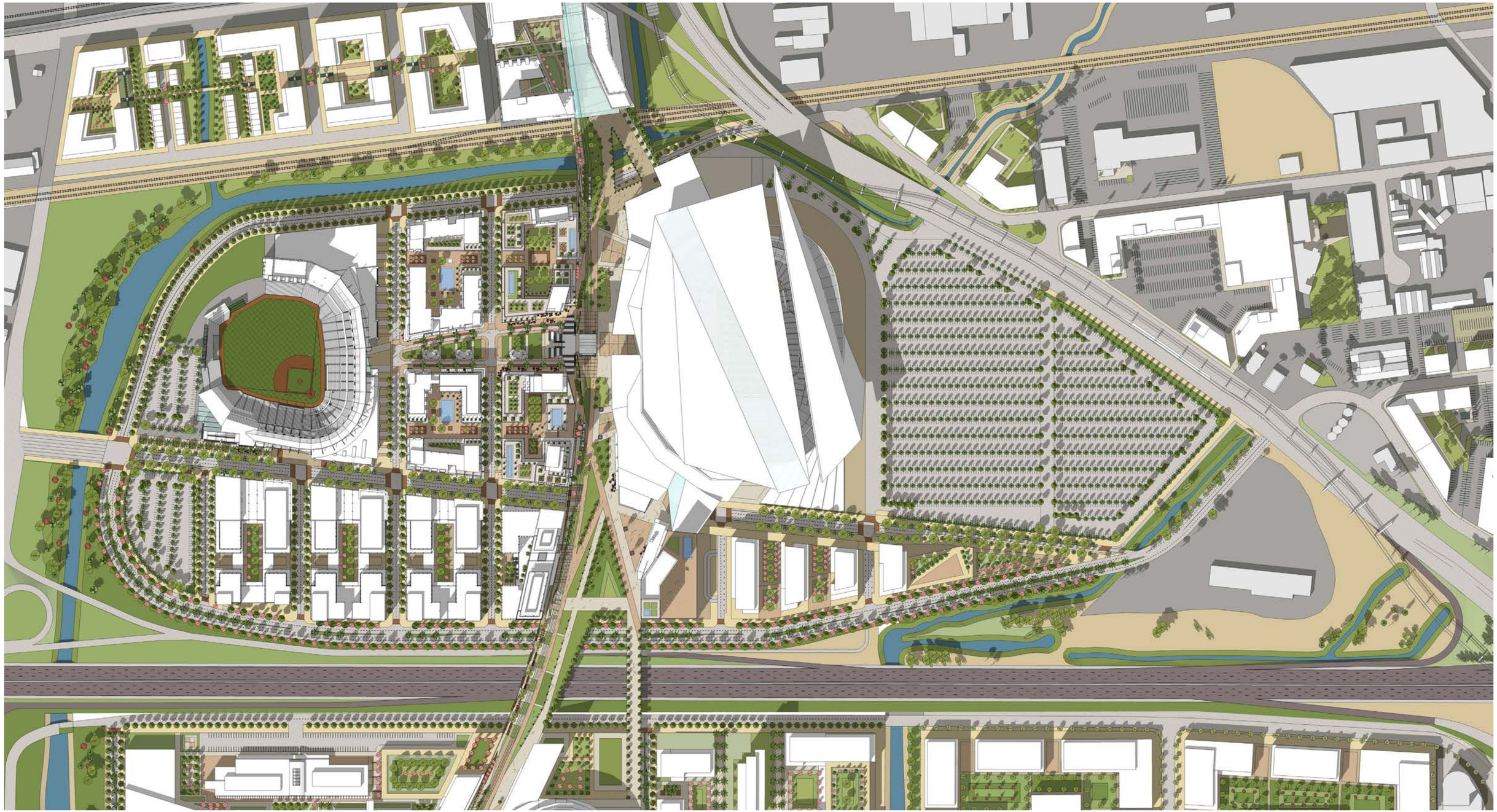

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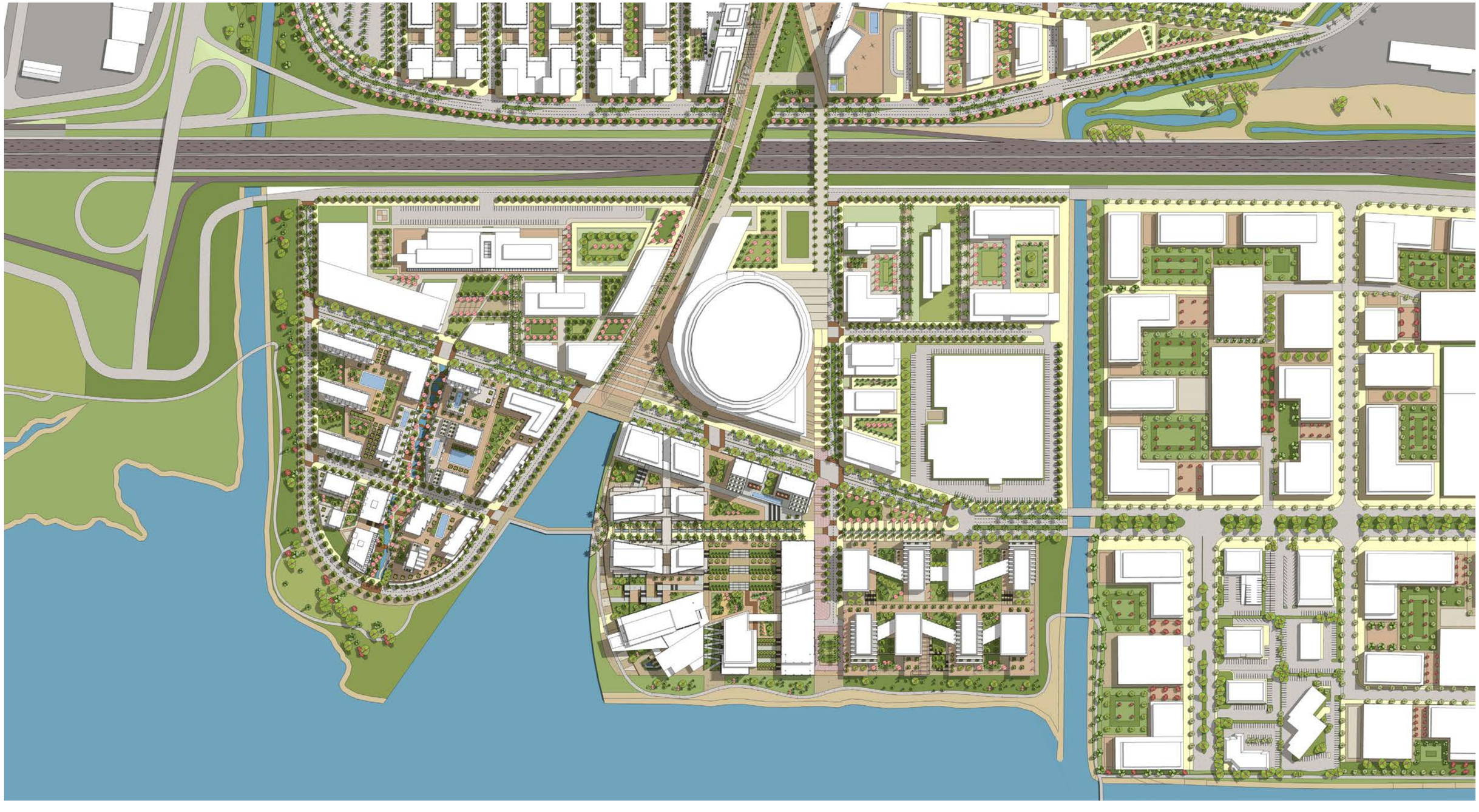

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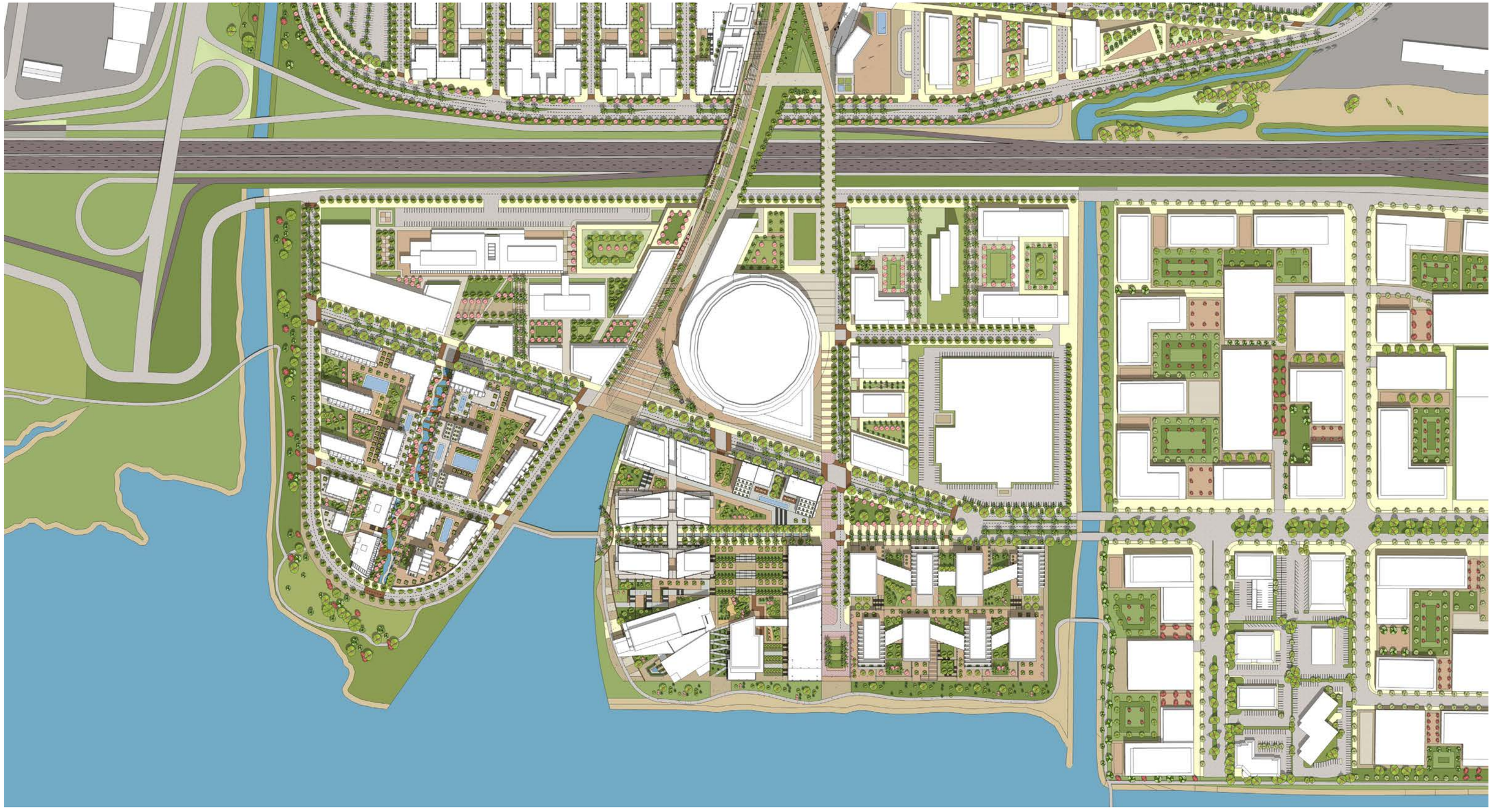

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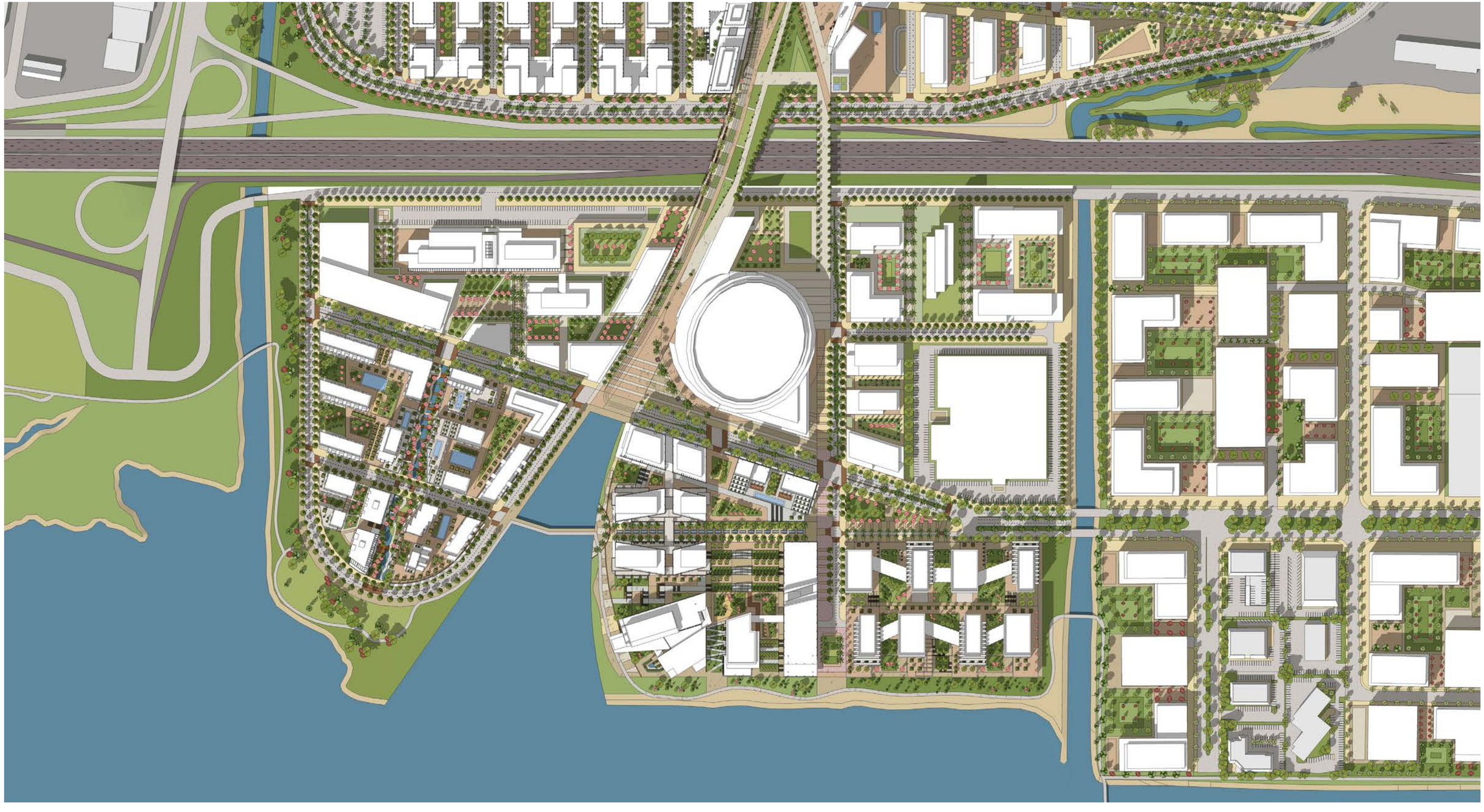

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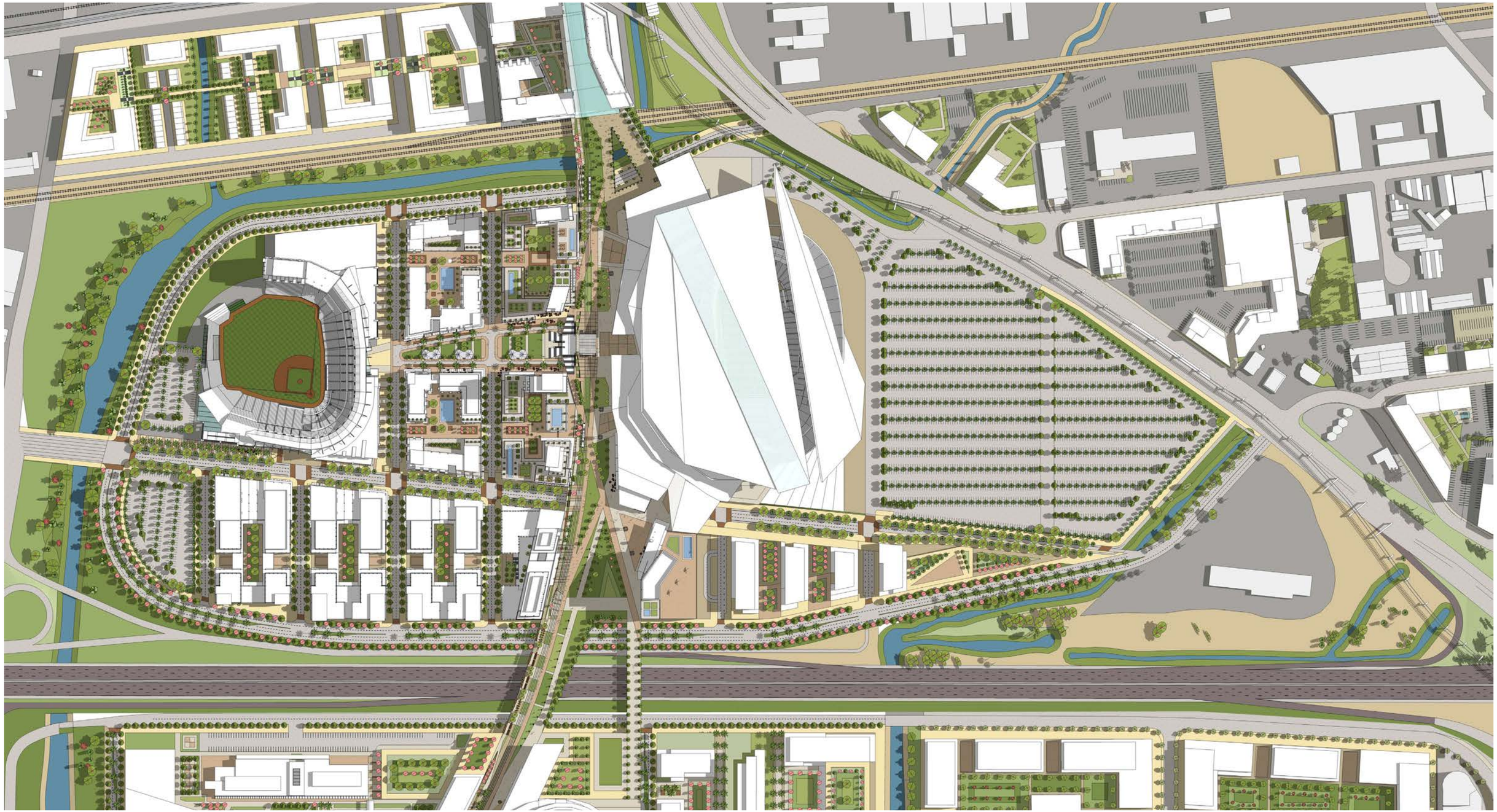

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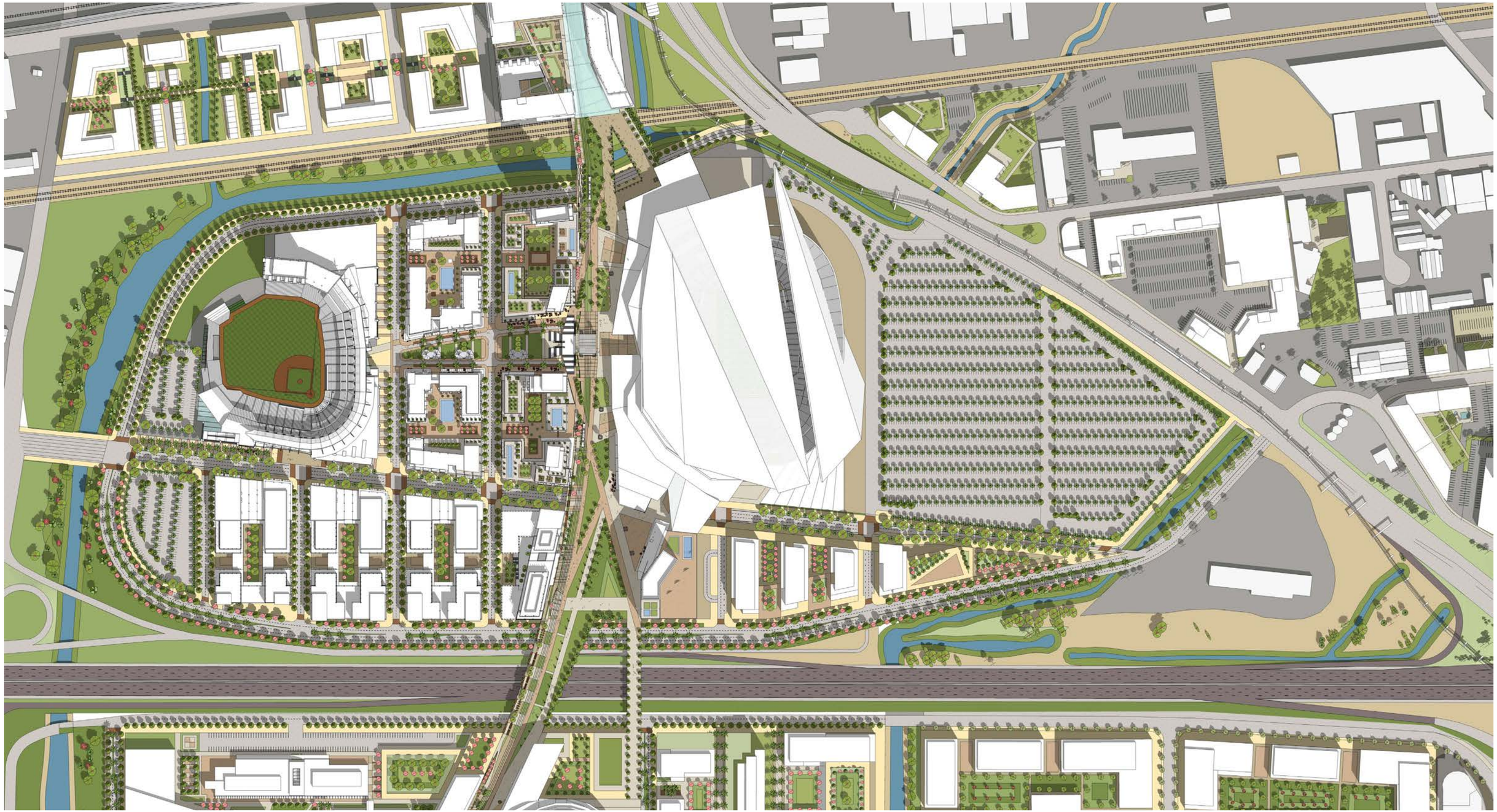

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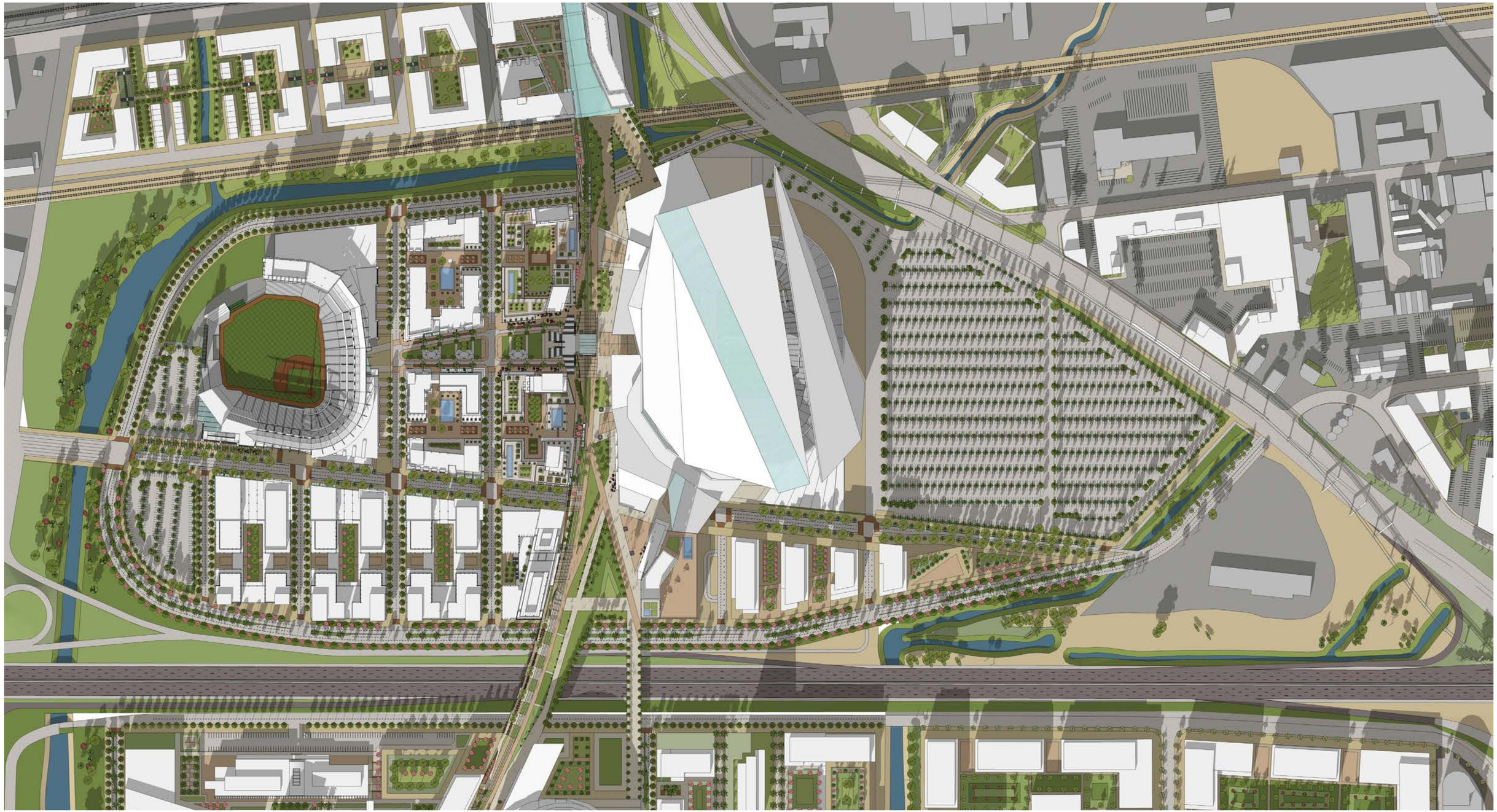

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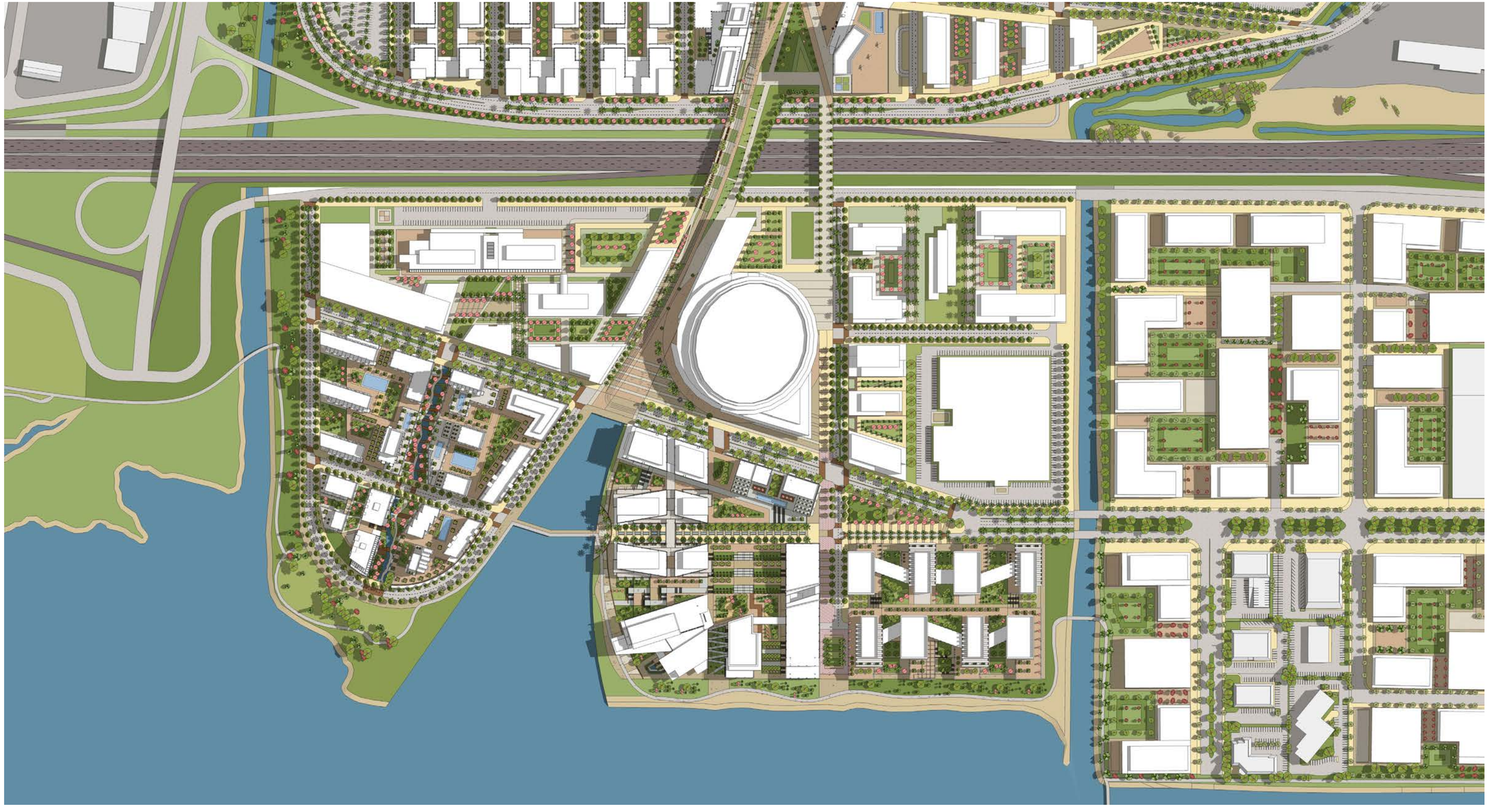

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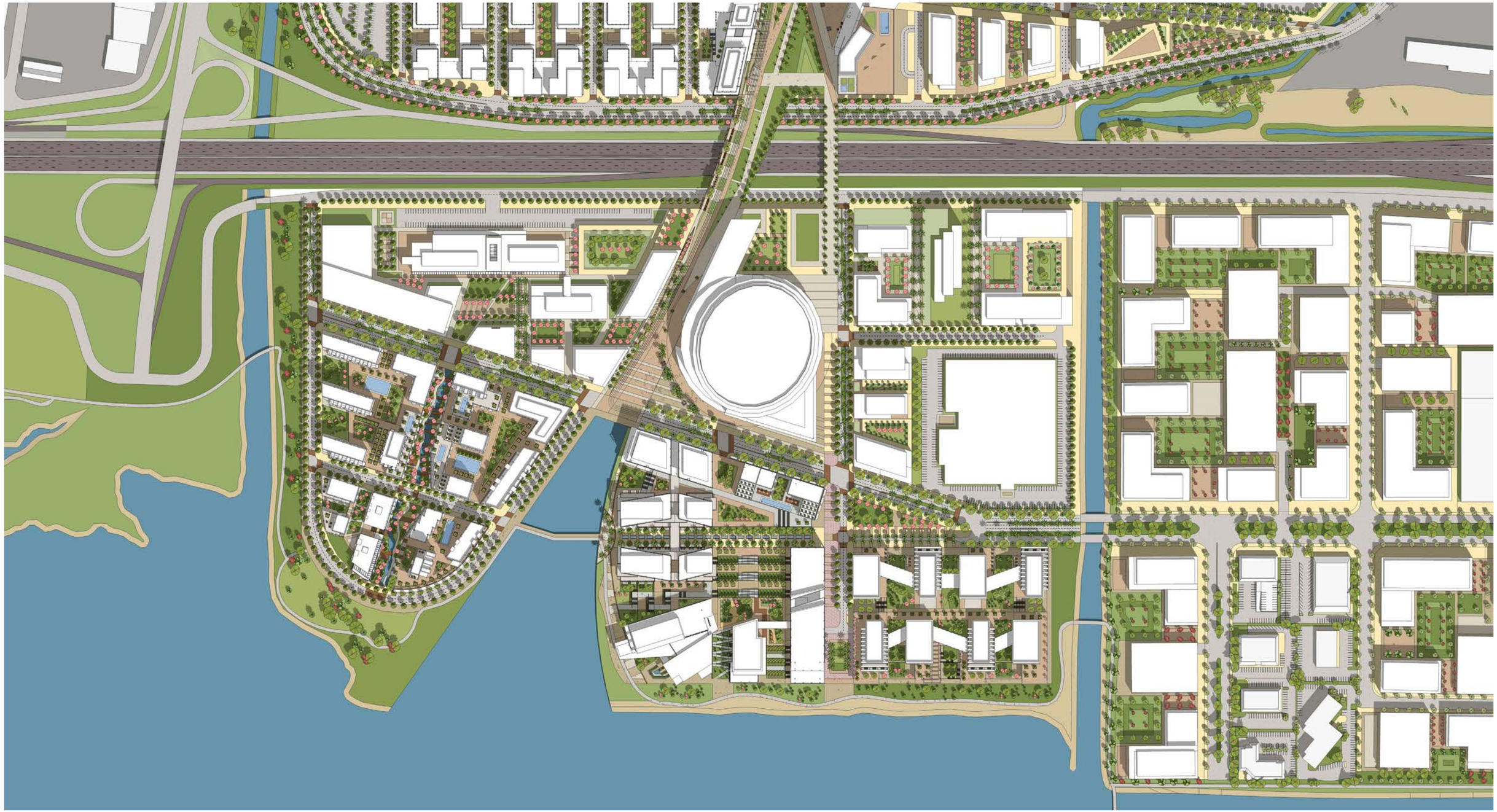

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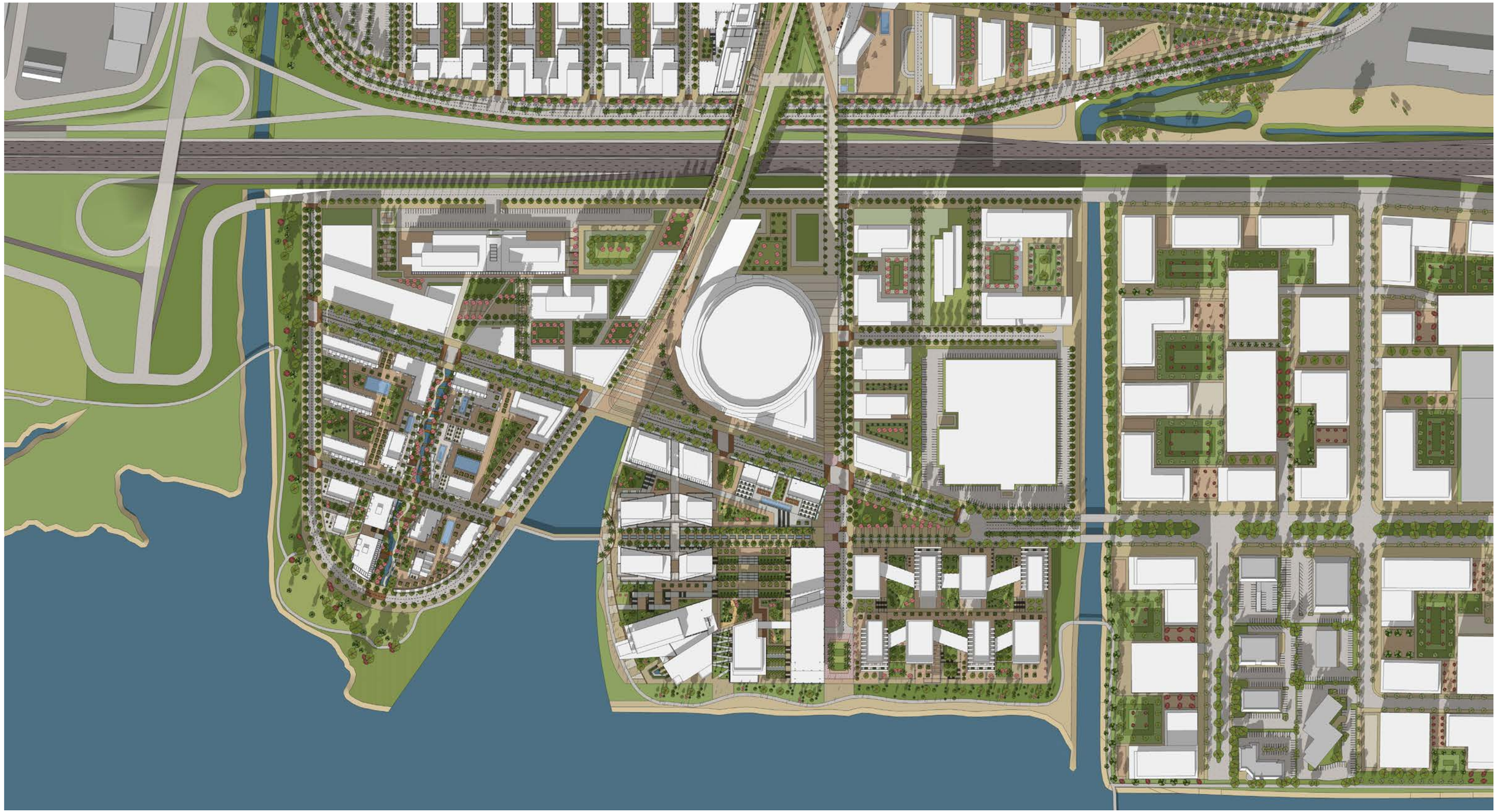

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Winter Solstice

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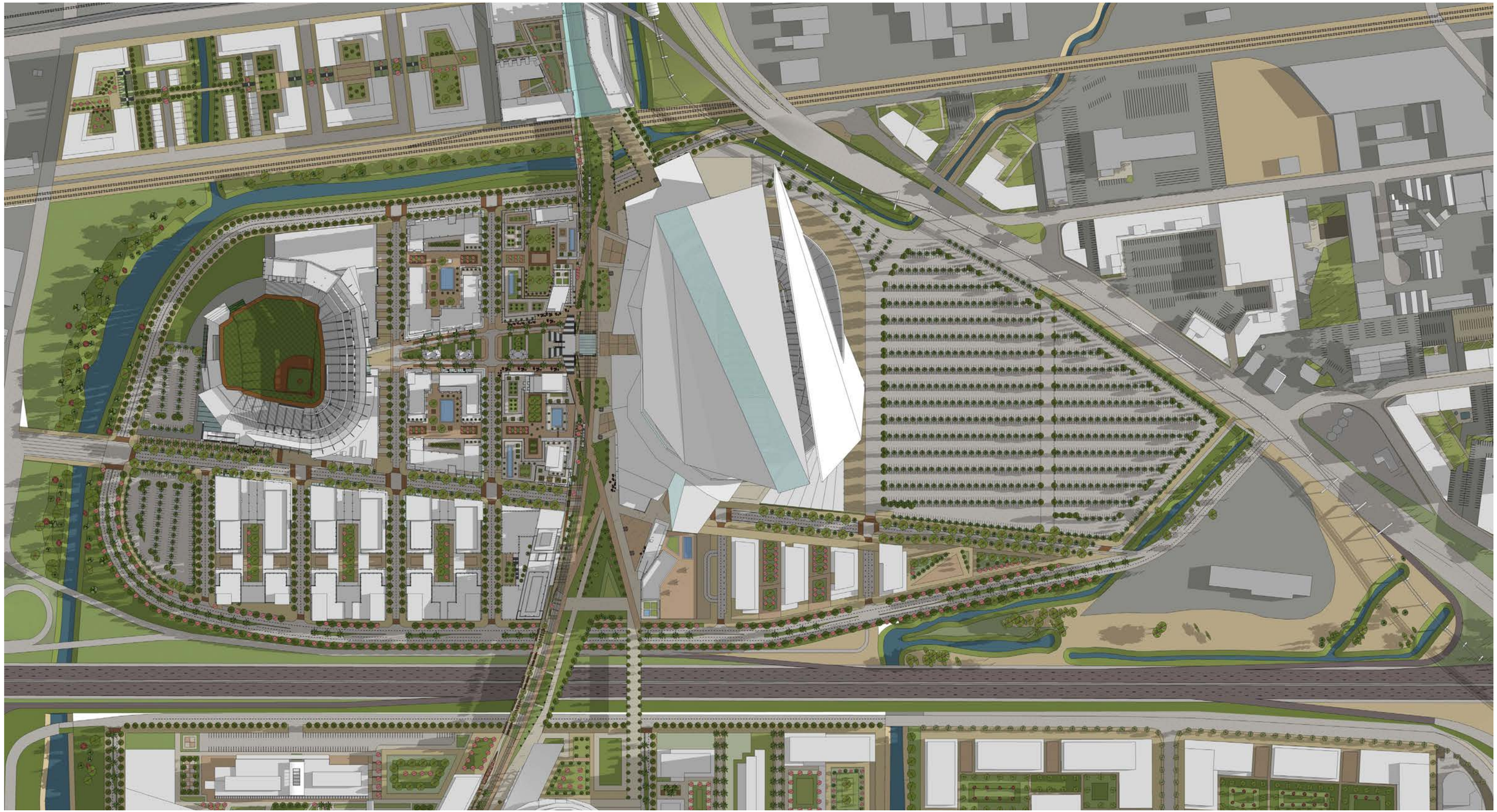

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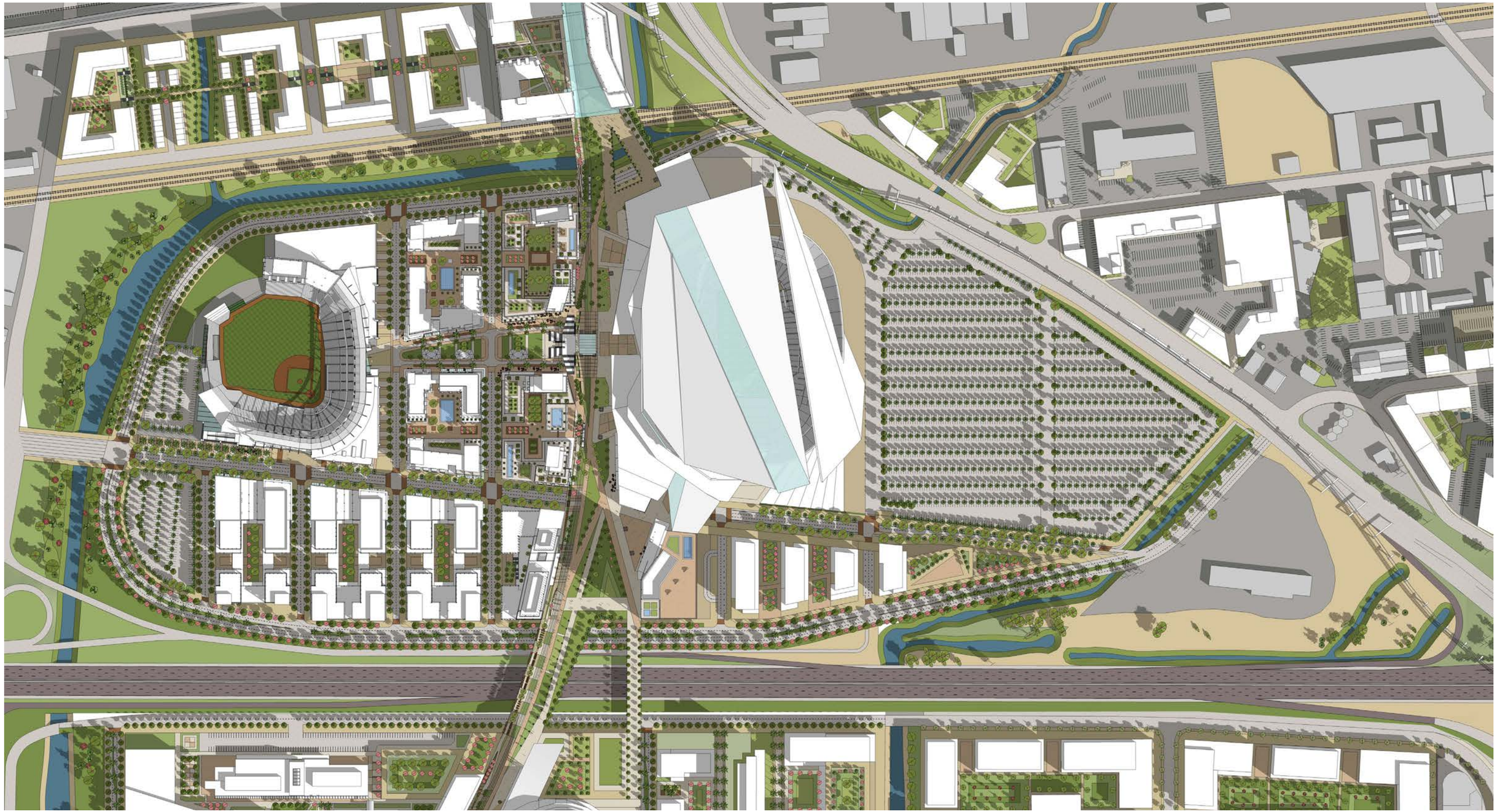

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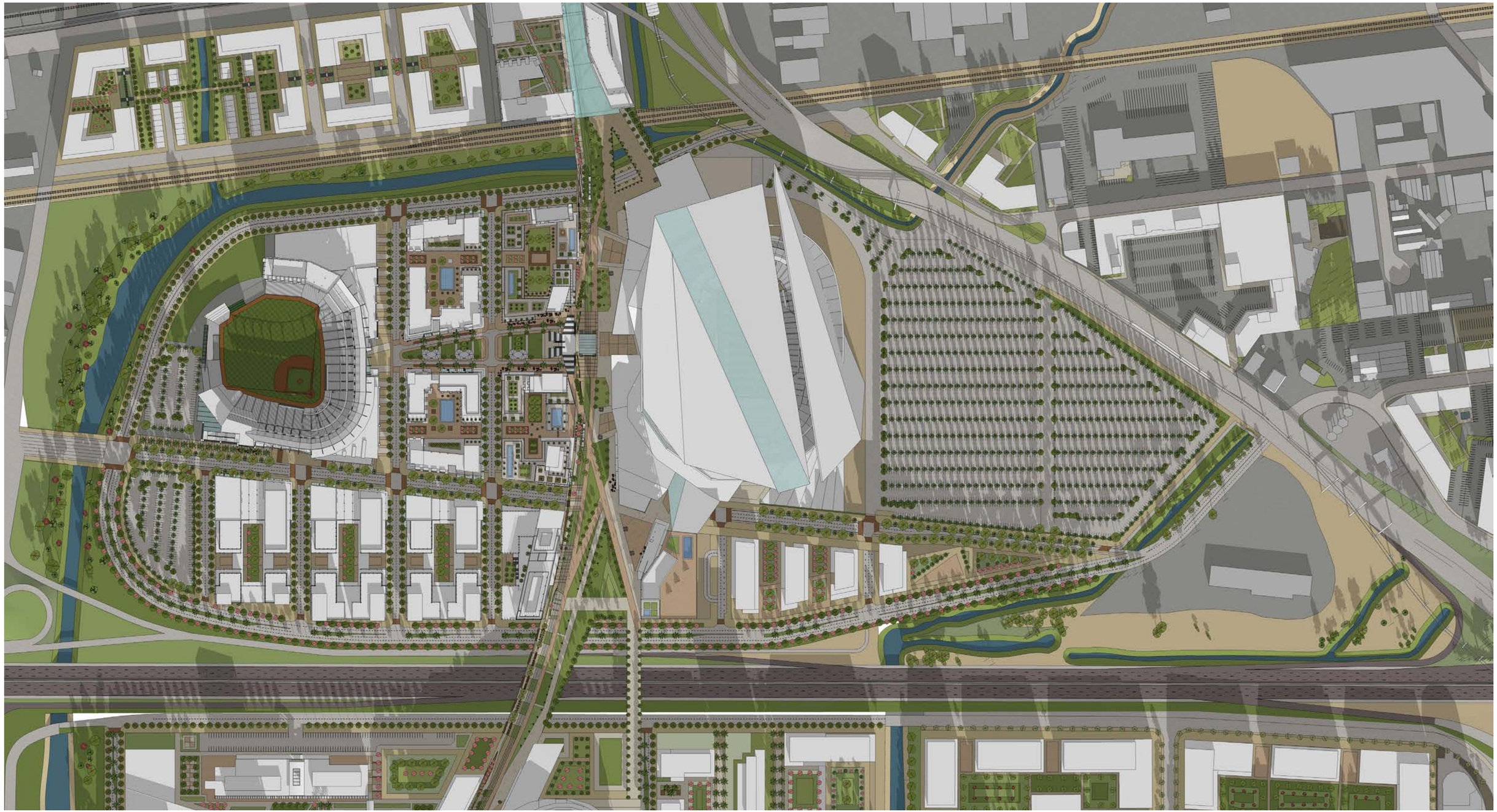

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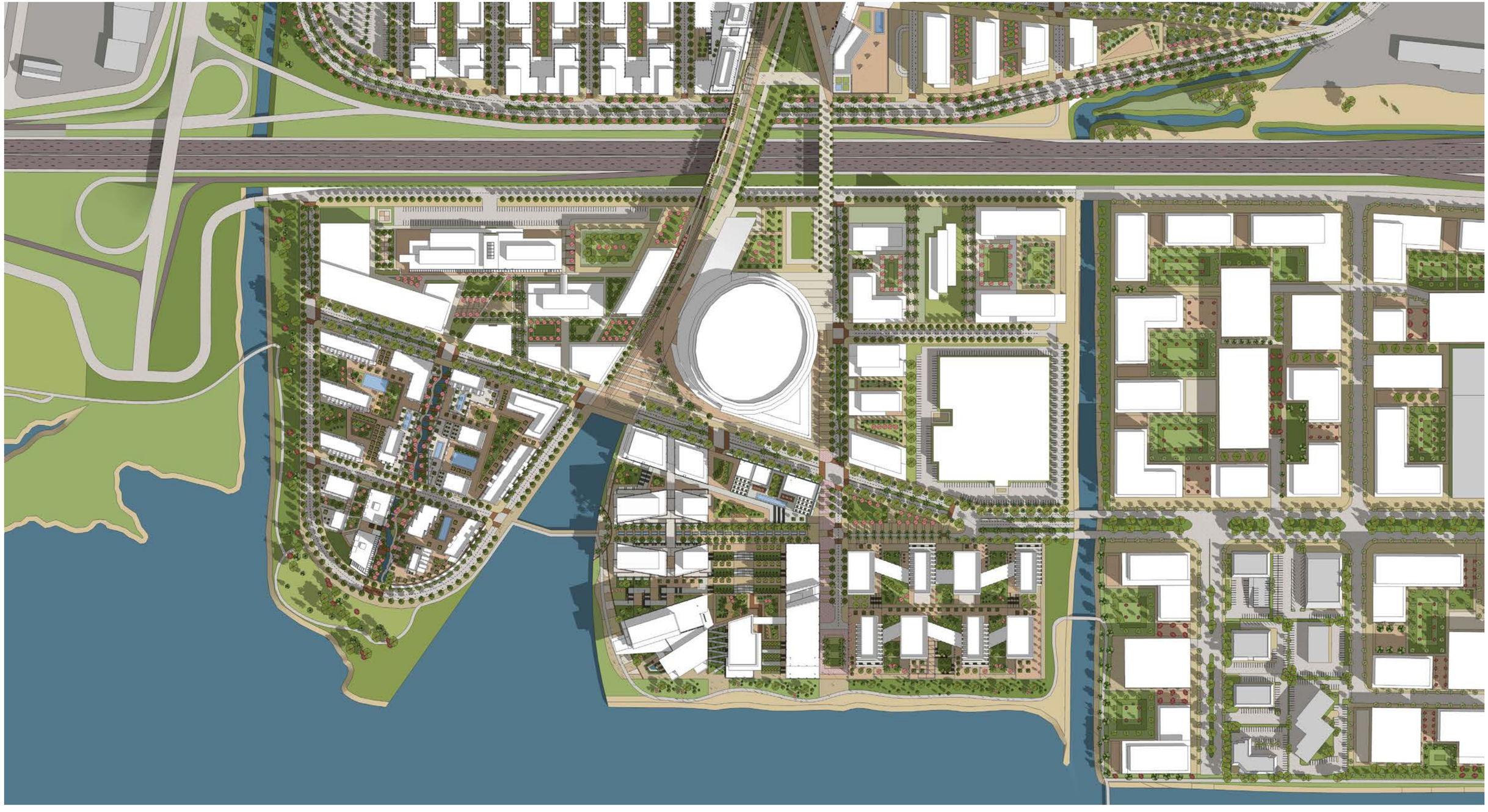

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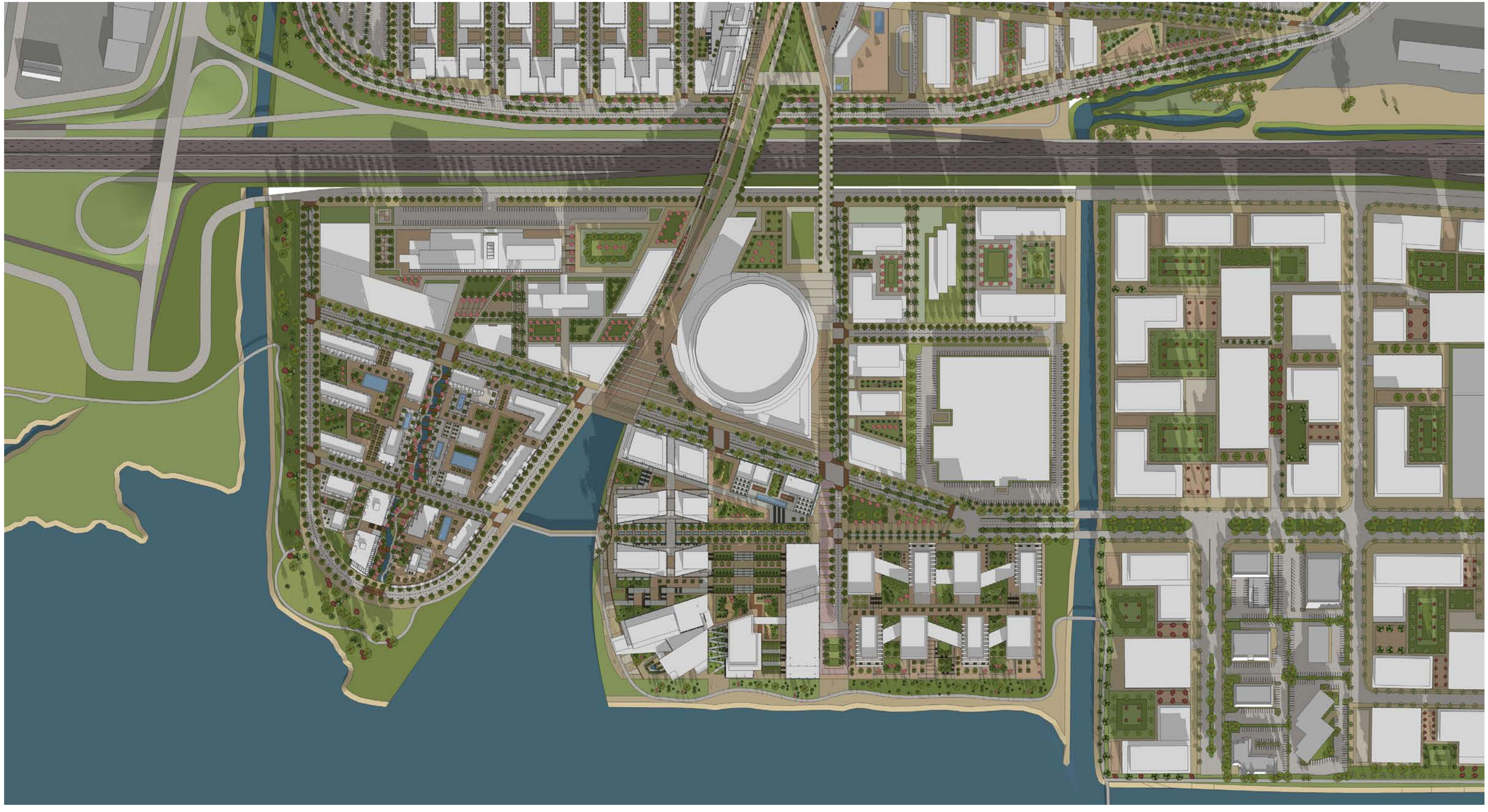

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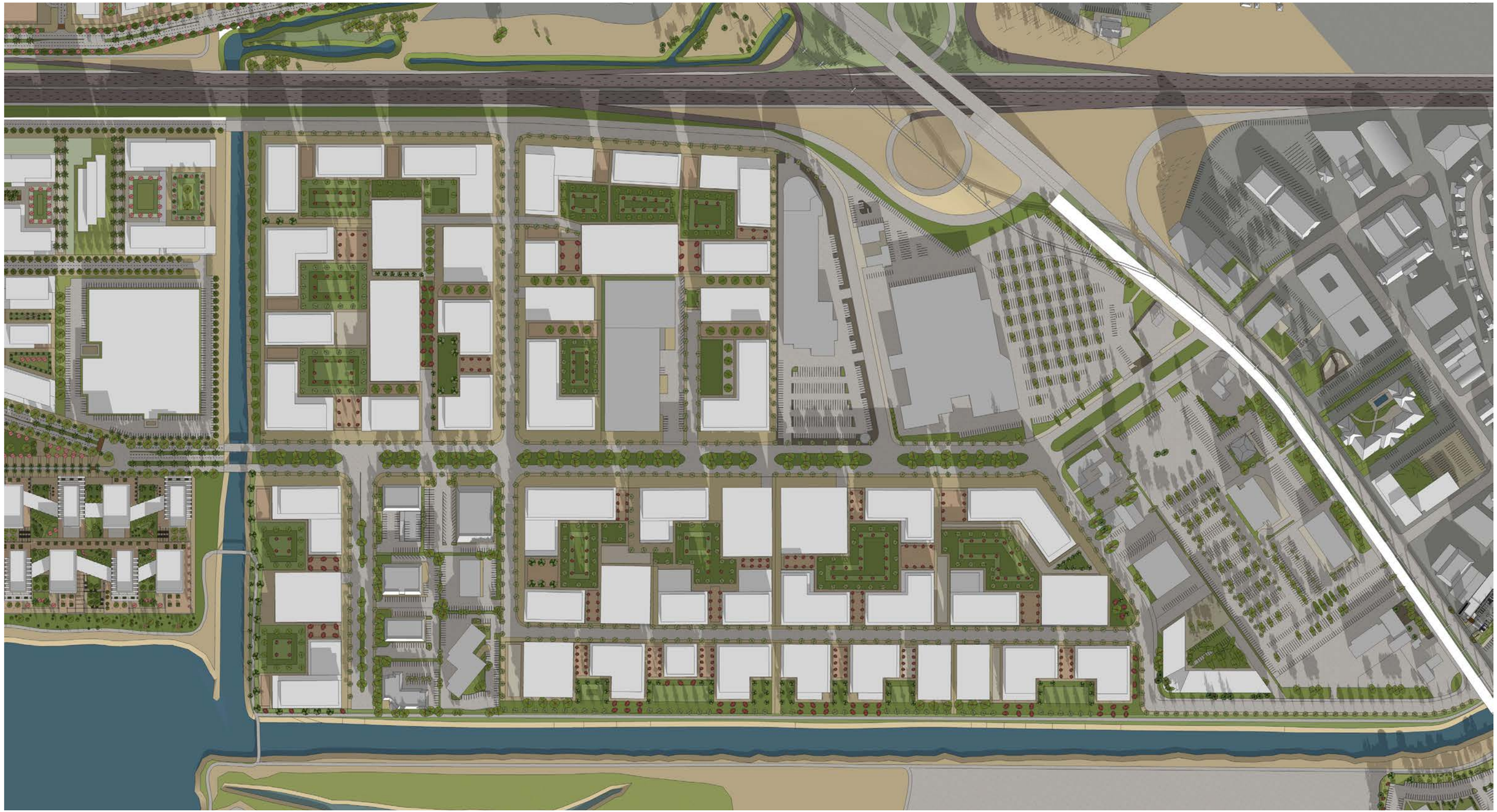

APPENDIX 4.2

URBEMIS Model Outputs and BAAQMD BGM Model Results

January 23, 2014

MEMORANDUM

Re: Detailed Air Quality and Human Health Risk Assessment for the Coliseum Site and Plan Buildout

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The purpose of this memorandum is to summarize the methodology used to assess the air quality and human health impact of the Coliseum Site and Plan Buildout as described in the Coliseum Area Specific Plan. Air dispersion modeling and health risk assessment procedures, as well as analyses results, are described below.

1 Coliseum Site Air Dispersion Model

1.1 Modeled Pollutants and Averaging Periods

The only pollutants modeled for human health impact from construction were diesel particulate matter (DPM) and $PM_{2.5}$. The pollutants modeled for human health impact from operational roadways include DPM, $PM_{2.5}$ and other air toxics speciated from exhaust and evaporative total organic gases (TOGs) for the gasoline-fueled vehicles. The pollutants modeled for cumulative health impact analysis for AMTRAK and freight locomotive are DPM and $PM_{2.5}$, while for the AB&I foundry pollutants modeled are all the air toxics whose emissions were provided by the Bay Area Air Quality Management District ("BAAQM" or "the District").[1] Calculation of chemical concentrations for use in exposure analysis requires the selection of appropriate concentration averaging times. The annual average DPM concentration over the span of the construction was calculated for use in estimating cancer and chronic non-cancer risk from construction. The DPM and gasoline TOG emissions for years 2013 (for baseline) and 2035 (for future Coliseum Site), together with a scaling factor that takes into account the cleaner fleet within the corresponding 70-year period were used in estimating cancer and chronic non-cancer risk from the roadway impact. The annual average DPM concentration based on the existing locomotive activity was calculated for use in estimating cancer and chronic non-cancer risk. The annual average air toxics concentration for the AB&I foundry was calculated for use in estimating cancer and chronic non-cancer risk. Maximum short-term DPM concentrations (one-hour averages) were not estimated as an acute toxicity criteria for DPM has not been developed by the Cal/EPA, as indicated in Table 2-5-1 of BAAQMD Regulation 2 Rule 5 where there is no acute REL listed. Maximum short-term concentrations (one-hour averages) were calculated for gasoline TOGs to evaluate the acute HI from the roadways. Maximum short-term concentrations were not calculated for the cumulative sources including the locomotives and the foundry. The maximum annual $PM_{2.5}$ concentrations were calculated for both construction and roadway analyses. The annual average $PM_{2.5}$ concentration were calculated for both locomotive and foundry analyses.

[1] Emissions data and emissions calculator provided by the District via email on December 10, 2013. Information was requested by ENVIRON using the Risk & Hazard Stationary Source Inquiry form available online at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx

1.2 Modeling Sources

Construction Sources

AERMOD model version 12345 was used for the construction modeling. Emissions from on-site construction equipment were modeled using a grid of 20 meter by 20 meter adjacent volume sources distributed over the site. For use in AERMOD, recommended default source parameters including release height and initial vertical dimension (IVD) in the South Coast Air Quality Management District (SCAQMD) Localized Significant Thresholds (LST) Methodology[2] were used. The initial lateral dimension (ILD) was calculated by dividing the length of the side of the volume source by 4.3, based on the AERMOD guidance for a single volume source.[3] Construction emissions from off-site roadways were quantified based on on-road trip distances traveled within one mile of the Coliseum Site boundary. These emissions were distributed evenly amongst the on-site volume sources. See **Figure 4.6B-1** for modeled construction sources.

Operational Sources

Roadway

Cal3QHCR model version 13196 was used for the roadway modeling. Surface roadway segments within 1,000 ft of the Coliseum Site boundary roadways with traffic volume greater than 10,000 vehicles per day together with Highway I-880 within one-mile of the Coliseum Site boundary were included for the analysis. See **Figure 4.6B-2** for modeled roadway sources.

Locomotive

AERMOD model version 12345 was used for the locomotive modeling. Running emissions within one-mile of the Coliseum Site boundary were modeled using adjacent volume sources distributed on the AMTRAK line to the west of the BART station and the freight train line to the east of the BART station. The widths of the volume sources vary depending on the number of tracks the sources represent. Idling emissions of the AMTRAK line at its Coliseum station were modeled using adjacent volume sources distributed on a 143-m stretch at the station. See **Figure 4.6B-3** for modeled locomotive sources.

AB&I Foundry

AERMOD model version 12345 was used for modeling of emissions from the AB&I foundry. Because various sources including furnaces, tanks, and fugitives etc., an area source that encompasses the entire facility except for the parking area with a release height of six meters and an initial vertical dimension of two meters was used. These source parameters were estimated based on a visual inspection of the facility and were intended to represent emissions from both the exhaust tasks and the ground-based fugitives. See **Figure 4.6B-4** for modeled foundry source.

[2] **According to the LST methodology, dimension of the volume source was determined based on the size of the construction zone.**

[3] USEPA. 2004. User's Guide for the AMS/EPA Regulatory Model – AERMOD. EPA-454/B-03/001.September.

1.3 Terrain

Terrain elevations were incorporated into the model using version 11103 of AERMAP, AERMOD's terrain preprocessor, as per USEPA guidance.[4] Terrain elevation data for the entire modeling domain was extracted from 1/3-arc second National Elevation Dataset (NED) files with resolution of approximately 10 meters, obtained from the United States Geological Survey.[5]

1.4 Meteorological Data

AERMOD requires a meteorological input file to characterize the transport and dispersion of pollutants in the atmosphere. Surface and upper air meteorological data inputs as well as surface parameter data describing the land use and surface characteristics near the Site are first processed using AERMET, the meteorological preprocessor to AERMOD. Meteorological data from Oakland Airport (KOAK) was used, processed for AERMOD using AERSURFACE version 13016 and AERMET version 12345 for the years 2007 to 2011. The KOAK meteorological station is about 2.5 miles southwest of the Facility.

Cal3QHCR requires a meteorological dataset used in the USEPA ISCST3 model. The ISCST3-ready data for KOAK for year 1983 received from the BAAQMD was used for the dispersion modeling.

1.5 Land Use Analysis

AERMOD can evaluate heat island effects from urban areas to atmospheric transport and dispersion using an urban boundary layer option. Consistent with BAAQMD guidance, the urban setting was used in this analysis. For AERMOD modeling, the City of Oakland population of 395,817 based on the Census data[6] together with a default surface roughness of 100 centimeters were used. For Cal3QHCR modeling, the urban mixing height together with the surface roughness of 100 centimeters were used.

1.6 Receptor Locations

The air dispersion analysis used gridded receptor points on-site and off-site. The on-site receptor points represent the general residential population within the residential areas of the Project. The off-site gridded receptor points represent the general population in the vicinity of the Project, which includes residential populations. However, these receptors do not necessarily represent the specific locations of the residential populations in the vicinity of the Project. ENVIRON used discrete Cartesian receptor grid points in the residential areas surrounding the site in the air dispersion modeling. The Cartesian receptors comprise a receptor grid with spacing of 50 meters extending out to a distance of approximately 1 mile from the Coliseum boundary. A flagpole height of 1.8 meters was used for the off-site receptors. The locations of the off-site receptor grid points are shown in **Figure 4.6B-5**. The on-site receptors are spaced 20 meters apart. They are located in four clusters on the land use parcels designated "residential" or "mixed-use". Three flagpole heights were used, reflecting the possibility of

[4] USEPA. 2009. Addendum to User's Guide for the AMS/EPA Regulatory Model - AERMOD. Office of Air Quality Planning and Standards. Air Quality Assessment Division. Research Triangle Park, North Carolina. October

[5] United States Geological Survey (USGS). 2001. National Elevation Dataset. Available online at: http://viewer.nationalmap.gov/viewer/. Accessed November 2013

[6] United States Census Bureau. 2011. 2011 estimated population for City of Oakland. http://quickfacts.census.gov/qfd/states/06/0653000.html

multiple stories of residential development: 1.8 m, 4.8 m and 7.8 m. While more than three stories of development may be possible, these flagpole heights are designed to cover the height at which maximum concentrations are likely to occur. The locations of the on-site receptor grid points are shown in **Figure 4.6B-5.**

Sensitive receptors other than the residential receptors as defined in the City of Oakland CEQA Thresholds of Significance Guidance were identified within 1,000 ft of the Plan Buildout boundary, as shown in **Figure 4.2-2**. These sensitive populations were not evaluated explicitly in this analysis. Instead the off-site residential receptor grid which covers these sensitive receptor locations were evaluated as a conservative estimate of the human health risks at these locations.

1.7 Modeling Adjustment Factors

Cal/EPA recommends applying an adjustment factor to the annual average concentration modeled assuming continuous emissions (*i.e.*, 24 hours per day, 7 days per week), when the actual emissions are less than 24 hours per day and exposures are concurrent with activities occurring at the Project. The modeling adjustment factors are discussed below.

Residents are assumed to be exposed to emissions 24 hours per day, seven days per week. This assumption is consistent with the modeled annual average air concentration (24 hours per day, 7 days per week). Thus, the annual average concentration need not be adjusted and modeling adjustment factors are not needed.

1.8 Hour-of-Day Temporal Profile

An hour-of-day temporal profile was used for the construction modeling based on the City of Oakland Standard Conditions of Approval (SCA) 27, which limits the construction activities to 7:00 AM – 7:00 PM. No temporal profiles were used for the locomotive sources and the foundry sources. Even though no specific temporal profile was used for the roadway segments, the hour-of-day traffic volume used by the model reflects the fluctuation of daily traffic.

1.9 Dispersion Modeling Setup

For the AERMOD models, the simulated dispersion sources were given a unit emissions rate (1 gram per second [g/s]). Chemical air concentrations were estimated using the annual average dispersion factors using the five years of the meteorological data calculated from the model and multiplying them by their respective emissions from each source. For estimation purposes, the annual emissions were averaged over 365 days a year and 24 hours a day.

The following equation was used to estimate these values:

$$\text{Annual Average Concentration} = \left(Q_{annual} \times \left(\frac{\chi}{Q} \right)_{annual} \right)_i$$

Where:

Q = emission rate of DPM (g/s)

$\left(\frac{\chi}{Q}\right)$ = dispersion factor ($\mu g/m^3$)/(g/s)

i = volume source

For the Cal3QHCR model of roadway segments, real hour-of-day emission rate and traffic volume were used to calculate concentrations at on-site and off-site receptors.

1.10 Buffer Analysis for Onsite Residential Areas

Distance based buffers were created in order to analyze the impacts on on-site residents in a scenario in which residential areas would be occupied prior to the completion of project construction. Sources within the buffers were excluded from the model and emissions redistributed among the remaining sources. This methodology models the impacts on on-site residents in scenarios in which a buffer is created around each residential area from which construction equipment is excluded. Buffer distances of 50 meters, 100 meters, and 200 meters were modeled.

2 Risk Characterization Methods

2.1 Exposure Assessment

Potentially Exposed Populations: The off-site receptor populations with the potential for sensitive receptors covered by the CEQA guidelines included in this evaluation are listed as below:

- Residents
- Other Sensitive Populations

The nearest residential populations are next to the northwest boundary of the Coliseum site, as most of the area around the site is commercial. Additional sensitive populations as defined in the City's were identified within the receptor grid defined for this analysis using a map based internet search of businesses in the surrounding area. **Figure 4.2-2** shows the sensitive receptors identified. For purposes of the health impact analysis, only residential receptors were evaluated because the residential receptor grid used in the analysis already covers the locations of the identified sensitive receptors. The Maximally Exposed Individual Sensitive Receptor (MEISR) was then defined as the sensitive receptor (in this case, a residential receptor) with the highest estimated cancer or chronic non-cancer health impacts.

Future on-site residents were also evaluated for the risk assessment.

Exposure Assumptions: The exposure parameters used to estimate excess lifetime cancer risks and non-cancer hazard quotients (HQs) for the on-site and off-site residents were obtained using risk assessment guidelines from Cal/EPA and BAAQMD, unless otherwise noted, and are presented in **Table 4.2B-1**.[7,8]

[7] California Environmental Protection Agency (Cal/EPA). 2003. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. August

Calculation of Intake: The dose estimated for each exposure pathway is a function of the concentration of a chemical and the intake of that chemical. The equations used to calculate the intake factor for inhalation, IF_{inh}, are presented on **Table 4.2B-1**.

The chemical intake or dose is estimated by multiplying the inhalation intake factor, IF_{inh}, by the chemical concentration in air, C_i. When coupled with the chemical concentration, this calculation is mathematically equivalent to the dose algorithm given in Office of Environmental Health Hazard Assessment (OEHHA) Hot Spots guidance.

2.2 Toxicity Assessment

The toxicity assessment characterizes the relationship between the magnitude of exposure and the nature and magnitude of adverse health effects that may result from such exposure. For purposes of calculating exposure criteria to be used in risk assessments, adverse health effects are classified into two broad categories – cancer and non-cancer endpoints. Toxicity values used to estimate the likelihood of adverse effects occurring in humans at different exposure levels are identified as part of the toxicity assessment component of a risk assessment. The carcinogenic and chronic non-cancer toxicity values for the involved air toxics are summarized in **Table 4.2B-2**.

2.3 Cancer Risk Adjustment Factors

In order to compare the project with the thresholds specified in the BAAQMD Guidance, the estimated excess lifetime cancer risks for a lifetime resident were adjusted using the cancer risk adjustment factor (CRAF) calculated based on the age sensitivity factors (ASF) recommended in the Cal/EPA OEHHA Technical Support Document (TSD) and the 2010 BAAQMD Health and Safety Risk Analysis Guidelines.[9,10] This approach accounts for an "anticipated special sensitivity to carcinogens" of infants and children. Cancer risk estimates are weighted by a factor of 10 for exposures that occur from the third trimester of pregnancy to two years of age and by a factor of three for exposures that occur from two years through 15 years of age. No weighting factor (*i.e.*, a CRAF of one, which is equivalent to no adjustment) is applied to ages 16 to 70 years. **Table 4.2B-3** shows the CRAF used for lifetime residents for roadway, locomotive, and foundry sources, and the CRAF used for resident child for construction sources.

2.4 Risk Characterization

2.4.1 Estimation of Cancer Risks

Excess lifetime cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (*e.g.,* lungs) by the chemical-specific cancer potency factor (CPF).

[8] BAAQMD. 2010. Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. January

[9] Cal/EPA. 2009. Technical Support Document for Cancer Potency Factors: Methodologies for derivation, listing of available values, and adjustments to allow for early life stage exposures. Office of Environmental Health Hazard Assessment. May

[10] BAAQMD. 2010b. Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. January

The equation used to calculate the potential excess lifetime cancer risk for the inhalation pathway is as follows:

$$Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF \times CRAF$$

Where:

$Risk_{inh}$	=	Cancer Risk; the incremental probability of an individual developing cancer as a result of inhalation exposure to a particular potential carcinogen (unitless)
C_i	=	Annual Average Air Concentration for $Chemical_i$ ($\mu g/m^3$)
CF	=	Conversion Factor (mg/µg)
IF_{inh}	=	Intake Factor for Inhalation (m^3/kg-day)
CPF_I	=	Cancer Potency Factor for $Chemical_i$ $(mg\ chemical/kg\ body\ weight\text{-}day)^{-1}$
CRAF	=	Cancer Risk Adjustment Factor (unitless)

2.4.2 Estimation of Chronic Non-cancer Hazard Quotients/Indices

The potential for exposure to result in chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) to the chemical-specific non-cancer chronic reference exposure levels (RELs). When calculated for a single chemical, the comparison yields a ratio termed a HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the HQs for all chemicals are summed, yielding a hazard index or HI.

The equations used to calculate the chemical-specific HQs and the overall HI are:

$$\text{Chronic } HQ_i = C_i / cREL_i$$

$$\text{Chronic HI} = \Sigma HQ_i$$

Where:

Chronic HQ_i	=	Chronic Hazard Quotient for $Chemical_i$ (unitless)
Chronic HI	=	Hazard Index (unitless)
C_i	=	Annual Average Air Concentration for $Chemical_i$ ($\mu g/m^3$)
$cREL_i$	=	Chronic Non-cancer Reference Exposure Level for $Chemical_i$ ($\mu g/m^3$)

2.4.3 Estimation of Acute Non-cancer Hazard Quotients/Indices

The potential for exposure to result in adverse acute effects is evaluated by comparing the estimated one-hour maximum air concentration of chemical to the acute reference exposure level (aREL) for each chemical evaluated in ths analysis. When calculated for a single chemical, the comparison yields an HQ. To evaluate the potential for adverse acute health effects from

simultaneous exposure to multiple chemicals, the HQs for all chemicals are summed, yielding a HI.

$$\text{Acute } HQ_i = C_i / aREL_i$$

$$\text{Acute HI} = \Sigma HQ_i$$

Where:

Acute HQ_i	=	Acute Hazard Quotient for $Chemical_i$ (unitless)
Acute HI	=	Hazard Index (unitless)
C_i	=	One-hour Maximum Air Concentration for $Chemical_i$ ($\mu g/m^3$)
$aREL_i$	=	Acute Non-cancer Reference Exposure Level for $Chemical_i$ ($\mu g/m^3$)

3 Uncertainties

In accordance with risk assessment guidance, the uncertainties associated with this analysis, including emissions estimation, air dispersion modeling, and risk estimation, have been evaluated. The following sections summarize the critical uncertainties associated with the emissions estimation, air dispersion modeling, and risk estimation components of the risk assessment. This analysis was performed using the best data and methodologies available at the time, notwithstanding the fact that there are the uncertainties outlined below.

Estimation of Emissions: There are uncertainties associated with the estimation of emissions from construction and operation of the Project. Where project-specific data, such as construction equipment lists, are not available, default assumptions in CalEEMod™ were used. CalEEMod™ default equipment lists are based on a survey of construction sites up to 34 acres in area. The area of this Coliseum Site is approximately 200 acres. Consequently, the default equipment list may not be representative of project equipment.

Estimation of Exposure Concentrations: There is also uncertainty associated with the estimated exposure concentrations. The limitations of the air dispersion model provide a source of uncertainty in the estimation of exposure concentrations. According to USEPA, errors due to the limitation of the algorithms implemented in the air dispersion model in the highest estimated concentrations of +/- 10 percent to 40 percent are typical.[11]

Source Representation: The source parameters used to model emission sources add uncertainty. For all emission sources, the selected source parameters were either project-specific, recommended as defaults, or expected to produce more conservative results.

[11] USEPA. 2005. Guideline on Air Quality Models (Revised). 40 Code of Federal Regulations, Part 51, Appendix W. Office of Air Quality Planning and Standards. November.

Discrepancies might exist in actual emissions characteristics of a source and its representation in the model; exposure concentrations used in this assessment represent approximate exposure concentrations.

Exposure Assumptions: For the assessment of cumulative health risk impacts, numerous assumptions must be made in order to estimate human exposure to chemicals. These assumptions include parameters such as breathing rates, exposure time and frequency, exposure duration, and human activity patterns. While a mean value derived from scientifically defensible studies is the best estimate of central tendency, most of the exposure variables used in this analysis are high-end estimates. For example, it is assumed that residential receptor exposure to the Project and existing emissions occurs during the entire operational duration and exposure to the cumulative emissions sources occur 24 hours per day for 350 days per year, a highly conservative assumption since most residents do not remain in their homes for this period of time. The combination of several high-end estimates used as exposure parameters may substantially overestimate chemical intake. The excess lifetime cancer risks calculated in this assessment are therefore likely to be higher than may be required to be protective of public health.

Toxicity Assessment: The Cal/EPA CPF for DPM was used to estimate cancer risks associated with exposure to DPM from the Project and off-site emissions. However, the CPF derived by Cal/EPA for DPM is highly uncertain in both the estimation of response and dose. In the past, due to inadequate animal test data and epidemiology data on diesel exhaust, the International Agency for Research on Cancer (IARC), a branch of the World Health Organization (WHO), had classified DPM as Probably Carcinogenic to Humans (Group 2); the USEPA had also concluded that the existing data did not provide an adequate basis for quantitative risk assessment.[12] However, based on two recent scientific studies,[13,14] IARC recently re-classified DPM as Carcinogenic to Humans to Group 1, which means that the agency has determined that there is "sufficient evidence of carcinogenicity" of a substance in humans and represents the strongest weight-of-evidence rating in IARC's carcinogen classification scheme.[15]

Risk Calculations: The USEPA notes that the conservative assumptions used in a risk assessment are intended to assure that the estimated risks do not underestimate the actual risks posed by a site and that the estimated risks do not necessarily represent actual risks experienced by populations at or near a site.[16]

[12] USEPA. 2002. Health Assessment Document for Diesel Engine Exhaust. National Center for Environmental Assessment, Office of Research and Development, Washington, DC. EPA/600/8-90/057F. May

[13] Silverman DT, Samanic CM, Lubin JH, Blair AE, Stewart PA, Vermeulen R, Coble JB, Rothman N, Schleiff PL, Travis WD, Ziegler RG, Wacholder S, Attfield MD. 2012. The Diesel Exhaust in Miners Study: A Cohort Mortality Study With Emphasis on Lung Cancer. J Natl Cancer Inst

[14] Attfield MD, Schleiff PL, Lubin JH, Blair A, Stewart PA, Vermeulen R, Coble JB, Silverman DT. 2012. The Diesel Exhaust in Miners Study: A Nested Case-Control Study of Lung Cancer and Diesel Exhaust. J Natl Cancer Inst.

[15] International Agency for Research on Cancer (IARC). 2012. Press Release No. 213. IARC: Diesel Engine Exhaust Carcinogenic. June.

[16] United States Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund Human Health Risk Assessment: U.S. EPA Region IX Recommendations (Interim Final). San Francisco, CA. December

The estimated risks in this analysis are based primarily on a series of conservative assumptions related to predicted environmental concentrations, exposure, and chemical toxicity. The use of conservative assumptions tends to produce upper-bound estimates of risk. Although it is difficult to quantify the uncertainties associated with all the assumptions made in this risk assessment, the use of conservative assumptions is likely to result in substantial overestimates of exposure, and hence, risk. BAAQMD acknowledges this uncertainty by stating: "the methods used [to estimate risk] are conservative, meaning that the real risks from the source may be lower than the calculations, but it is unlikely that they will be higher."[17]

[17] BAAQMD. 2011. Frequently Asked Questions – Toxic Air Contaminants. Available online at: http://www.baaqmd.gov/Help/~/~/link.aspx?_id=C8992846AA0045ECABDB489211201B61&_z=z. Accessed July 2013

Appendix A

CalEEMod™ Output

“Demolition Only” CalEEMod™ Output

Emissions from Demolition within the Coliseum Site

Oakland Coliseum - Demolition

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	89.15	1000sqft	3.40	89,150.00	0
Place of Worship	7.75	1000sqft	0.61	7,750.00	0
General Light Industry	58.50	1000sqft	7.29	58,500.00	0
Unrefrigerated Warehouse-No Rail	157.75	1000sqft	11.80	157,750.00	0
Unrefrigerated Warehouse-No Rail	190.93	1000sqft	14.58	190,930.00	0
Parking Lot	40.00	Acre	40.00	1,742,400.00	0
Arena	615.00	1000sqft	8.67	615,000.00	0
Arena	1,251.40	1000sqft	103.20	1,251,400.00	0
High Turnover (Sit Down Restaurant)	6.95	1000sqft	1.28	6,950.00	0
Automobile Care Center	30.00	1000sqft	6.55	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	582.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 Non-Default Data

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	2.05	3.40

tblLandUse	LotAcreage	0.18	0.61
tblLandUse	LotAcreage	1.34	7.29
tblLandUse	LotAcreage	3.62	11.80
tblLandUse	LotAcreage	4.38	14.58
tblLandUse	LotAcreage	402.24	103.20
tblLandUse	LotAcreage	197.68	8.67
tblLandUse	LotAcreage	0.16	1.28
tblLandUse	LotAcreage	0.69	6.55
tblProjectCharacteristics	CO2IntensityFactor	641.35	582.77
tblProjectCharacteristics	OperationalYear	2014	2035

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.6097	6.9930	5.1448	7.9500e-003	1.1789	0.2887	1.4676	0.1905	0.2691	0.4595	0.0000	744.5528	744.5528	0.1063	0.0000	746.7851
Total	**0.6097**	**6.9930**	**5.1448**	**7.9500e-003**	**1.1789**	**0.2887**	**1.4676**	**0.1905**	**0.2691**	**0.4595**	**0.0000**	**744.5528**	**744.5528**	**0.1063**	**0.0000**	**746.7851**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2014	0.6097	6.9930	5.1448	7.9500e-003	0.5843	0.2887	0.8731	0.1004	0.2691	0.3695	0.0000	744.5524	744.5524	0.1063	0.0000	746.7847
Total	**0.6097**	**6.9930**	**5.1448**	**7.9500e-003**	**0.5843**	**0.2887**	**0.8731**	**0.1004**	**0.2691**	**0.3695**	**0.0000**	**744.5524**	**744.5524**	**0.1063**	**0.0000**	**746.7847**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.43**	**0.00**	**40.51**	**47.26**	**0.00**	**19.59**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Energy	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	8,340.8343	8,340.8343	0.3271	0.1090	8,381.4901
Mobile	6.6578	8.7370	60.9549	0.0638	3.3040	0.1284	3.4325	0.8884	0.1187	1.0070	0.0000	4,230.5774	4,230.5774	0.1296	0.0000	4,233.2997
Waste						0.0000	0.0000		0.0000	0.0000	157.5311	0.0000	157.5311	9.3098	0.0000	353.0374
Water						0.0000	0.0000		0.0000	0.0000	291.6100	1,373.2682	1,664.8782	30.0195	0.7214	2,518.9057
Total	**24.4402**	**11.3792**	**63.1966**	**0.0797**	**3.3040**	**0.3293**	**3.6334**	**0.8884**	**0.3195**	**1.2079**	**449.1411**	**13,944.7237**	**14,393.8648**	**39.7861**	**0.8303**	**15,486.7790**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Energy	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	8,340.8343	8,340.8343	0.3271	0.1090	8,381.4901
Mobile	6.6578	8.7370	60.9549	0.0638	3.3040	0.1284	3.4325	0.8884	0.1187	1.0070	0.0000	4,230.5774	4,230.5774	0.1296	0.0000	4,233.2997
Waste						0.0000	0.0000		0.0000	0.0000	157.5311	0.0000	157.5311	9.3098	0.0000	353.0374
Water						0.0000	0.0000		0.0000	0.0000	291.6100	1,373.2682	1,664.8782	30.0140	0.7202	2,518.4405
Total	**24.4402**	**11.3792**	**63.1966**	**0.0797**	**3.3040**	**0.3293**	**3.6334**	**0.8884**	**0.3195**	**1.2079**	**449.1411**	**13,944.7237**	**14,393.8648**	**39.7806**	**0.8292**	**15,486.3138**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.14**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	10/7/2014	5	200	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	9,990.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0810	0.0000	1.0810	0.1637	0.0000	0.1637	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4596	4.9543	3.6287	3.9900e-003		0.2527	0.2527		0.2359	0.2359	0.0000	377.7595	377.7595	0.1021	0.0000	379.9032
Total	**0.4596**	**4.9543**	**3.6287**	**3.9900e-003**	**1.0810**	**0.2527**	**1.3337**	**0.1637**	**0.2359**	**0.3996**	**0.0000**	**377.7595**	**377.7595**	**0.1021**	**0.0000**	**379.9032**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.1429	2.0280	1.4127	3.7900e-003	0.0843	0.0359	0.1202	0.0232	0.0330	0.0562	0.0000	353.5347	353.5347	3.3700e-003	0.0000	353.6054
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2400e-003	0.0106	0.1033	1.6000e-004	0.0136	1.3000e-004	0.0138	3.6200e-003	1.2000e-004	3.7400e-003	0.0000	13.2586	13.2586	8.5000e-004	0.0000	13.2764
Total	**0.1501**	**2.0387**	**1.5160**	**3.9500e-003**	**0.0979**	**0.0360**	**0.1339**	**0.0268**	**0.0331**	**0.0599**	**0.0000**	**366.7933**	**366.7933**	**4.2200e-003**	**0.0000**	**366.8819**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4864	0.0000	0.4864	0.0737	0.0000	0.0737	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4596	4.9543	3.6287	3.9900e-003		0.2527	0.2527		0.2359	0.2359	0.0000	377.7591	377.7591	0.1021	0.0000	379.9028
Total	**0.4596**	**4.9543**	**3.6287**	**3.9900e-003**	**0.4864**	**0.2527**	**0.7391**	**0.0737**	**0.2359**	**0.3096**	**0.0000**	**377.7591**	**377.7591**	**0.1021**	**0.0000**	**379.9028**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1429	2.0280	1.4127	3.7900e-003	0.0843	0.0359	0.1202	0.0232	0.0330	0.0562	0.0000	353.5347	353.5347	3.3700e-003	0.0000	353.6054
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2400e-003	0.0106	0.1033	1.6000e-004	0.0136	1.3000e-004	0.0138	3.6200e-003	1.2000e-004	3.7400e-003	0.0000	13.2586	13.2586	8.5000e-004	0.0000	13.2764

Total	**0.1501**	**2.0387**	**1.5160**	**3.9500e-003**	**0.0979**	**0.0360**	**0.1339**	**0.0268**	**0.0331**	**0.0599**	**0.0000**	**366.7933**	**366.7933**	**4.2200e-003**	**0.0000**	**366.8819**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.6578	8.7370	60.9549	0.0638	3.3040	0.1284	3.4325	0.8884	0.1187	1.0070	0.0000	4,230.5774	4,230.5774	0.1296	0.0000	4,233.2997
Unmitigated	6.6578	8.7370	60.9549	0.0638	3.3040	0.1284	3.4325	0.8884	0.1187	1.0070	0.0000	4,230.5774	4,230.5774	0.1296	0.0000	4,233.2997

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	6,586.65	6,586.65	6586.65	129,203	129,203
Arena	13,402.49	13,402.49	13402.49	262,903	262,903
Automobile Care Center	1,860.00	1,860.00	1860.00	1,852,906	1,852,906
General Light Industry	407.75	77.22	39.78	899,095	899,095
General Office Building	981.54	211.29	87.37	1,777,416	1,777,416
High Turnover (Sit Down Restaurant)	883.69	1,100.67	916.29	1,066,685	1,066,685
Parking Lot	0.00	0.00	0.00		
Place of Worship	70.60	80.37	283.88	191,682	191,682
Unrefrigerated Warehouse-No Rail	408.57	408.57	408.57	1,192,832	1,192,832
Unrefrigerated Warehouse-No Rail	494.51	494.51	494.51	1,443,724	1,443,724
Total	25,095.81	24,221.77	24,079.54	8,816,445	8,816,445

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Arena	9.50	7.30	7.30	0.00	81.00	19.00	0.66	0.28	0.6
Arena	9.50	7.30	7.30	0.00	81.00	19.00	0.66	0.28	0.6
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.534279	0.061728	0.163535	0.108433	0.030557	0.004584	0.021278	0.063079	0.001942	0.003382	0.005694	0.000164	0.001344

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,464.6925	5,464.6925	0.2719	0.0563	5,487.8446
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,464.6925	5,464.6925	0.2719	0.0563	5,487.8446
NaturalGas Mitigated	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	2,876.1418	2,876.1418	0.0551	0.0527	2,893.6455
NaturalGas Unmitigated	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	2,876.1418	2,876.1418	0.0551	0.0527	2,893.6455

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	3.2136e+007	0.1733	1.5753	1.3233	9.4500e-003		0.1197	0.1197		0.1197	0.1197	0.0000	1,714.8968	1,714.8968	0.0329	0.0314	1,725.3334
Automobile Care Center	770400	4.1500e-003	0.0378	0.0317	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1115	41.1115	7.9000e-004	7.5000e-004	41.3617
General Light Industry	1.50228e+006	8.1000e-003	0.0736	0.0619	4.4000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	80.1674	80.1674	1.5400e-003	1.4700e-003	80.6553
General Office Building	1.80885e+006	9.7500e-003	0.0887	0.0745	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	96.5273	96.5273	1.8500e-003	1.7700e-003	97.1148
High Turnover (Sit Down Restaurant)	1.18157e+006	6.3700e-003	0.0579	0.0487	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	63.0531	63.0531	1.2100e-003	1.1600e-003	63.4368
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	199020	1.0700e-003	9.7600e-003	8.1900e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6205	10.6205	2.0000e-004	1.9000e-004	10.6851
Unrefrigerated Warehouse-No Rail	228738	1.2300e-003	0.0112	9.4200e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2063	12.2063	2.3000e-004	2.2000e-004	12.2806
Unrefrigerated Warehouse-No Rail	276849	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7737	14.7737	2.8000e-004	2.7000e-004	14.8636
Arena	1.57932e+007	0.0852	0.7742	0.6503	4.6500e-003		0.0588	0.0588		0.0588	0.0588	0.0000	842.7853	842.7853	0.0162	0.0155	847.9144
Total		**0.2906**	**2.6420**	**2.2193**	**0.0159**		**0.2008**	**0.2008**		**0.2008**	**0.2008**	**0.0000**	**2,876.1418**	**2,876.1418**	**0.0551**	**0.0527**	**2,893.6455**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	770400	4.1500e-003	0.0378	0.0317	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1115	41.1115	7.9000e-004	7.5000e-004	41.3617

General Light Industry	1.50228e+006	8.1000e-003	0.0736	0.0619	4.4000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	80.1674	80.1674	1.5400e-003	1.4700e-003	80.6553
General Office Building	1.80885e+006	9.7500e-003	0.0887	0.0745	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	96.5273	96.5273	1.8500e-003	1.7700e-003	97.1148
High Turnover (Sit Down Restaurant)	1.18157e+006	6.3700e-003	0.0579	0.0487	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	63.0531	63.0531	1.2100e-003	1.1600e-003	63.4368
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	199020	1.0700e-003	9.7600e-003	8.1900e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6205	10.6205	2.0000e-004	1.9000e-004	10.6851
Unrefrigerated Warehouse-No Rail	228738	1.2300e-003	0.0112	9.4200e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2063	12.2063	2.3000e-004	2.2000e-004	12.2806
Unrefrigerated Warehouse-No Rail	276849	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7737	14.7737	2.8000e-004	2.7000e-004	14.8636
Arena	1.57932e+007	0.0852	0.7742	0.6503	4.6500e-003		0.0588	0.0588		0.0588	0.0588	0.0000	842.7853	842.7853	0.0162	0.0155	847.9144
Arena	3.2136e+007	0.1733	1.5753	1.3233	9.4500e-003		0.1197	0.1197		0.1197	0.1197	0.0000	1,714.8968	1,714.8968	0.0329	0.0314	1,725.3334
Total		**0.2906**	**2.6420**	**2.2193**	**0.0159**		**0.2008**	**0.2008**		**0.2008**	**0.2008**	**0.0000**	**2,876.1418**	**2,876.1418**	**0.0551**	**0.0527**	**2,893.6455**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	1.03491e+007	2,735.6755	0.1361	0.0282	2,747.2657
Arena	5.08605e+006	1,344.4466	0.0669	0.0138	1,350.1426
Automobile Care Center	248100	65.5828	3.2600e-003	6.8000e-004	65.8606
General Light Industry	483795	127.8864	6.3600e-003	1.3200e-003	128.4282
General Office Building	1.2374e+006	327.0949	0.0163	3.3700e-003	328.4807
High Turnover (Sit Down Restaurant)	210168	55.5558	2.7600e-003	5.7000e-004	55.7912
Parking Lot	1.53331e+006	405.3157	0.0202	4.1700e-003	407.0329

Place of Worship	64092.5	16.9422	8.4000e-004	1.7000e-004	17.0140
Unrefrigerated Warehouse-No Rail	660972	174.7215	8.6900e-003	1.8000e-003	175.4617
Unrefrigerated Warehouse-No Rail	799997	211.4712	0.0105	2.1800e-003	212.3671
Total		**5,464.6925**	**0.2719**	**0.0563**	**5,487.8446**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	1.03491e+007	2,735.6755	0.1361	0.0282	2,747.2657
Arena	5.08605e+006	1,344.4466	0.0669	0.0138	1,350.1426
Automobile Care Center	248100	65.5828	3.2600e-003	6.8000e-004	65.8606
General Light Industry	483795	127.8864	6.3600e-003	1.3200e-003	128.4282
General Office Building	1.2374e+006	327.0949	0.0163	3.3700e-003	328.4807
High Turnover (Sit Down Restaurant)	210168	55.5558	2.7600e-003	5.7000e-004	55.7912
Parking Lot	1.53331e+006	405.3157	0.0202	4.1700e-003	407.0329
Place of Worship	64092.5	16.9422	8.4000e-004	1.7000e-004	17.0140
Unrefrigerated Warehouse-No Rail	660972	174.7215	8.6900e-003	1.8000e-003	175.4617
Unrefrigerated Warehouse-No Rail	799997	211.4712	0.0105	2.1800e-003	212.3671
Total		**5,464.6925**	**0.2719**	**0.0563**	**5,487.8446**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Unmitigated	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2826					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	16.2072					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0500e-003	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Total	**17.4918**	**2.0000e-004**	**0.0224**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0437**	**0.0437**	**1.1000e-004**	**0.0000**	**0.0461**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2826					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	16.2072					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0500e-003	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Total	**17.4918**	**2.0000e-004**	**0.0224**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0437**	**0.0437**	**1.1000e-004**	**0.0000**	**0.0461**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,664.8782	30.0140	0.7202	2,518.4405
Unmitigated	1,664.8782	30.0195	0.7214	2,518.9057

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Arena	803.989 / 51.3185	1,452.5293	26.2576	0.6309	2,199.5241
Automobile Care Center	2.82243 / 1.72988	6.5329	0.0923	2.2300e-003	9.1614
General Light Industry	13.5281 / 0	23.6417	0.4418	0.0106	36.2075
General Office Building	15.845 / 9.71143	36.6755	0.5179	0.0125	51.4314
High Turnover (Sit Down Restaurant)	2.10956 / 0.134653	3.8112	0.0689	1.6600e-003	5.7713
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.242489 / 0.379278	0.7747	7.9400e-003	1.9000e-004	1.0014
Unrefrigerated Warehouse-No Rail	80.6322 / 0	140.9127	2.6331	0.0632	215.8088
Total		**1,664.8782**	**30.0195**	**0.7214**	**2,518.9057**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	803.989 / 51.3185	1,452.5293	26.2528	0.6299	2,199.1171
Automobile Care Center	2.82243 / 1.72988	6.5329	0.0922	2.2300e-003	9.1599
General Light Industry	13.5281 / 0	23.6417	0.4417	0.0106	36.2006
General Office Building	15.845 / 9.71143	36.6755	0.5178	0.0125	51.4233
High Turnover (Sit Down Restaurant)	2.10956 / 0.134653	3.8112	0.0689	1.6500e-003	5.7702
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.242489 / 0.379278	0.7747	7.9300e-003	1.9000e-004	1.0013

Unrefrigerated Warehouse-No Rail	80.6322 / 0	140.9127	2.6327	0.0631	215.7680
Total		**1,664.8782**	**30.0140**	**0.7202**	**2,518.4405**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	157.5311	9.3098	0.0000	353.0374
Mitigated	157.5311	9.3098	0.0000	353.0374

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	51.36	10.4256	0.6161	0.0000	23.3645
Automobile Care Center	114.6	23.2628	1.3748	0.0000	52.1334
General Light Industry	72.54	14.7250	0.8702	0.0000	32.9996
General Office Building	82.91	16.8300	0.9946	0.0000	37.7171

High Turnover (Sit Down Restaurant)	82.7	16.7874	0.9921	0.0000	37.6215
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	44.18	8.9681	0.5300	0.0000	20.0982
Unrefrigerated Warehouse-No Rail	327.76	66.5323	3.9320	0.0000	149.1032
Total		**157.5311**	**9.3098**	**0.0000**	**353.0374**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	51.36	10.4256	0.6161	0.0000	23.3645
Automobile Care Center	114.6	23.2628	1.3748	0.0000	52.1334
General Light Industry	72.54	14.7250	0.8702	0.0000	32.9996
General Office Building	82.91	16.8300	0.9946	0.0000	37.7171
High Turnover (Sit Down Restaurant)	82.7	16.7874	0.9921	0.0000	37.6215
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	44.18	8.9681	0.5300	0.0000	20.0982
Unrefrigerated Warehouse-No Rail	327.76	66.5323	3.9320	0.0000	149.1032
Total		**157.5311**	**9.3098**	**0.0000**	**353.0374**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

“Demolition and Grinding” CalEEMod™ Output

Emissions from Demolition and Grinding within the Coliseum Site

Oakland Coliseum - Demolition and Grinding

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	89.15	1000sqft	3.40	89,150.00	0
Place of Worship	7.75	1000sqft	0.61	7,750.00	0
General Light Industry	58.50	1000sqft	7.29	58,500.00	0
Unrefrigerated Warehouse-No Rail	157.75	1000sqft	11.80	157,750.00	0
Unrefrigerated Warehouse-No Rail	190.93	1000sqft	14.58	190,930.00	0
Parking Lot	40.00	Acre	40.00	1,742,400.00	0
Arena	615.00	1000sqft	8.67	615,000.00	0
Arena	1,251.40	1000sqft	103.20	1,251,400.00	0
High Turnover (Sit Down Restaurant)	6.95	1000sqft	1.28	6,950.00	0
Automobile Care Center	30.00	1000sqft	6.55	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	582.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 Non-Default Data

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	204.00

tblLandUse	LotAcreage	2.05	3.40
tblLandUse	LotAcreage	0.18	0.61
tblLandUse	LotAcreage	1.34	7.29
tblLandUse	LotAcreage	3.62	11.80
tblLandUse	LotAcreage	4.38	14.58
tblLandUse	LotAcreage	402.24	103.20
tblLandUse	LotAcreage	197.68	8.67
tblLandUse	LotAcreage	0.16	1.28
tblLandUse	LotAcreage	0.69	6.55
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	582.77
tblProjectCharacteristics	OperationalYear	2014	2035

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.5714	5.8607	4.3307	5.2100e-003	0.0384	0.3075	0.3459	8.2400e-003	0.2891	0.2973	0.0000	486.4999	486.4999	0.1219	0.0000	489.0599
2015	0.2283	1.9756	1.3818	2.4700e-003	0.0537	0.1177	0.1713	9.7200e-003	0.1140	0.1237	0.0000	222.2701	222.2701	0.0432	0.0000	223.1762
Total	**0.7997**	**7.8363**	**5.7124**	**7.6800e-003**	**0.0921**	**0.4252**	**0.5173**	**0.0180**	**0.4031**	**0.4211**	**0.0000**	**708.7700**	**708.7700**	**0.1651**	**0.0000**	**712.2360**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.5714	5.8607	4.3307	5.2100e-003	0.0291	0.3075	0.3366	6.8200e-003	0.2891	0.2959	0.0000	486.4993	486.4993	0.1219	0.0000	489.0593
2015	0.2283	1.9756	1.3818	2.4700e-003	0.0318	0.1177	0.1494	6.4000e-003	0.1140	0.1204	0.0000	222.2698	222.2698	0.0432	0.0000	223.1759
Total	**0.7997**	**7.8363**	**5.7124**	**7.6800e-003**	**0.0608**	**0.4252**	**0.4860**	**0.0132**	**0.4031**	**0.4163**	**0.0000**	**708.7692**	**708.7692**	**0.1651**	**0.0000**	**712.2352**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**33.95**	**0.00**	**6.04**	**26.39**	**0.00**	**1.13**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Energy	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	8,340.8343	8,340.8343	0.3271	0.1090	8,381.4901
Mobile	6.6578	8.7370	60.9549	0.0638	3.3040	0.1284	3.4325	0.8884	0.1187	1.0070	0.0000	4,230.5774	4,230.5774	0.1296	0.0000	4,233.2997
Waste						0.0000	0.0000		0.0000	0.0000	157.5311	0.0000	157.5311	9.3098	0.0000	353.0374
Water						0.0000	0.0000		0.0000	0.0000	291.6100	1,373.2682	1,664.8782	30.0195	0.7214	2,518.9057
Total	**24.4402**	**11.3792**	**63.1966**	**0.0797**	**3.3040**	**0.3293**	**3.6334**	**0.8884**	**0.3195**	**1.2079**	**449.1411**	**13,944.7237**	**14,393.8648**	**39.7861**	**0.8303**	**15,486.7790**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Energy	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	8,340.8343	8,340.8343	0.3271	0.1090	8,381.4901
Mobile	6.6578	8.7370	60.9549	0.0638	3.3040	0.1284	3.4325	0.8884	0.1187	1.0070	0.0000	4,230.5774	4,230.5774	0.1296	0.0000	4,233.2997
Waste						0.0000	0.0000		0.0000	0.0000	157.5311	0.0000	157.5311	9.3098	0.0000	353.0374
Water						0.0000	0.0000		0.0000	0.0000	291.6100	1,373.2682	1,664.8782	30.0140	0.7202	2,518.4405
Total	**24.4402**	**11.3792**	**63.1966**	**0.0797**	**3.3040**	**0.3293**	**3.6334**	**0.8884**	**0.3195**	**1.2079**	**449.1411**	**13,944.7237**	**14,393.8648**	**39.7806**	**0.8292**	**15,486.3138**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.14**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	10/7/2014	5	200	
2	Grinding	Demolition	10/8/2014	7/20/2015	5	204	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grinding	Concrete/Industrial Saws	0	8.00	81	0.73
Grinding	Crushing/Proc. Equipment	1	5.00	85	0.78
Grinding	Crushing/Proc. Equipment	1	5.00	85	0.78
Grinding	Excavators	1	8.00	162	0.38
Grinding	Generator Sets	1	8.00	84	0.74
Grinding	Off-Highway Trucks	1	5.00	400	0.38
Grinding	Rubber Tired Dozers	0	8.00	255	0.40
Grinding	Skid Steer Loaders	1	8.00	64	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grinding	6	15.00	0.00	525.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4596	4.9543	3.6287	3.9900e-003		0.2527	0.2527		0.2359	0.2359	0.0000	377.7595	377.7595	0.1021	0.0000	379.9032
Total	**0.4596**	**4.9543**	**3.6287**	**3.9900e-003**		**0.2527**	**0.2527**		**0.2359**	**0.2359**	**0.0000**	**377.7595**	**377.7595**	**0.1021**	**0.0000**	**379.9032**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2400e-003	0.0106	0.1033	1.6000e-004	0.0136	1.3000e-004	0.0138	3.6200e-003	1.2000e-004	3.7400e-003	0.0000	13.2586	13.2586	8.5000e-004	0.0000	13.2764
Total	**7.2400e-003**	**0.0106**	**0.1033**	**1.6000e-004**	**0.0136**	**1.3000e-004**	**0.0138**	**3.6200e-003**	**1.2000e-004**	**3.7400e-003**	**0.0000**	**13.2586**	**13.2586**	**8.5000e-004**	**0.0000**	**13.2764**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4596	4.9543	3.6287	3.9900e-003		0.2527	0.2527		0.2359	0.2359	0.0000	377.7591	377.7591	0.1021	0.0000	379.9028

Total	**0.4596**	**4.9543**	**3.6287**	**3.9900e-003**		**0.2527**	**0.2527**		**0.2359**	**0.2359**	**0.0000**	**377.7591**	**377.7591**	**0.1021**	**0.0000**	**379.9028**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2400e-003	0.0106	0.1033	1.6000e-004	0.0136	1.3000e-004	0.0138	3.6200e-003	1.2000e-004	3.7400e-003	0.0000	13.2586	13.2586	8.5000e-004	0.0000	13.2764
Total	**7.2400e-003**	**0.0106**	**0.1033**	**1.6000e-004**	**0.0136**	**1.3000e-004**	**0.0138**	**3.6200e-003**	**1.2000e-004**	**3.7400e-003**	**0.0000**	**13.2586**	**13.2586**	**8.5000e-004**	**0.0000**	**13.2764**

3.3 Grinding - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0170	0.0000	0.0170	2.5700e-003	0.0000	2.5700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1001	0.8607	0.5449	9.4000e-004		0.0541	0.0541		0.0525	0.0525	0.0000	85.8824	85.8824	0.0187	0.0000	86.2742
Total	**0.1001**	**0.8607**	**0.5449**	**9.4000e-004**	**0.0170**	**0.0541**	**0.0711**	**2.5700e-003**	**0.0525**	**0.0551**	**0.0000**	**85.8824**	**85.8824**	**0.0187**	**0.0000**	**86.2742**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2500e-003	0.0319	0.0222	6.0000e-005	3.6500e-003	5.6000e-004	4.2200e-003	9.4000e-004	5.2000e-004	1.4500e-003	0.0000	5.5555	5.5555	5.0000e-005	0.0000	5.5566
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2100e-003	3.2400e-003	0.0315	5.0000e-005	4.1500e-003	4.0000e-005	4.1900e-003	1.1000e-003	4.0000e-005	1.1400e-003	0.0000	4.0439	4.0439	2.6000e-004	0.0000	4.0493
Total	**4.4600e-003**	**0.0351**	**0.0537**	**1.1000e-004**	**7.8000e-003**	**6.0000e-004**	**8.4100e-003**	**2.0400e-003**	**5.6000e-004**	**2.5900e-003**	**0.0000**	**9.5994**	**9.5994**	**3.1000e-004**	**0.0000**	**9.6060**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.6500e-003	0.0000	7.6500e-003	1.1600e-003	0.0000	1.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1001	0.8607	0.5449	9.4000e-004		0.0541	0.0541		0.0525	0.0525	0.0000	85.8823	85.8823	0.0187	0.0000	86.2741
Total	**0.1001**	**0.8607**	**0.5449**	**9.4000e-004**	**7.6500e-003**	**0.0541**	**0.0617**	**1.1600e-003**	**0.0525**	**0.0536**	**0.0000**	**85.8823**	**85.8823**	**0.0187**	**0.0000**	**86.2741**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	2.2500e-003	0.0319	0.0222	6.0000e-005	3.6500e-003	5.6000e-004	4.2200e-003	9.4000e-004	5.2000e-004	1.4500e-003	0.0000	5.5555	5.5555	5.0000e-005	0.0000	5.5566
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2100e-003	3.2400e-003	0.0315	5.0000e-005	4.1500e-003	4.0000e-005	4.1900e-003	1.1000e-003	4.0000e-005	1.1400e-003	0.0000	4.0439	4.0439	2.6000e-004	0.0000	4.0493
Total	**4.4600e-003**	**0.0351**	**0.0537**	**1.1000e-004**	**7.8000e-003**	**6.0000e-004**	**8.4100e-003**	**2.0400e-003**	**5.6000e-004**	**2.5900e-003**	**0.0000**	**9.5994**	**9.5994**	**3.1000e-004**	**0.0000**	**9.6060**

3.3 Grinding - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0399	0.0000	0.0399	6.0300e-003	0.0000	6.0300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2189	1.9046	1.2671	2.2100e-003		0.1166	0.1166		0.1131	0.1131	0.0000	200.2483	200.2483	0.0425	0.0000	201.1406
Total	**0.2189**	**1.9046**	**1.2671**	**2.2100e-003**	**0.0399**	**0.1166**	**0.1565**	**6.0300e-003**	**0.1131**	**0.1191**	**0.0000**	**200.2483**	**200.2483**	**0.0425**	**0.0000**	**201.1406**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7300e-003	0.0641	0.0489	1.4000e-004	4.1000e-003	9.6000e-004	5.0600e-003	1.1000e-003	8.8000e-004	1.9800e-003	0.0000	12.8518	12.8518	1.1000e-004	0.0000	12.8541
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6100e-003	6.7900e-003	0.0658	1.2000e-004	9.7300e-003	9.0000e-005	9.8200e-003	2.5900e-003	8.0000e-005	2.6700e-003	0.0000	9.1699	9.1699	5.5000e-004	0.0000	9.1815
Total	**9.3400e-003**	**0.0709**	**0.1146**	**2.6000e-004**	**0.0138**	**1.0500e-003**	**0.0149**	**3.6900e-003**	**9.6000e-004**	**4.6500e-003**	**0.0000**	**22.0217**	**22.0217**	**6.6000e-004**	**0.0000**	**22.0356**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0179	0.0000	0.0179	2.7200e-003	0.0000	2.7200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2189	1.9046	1.2671	2.2100e-003		0.1166	0.1166		0.1131	0.1131	0.0000	200.2481	200.2481	0.0425	0.0000	201.1403
Total	**0.2189**	**1.9046**	**1.2671**	**2.2100e-003**	**0.0179**	**0.1166**	**0.1345**	**2.7200e-003**	**0.1131**	**0.1158**	**0.0000**	**200.2481**	**200.2481**	**0.0425**	**0.0000**	**201.1403**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7300e-003	0.0641	0.0489	1.4000e-004	4.1000e-003	9.6000e-004	5.0600e-003	1.1000e-003	8.8000e-004	1.9800e-003	0.0000	12.8518	12.8518	1.1000e-004	0.0000	12.8541
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6100e-003	6.7900e-003	0.0658	1.2000e-004	9.7300e-003	9.0000e-005	9.8200e-003	2.5900e-003	8.0000e-005	2.6700e-003	0.0000	9.1699	9.1699	5.5000e-004	0.0000	9.1815
Total	**9.3400e-003**	**0.0709**	**0.1146**	**2.6000e-004**	**0.0138**	**1.0500e-003**	**0.0149**	**3.6900e-003**	**9.6000e-004**	**4.6500e-003**	**0.0000**	**22.0217**	**22.0217**	**6.6000e-004**	**0.0000**	**22.0356**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	6.6578	8.7370	60.9549	0.0638	3.3040	0.1284	3.4325	0.8884	0.1187	1.0070	0.0000	4,230.5774	4,230.5774	0.1296	0.0000	4,233.2997
Mitigated	6.6578	8.7370	60.9549	0.0638	3.3040	0.1284	3.4325	0.8884	0.1187	1.0070	0.0000	4,230.5774	4,230.5774	0.1296	0.0000	4,233.2997

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	6,586.65	6,586.65	6586.65	129,203	129,203
Arena	13,402.49	13,402.49	13402.49	262,903	262,903
Automobile Care Center	1,860.00	1,860.00	1860.00	1,852,906	1,852,906
General Light Industry	407.75	77.22	39.78	899,095	899,095
General Office Building	981.54	211.29	87.37	1,777,416	1,777,416
High Turnover (Sit Down Restaurant)	883.69	1,100.67	916.29	1,066,685	1,066,685
Parking Lot	0.00	0.00	0.00		
Place of Worship	70.60	80.37	283.88	191,682	191,682
Unrefrigerated Warehouse-No Rail	408.57	408.57	408.57	1,192,832	1,192,832
Unrefrigerated Warehouse-No Rail	494.51	494.51	494.51	1,443,724	1,443,724
Total	25,095.81	24,221.77	24,079.54	8,816,445	8,816,445

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.50	7.30	7.30	0.00	81.00	19.00	0.66	0.28	0.6
Arena	9.50	7.30	7.30	0.00	81.00	19.00	0.66	0.28	0.6
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.534279	0.061728	0.163535	0.108433	0.030557	0.004584	0.021278	0.063079	0.001942	0.003382	0.005694	0.000164	0.001344

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	2,876.1418	2,876.1418	0.0551	0.0527	2,893.6455
NaturalGas Unmitigated	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	2,876.1418	2,876.1418	0.0551	0.0527	2,893.6455
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,464.6925	5,464.6925	0.2719	0.0563	5,487.8446
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,464.6925	5,464.6925	0.2719	0.0563	5,487.8446

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	1.57932e+007	0.0852	0.7742	0.6503	4.6500e-003		0.0588	0.0588		0.0588	0.0588	0.0000	842.7853	842.7853	0.0162	0.0155	847.9144
Arena	3.2136e+007	0.1733	1.5753	1.3233	9.4500e-003		0.1197	0.1197		0.1197	0.1197	0.0000	1,714.8968	1,714.8968	0.0329	0.0314	1,725.3334
Automobile Care Center	770400	4.1500e-003	0.0378	0.0317	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1115	41.1115	7.9000e-004	7.5000e-004	41.3617
General Light Industry	1.50228e+006	8.1000e-003	0.0736	0.0619	4.4000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	80.1674	80.1674	1.5400e-003	1.4700e-003	80.6553
General Office Building	1.80885e+006	9.7500e-003	0.0887	0.0745	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	96.5273	96.5273	1.8500e-003	1.7700e-003	97.1148
High Turnover (Sit Down Restaurant)	1.18157e+006	6.3700e-003	0.0579	0.0487	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	63.0531	63.0531	1.2100e-003	1.1600e-003	63.4368
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	199020	1.0700e-003	9.7600e-003	8.1900e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6205	10.6205	2.0000e-004	1.9000e-004	10.6851
Unrefrigerated Warehouse-No Rail	228738	1.2300e-003	0.0112	9.4200e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2063	12.2063	2.3000e-004	2.2000e-004	12.2806
Unrefrigerated Warehouse-No Rail	276849	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7737	14.7737	2.8000e-004	2.7000e-004	14.8636
Total		**0.2906**	**2.6420**	**2.2193**	**0.0159**		**0.2008**	**0.2008**		**0.2008**	**0.2008**	**0.0000**	**2,876.1418**	**2,876.1418**	**0.0551**	**0.0527**	**2,893.6455**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	770400	4.1500e-003	0.0378	0.0317	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1115	41.1115	7.9000e-004	7.5000e-004	41.3617
General Light Industry	1.50228e+006	8.1000e-003	0.0736	0.0619	4.4000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	80.1674	80.1674	1.5400e-003	1.4700e-003	80.6553
General Office Building	1.80885e+006	9.7500e-003	0.0887	0.0745	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	96.5273	96.5273	1.8500e-003	1.7700e-003	97.1148
High Turnover (Sit Down Restaurant)	1.18157e+006	6.3700e-003	0.0579	0.0487	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	63.0531	63.0531	1.2100e-003	1.1600e-003	63.4368
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Place of Worship	199020	1.0700e-003	9.7600e-003	8.1900e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6205	10.6205	2.0000e-004	1.9000e-004	10.6851
Unrefrigerated Warehouse-No Rail	228738	1.2300e-003	0.0112	9.4200e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2063	12.2063	2.3000e-004	2.2000e-004	12.2806
Unrefrigerated Warehouse-No Rail	276849	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7737	14.7737	2.8000e-004	2.7000e-004	14.8636
Arena	1.57932e+007	0.0852	0.7742	0.6503	4.6500e-003		0.0588	0.0588		0.0588	0.0588	0.0000	842.7853	842.7853	0.0162	0.0155	847.9144
Arena	3.2136e+007	0.1733	1.5753	1.3233	9.4500e-003		0.1197	0.1197		0.1197	0.1197	0.0000	1,714.8968	1,714.8968	0.0329	0.0314	1,725.3334
Total		**0.2906**	**2.6420**	**2.2193**	**0.0159**		**0.2008**	**0.2008**		**0.2008**	**0.2008**	**0.0000**	**2,876.1418**	**2,876.1418**	**0.0551**	**0.0527**	**2,893.6455**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	1.03491e+007	2,735.6755	0.1361	0.0282	2,747.2657
Arena	5.08605e+006	1,344.4466	0.0669	0.0138	1,350.1426
Automobile Care Center	248100	65.5828	3.2600e-003	6.8000e-004	65.8606
General Light Industry	483795	127.8864	6.3600e-003	1.3200e-003	128.4282
General Office Building	1.2374e+006	327.0949	0.0163	3.3700e-003	328.4807
High Turnover (Sit Down Restaurant)	210168	55.5558	2.7600e-003	5.7000e-004	55.7912
Parking Lot	1.53331e+006	405.3157	0.0202	4.1700e-003	407.0329
Place of Worship	64092.5	16.9422	8.4000e-004	1.7000e-004	17.0140
Unrefrigerated Warehouse-No Rail	660972	174.7215	8.6900e-003	1.8000e-003	175.4617
Unrefrigerated Warehouse-No Rail	799997	211.4712	0.0105	2.1800e-003	212.3671
Total		**5,464.6925**	**0.2719**	**0.0563**	**5,487.8446**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	1.03491e+007	2,735.6755	0.1361	0.0282	2,747.2657
Arena	5.08605e+006	1,344.4466	0.0669	0.0138	1,350.1426
Automobile Care Center	248100	65.5828	3.2600e-003	6.8000e-004	65.8606
General Light Industry	483795	127.8864	6.3600e-003	1.3200e-003	128.4282
General Office Building	1.2374e+006	327.0949	0.0163	3.3700e-003	328.4807
High Turnover (Sit Down Restaurant)	210168	55.5558	2.7600e-003	5.7000e-004	55.7912
Parking Lot	1.53331e+006	405.3157	0.0202	4.1700e-003	407.0329
Place of Worship	64092.5	16.9422	8.4000e-004	1.7000e-004	17.0140
Unrefrigerated Warehouse-No Rail	660972	174.7215	8.6900e-003	1.8000e-003	175.4617
Unrefrigerated Warehouse-No Rail	799997	211.4712	0.0105	2.1800e-003	212.3671
Total		**5,464.6925**	**0.2719**	**0.0563**	**5,487.8446**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Mitigated	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2826					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	16.2072					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0500e-003	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Total	**17.4918**	**2.0000e-004**	**0.0224**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0437**	**0.0437**	**1.1000e-004**	**0.0000**	**0.0461**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

Architectural Coating	1.2826					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	16.2072					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0500e-003	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Total	**17.4918**	**2.0000e-004**	**0.0224**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0437**	**0.0437**	**1.1000e-004**	**0.0000**	**0.0461**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	1,664.8782	30.0195	0.7214	2,518.9057
Mitigated	1,664.8782	30.0140	0.7202	2,518.4405

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	803.989 / 51.3185	1,452.5293	26.2576	0.6309	2,199.5241
Automobile Care Center	2.82243 / 1.72988	6.5329	0.0923	2.2300e-003	9.1614
General Light Industry	13.5281 / 0	23.6417	0.4418	0.0106	36.2075

General Office Building	15.845 / 9.71143	36.6755	0.5179	0.0125	51.4314
High Turnover (Sit Down Restaurant)	2.10956 / 0.134653	3.8112	0.0689	1.6600e-003	5.7713
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.242489 / 0.379278	0.7747	7.9400e-003	1.9000e-004	1.0014
Unrefrigerated Warehouse-No Rail	80.6322 / 0	140.9127	2.6331	0.0632	215.8088
Total		**1,664.8782**	**30.0195**	**0.7214**	**2,518.9057**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	803.989 / 51.3185	1,452.5293	26.2528	0.6299	2,199.1171
Automobile Care Center	2.82243 / 1.72988	6.5329	0.0922	2.2300e-003	9.1599
General Light Industry	13.5281 / 0	23.6417	0.4417	0.0106	36.2006
General Office Building	15.845 / 9.71143	36.6755	0.5178	0.0125	51.4233
High Turnover (Sit Down Restaurant)	2.10956 / 0.134653	3.8112	0.0689	1.6500e-003	5.7702
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.242489 / 0.379278	0.7747	7.9300e-003	1.9000e-004	1.0013
Unrefrigerated Warehouse-No Rail	80.6322 / 0	140.9127	2.6327	0.0631	215.7680
Total		**1,664.8782**	**30.0140**	**0.7202**	**2,518.4405**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	157.5311	9.3098	0.0000	353.0374
Unmitigated	157.5311	9.3098	0.0000	353.0374

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	51.36	10.4256	0.6161	0.0000	23.3645
Automobile Care Center	114.6	23.2628	1.3748	0.0000	52.1334
General Light Industry	72.54	14.7250	0.8702	0.0000	32.9996
General Office Building	82.91	16.8300	0.9946	0.0000	37.7171
High Turnover (Sit Down Restaurant)	82.7	16.7874	0.9921	0.0000	37.6215
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	44.18	8.9681	0.5300	0.0000	20.0982
Unrefrigerated Warehouse-No Rail	327.76	66.5323	3.9320	0.0000	149.1032

Total		**157.5311**	**9.3098**	**0.0000**	**353.0374**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	51.36	10.4256	0.6161	0.0000	23.3645
Automobile Care Center	114.6	23.2628	1.3748	0.0000	52.1334
General Light Industry	72.54	14.7250	0.8702	0.0000	32.9996
General Office Building	82.91	16.8300	0.9946	0.0000	37.7171
High Turnover (Sit Down Restaurant)	82.7	16.7874	0.9921	0.0000	37.6215
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	44.18	8.9681	0.5300	0.0000	20.0982
Unrefrigerated Warehouse-No Rail	327.76	66.5323	3.9320	0.0000	149.1032
Total		**157.5311**	**9.3098**	**0.0000**	**353.0374**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

“Construction” CalEEMod™ Output

Emissions from Construction within the Coliseum Site

Oakland Coliseum - Construction

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	12.90	1000sqft	0.70	12,900.00	0
Research & Development	1,500.13	1000sqft	14.70	1,500,126.00	0
Enclosed Parking with Elevator	13,040.00	Space	36.50	5,216,000.00	0
Parking Lot	4,326.00	Space	4.70	1,730,400.00	0
Arena	3,400.00	1000sqft	28.70	3,400,000.00	0
Arena	850.00	1000sqft	12.40	850,000.00	0
Hotel	875.00	Room	3.60	1,270,500.00	0
Apartments High Rise	4,000.00	Dwelling Unit	32.50	4,000,000.00	11440
Regional Shopping Center	415.00	1000sqft	6.60	415,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	582.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 Non-Default Data

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	1,500,130.00	1,500,126.00
tblLandUse	LotAcreage	0.30	0.70

tblLandUse	LotAcreage	34.44	14.70
tblLandUse	LotAcreage	117.36	36.50
tblLandUse	LotAcreage	38.93	4.70
tblLandUse	LotAcreage	1,092.86	28.70
tblLandUse	LotAcreage	273.21	12.40
tblLandUse	LotAcreage	29.17	3.60
tblLandUse	LotAcreage	64.52	32.50
tblLandUse	LotAcreage	9.53	6.60
tblProjectCharacteristics	CO2IntensityFactor	641.35	582.77
tblProjectCharacteristics	OperationalYear	2014	2035

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.8123	9.1657	6.3858	6.9700e-003	2.4509	0.4620	2.9129	1.1593	0.4250	1.5843	0.0000	667.4433	667.4433	0.1921	0.0000	671.4783
2015	4.2224	25.5240	49.6683	0.0810	5.8347	0.6958	6.5305	1.7695	0.6417	2.4112	0.0000	6,885.8197	6,885.8197	0.4094	0.0000	6,894.4161
2016	9.1622	46.9451	116.7459	0.2143	12.6955	0.8985	13.5941	3.4270	0.8312	4.2582	0.0000	17,651.4467	17,651.4467	0.6752	0.0000	17,665.6252
2017	8.3215	42.0041	107.2581	0.2133	12.6472	0.7925	13.4396	3.4140	0.7334	4.1474	0.0000	17,090.6491	17,090.6491	0.6216	0.0000	17,103.7026
2018	7.6215	38.0746	99.4895	0.2139	12.6956	0.7199	13.4156	3.4271	0.6665	4.0935	0.0000	16,682.4410	16,682.4410	0.5818	0.0000	16,694.6588
2019	6.9397	34.6998	92.2881	0.2137	12.6956	0.6591	13.3546	3.4270	0.6102	4.0372	0.0000	16,233.8475	16,233.8475	0.5478	0.0000	16,245.3506
2020	6.4150	30.1622	86.9116	0.2143	12.7441	0.5937	13.3378	3.4401	0.5497	3.9898	0.0000	15,778.9902	15,778.9902	0.5224	0.0000	15,789.9605
2021	6.0823	25.3620	82.6805	0.2134	12.6959	0.5331	13.2290	3.4272	0.4936	3.9208	0.0000	15,567.2508	15,567.2508	0.4995	0.0000	15,577.7405

2022	5.7495	22.5429	77.8737	0.2124	12.6478	0.5062	13.1540	3.4143	0.4685	3.8828	0.0000	15,372.2294	15,372.2294	0.4809	0.0000	15,382.3277
2023	5.3963	19.5019	73.8551	0.2121	12.6482	0.4835	13.1317	3.4144	0.4473	3.8618	0.0000	15,234.4536	15,234.4536	0.4608	0.0000	15,244.1297
2024	5.1802	19.1906	71.0092	0.2137	12.7460	0.4775	13.2235	3.4409	0.4416	3.8825	0.0000	15,247.6756	15,247.6756	0.4509	0.0000	15,257.1443
2025	4.9795	18.7096	68.3036	0.2129	12.6978	0.4662	13.1640	3.4280	0.4309	3.8589	0.0000	15,098.6086	15,098.6086	0.4381	0.0000	15,107.8075
2026	4.8265	18.3066	66.5282	0.2129	12.6981	0.4606	13.1587	3.4281	0.4258	3.8538	0.0000	15,017.8492	15,017.8492	0.4277	0.0000	15,026.8314
2027	2.5535	10.0816	35.3004	0.1140	6.7225	0.2694	6.9919	1.8149	0.2489	2.0638	0.0000	8,030.1257	8,030.1257	0.2609	0.0000	8,035.6052
2028	70.2987	0.8515	4.2127	0.0168	1.2989	0.0340	1.3329	0.3455	0.0317	0.3772	0.0000	1,028.2889	1,028.2889	0.0680	0.0000	1,029.7172
2029	24.5630	0.1492	1.1806	5.4700e-003	0.4519	4.9000e-003	0.4568	0.1202	4.6500e-003	0.1249	0.0000	322.3977	322.3977	0.0126	0.0000	322.6632
Total	**173.1240**	**361.2712**	**1,039.6912**	**2.5711**	**156.3708**	**8.0568**	**164.4275**	**42.8975**	**7.4505**	**50.3480**	**0.0000**	**191,909.5169**	**191,909.5169**	**6.6496**	**0.0000**	**192,049.1587**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.8123	9.1657	6.3858	6.9700e-003	1.1154	0.4620	1.5773	0.5250	0.4250	0.9500	0.0000	667.4426	667.4426	0.1921	0.0000	671.4776
2015	4.2224	25.5240	49.6683	0.0810	5.0953	0.6958	5.7911	1.4629	0.6417	2.1046	0.0000	6,885.8190	6,885.8190	0.4094	0.0000	6,894.4154
2016	9.1622	46.9451	116.7459	0.2143	12.6955	0.8985	13.5941	3.4270	0.8312	4.2582	0.0000	17,651.4463	17,651.4463	0.6752	0.0000	17,665.6249
2017	8.3215	42.0041	107.2581	0.2133	12.6472	0.7925	13.4396	3.4140	0.7334	4.1474	0.0000	17,090.6487	17,090.6487	0.6216	0.0000	17,103.7022
2018	7.6215	38.0746	99.4895	0.2139	12.6956	0.7199	13.4156	3.4271	0.6665	4.0935	0.0000	16,682.4407	16,682.4407	0.5818	0.0000	16,694.6584
2019	6.9397	34.6998	92.2881	0.2137	12.6956	0.6591	13.3546	3.4270	0.6102	4.0372	0.0000	16,233.8471	16,233.8471	0.5478	0.0000	16,245.3503
2020	6.4150	30.1622	86.9116	0.2143	12.7441	0.5937	13.3378	3.4401	0.5497	3.9898	0.0000	15,778.9898	15,778.9898	0.5224	0.0000	15,789.9601
2021	6.0823	25.3619	82.6805	0.2134	12.6959	0.5331	13.2290	3.4272	0.4936	3.9208	0.0000	15,567.2505	15,567.2505	0.4995	0.0000	15,577.7401

2022	5.7495	22.5429	77.8737	0.2124	12.6478	0.5062	13.1540	3.4143	0.4685	3.8828	0.0000	15,372.2290	15,372.2290	0.4809	0.0000	15,382.3273
2023	5.3963	19.5018	73.8551	0.2121	12.6482	0.4835	13.1317	3.4144	0.4473	3.8618	0.0000	15,234.4533	15,234.4533	0.4608	0.0000	15,244.1293
2024	5.1802	19.1906	71.0092	0.2137	12.7460	0.4775	13.2235	3.4409	0.4416	3.8825	0.0000	15,247.6752	15,247.6752	0.4509	0.0000	15,257.1440
2025	4.9795	18.7096	68.3036	0.2129	12.6978	0.4662	13.1640	3.4280	0.4309	3.8589	0.0000	15,098.6082	15,098.6082	0.4381	0.0000	15,107.8072
2026	4.8265	18.3066	66.5282	0.2129	12.6981	0.4606	13.1587	3.4281	0.4258	3.8538	0.0000	15,017.8488	15,017.8488	0.4277	0.0000	15,026.8310
2027	2.5535	10.0816	35.3004	0.1140	6.7225	0.2694	6.9919	1.8149	0.2489	2.0638	0.0000	8,030.1253	8,030.1253	0.2609	0.0000	8,035.6048
2028	70.2987	0.8515	4.2127	0.0168	1.2989	0.0340	1.3329	0.3455	0.0317	0.3772	0.0000	1,028.2887	1,028.2887	0.0680	0.0000	1,029.7170
2029	24.5630	0.1492	1.1806	5.4700e-003	0.4519	4.9000e-003	0.4568	0.1202	4.6500e-003	0.1249	0.0000	322.3977	322.3977	0.0126	0.0000	322.6632
Total	**173.1240**	**361.2712**	**1,039.6911**	**2.5711**	**154.2958**	**8.0568**	**162.3525**	**41.9566**	**7.4505**	**49.4071**	**0.0000**	**191,909.5109**	**191,909.5109**	**6.6496**	**0.0000**	**192,049.1527**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**1.33**	**0.00**	**1.26**	**2.19**	**0.00**	**1.87**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	85.2952	0.3962	34.2580	5.4000e-003		0.8114	0.8114		0.8114	0.8114	65.4698	154.7175	220.1873	0.1689	5.4600e-003	225.4260
Energy	1.2600	11.3505	8.8580	0.0687		0.8706	0.8706		0.8706	0.8706	0.0000	42,935.5364	42,935.5364	1.7551	0.5423	43,140.4985
Mobile	32.4939	62.0596	333.5964	0.7757	47.4631	1.3103	48.7734	12.7613	1.2089	13.9702	0.0000	51,558.4251	51,558.4251	1.3002	0.0000	51,585.7294
Waste						0.0000	0.0000		0.0000	0.0000	608.5202	0.0000	608.5202	35.9625	0.0000	1,363.7330
Water						0.0000	0.0000		0.0000	0.0000	915.0308	4,406.5692	5,321.6000	94.2017	2.2645	8,001.8304

Total	**119.0492**	**73.8062**	**376.7124**	**0.8498**	**47.4631**	**2.9923**	**50.4554**	**12.7613**	**2.8908**	**15.6521**	**1,589.0208**	**99,055.2482**	**100,644.2691**	**133.3884**	**2.8122**	**104,317.2174**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	85.2952	0.3962	34.2580	5.4000e-003		0.8114	0.8114		0.8114	0.8114	65.4698	154.7175	220.1873	0.1689	5.4600e-003	225.4260
Energy	1.2600	11.3505	8.8580	0.0687		0.8706	0.8706		0.8706	0.8706	0.0000	42,935.5364	42,935.5364	1.7551	0.5423	43,140.4985
Mobile	32.4939	62.0596	333.5964	0.7757	47.4631	1.3103	48.7734	12.7613	1.2089	13.9702	0.0000	51,558.4251	51,558.4251	1.3002	0.0000	51,585.7294
Waste						0.0000	0.0000		0.0000	0.0000	608.5202	0.0000	608.5202	35.9625	0.0000	1,363.7330
Water						0.0000	0.0000		0.0000	0.0000	915.0308	4,406.5692	5,321.6000	94.1846	2.2610	8,000.3706
Total	**119.0492**	**73.8062**	**376.7124**	**0.8498**	**47.4631**	**2.9923**	**50.4554**	**12.7613**	**2.8908**	**15.6521**	**1,589.0208**	**99,055.2482**	**100,644.2691**	**133.3712**	**2.8087**	**104,315.7576**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.13**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2014	6/17/2014	5	120	
2	Grading	Grading	6/18/2014	8/25/2015	5	310	
3	Building Construction	Building Construction	8/26/2015	7/13/2027	5	3100	
4	Paving	Paving	7/14/2027	5/16/2028	5	220	

5	Architectural Coating	Architectural Coating	5/17/2028	3/20/2029	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 0

Residential Indoor: 8,100,000; Residential Outdoor: 2,700,000; Non-Residential Indoor: 19,074,657; Non-Residential Outdoor: 6,358,219

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading		8	20.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction		9	8,733.00	2,787.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving		6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating		1	1,747.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0840	0.0000	1.0840	0.5958	0.0000	0.5958	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3175	3.4572	2.5777	2.3500e-003		0.1883	0.1883		0.1732	0.1732	0.0000	226.2097	226.2097	0.0669	0.0000	227.6135
Total	**0.3175**	**3.4572**	**2.5777**	**2.3500e-003**	**1.0840**	**0.1883**	**1.2722**	**0.5958**	**0.1732**	**0.7690**	**0.0000**	**226.2097**	**226.2097**	**0.0669**	**0.0000**	**227.6135**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	5.2100e-003	7.6600e-003	0.0744	1.2000e-004	9.8000e-003	1.0000e-004	9.9000e-003	2.6100e-003	9.0000e-005	2.7000e-003	0.0000	9.5462	9.5462	6.1000e-004	0.0000	9.5590
Total	**5.2100e-003**	**7.6600e-003**	**0.0744**	**1.2000e-004**	**9.8000e-003**	**1.0000e-004**	**9.9000e-003**	**2.6100e-003**	**9.0000e-005**	**2.7000e-003**	**0.0000**	**9.5462**	**9.5462**	**6.1000e-004**	**0.0000**	**9.5590**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4878	0.0000	0.4878	0.2681	0.0000	0.2681	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3175	3.4572	2.5777	2.3500e-003		0.1883	0.1883		0.1732	0.1732	0.0000	226.2094	226.2094	0.0669	0.0000	227.6132
Total	**0.3175**	**3.4572**	**2.5777**	**2.3500e-003**	**0.4878**	**0.1883**	**0.6761**	**0.2681**	**0.1732**	**0.4413**	**0.0000**	**226.2094**	**226.2094**	**0.0669**	**0.0000**	**227.6132**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2100e-003	7.6600e-003	0.0744	1.2000e-004	9.8000e-003	1.0000e-004	9.9000e-003	2.6100e-003	9.0000e-005	2.7000e-003	0.0000	9.5462	9.5462	6.1000e-004	0.0000	9.5590
Total	**5.2100e-003**	**7.6600e-003**	**0.0744**	**1.2000e-004**	**9.8000e-003**	**1.0000e-004**	**9.9000e-003**	**2.6100e-003**	**9.0000e-005**	**2.7000e-003**	**0.0000**	**9.5462**	**9.5462**	**6.1000e-004**	**0.0000**	**9.5590**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3444	0.0000	1.3444	0.5575	0.0000	0.5575	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4828	5.6908	3.6366	4.3500e-003		0.2735	0.2735		0.2516	0.2516	0.0000	419.2244	419.2244	0.1239	0.0000	421.8260
Total	**0.4828**	**5.6908**	**3.6366**	**4.3500e-003**	**1.3444**	**0.2735**	**1.6179**	**0.5575**	**0.2516**	**0.8091**	**0.0000**	**419.2244**	**419.2244**	**0.1239**	**0.0000**	**421.8260**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8000e-003	0.0100	0.0971	1.5000e-004	0.0128	1.3000e-004	0.0129	3.4000e-003	1.1000e-004	3.5200e-003	0.0000	12.4631	12.4631	8.0000e-004	0.0000	12.4799
Total	**6.8000e-003**	**0.0100**	**0.0971**	**1.5000e-004**	**0.0128**	**1.3000e-004**	**0.0129**	**3.4000e-003**	**1.1000e-004**	**3.5200e-003**	**0.0000**	**12.4631**	**12.4631**	**8.0000e-004**	**0.0000**	**12.4799**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust					0.6050	0.0000	0.6050	0.2509	0.0000	0.2509	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4828	5.6908	3.6366	4.3500e-003		0.2735	0.2735		0.2516	0.2516	0.0000	419.2239	419.2239	0.1239	0.0000	421.8255
Total	**0.4828**	**5.6908**	**3.6366**	**4.3500e-003**	**0.6050**	**0.2735**	**0.8785**	**0.2509**	**0.2516**	**0.5025**	**0.0000**	**419.2239**	**419.2239**	**0.1239**	**0.0000**	**421.8255**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8000e-003	0.0100	0.0971	1.5000e-004	0.0128	1.3000e-004	0.0129	3.4000e-003	1.1000e-004	3.5200e-003	0.0000	12.4631	12.4631	8.0000e-004	0.0000	12.4799
Total	**6.8000e-003**	**0.0100**	**0.0971**	**1.5000e-004**	**0.0128**	**1.3000e-004**	**0.0129**	**3.4000e-003**	**1.1000e-004**	**3.5200e-003**	**0.0000**	**12.4631**	**12.4631**	**8.0000e-004**	**0.0000**	**12.4799**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3444	0.0000	1.3444	0.5575	0.0000	0.5575	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5725	6.6794	4.2960	5.2200e-003		0.3213	0.3213		0.2956	0.2956	0.0000	497.2167	497.2167	0.1484	0.0000	500.3339
Total	**0.5725**	**6.6794**	**4.2960**	**5.2200e-003**	**1.3444**	**0.3213**	**1.6657**	**0.5575**	**0.2956**	**0.8530**	**0.0000**	**497.2167**	**497.2167**	**0.1484**	**0.0000**	**500.3339**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2600e-003	0.0107	0.1036	1.8000e-004	0.0153	1.4000e-004	0.0155	4.0800e-003	1.3000e-004	4.2100e-003	0.0000	14.4496	14.4496	8.7000e-004	0.0000	14.4678
Total	**7.2600e-003**	**0.0107**	**0.1036**	**1.8000e-004**	**0.0153**	**1.4000e-004**	**0.0155**	**4.0800e-003**	**1.3000e-004**	**4.2100e-003**	**0.0000**	**14.4496**	**14.4496**	**8.7000e-004**	**0.0000**	**14.4678**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6050	0.0000	0.6050	0.2509	0.0000	0.2509	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5725	6.6794	4.2960	5.2200e-003		0.3213	0.3213		0.2956	0.2956	0.0000	497.2161	497.2161	0.1484	0.0000	500.3333
Total	**0.5725**	**6.6794**	**4.2960**	**5.2200e-003**	**0.6050**	**0.3213**	**0.9263**	**0.2509**	**0.2956**	**0.5464**	**0.0000**	**497.2161**	**497.2161**	**0.1484**	**0.0000**	**500.3333**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2600e-003	0.0107	0.1036	1.8000e-004	0.0153	1.4000e-004	0.0155	4.0800e-003	1.3000e-004	4.2100e-003	0.0000	14.4496	14.4496	8.7000e-004	0.0000	14.4678
Total	**7.2600e-003**	**0.0107**	**0.1036**	**1.8000e-004**	**0.0153**	**1.4000e-004**	**0.0155**	**4.0800e-003**	**1.3000e-004**	**4.2100e-003**	**0.0000**	**14.4496**	**14.4496**	**8.7000e-004**	**0.0000**	**14.4678**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1683	1.3814	0.8623	1.2300e-003		0.0974	0.0974		0.0916	0.0916	0.0000	112.2374	112.2374	0.0282	0.0000	112.8288
Total	**0.1683**	**1.3814**	**0.8623**	**1.2300e-003**		**0.0974**	**0.0974**		**0.0916**	**0.0916**	**0.0000**	**112.2374**	**112.2374**	**0.0282**	**0.0000**	**112.8288**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7485	14.9110	19.7791	0.0308	0.8288	0.2438	1.0726	0.2381	0.2242	0.4622	0.0000	2,827.2055	2,827.2055	0.0256	0.0000	2,827.7431
Worker	1.7258	2.5414	24.6274	0.0436	3.6462	0.0332	3.6794	0.9699	0.0303	1.0002	0.0000	3,434.7105	3,434.7105	0.2063	0.0000	3,439.0426

Total	**3.4743**	**17.4525**	**44.4065**	**0.0744**	**4.4750**	**0.2770**	**4.7520**	**1.2080**	**0.2545**	**1.4624**	**0.0000**	**6,261.9160**	**6,261.9160**	**0.2319**	**0.0000**	**6,266.7857**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1683	1.3814	0.8623	1.2300e-003		0.0974	0.0974		0.0916	0.0916	0.0000	112.2373	112.2373	0.0282	0.0000	112.8286
Total	**0.1683**	**1.3814**	**0.8623**	**1.2300e-003**		**0.0974**	**0.0974**		**0.0916**	**0.0916**	**0.0000**	**112.2373**	**112.2373**	**0.0282**	**0.0000**	**112.8286**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7485	14.9110	19.7791	0.0308	0.8288	0.2438	1.0726	0.2381	0.2242	0.4622	0.0000	2,827.2055	2,827.2055	0.0256	0.0000	2,827.7431
Worker	1.7258	2.5414	24.6274	0.0436	3.6462	0.0332	3.6794	0.9699	0.0303	1.0002	0.0000	3,434.7105	3,434.7105	0.2063	0.0000	3,439.0426
Total	**3.4743**	**17.4525**	**44.4065**	**0.0744**	**4.4750**	**0.2770**	**4.7520**	**1.2080**	**0.2545**	**1.4624**	**0.0000**	**6,261.9160**	**6,261.9160**	**0.2319**	**0.0000**	**6,266.7857**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0104**	**316.0104**	**0.0784**	**0.0000**	**317.6563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3573	36.7767	52.0827	0.0873	2.3513	0.5534	2.9047	0.6755	0.5089	1.1844	0.0000	7,926.0219	7,926.0219	0.0641	0.0000	7,927.3685
Worker	4.3604	6.4483	62.2480	0.1235	10.3442	0.0884	10.4326	2.7515	0.0811	2.8326	0.0000	9,409.4144	9,409.4144	0.5327	0.0000	9,420.6005
Total	**8.7177**	**43.2251**	**114.3308**	**0.2108**	**12.6955**	**0.6418**	**13.3373**	**3.4270**	**0.5900**	**4.0170**	**0.0000**	**17,335.4363**	**17,335.4363**	**0.5968**	**0.0000**	**17,347.9689**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0101**	**316.0101**	**0.0784**	**0.0000**	**317.6560**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3573	36.7767	52.0827	0.0873	2.3513	0.5534	2.9047	0.6755	0.5089	1.1844	0.0000	7,926.0219	7,926.0219	0.0641	0.0000	7,927.3685
Worker	4.3604	6.4483	62.2480	0.1235	10.3442	0.0884	10.4326	2.7515	0.0811	2.8326	0.0000	9,409.4144	9,409.4144	0.5327	0.0000	9,420.6005
Total	**8.7177**	**43.2251**	**114.3308**	**0.2108**	**12.6955**	**0.6418**	**13.3373**	**3.4270**	**0.5900**	**4.0170**	**0.0000**	**17,335.4363**	**17,335.4363**	**0.5968**	**0.0000**	**17,347.9689**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3228**	**311.3228**	**0.0766**	**0.0000**	**312.9319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0730	32.8223	49.7816	0.0868	2.3426	0.4771	2.8197	0.6730	0.4387	1.1117	0.0000	7,762.9995	7,762.9995	0.0606	0.0000	7,764.2718
Worker	3.8452	5.7490	55.1197	0.1230	10.3046	0.0838	10.3884	2.7410	0.0772	2.8182	0.0000	9,016.3267	9,016.3267	0.4844	0.0000	9,026.4988
Total	**7.9182**	**38.5713**	**104.9013**	**0.2098**	**12.6471**	**0.5609**	**13.2081**	**3.4140**	**0.5159**	**3.9299**	**0.0000**	**16,779.3263**	**16,779.3263**	**0.5450**	**0.0000**	**16,790.7707**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3225**	**311.3225**	**0.0766**	**0.0000**	**312.9315**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0730	32.8223	49.7816	0.0868	2.3426	0.4771	2.8197	0.6730	0.4387	1.1117	0.0000	7,762.9995	7,762.9995	0.0606	0.0000	7,764.2718
Worker	3.8452	5.7490	55.1197	0.1230	10.3046	0.0838	10.3884	2.7410	0.0772	2.8182	0.0000	9,016.3267	9,016.3267	0.4844	0.0000	9,026.4988
Total	**7.9182**	**38.5713**	**104.9013**	**0.2098**	**12.6471**	**0.5609**	**13.2081**	**3.4140**	**0.5159**	**3.9299**	**0.0000**	**16,779.3263**	**16,779.3263**	**0.5450**	**0.0000**	**16,790.7707**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723
Total	**0.3483**	**3.0355**	**2.2880**	**3.5000e-003**		**0.1950**	**0.1950**		**0.1833**	**0.1833**	**0.0000**	**308.9844**	**308.9844**	**0.0756**	**0.0000**	**310.5723**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8478	29.8509	47.8537	0.0870	2.3514	0.4439	2.7953	0.6755	0.4082	1.0837	0.0000	7,658.6000	7,658.6000	0.0597	0.0000	7,659.8543
Worker	3.4254	5.1882	49.3478	0.1234	10.3442	0.0811	10.4253	2.7515	0.0749	2.8265	0.0000	8,714.8566	8,714.8566	0.4465	0.0000	8,724.2321

Total	**7.2732**	**35.0391**	**97.2015**	**0.2104**	**12.6956**	**0.5249**	**13.2206**	**3.4271**	**0.4832**	**3.9102**	**0.0000**	**16,373.4566**	**16,373.4566**	**0.5062**	**0.0000**	**16,384.0864**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720
Total	**0.3483**	**3.0355**	**2.2880**	**3.5000e-003**		**0.1950**	**0.1950**		**0.1833**	**0.1833**	**0.0000**	**308.9841**	**308.9841**	**0.0756**	**0.0000**	**310.5720**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8478	29.8509	47.8537	0.0870	2.3514	0.4439	2.7953	0.6755	0.4082	1.0837	0.0000	7,658.6000	7,658.6000	0.0597	0.0000	7,659.8543
Worker	3.4254	5.1882	49.3478	0.1234	10.3442	0.0811	10.4253	2.7515	0.0749	2.8265	0.0000	8,714.8566	8,714.8566	0.4465	0.0000	8,724.2321
Total	**7.2732**	**35.0391**	**97.2015**	**0.2104**	**12.6956**	**0.5249**	**13.2206**	**3.4271**	**0.4832**	**3.9102**	**0.0000**	**16,373.4566**	**16,373.4566**	**0.5062**	**0.0000**	**16,384.0864**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5302	305.5302	0.0743	0.0000	307.0913
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**	**0.0000**	**305.5302**	**305.5302**	**0.0743**	**0.0000**	**307.0913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5176	27.2382	45.2719	0.0868	2.3514	0.4122	2.7635	0.6755	0.3791	1.0546	0.0000	7,526.3134	7,526.3134	0.0583	0.0000	7,527.5379
Worker	3.1152	4.7257	44.7820	0.1234	10.3442	0.0792	10.4234	2.7515	0.0734	2.8249	0.0000	8,402.0039	8,402.0039	0.4151	0.0000	8,410.7214
Total	**6.6328**	**31.9639**	**90.0539**	**0.2102**	**12.6956**	**0.4914**	**13.1869**	**3.4270**	**0.4525**	**3.8795**	**0.0000**	**15,928.3173**	**15,928.3173**	**0.4734**	**0.0000**	**15,938.2593**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5299	305.5299	0.0743	0.0000	307.0909
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**	**0.0000**	**305.5299**	**305.5299**	**0.0743**	**0.0000**	**307.0909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5176	27.2382	45.2719	0.0868	2.3514	0.4122	2.7635	0.6755	0.3791	1.0546	0.0000	7,526.3134	7,526.3134	0.0583	0.0000	7,527.5379
Worker	3.1152	4.7257	44.7820	0.1234	10.3442	0.0792	10.4234	2.7515	0.0734	2.8249	0.0000	8,402.0039	8,402.0039	0.4151	0.0000	8,410.7214
Total	**6.6328**	**31.9639**	**90.0539**	**0.2102**	**12.6956**	**0.4914**	**13.1869**	**3.4270**	**0.4525**	**3.8795**	**0.0000**	**15,928.3173**	**15,928.3173**	**0.4734**	**0.0000**	**15,938.2593**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371	0.0000	302.1514	302.1514	0.0736	0.0000	303.6973
Total	**0.2766**	**2.5000**	**2.2019**	**3.5100e-003**		**0.1458**	**0.1458**		**0.1371**	**0.1371**	**0.0000**	**302.1514**	**302.1514**	**0.0736**	**0.0000**	**303.6973**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2293	23.2920	43.2513	0.0870	2.3603	0.3694	2.7297	0.6781	0.3398	1.0179	0.0000	7,380.8653	7,380.8653	0.0567	0.0000	7,382.0567
Worker	2.9091	4.3702	41.4584	0.1238	10.3838	0.0785	10.4623	2.7621	0.0728	2.8349	0.0000	8,095.9735	8,095.9735	0.3921	0.0000	8,104.2066
Total	**6.1384**	**27.6622**	**84.7097**	**0.2108**	**12.7441**	**0.4479**	**13.1920**	**3.4401**	**0.4126**	**3.8528**	**0.0000**	**15,476.8388**	**15,476.8388**	**0.4488**	**0.0000**	**15,486.2632**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371	0.0000	302.1510	302.1510	0.0736	0.0000	303.6969
Total	**0.2766**	**2.5000**	**2.2019**	**3.5100e-003**		**0.1458**	**0.1458**		**0.1371**	**0.1371**	**0.0000**	**302.1510**	**302.1510**	**0.0736**	**0.0000**	**303.6969**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2293	23.2920	43.2513	0.0870	2.3603	0.3694	2.7297	0.6781	0.3398	1.0179	0.0000	7,380.8653	7,380.8653	0.0567	0.0000	7,382.0567
Worker	2.9091	4.3702	41.4584	0.1238	10.3838	0.0785	10.4623	2.7621	0.0728	2.8349	0.0000	8,095.9735	8,095.9735	0.3921	0.0000	8,104.2066
Total	**6.1384**	**27.6622**	**84.7097**	**0.2108**	**12.7441**	**0.4479**	**13.1920**	**3.4401**	**0.4126**	**3.8528**	**0.0000**	**15,476.8388**	**15,476.8388**	**0.4488**	**0.0000**	**15,486.2632**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2471	2.2629	2.1582	3.5000e-003		0.1246	0.1246		0.1172	0.1172	0.0000	301.0339	301.0339	0.0725	0.0000	302.5568
Total	**0.2471**	**2.2629**	**2.1582**	**3.5000e-003**		**0.1246**	**0.1246**		**0.1172**	**0.1172**	**0.0000**	**301.0339**	**301.0339**	**0.0725**	**0.0000**	**302.5568**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1022	19.0485	41.9805	0.0865	2.3517	0.3307	2.6825	0.6757	0.3043	0.9800	0.0000	7,342.4182	7,342.4182	0.0564	0.0000	7,343.6025
Worker	2.7330	4.0506	38.5418	0.1233	10.3442	0.0778	10.4220	2.7515	0.0721	2.8236	0.0000	7,923.7988	7,923.7988	0.3706	0.0000	7,931.5811

Total	**5.8352**	**23.0990**	**80.5223**	**0.2099**	**12.6959**	**0.4085**	**13.1044**	**3.4272**	**0.3764**	**3.8036**	**0.0000**	**15,266.2170**	**15,266.2170**	**0.4270**	**0.0000**	**15,275.1837**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2471	2.2629	2.1582	3.5000e-003		0.1246	0.1246		0.1172	0.1172	0.0000	301.0335	301.0335	0.0725	0.0000	302.5565
Total	**0.2471**	**2.2629**	**2.1582**	**3.5000e-003**		**0.1246**	**0.1246**		**0.1172**	**0.1172**	**0.0000**	**301.0335**	**301.0335**	**0.0725**	**0.0000**	**302.5565**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1022	19.0485	41.9805	0.0865	2.3517	0.3307	2.6825	0.6757	0.3043	0.9800	0.0000	7,342.4182	7,342.4182	0.0564	0.0000	7,343.6025
Worker	2.7330	4.0506	38.5418	0.1233	10.3442	0.0778	10.4220	2.7515	0.0721	2.8236	0.0000	7,923.7988	7,923.7988	0.3706	0.0000	7,931.5811
Total	**5.8352**	**23.0990**	**80.5223**	**0.2099**	**12.6959**	**0.4085**	**13.1044**	**3.4272**	**0.3764**	**3.8036**	**0.0000**	**15,266.2170**	**15,266.2170**	**0.4270**	**0.0000**	**15,275.1837**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2209	2.0197	2.1226	3.4900e-003		0.1047	0.1047		0.0986	0.0986	0.0000	299.9946	299.9946	0.0718	0.0000	301.5017
Total	**0.2209**	**2.0197**	**2.1226**	**3.4900e-003**		**0.1047**	**0.1047**		**0.0986**	**0.0986**	**0.0000**	**299.9946**	**299.9946**	**0.0718**	**0.0000**	**301.5017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9550	16.7536	39.8553	0.0861	2.3432	0.3244	2.6676	0.6733	0.2984	0.9717	0.0000	7,307.5864	7,307.5864	0.0574	0.0000	7,308.7910
Worker	2.5737	3.7695	35.8958	0.1229	10.3046	0.0771	10.3817	2.7410	0.0715	2.8125	0.0000	7,764.6484	7,764.6484	0.3517	0.0000	7,772.0350
Total	**5.5286**	**20.5232**	**75.7511**	**0.2089**	**12.6477**	**0.4015**	**13.0492**	**3.4143**	**0.3700**	**3.7842**	**0.0000**	**15,072.2347**	**15,072.2347**	**0.4091**	**0.0000**	**15,080.8260**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.2209	2.0197	2.1226	3.4900e-003		0.1047	0.1047		0.0986	0.0986	0.0000	299.9943	299.9943	0.0718	0.0000	301.5013
Total	**0.2209**	**2.0197**	**2.1226**	**3.4900e-003**		**0.1047**	**0.1047**		**0.0986**	**0.0986**	**0.0000**	**299.9943**	**299.9943**	**0.0718**	**0.0000**	**301.5013**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9550	16.7536	39.8553	0.0861	2.3432	0.3244	2.6676	0.6733	0.2984	0.9717	0.0000	7,307.5864	7,307.5864	0.0574	0.0000	7,308.7910
Worker	2.5737	3.7695	35.8958	0.1229	10.3046	0.0771	10.3817	2.7410	0.0715	2.8125	0.0000	7,764.6484	7,764.6484	0.3517	0.0000	7,772.0350
Total	**5.5286**	**20.5232**	**75.7511**	**0.2089**	**12.6477**	**0.4015**	**13.0492**	**3.4143**	**0.3700**	**3.7842**	**0.0000**	**15,072.2347**	**15,072.2347**	**0.4091**	**0.0000**	**15,080.8260**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2036	1.8606	2.1072	3.4900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	300.0980	300.0980	0.0713	0.0000	301.5949
Total	**0.2036**	**1.8606**	**2.1072**	**3.4900e-003**		**0.0906**	**0.0906**		**0.0852**	**0.0852**	**0.0000**	**300.0980**	**300.0980**	**0.0713**	**0.0000**	**301.5949**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7563	14.1065	38.1216	0.0858	2.3437	0.3161	2.6598	0.6735	0.2908	0.9643	0.0000	7,286.7045	7,286.7045	0.0530	0.0000	7,287.8181
Worker	2.4365	3.5347	33.6263	0.1228	10.3046	0.0768	10.3814	2.7410	0.0713	2.8123	0.0000	7,647.6512	7,647.6512	0.3365	0.0000	7,654.7167
Total	**5.1927**	**17.6412**	**71.7479**	**0.2086**	**12.6482**	**0.3930**	**13.0412**	**3.4144**	**0.3621**	**3.7766**	**0.0000**	**14,934.3557**	**14,934.3557**	**0.3895**	**0.0000**	**14,942.5348**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2036	1.8606	2.1072	3.4900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	300.0976	300.0976	0.0713	0.0000	301.5946
Total	**0.2036**	**1.8606**	**2.1072**	**3.4900e-003**		**0.0906**	**0.0906**		**0.0852**	**0.0852**	**0.0000**	**300.0976**	**300.0976**	**0.0713**	**0.0000**	**301.5946**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7563	14.1065	38.1216	0.0858	2.3437	0.3161	2.6598	0.6735	0.2908	0.9643	0.0000	7,286.7045	7,286.7045	0.0530	0.0000	7,287.8181
Worker	2.4365	3.5347	33.6263	0.1228	10.3046	0.0768	10.3814	2.7410	0.0713	2.8123	0.0000	7,647.6512	7,647.6512	0.3365	0.0000	7,654.7167
Total	**5.1927**	**17.6412**	**71.7479**	**0.2086**	**12.6482**	**0.3930**	**13.0412**	**3.4144**	**0.3621**	**3.7766**	**0.0000**	**14,934.3557**	**14,934.3557**	**0.3895**	**0.0000**	**14,942.5348**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1920	1.7524	2.1135	3.5200e-003		0.0800	0.0800		0.0752	0.0752	0.0000	302.4646	302.4646	0.0714	0.0000	303.9643
Total	**0.1920**	**1.7524**	**2.1135**	**3.5200e-003**		**0.0800**	**0.0800**		**0.0752**	**0.0752**	**0.0000**	**302.4646**	**302.4646**	**0.0714**	**0.0000**	**303.9643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6550	14.0794	36.8921	0.0865	2.3622	0.3202	2.6824	0.6788	0.2946	0.9735	0.0000	7,344.2130	7,344.2130	0.0537	0.0000	7,345.3396
Worker	2.3332	3.3587	32.0036	0.1238	10.3838	0.0773	10.4611	2.7621	0.0717	2.8338	0.0000	7,600.9980	7,600.9980	0.3258	0.0000	7,607.8404

Total	**4.9883**	**17.4382**	**68.8957**	**0.2102**	**12.7460**	**0.3975**	**13.1435**	**3.4409**	**0.3663**	**3.8072**	**0.0000**	**14,945.2110**	**14,945.2110**	**0.3795**	**0.0000**	**14,953.1800**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1920	1.7524	2.1135	3.5200e-003		0.0800	0.0800		0.0752	0.0752	0.0000	302.4642	302.4642	0.0714	0.0000	303.9639
Total	**0.1920**	**1.7524**	**2.1135**	**3.5200e-003**		**0.0800**	**0.0800**		**0.0752**	**0.0752**	**0.0000**	**302.4642**	**302.4642**	**0.0714**	**0.0000**	**303.9639**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6550	14.0794	36.8921	0.0865	2.3622	0.3202	2.6824	0.6788	0.2946	0.9735	0.0000	7,344.2130	7,344.2130	0.0537	0.0000	7,345.3396
Worker	2.3332	3.3587	32.0036	0.1238	10.3838	0.0773	10.4611	2.7621	0.0717	2.8338	0.0000	7,600.9980	7,600.9980	0.3258	0.0000	7,607.8404
Total	**4.9883**	**17.4382**	**68.8957**	**0.2102**	**12.7460**	**0.3975**	**13.1435**	**3.4409**	**0.3663**	**3.8072**	**0.0000**	**14,945.2110**	**14,945.2110**	**0.3795**	**0.0000**	**14,953.1800**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4019**	**301.4019**	**0.0707**	**0.0000**	**302.8874**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5769	13.9117	35.8418	0.0861	2.3536	0.3205	2.6741	0.6765	0.2948	0.9713	0.0000	7,317.8123	7,317.8123	0.0536	0.0000	7,318.9386
Worker	2.2250	3.1785	30.3670	0.1233	10.3442	0.0772	10.4214	2.7515	0.0716	2.8232	0.0000	7,479.3944	7,479.3944	0.3137	0.0000	7,485.9815
Total	**4.8018**	**17.0902**	**66.2089**	**0.2094**	**12.6978**	**0.3977**	**13.0955**	**3.4280**	**0.3665**	**3.7944**	**0.0000**	**14,797.2067**	**14,797.2067**	**0.3673**	**0.0000**	**14,804.9201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4015**	**301.4015**	**0.0707**	**0.0000**	**302.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5769	13.9117	35.8418	0.0861	2.3536	0.3205	2.6741	0.6765	0.2948	0.9713	0.0000	7,317.8123	7,317.8123	0.0536	0.0000	7,318.9386
Worker	2.2250	3.1785	30.3670	0.1233	10.3442	0.0772	10.4214	2.7515	0.0716	2.8232	0.0000	7,479.3944	7,479.3944	0.3137	0.0000	7,485.9815
Total	**4.8018**	**17.0902**	**66.2089**	**0.2094**	**12.6978**	**0.3977**	**13.0955**	**3.4280**	**0.3665**	**3.7944**	**0.0000**	**14,797.2067**	**14,797.2067**	**0.3673**	**0.0000**	**14,804.9201**

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4019**	**301.4019**	**0.0707**	**0.0000**	**302.8874**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5140	13.6539	35.3812	0.0861	2.3539	0.3144	2.6683	0.6766	0.2893	0.9658	0.0000	7,317.9008	7,317.9008	0.0529	0.0000	7,319.0112
Worker	2.1349	3.0332	29.0523	0.1233	10.3442	0.0776	10.4218	2.7515	0.0720	2.8236	0.0000	7,398.5465	7,398.5465	0.3041	0.0000	7,404.9328
Total	**4.6488**	**16.6871**	**64.4335**	**0.2094**	**12.6981**	**0.3921**	**13.0902**	**3.4281**	**0.3613**	**3.7894**	**0.0000**	**14,716.4473**	**14,716.4473**	**0.3570**	**0.0000**	**14,723.9439**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4015**	**301.4015**	**0.0707**	**0.0000**	**302.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5140	13.6539	35.3812	0.0861	2.3539	0.3144	2.6683	0.6766	0.2893	0.9658	0.0000	7,317.9008	7,317.9008	0.0529	0.0000	7,319.0112
Worker	2.1349	3.0332	29.0523	0.1233	10.3442	0.0776	10.4218	2.7515	0.0720	2.8236	0.0000	7,398.5465	7,398.5465	0.3041	0.0000	7,404.9328
Total	**4.6488**	**16.6871**	**64.4335**	**0.2094**	**12.6981**	**0.3921**	**13.0902**	**3.4281**	**0.3613**	**3.7894**	**0.0000**	**14,716.4473**	**14,716.4473**	**0.3570**	**0.0000**	**14,723.9439**

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0939	0.8563	1.1076	1.8500e-003		0.0362	0.0362		0.0341	0.0341	0.0000	159.3619	159.3619	0.0374	0.0000	160.1474
Total	**0.0939**	**0.8563**	**1.1076**	**1.8500e-003**		**0.0362**	**0.0362**		**0.0341**	**0.0341**	**0.0000**	**159.3619**	**159.3619**	**0.0374**	**0.0000**	**160.1474**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3143	7.1693	18.5401	0.0455	1.2448	0.1666	1.4114	0.3578	0.1532	0.5111	0.0000	3,869.8266	3,869.8266	0.0280	0.0000	3,870.4147
Worker	1.0851	1.5357	14.7520	0.0652	5.4694	0.0412	5.5106	1.4548	0.0383	1.4931	0.0000	3,874.5066	3,874.5066	0.1563	0.0000	3,877.7891

Total	**2.3993**	**8.7051**	**33.2921**	**0.1107**	**6.7141**	**0.2078**	**6.9219**	**1.8126**	**0.1915**	**2.0041**	**0.0000**	**7,744.3331**	**7,744.3331**	**0.1843**	**0.0000**	**7,748.2037**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0939	0.8563	1.1076	1.8500e-003		0.0362	0.0362		0.0341	0.0341	0.0000	159.3617	159.3617	0.0374	0.0000	160.1472
Total	**0.0939**	**0.8563**	**1.1076**	**1.8500e-003**		**0.0362**	**0.0362**		**0.0341**	**0.0341**	**0.0000**	**159.3617**	**159.3617**	**0.0374**	**0.0000**	**160.1472**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3143	7.1693	18.5401	0.0455	1.2448	0.1666	1.4114	0.3578	0.1532	0.5111	0.0000	3,869.8266	3,869.8266	0.0280	0.0000	3,870.4147
Worker	1.0851	1.5357	14.7520	0.0652	5.4694	0.0412	5.5106	1.4548	0.0383	1.4931	0.0000	3,874.5066	3,874.5066	0.1563	0.0000	3,877.7891
Total	**2.3993**	**8.7051**	**33.2921**	**0.1107**	**6.7141**	**0.2078**	**6.9219**	**1.8126**	**0.1915**	**2.0041**	**0.0000**	**7,744.3331**	**7,744.3331**	**0.1843**	**0.0000**	**7,748.2037**

3.5 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0552	0.5179	0.8781	1.3700e-003		0.0253	0.0253		0.0233	0.0233	0.0000	120.4991	120.4991	0.0390	0.0000	121.3175
Paving	3.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0586**	**0.5179**	**0.8781**	**1.3700e-003**		**0.0253**	**0.0253**		**0.0233**	**0.0233**	**0.0000**	**120.4991**	**120.4991**	**0.0390**	**0.0000**	**121.3175**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6600e-003	2.3500e-003	0.0226	1.0000e-004	8.3700e-003	6.0000e-005	8.4400e-003	2.2300e-003	6.0000e-005	2.2900e-003	0.0000	5.9316	5.9316	2.4000e-004	0.0000	5.9366
Total	**1.6600e-003**	**2.3500e-003**	**0.0226**	**1.0000e-004**	**8.3700e-003**	**6.0000e-005**	**8.4400e-003**	**2.2300e-003**	**6.0000e-005**	**2.2900e-003**	**0.0000**	**5.9316**	**5.9316**	**2.4000e-004**	**0.0000**	**5.9366**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.0552	0.5179	0.8781	1.3700e-003		0.0253	0.0253		0.0233	0.0233	0.0000	120.4989	120.4989	0.0390	0.0000	121.3173
Paving	3.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0586**	**0.5179**	**0.8781**	**1.3700e-003**		**0.0253**	**0.0253**		**0.0233**	**0.0233**	**0.0000**	**120.4989**	**120.4989**	**0.0390**	**0.0000**	**121.3173**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6600e-003	2.3500e-003	0.0226	1.0000e-004	8.3700e-003	6.0000e-005	8.4400e-003	2.2300e-003	6.0000e-005	2.2900e-003	0.0000	5.9316	5.9316	2.4000e-004	0.0000	5.9366
Total	**1.6600e-003**	**2.3500e-003**	**0.0226**	**1.0000e-004**	**8.3700e-003**	**6.0000e-005**	**8.4400e-003**	**2.2300e-003**	**6.0000e-005**	**2.2900e-003**	**0.0000**	**5.9316**	**5.9316**	**2.4000e-004**	**0.0000**	**5.9366**

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0435	0.4084	0.6925	1.0800e-003		0.0199	0.0199		0.0183	0.0183	0.0000	95.0277	95.0277	0.0307	0.0000	95.6731
Paving	2.7100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0462**	**0.4084**	**0.6925**	**1.0800e-003**		**0.0199**	**0.0199**		**0.0183**	**0.0183**	**0.0000**	**95.0277**	**95.0277**	**0.0307**	**0.0000**	**95.6731**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2600e-003	1.7800e-003	0.0172	8.0000e-005	6.6000e-003	5.0000e-005	6.6500e-003	1.7600e-003	5.0000e-005	1.8000e-003	0.0000	4.6385	4.6385	1.8000e-004	0.0000	4.6424
Total	**1.2600e-003**	**1.7800e-003**	**0.0172**	**8.0000e-005**	**6.6000e-003**	**5.0000e-005**	**6.6500e-003**	**1.7600e-003**	**5.0000e-005**	**1.8000e-003**	**0.0000**	**4.6385**	**4.6385**	**1.8000e-004**	**0.0000**	**4.6424**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0435	0.4084	0.6925	1.0800e-003		0.0199	0.0199		0.0183	0.0183	0.0000	95.0276	95.0276	0.0307	0.0000	95.6730
Paving	2.7100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0462**	**0.4084**	**0.6925**	**1.0800e-003**		**0.0199**	**0.0199**		**0.0183**	**0.0183**	**0.0000**	**95.0276**	**95.0276**	**0.0307**	**0.0000**	**95.6730**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2600e-003	1.7800e-003	0.0172	8.0000e-005	6.6000e-003	5.0000e-005	6.6500e-003	1.7600e-003	5.0000e-005	1.8000e-003	0.0000	4.6385	4.6385	1.8000e-004	0.0000	4.6424
Total	**1.2600e-003**	**1.7800e-003**	**0.0172**	**8.0000e-005**	**6.6000e-003**	**5.0000e-005**	**6.6500e-003**	**1.7600e-003**	**5.0000e-005**	**1.8000e-003**	**0.0000**	**4.6385**	**4.6385**	**1.8000e-004**	**0.0000**	**4.6424**

3.6 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	69.9907					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0139	0.0934	0.1474	2.4000e-004		4.2000e-003	4.2000e-003		4.2000e-003	4.2000e-003	0.0000	20.8090	20.8090	1.1400e-003	0.0000	20.8329
Total	**70.0046**	**0.0934**	**0.1474**	**2.4000e-004**		**4.2000e-003**	**4.2000e-003**		**4.2000e-003**	**4.2000e-003**	**0.0000**	**20.8090**	**20.8090**	**1.1400e-003**	**0.0000**	**20.8329**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2467	0.3479	3.3556	0.0154	1.2923	9.7800e-003	1.3021	0.3438	9.0700e-003	0.3528	0.0000	907.8136	907.8136	0.0360	0.0000	908.5688

Total	**0.2467**	**0.3479**	**3.3556**	**0.0154**	**1.2923**	**9.7800e-003**	**1.3021**	**0.3438**	**9.0700e-003**	**0.3528**	**0.0000**	**907.8136**	**907.8136**	**0.0360**	**0.0000**	**908.5688**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	69.9907					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0139	0.0934	0.1474	2.4000e-004		4.2000e-003	4.2000e-003		4.2000e-003	4.2000e-003	0.0000	20.8090	20.8090	1.1400e-003	0.0000	20.8328
Total	**70.0046**	**0.0934**	**0.1474**	**2.4000e-004**		**4.2000e-003**	**4.2000e-003**		**4.2000e-003**	**4.2000e-003**	**0.0000**	**20.8090**	**20.8090**	**1.1400e-003**	**0.0000**	**20.8328**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2467	0.3479	3.3556	0.0154	1.2923	9.7800e-003	1.3021	0.3438	9.0700e-003	0.3528	0.0000	907.8136	907.8136	0.0360	0.0000	908.5688
Total	**0.2467**	**0.3479**	**3.3556**	**0.0154**	**1.2923**	**9.7800e-003**	**1.3021**	**0.3438**	**9.0700e-003**	**0.3528**	**0.0000**	**907.8136**	**907.8136**	**0.0360**	**0.0000**	**908.5688**

3.6 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	24.4753					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8700e-003	0.0327	0.0516	8.0000e-005		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	7.2768	7.2768	4.0000e-004	0.0000	7.2851
Total	**24.4801**	**0.0327**	**0.0516**	**8.0000e-005**		**1.4700e-003**	**1.4700e-003**		**1.4700e-003**	**1.4700e-003**	**0.0000**	**7.2768**	**7.2768**	**4.0000e-004**	**0.0000**	**7.2851**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0829	0.1165	1.1291	5.3800e-003	0.4519	3.4300e-003	0.4554	0.1202	3.1800e-003	0.1234	0.0000	315.1209	315.1209	0.0122	0.0000	315.3781
Total	**0.0829**	**0.1165**	**1.1291**	**5.3800e-003**	**0.4519**	**3.4300e-003**	**0.4554**	**0.1202**	**3.1800e-003**	**0.1234**	**0.0000**	**315.1209**	**315.1209**	**0.0122**	**0.0000**	**315.3781**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Archit. Coating	24.4753					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8700e-003	0.0327	0.0516	8.0000e-005		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	7.2768	7.2768	4.0000e-004	0.0000	7.2851
Total	**24.4801**	**0.0327**	**0.0516**	**8.0000e-005**		**1.4700e-003**	**1.4700e-003**		**1.4700e-003**	**1.4700e-003**	**0.0000**	**7.2768**	**7.2768**	**4.0000e-004**	**0.0000**	**7.2851**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0829	0.1165	1.1291	5.3800e-003	0.4519	3.4300e-003	0.4554	0.1202	3.1800e-003	0.1234	0.0000	315.1209	315.1209	0.0122	0.0000	315.3781
Total	**0.0829**	**0.1165**	**1.1291**	**5.3800e-003**	**0.4519**	**3.4300e-003**	**0.4554**	**0.1202**	**3.1800e-003**	**0.1234**	**0.0000**	**315.1209**	**315.1209**	**0.0122**	**0.0000**	**315.3781**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	32.4939	62.0596	333.5964	0.7757	47.4631	1.3103	48.7734	12.7613	1.2089	13.9702	0.0000	51,558.4251	51,558.4251	1.3002	0.0000	51,585.7294
Unmitigated	32.4939	62.0596	333.5964	0.7757	47.4631	1.3103	48.7734	12.7613	1.2089	13.9702	0.0000	51,558.4251	51,558.4251	1.3002	0.0000	51,585.7294

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	26,360.00	28,640.00	24280.00	58,908,951	58,908,951
Arena	36,414.00	36,414.00	36414.00	714,296	714,296
Arena	9,103.50	9,103.50	9103.50	178,574	178,574
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	142.03	30.57	12.64	257,192	257,192
Hotel	7,148.75	7,166.25	5206.25	13,059,649	13,059,649
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	17,820.10	20,737.55	10474.60	30,134,964	30,134,964
Research & Development	12,166.05	2,850.25	1665.14	23,396,057	23,396,057
Total	109,154.43	104,942.12	87,156.14	126,649,682	126,649,682

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Arena	9.50	7.30	7.30	0.00	81.00	19.00	0.66	0.28	0.6
Arena	9.50	7.30	7.30	0.00	81.00	19.00	0.66	0.28	0.6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.534279	0.061728	0.163535	0.108433	0.030557	0.004584	0.021278	0.063079	0.001942	0.003382	0.005694	0.000164	0.001344

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30,465.7922	30,465.7922	1.5161	0.3137	30,594.8655
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30,465.7922	30,465.7922	1.5161	0.3137	30,594.8655
NaturalGas Mitigated	1.2600	11.3505	8.8580	0.0687		0.8706	0.8706		0.8706	0.8706	0.0000	12,469.7442	12,469.7442	0.2390	0.2286	12,545.6330
NaturalGas Unmitigated	1.2600	11.3505	8.8580	0.0687		0.8706	0.8706		0.8706	0.8706	0.0000	12,469.7442	12,469.7442	0.2390	0.2286	12,545.6330

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	2.1828e+007	0.1177	1.0700	0.8988	6.4200e-003		0.0813	0.0813		0.0813	0.0813	0.0000	1,164.8252	1,164.8252	0.0223	0.0214	1,171.9141
Arena	8.7312e+007	0.4708	4.2800	3.5952	0.0257		0.3253	0.3253		0.3253	0.3253	0.0000	4,659.3008	4,659.3008	0.0893	0.0854	4,687.6566
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	261741	1.4100e-003	0.0128	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	13.9675	13.9675	2.7000e-004	2.6000e-004	14.0525
Hotel	4.83425e+007	0.2607	2.3697	1.9906	0.0142		0.1801	0.1801		0.1801	0.1801	0.0000	2,579.7412	2,579.7412	0.0495	0.0473	2,595.4411
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Regional Shopping Center	1.992e+006	0.0107	0.0977	0.0820	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003	0.0000	106.3007	106.3007	2.0400e-003	1.9500e-003	106.9476
Research & Development	3.85232e+007	0.2077	1.8884	1.5863	0.0113		0.1435	0.1435		0.1435	0.1435	0.0000	2,055.7466	2,055.7466	0.0394	0.0377	2,068.2575
Apartments High Rise	3.54147e+007	0.1910	1.6319	0.6944	0.0104		0.1319	0.1319		0.1319	0.1319	0.0000	1,889.8622	1,889.8622	0.0362	0.0347	1,901.3636
Total		**1.2600**	**11.3505**	**8.8580**	**0.0687**		**0.8706**	**0.8706**		**0.8706**	**0.8706**	**0.0000**	**12,469.7442**	**12,469.7442**	**0.2390**	**0.2286**	**12,545.6330**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	8.7312e+007	0.4708	4.2800	3.5952	0.0257		0.3253	0.3253		0.3253	0.3253	0.0000	4,659.3008	4,659.3008	0.0893	0.0854	4,687.6566
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	261741	1.4100e-003	0.0128	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	13.9675	13.9675	2.7000e-004	2.6000e-004	14.0525
Hotel	4.83425e+007	0.2607	2.3697	1.9906	0.0142		0.1801	0.1801		0.1801	0.1801	0.0000	2,579.7412	2,579.7412	0.0495	0.0473	2,595.4411
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.992e+006	0.0107	0.0977	0.0820	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003	0.0000	106.3007	106.3007	2.0400e-003	1.9500e-003	106.9476
Research & Development	3.85232e+007	0.2077	1.8884	1.5863	0.0113		0.1435	0.1435		0.1435	0.1435	0.0000	2,055.7466	2,055.7466	0.0394	0.0377	2,068.2575
Apartments High Rise	3.54147e+007	0.1910	1.6319	0.6944	0.0104		0.1319	0.1319		0.1319	0.1319	0.0000	1,889.8622	1,889.8622	0.0362	0.0347	1,901.3636
Arena	2.1828e+007	0.1177	1.0700	0.8988	6.4200e-003		0.0813	0.0813		0.0813	0.0813	0.0000	1,164.8252	1,164.8252	0.0223	0.0214	1,171.9141
Total		**1.2600**	**11.3505**	**8.8580**	**0.0687**		**0.8706**	**0.8706**		**0.8706**	**0.8706**	**0.0000**	**12,469.7442**	**12,469.7442**	**0.2390**	**0.2286**	**12,545.6330**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.44614e+007	3,822.7268	0.1902	0.0394	3,838.9225
Arena	2.8118e+007	7,432.7128	0.3699	0.0765	7,464.2027
Arena	7.0295e+006	1,858.1782	0.0925	0.0191	1,866.0507
Enclosed Parking with Elevator	3.51558e+007	9,293.0956	0.4625	0.0957	9,332.4674
General Office Building	179052	47.3306	2.3600e-003	4.9000e-004	47.5311
Hotel	1.15616e+007	3,056.1804	0.1521	0.0315	3,069.1284
Parking Lot	1.52275e+006	402.5243	0.0200	4.1400e-003	404.2297
Regional Shopping Center	4.81815e+006	1,273.6299	0.0634	0.0131	1,279.0258
Research & Development	1.2406e+007	3,279.4135	0.1632	0.0338	3,293.3072
Total		**30,465.7922**	**1.5161**	**0.3137**	**30,594.8655**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.44614e+007	3,822.7268	0.1902	0.0394	3,838.9225
Arena	2.8118e+007	7,432.7128	0.3699	0.0765	7,464.2027
Arena	7.0295e+006	1,858.1782	0.0925	0.0191	1,866.0507

Enclosed Parking with Elevator	3.51558e+007	9,293.0956	0.4625	0.0957	9,332.4674
General Office Building	179052	47.3306	2.3600e-003	4.9000e-004	47.5311
Hotel	1.15616e+007	3,056.1804	0.1521	0.0315	3,069.1284
Parking Lot	1.52275e+006	402.5243	0.0200	4.1400e-003	404.2297
Regional Shopping Center	4.81815e+006	1,273.6299	0.0634	0.0131	1,279.0258
Research & Development	1.2406e+007	3,279.4135	0.1632	0.0338	3,293.3072
Total		**30,465.7922**	**1.5161**	**0.3137**	**30,594.8655**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	85.2952	0.3962	34.2580	5.4000e-003		0.8114	0.8114		0.8114	0.8114	65.4698	154.7175	220.1873	0.1689	5.4600e-003	225.4260
Unmitigated	85.2952	0.3962	34.2580	5.4000e-003		0.8114	0.8114		0.8114	0.8114	65.4698	154.7175	220.1873	0.1689	5.4600e-003	225.4260

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.4466					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	71.8414					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.1019	0.0527	4.4388	3.8200e-003		0.6459	0.6459		0.6459	0.6459	65.4698	105.7660	171.2358	0.1216	5.4600e-003	175.4811
Landscaping	0.9053	0.3435	29.8192	1.5900e-003		0.1655	0.1655		0.1655	0.1655	0.0000	48.9515	48.9515	0.0473	0.0000	49.9450
Total	**85.2952**	**0.3962**	**34.2580**	**5.4100e-003**		**0.8114**	**0.8114**		**0.8114**	**0.8114**	**65.4698**	**154.7175**	**220.1873**	**0.1689**	**5.4600e-003**	**225.4260**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.4466					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	71.8414					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.1019	0.0527	4.4388	3.8200e-003		0.6459	0.6459		0.6459	0.6459	65.4698	105.7660	171.2358	0.1216	5.4600e-003	175.4811
Landscaping	0.9053	0.3435	29.8192	1.5900e-003		0.1655	0.1655		0.1655	0.1655	0.0000	48.9515	48.9515	0.0473	0.0000	49.9450
Total	**85.2952**	**0.3962**	**34.2580**	**5.4100e-003**		**0.8114**	**0.8114**		**0.8114**	**0.8114**	**65.4698**	**154.7175**	**220.1873**	**0.1689**	**5.4600e-003**	**225.4260**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5,321.6000	94.1846	2.2610	8,000.3706
Unmitigated	5,321.6000	94.2017	2.2645	8,001.8304

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	260.616 / 164.301	607.4622	8.5183	0.2059	850.1821
Arena	1830.77 / 116.858	3,307.5705	59.7915	1.4367	5,008.5604
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	2.29277 / 1.40524	5.3070	0.0749	1.8100e-003	7.4421
Hotel	22.1959 / 2.46621	41.0713	0.7250	0.0174	61.6978
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	30.7401 / 18.8407	71.1526	1.0047	0.0243	99.7797
Research & Development	737.605 / 0	1,289.0366	24.0874	0.5784	1,974.1682
Total		**5,321.6000**	**94.2017**	**2.2645**	**8,001.8304**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	260.616 / 164.301	607.4622	8.5167	0.2056	850.0502
Arena	1830.77 / 116.858	3,307.5705	59.7806	1.4344	5,007.6338
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	2.29277 / 1.40524	5.3070	0.0749	1.8100e-003	7.4410
Hotel	22.1959 / 2.46621	41.0713	0.7248	0.0174	61.6866
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	30.7401 / 18.8407	71.1526	1.0045	0.0243	99.7641
Research & Development	737.605 / 0	1,289.0366	24.0830	0.5775	1,973.7949
Total		**5,321.6000**	**94.1846**	**2.2610**	**8,000.3706**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	608.5202	35.9625	0.0000	1,363.7330
Unmitigated	608.5202	35.9625	0.0000	1,363.7330

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	1840	373.5034	22.0734	0.0000	837.0451
Arena	116.96	23.7418	1.4031	0.0000	53.2070
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	12	2.4359	0.1440	0.0000	5.4590
Hotel	479.06	97.2449	5.7470	0.0000	217.9320
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	435.75	88.4533	5.2274	0.0000	198.2296
Research & Development	114	23.1410	1.3676	0.0000	51.8604
Total		**608.5202**	**35.9625**	**0.0000**	**1,363.7330**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Apartments High Rise	1840	373.5034	22.0734	0.0000	837.0451
Arena	116.96	23.7418	1.4031	0.0000	53.2070
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	12	2.4359	0.1440	0.0000	5.4590
Hotel	479.06	97.2449	5.7470	0.0000	217.9320
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	435.75	88.4533	5.2274	0.0000	198.2296
Research & Development	114	23.1410	1.3676	0.0000	51.8604
Total		**608.5202**	**35.9625**	**0.0000**	**1,363.7330**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

“2013 Baseline” CalEEMod™ Output

Existing Emissions from the Coliseum Site Area

Oakland Coliseum Project - Existing (2013) Operational

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	89.15	1000sqft	3.40	89,150.00	0
Place of Worship	7.75	1000sqft	0.61	7,750.00	0
General Light Industry	58.50	1000sqft	7.29	58,500.00	0
Unrefrigerated Warehouse-No Rail	157.75	1000sqft	11.80	157,750.00	0
Unrefrigerated Warehouse-No Rail	190.93	1000sqft	14.58	190,930.00	0
Parking Lot	40.00	Acre	40.00	1,742,400.00	0
Arena	615.00	1000sqft	8.67	615,000.00	0
Arena	1,251.40	1000sqft	103.20	1,251,400.00	0
High Turnover (Sit Down Restaurant)	6.95	1000sqft	1.28	6,950.00	0
Automobile Care Center	30.00	1000sqft	6.55	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2013
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	582.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 Non-Default Data

Table Name	Column Name	Default Value	New Value

tblConstructionPhase	NumDays	200.00	0.00
tblLandUse	LotAcreage	2.05	3.40
tblLandUse	LotAcreage	0.18	0.61
tblLandUse	LotAcreage	1.34	7.29
tblLandUse	LotAcreage	3.62	11.80
tblLandUse	LotAcreage	4.38	14.58
tblLandUse	LotAcreage	402.24	103.20
tblLandUse	LotAcreage	197.68	8.67
tblLandUse	LotAcreage	0.16	1.28
tblLandUse	LotAcreage	0.69	6.55
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	582.77
tblProjectCharacteristics	OperationalYear	2014	2013
tblVehicleTrips	CC_TTP	48.00	28.00
tblVehicleTrips	CC_TTP	72.50	64.70
tblVehicleTrips	CC_TTP	95.00	28.00
tblVehicleTrips	CC_TTP	0.00	28.00
tblVehicleTrips	CNW_TTP	19.00	13.00
tblVehicleTrips	CNW_TTP	5.00	13.00
tblVehicleTrips	CNW_TTP	41.00	13.00
tblVehicleTrips	CW_TTP	33.00	59.00
tblVehicleTrips	CW_TTP	8.50	16.30
tblVehicleTrips	CW_TTP	0.00	59.00
tblVehicleTrips	DV_TP	0.28	0.00
tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	20.00	0.00

tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	0.60	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	0.66	100.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	37.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	10.71	3.37
tblVehicleTrips	ST_TR	62.00	0.81
tblVehicleTrips	ST_TR	1.32	0.81
tblVehicleTrips	ST_TR	2.37	1.73
tblVehicleTrips	ST_TR	158.37	29.59
tblVehicleTrips	ST_TR	10.37	0.81
tblVehicleTrips	ST_TR	2.59	0.81
tblVehicleTrips	SU_TR	10.71	3.37
tblVehicleTrips	SU_TR	62.00	0.42
tblVehicleTrips	SU_TR	0.68	0.42
tblVehicleTrips	SU_TR	0.98	0.72
tblVehicleTrips	SU_TR	131.84	14.95
tblVehicleTrips	SU_TR	36.63	0.42
tblVehicleTrips	SU_TR	2.59	0.42

tblVehicleTrips	WD_TR	10.71	3.37
tblVehicleTrips	WD_TR	62.00	4.28
tblVehicleTrips	WD_TR	6.97	4.28
tblVehicleTrips	WD_TR	11.01	8.08
tblVehicleTrips	WD_TR	127.15	25.43
tblVehicleTrips	WD_TR	9.11	4.28
tblVehicleTrips	WD_TR	2.59	4.28

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	17.4922	2.3000e-004	0.0238	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0437	0.0437	1.4000e-004	0.0000	0.0466
Energy	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	8,340.8343	8,340.8343	0.3271	0.1090	8,381.4901
Mobile	8.4803	27.4515	92.9881	0.1308	8.6948	0.5484	9.2433	2.3361	0.5035	2.8396	0.0000	11,272.5104	11,272.5104	0.5795	0.0000	11,284.6806
Waste						0.0000	0.0000		0.0000	0.0000	157.5311	0.0000	157.5311	9.3098	0.0000	353.0374
Water						0.0000	0.0000		0.0000	0.0000	291.6100	1,373.2682	1,664.8782	30.0195	0.7214	2,518.9057
Total	**26.2631**	**30.0937**	**95.2312**	**0.1467**	**8.6948**	**0.7493**	**9.4441**	**2.3361**	**0.7044**	**3.0405**	**449.1411**	**20,986.6566**	**21,435.7977**	**40.2360**	**0.8303**	**22,538.1604**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	17.4922	2.3000e-004	0.0238	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0437	0.0437	1.4000e-004	0.0000	0.0466
Energy	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	8,340.8343	8,340.8343	0.3271	0.1090	8,381.4901
Mobile	8.4803	27.4515	92.9881	0.1308	8.6948	0.5484	9.2433	2.3361	0.5035	2.8396	0.0000	11,272.5104	11,272.5104	0.5795	0.0000	11,284.6806
Waste						0.0000	0.0000		0.0000	0.0000	39.3828	0.0000	39.3828	2.3275	0.0000	88.2594
Water						0.0000	0.0000		0.0000	0.0000	291.6100	1,373.2682	1,664.8782	30.0140	0.7202	2,518.4405
Total	**26.2631**	**30.0937**	**95.2312**	**0.1467**	**8.6948**	**0.7493**	**9.4441**	**2.3361**	**0.7044**	**3.0405**	**330.9928**	**20,986.6566**	**21,317.6494**	**33.2482**	**0.8292**	**22,272.9171**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**26.31**	**0.00**	**0.55**	**17.37**	**0.14**	**1.18**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	9,990.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.4803	27.4515	92.9881	0.1308	8.6948	0.5484	9.2433	2.3361	0.5035	2.8396	0.0000	11,272.5104	11,272.5104	0.5795	0.0000	11,284.6806
Unmitigated	8.4803	27.4515	92.9881	0.1308	8.6948	0.5484	9.2433	2.3361	0.5035	2.8396	0.0000	11,272.5104	11,272.5104	0.5795	0.0000	11,284.6806

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	2,071.23	2,071.23	2071.23	5,503,665	5,503,665
Arena	4,214.53	4,214.53	4214.53	11,198,839	11,198,839
Automobile Care Center	128.32	24.30	12.52	303,323	303,323
General Light Industry	250.23	47.39	24.41	591,479	591,479
General Office Building	720.63	154.39	64.39	1,595,094	1,595,094
High Turnover (Sit Down Restaurant)	176.74	205.67	103.89	475,209	475,209
Parking Lot	0.00	0.00	0.00		
Place of Worship	33.15	6.28	3.23	78,358	78,358
Unrefrigerated Warehouse-No Rail	674.76	127.79	65.83	1,594,972	1,594,972
Unrefrigerated Warehouse-No Rail	816.68	154.67	79.68	1,930,447	1,930,447
Total	9,086.26	7,006.24	6,639.70	23,271,387	23,271,387

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.50	7.30	7.30	0.00	81.00	19.00	100	0	0
Arena	9.50	7.30	7.30	0.00	81.00	19.00	100	0	0
Automobile Care Center	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	100	0	0
High Turnover (Sit Down	9.50	7.30	7.30	16.30	64.70	19.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Place of Worship	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.542556	0.062211	0.168896	0.115895	0.031898	0.004750	0.018306	0.042929	0.001741	0.003743	0.005433	0.000213	0.001429

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	2,876.1418	2,876.1418	0.0551	0.0527	2,893.6455
NaturalGas Unmitigated	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	2,876.1418	2,876.1418	0.0551	0.0527	2,893.6455
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,464.6925	5,464.6925	0.2719	0.0563	5,487.8446
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,464.6925	5,464.6925	0.2719	0.0563	5,487.8446

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	1.57932e+007	0.0852	0.7742	0.6503	4.6500e-003		0.0588	0.0588		0.0588	0.0588	0.0000	842.7853	842.7853	0.0162	0.0155	847.9144
Arena	3.2136e+007	0.1733	1.5753	1.3233	9.4500e-003		0.1197	0.1197		0.1197	0.1197	0.0000	1,714.8968	1,714.8968	0.0329	0.0314	1,725.3334
Automobile Care Center	770400	4.1500e-003	0.0378	0.0317	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1115	41.1115	7.9000e-004	7.5000e-004	41.3617
General Light Industry	1.50228e+006	8.1000e-003	0.0736	0.0619	4.4000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	80.1674	80.1674	1.5400e-003	1.4700e-003	80.6553
General Office Building	1.80885e+006	9.7500e-003	0.0887	0.0745	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	96.5273	96.5273	1.8500e-003	1.7700e-003	97.1148
High Turnover (Sit Down Restaurant)	1.18157e+006	6.3700e-003	0.0579	0.0487	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	63.0531	63.0531	1.2100e-003	1.1600e-003	63.4368
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Place of Worship	199020	1.0700e-003	9.7600e-003	8.1900e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6205	10.6205	2.0000e-004	1.9000e-004	10.6851
Unrefrigerated Warehouse-No Rail	228738	1.2300e-003	0.0112	9.4200e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2063	12.2063	2.3000e-004	2.2000e-004	12.2806
Unrefrigerated Warehouse-No Rail	276849	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7737	14.7737	2.8000e-004	2.7000e-004	14.8636
Total		**0.2906**	**2.6420**	**2.2193**	**0.0159**		**0.2008**	**0.2008**		**0.2008**	**0.2008**	**0.0000**	**2,876.1418**	**2,876.1418**	**0.0551**	**0.0527**	**2,893.6455**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	770400	4.1500e-003	0.0378	0.0317	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1115	41.1115	7.9000e-004	7.5000e-004	41.3617
Arena	1.57932e+007	0.0852	0.7742	0.6503	4.6500e-003		0.0588	0.0588		0.0588	0.0588	0.0000	842.7853	842.7853	0.0162	0.0155	847.9144
Arena	3.2136e+007	0.1733	1.5753	1.3233	9.4500e-003		0.1197	0.1197		0.1197	0.1197	0.0000	1,714.8968	1,714.8968	0.0329	0.0314	1,725.3334
General Light Industry	1.50228e+006	8.1000e-003	0.0736	0.0619	4.4000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	80.1674	80.1674	1.5400e-003	1.4700e-003	80.6553
General Office Building	1.80885e+006	9.7500e-003	0.0887	0.0745	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	96.5273	96.5273	1.8500e-003	1.7700e-003	97.1148
High Turnover (Sit Down Restaurant)	1.18157e+006	6.3700e-003	0.0579	0.0487	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	63.0531	63.0531	1.2100e-003	1.1600e-003	63.4368
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	199020	1.0700e-003	9.7600e-003	8.1900e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6205	10.6205	2.0000e-004	1.9000e-004	10.6851
Unrefrigerated Warehouse-No Rail	228738	1.2300e-003	0.0112	9.4200e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2063	12.2063	2.3000e-004	2.2000e-004	12.2806
Unrefrigerated Warehouse-No Rail	276849	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7737	14.7737	2.8000e-004	2.7000e-004	14.8636
Total		**0.2906**	**2.6420**	**2.2193**	**0.0159**		**0.2008**	**0.2008**		**0.2008**	**0.2008**	**0.0000**	**2,876.1418**	**2,876.1418**	**0.0551**	**0.0527**	**2,893.6455**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	1.03491e+007	2,735.6755	0.1361	0.0282	2,747.2657
Arena	5.08605e+006	1,344.4466	0.0669	0.0138	1,350.1426
Automobile Care Center	248100	65.5828	3.2600e-003	6.8000e-004	65.8606
General Light Industry	483795	127.8864	6.3600e-003	1.3200e-003	128.4282
General Office Building	1.2374e+006	327.0949	0.0163	3.3700e-003	328.4807
High Turnover (Sit Down Restaurant)	210168	55.5558	2.7600e-003	5.7000e-004	55.7912
Parking Lot	1.53331e+006	405.3157	0.0202	4.1700e-003	407.0329
Place of Worship	64092.5	16.9422	8.4000e-004	1.7000e-004	17.0140
Unrefrigerated Warehouse-No Rail	660972	174.7215	8.6900e-003	1.8000e-003	175.4617
Unrefrigerated Warehouse-No Rail	799997	211.4712	0.0105	2.1800e-003	212.3671
Total		**5,464.6925**	**0.2719**	**0.0563**	**5,487.8446**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	1.03491e+007	2,735.6755	0.1361	0.0282	2,747.2657
Arena	5.08605e+006	1,344.4466	0.0669	0.0138	1,350.1426

Automobile Care Center	248100	65.5828	3.2600e-003	6.8000e-004	65.8606
General Light Industry	483795	127.8864	6.3600e-003	1.3200e-003	128.4282
General Office Building	1.2374e+006	327.0949	0.0163	3.3700e-003	328.4807
High Turnover (Sit Down Restaurant)	210168	55.5558	2.7600e-003	5.7000e-004	55.7912
Parking Lot	1.53331e+006	405.3157	0.0202	4.1700e-003	407.0329
Place of Worship	64092.5	16.9422	8.4000e-004	1.7000e-004	17.0140
Unrefrigerated Warehouse-No Rail	660972	174.7215	8.6900e-003	1.8000e-003	175.4617
Unrefrigerated Warehouse-No Rail	799997	211.4712	0.0105	2.1800e-003	212.3671
Total		**5,464.6925**	**0.2719**	**0.0563**	**5,487.8446**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	17.4922	2.3000e-004	0.0238	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0437	0.0437	1.4000e-004	0.0000	0.0466
Unmitigated	17.4922	2.3000e-004	0.0238	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0437	0.0437	1.4000e-004	0.0000	0.0466

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2826					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	16.2072					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4600e-003	2.3000e-004	0.0238	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0437	0.0437	1.4000e-004	0.0000	0.0466
Total	**17.4922**	**2.3000e-004**	**0.0238**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.0437**	**0.0437**	**1.4000e-004**	**0.0000**	**0.0466**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2826					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	16.2072					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4600e-003	2.3000e-004	0.0238	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0437	0.0437	1.4000e-004	0.0000	0.0466
Total	**17.4922**	**2.3000e-004**	**0.0238**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.0437**	**0.0437**	**1.4000e-004**	**0.0000**	**0.0466**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	1,664.8782	30.0195	0.7214	2,518.9057
Mitigated	1,664.8782	30.0140	0.7202	2,518.4405

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	803.989 / 51.3185	1,452.5293	26.2576	0.6309	2,199.5241
Automobile Care Center	2.82243 / 1.72988	6.5329	0.0923	2.2300e-003	9.1614
General Light Industry	13.5281 / 0	23.6417	0.4418	0.0106	36.2075
General Office Building	15.845 / 9.71143	36.6755	0.5179	0.0125	51.4314
High Turnover (Sit Down Restaurant)	2.10956 / 0.134653	3.8112	0.0689	1.6600e-003	5.7713
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.242489 / 0.379278	0.7747	7.9400e-003	1.9000e-004	1.0014
Unrefrigerated Warehouse-No Rail	80.6322 / 0	140.9127	2.6331	0.0632	215.8088
Total		**1,664.8782**	**30.0195**	**0.7214**	**2,518.9057**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	803.989 / 51.3185	1,452.5293	26.2528	0.6299	2,199.1171
Automobile Care Center	2.82243 / 1.72988	6.5329	0.0922	2.2300e-003	9.1599
General Light Industry	13.5281 / 0	23.6417	0.4417	0.0106	36.2006
General Office Building	15.845 / 9.71143	36.6755	0.5178	0.0125	51.4233
High Turnover (Sit Down Restaurant)	2.10956 / 0.134653	3.8112	0.0689	1.6500e-003	5.7702
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.242489 / 0.379278	0.7747	7.9300e-003	1.9000e-004	1.0013
Unrefrigerated Warehouse-No Rail	80.6322 / 0	140.9127	2.6327	0.0631	215.7680
Total		**1,664.8782**	**30.0140**	**0.7202**	**2,518.4405**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	39.3828	2.3275	0.0000	88.2594
Unmitigated	157.5311	9.3098	0.0000	353.0374

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	51.36	10.4256	0.6161	0.0000	23.3645
Automobile Care Center	114.6	23.2628	1.3748	0.0000	52.1334
General Light Industry	72.54	14.7250	0.8702	0.0000	32.9996
General Office Building	82.91	16.8300	0.9946	0.0000	37.7171
High Turnover (Sit Down Restaurant)	82.7	16.7874	0.9921	0.0000	37.6215
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	44.18	8.9681	0.5300	0.0000	20.0982
Unrefrigerated Warehouse-No Rail	327.76	66.5323	3.9320	0.0000	149.1032
Total		**157.5311**	**9.3098**	**0.0000**	**353.0374**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Arena	12.84	2.6064	0.1540	0.0000	5.8411
Automobile Care Center	28.65	5.8157	0.3437	0.0000	13.0333
General Light Industry	18.135	3.6812	0.2176	0.0000	8.2499
General Office Building	20.7275	4.2075	0.2487	0.0000	9.4293
High Turnover (Sit Down Restaurant)	20.675	4.1968	0.2480	0.0000	9.4054
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	11.045	2.2420	0.1325	0.0000	5.0246
Unrefrigerated Warehouse-No Rail	81.94	16.6331	0.9830	0.0000	37.2758
Total		**39.3828**	**2.3275**	**0.0000**	**88.2594**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

“2035 Baseline” CalEEMod™ Output

Future 2035 Emissions from the Coliseum Site Area with No Development

Oakland Coliseum Project - 2035 No Project Operational

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	89.15	1000sqft	3.40	89,150.00	0
Place of Worship	7.75	1000sqft	0.61	7,750.00	0
General Light Industry	58.50	1000sqft	7.29	58,500.00	0
Unrefrigerated Warehouse-No Rail	157.75	1000sqft	11.80	157,750.00	0
Unrefrigerated Warehouse-No Rail	190.93	1000sqft	14.58	190,930.00	0
Parking Lot	40.00	Acre	40.00	1,742,400.00	0
Arena	615.00	1000sqft	8.67	615,000.00	0
Arena	1,251.40	1000sqft	103.20	1,251,400.00	0
High Turnover (Sit Down Restaurant)	6.95	1000sqft	1.28	6,950.00	0
Automobile Care Center	30.00	1000sqft	6.55	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	488.07	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 Non-Default Data

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	0.00

tblLandUse	LotAcreage	2.05	3.40
tblLandUse	LotAcreage	0.18	0.61
tblLandUse	LotAcreage	1.34	7.29
tblLandUse	LotAcreage	3.62	11.80
tblLandUse	LotAcreage	4.38	14.58
tblLandUse	LotAcreage	402.24	103.20
tblLandUse	LotAcreage	197.68	8.67
tblLandUse	LotAcreage	0.16	1.28
tblLandUse	LotAcreage	0.69	6.55
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	488.07
tblProjectCharacteristics	OperationalYear	2014	2035
tblVehicleTrips	CC_TTP	48.00	28.00
tblVehicleTrips	CC_TTP	72.50	64.70
tblVehicleTrips	CC_TTP	95.00	28.00
tblVehicleTrips	CC_TTP	0.00	28.00
tblVehicleTrips	CNW_TTP	19.00	13.00
tblVehicleTrips	CNW_TTP	5.00	13.00
tblVehicleTrips	CNW_TTP	41.00	13.00
tblVehicleTrips	CW_TTP	33.00	59.00
tblVehicleTrips	CW_TTP	8.50	16.30
tblVehicleTrips	CW_TTP	0.00	59.00
tblVehicleTrips	DV_TP	0.28	0.00
tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00

tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	0.60	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	0.66	100.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	37.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	10.71	3.37
tblVehicleTrips	ST_TR	62.00	0.81
tblVehicleTrips	ST_TR	1.32	0.81
tblVehicleTrips	ST_TR	2.37	1.73
tblVehicleTrips	ST_TR	158.37	29.59
tblVehicleTrips	ST_TR	10.37	0.81
tblVehicleTrips	ST_TR	2.59	0.81
tblVehicleTrips	SU_TR	10.71	3.37
tblVehicleTrips	SU_TR	62.00	0.42
tblVehicleTrips	SU_TR	0.68	0.42
tblVehicleTrips	SU_TR	0.98	0.72
tblVehicleTrips	SU_TR	131.84	14.95
tblVehicleTrips	SU_TR	36.63	0.42
tblVehicleTrips	SU_TR	2.59	0.42
tblVehicleTrips	WD_TR	10.71	3.37

tblVehicleTrips	WD_TR	62.00	4.28
tblVehicleTrips	WD_TR	6.97	4.28
tblVehicleTrips	WD_TR	11.01	8.08
tblVehicleTrips	WD_TR	127.15	25.43
tblVehicleTrips	WD_TR	9.11	4.28
tblVehicleTrips	WD_TR	2.59	4.28

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Energy	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	7,452.8229	7,452.8229	0.3271	0.1090	7,493.4787
Mobile	3.2253	8.6478	37.7373	0.1365	8.7260	0.2176	8.9437	2.3462	0.2007	2.5468	0.0000	9,077.8600	9,077.8600	0.2146	0.0000	9,082.3662
Waste						0.0000	0.0000		0.0000	0.0000	157.5311	0.0000	157.5311	9.3098	0.0000	353.0374
Water						0.0000	0.0000		0.0000	0.0000	291.6100	1,150.1124	1,441.7224	30.0195	0.7214	2,295.7499
Total	**21.0077**	**11.2900**	**39.9789**	**0.1523**	**8.7260**	**0.4185**	**9.1445**	**2.3462**	**0.4016**	**2.7477**	**449.1411**	**17,680.8391**	**18,129.9802**	**39.8711**	**0.8303**	**19,224.6784**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Energy	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	7,452.8229	7,452.8229	0.3271	0.1090	7,493.4787
Mobile	3.2253	8.6478	37.7373	0.1365	8.7260	0.2176	8.9437	2.3462	0.2007	2.5468	0.0000	9,077.8600	9,077.8600	0.2146	0.0000	9,082.3662
Waste						0.0000	0.0000		0.0000	0.0000	39.3828	0.0000	39.3828	2.3275	0.0000	88.2594
Water						0.0000	0.0000		0.0000	0.0000	291.6100	1,150.1124	1,441.7224	30.0140	0.7202	2,295.2847
Total	**21.0077**	**11.2900**	**39.9789**	**0.1523**	**8.7260**	**0.4185**	**9.1445**	**2.3462**	**0.4016**	**2.7477**	**330.9928**	**17,680.8391**	**18,011.8318**	**32.8832**	**0.8292**	**18,959.4351**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**26.31**	**0.00**	**0.65**	**17.53**	**0.14**	**1.38**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	9,990.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.2253	8.6478	37.7373	0.1365	8.7260	0.2176	8.9437	2.3462	0.2007	2.5468	0.0000	9,077.8600	9,077.8600	0.2146	0.0000	9,082.3662
Unmitigated	3.2253	8.6478	37.7373	0.1365	8.7260	0.2176	8.9437	2.3462	0.2007	2.5468	0.0000	9,077.8600	9,077.8600	0.2146	0.0000	9,082.3662

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	2,072.55	2,072.55	2072.55	5,507,180	5,507,180
Arena	4,217.22	4,217.22	4217.22	11,205,992	11,205,992
Automobile Care Center	128.40	24.30	12.60	303,533	303,533
General Light Industry	250.38	47.39	24.57	591,890	591,890
General Office Building	720.33	154.23	64.19	1,594,317	1,594,317
High Turnover (Sit Down Restaurant)	176.74	205.65	103.90	475,207	475,207
Parking Lot	0.00	0.00	0.00		
Place of Worship	33.17	6.28	3.26	78,413	78,413
Unrefrigerated Warehouse-No Rail	675.17	127.78	66.26	1,596,080	1,596,080
Unrefrigerated Warehouse-No Rail	817.18	154.65	80.19	1,931,788	1,931,788
Total	9,091.14	7,010.04	6,644.73	23,284,400	23,284,400

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.50	7.30	7.30	0.00	81.00	19.00	100	0	0
Arena	9.50	7.30	7.30	0.00	81.00	19.00	100	0	0
Automobile Care Center	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	100	0	0
High Turnover (Sit Down	9.50	7.30	7.30	16.30	64.70	19.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Place of Worship	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.534279	0.061728	0.163535	0.108433	0.030557	0.004584	0.021278	0.063079	0.001942	0.003382	0.005694	0.000164	0.001344

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	2,876.1418	2,876.1418	0.0551	0.0527	2,893.6455
NaturalGas Unmitigated	0.2906	2.6420	2.2193	0.0159		0.2008	0.2008		0.2008	0.2008	0.0000	2,876.1418	2,876.1418	0.0551	0.0527	2,893.6455
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,576.6812	4,576.6812	0.2719	0.0563	4,599.8332
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,576.6812	4,576.6812	0.2719	0.0563	4,599.8332

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	1.57932e+007	0.0852	0.7742	0.6503	4.6500e-003		0.0588	0.0588		0.0588	0.0588	0.0000	842.7853	842.7853	0.0162	0.0155	847.9144
Arena	3.2136e+007	0.1733	1.5753	1.3233	9.4500e-003		0.1197	0.1197		0.1197	0.1197	0.0000	1,714.8968	1,714.8968	0.0329	0.0314	1,725.3334
Automobile Care Center	770400	4.1500e-003	0.0378	0.0317	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1115	41.1115	7.9000e-004	7.5000e-004	41.3617
General Light Industry	1.50228e+006	8.1000e-003	0.0736	0.0619	4.4000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	80.1674	80.1674	1.5400e-003	1.4700e-003	80.6553
General Office Building	1.80885e+006	9.7500e-003	0.0887	0.0745	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	96.5273	96.5273	1.8500e-003	1.7700e-003	97.1148
High Turnover (Sit Down Restaurant)	1.18157e+006	6.3700e-003	0.0579	0.0487	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	63.0531	63.0531	1.2100e-003	1.1600e-003	63.4368
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Place of Worship	199020	1.0700e-003	9.7600e-003	8.1900e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6205	10.6205	2.0000e-004	1.9000e-004	10.6851
Unrefrigerated Warehouse-No Rail	228738	1.2300e-003	0.0112	9.4200e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2063	12.2063	2.3000e-004	2.2000e-004	12.2806
Unrefrigerated Warehouse-No Rail	276849	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7737	14.7737	2.8000e-004	2.7000e-004	14.8636
Total		**0.2906**	**2.6420**	**2.2193**	**0.0159**		**0.2008**	**0.2008**		**0.2008**	**0.2008**	**0.0000**	**2,876.1418**	**2,876.1418**	**0.0551**	**0.0527**	**2,893.6455**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	770400	4.1500e-003	0.0378	0.0317	2.3000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	41.1115	41.1115	7.9000e-004	7.5000e-004	41.3617
Arena	1.57932e+007	0.0852	0.7742	0.6503	4.6500e-003		0.0588	0.0588		0.0588	0.0588	0.0000	842.7853	842.7853	0.0162	0.0155	847.9144
Arena	3.2136e+007	0.1733	1.5753	1.3233	9.4500e-003		0.1197	0.1197		0.1197	0.1197	0.0000	1,714.8968	1,714.8968	0.0329	0.0314	1,725.3334
General Light Industry	1.50228e+006	8.1000e-003	0.0736	0.0619	4.4000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	80.1674	80.1674	1.5400e-003	1.4700e-003	80.6553
General Office Building	1.80885e+006	9.7500e-003	0.0887	0.0745	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	96.5273	96.5273	1.8500e-003	1.7700e-003	97.1148
High Turnover (Sit Down Restaurant)	1.18157e+006	6.3700e-003	0.0579	0.0487	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	63.0531	63.0531	1.2100e-003	1.1600e-003	63.4368
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	199020	1.0700e-003	9.7600e-003	8.1900e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6205	10.6205	2.0000e-004	1.9000e-004	10.6851
Unrefrigerated Warehouse-No Rail	228738	1.2300e-003	0.0112	9.4200e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2063	12.2063	2.3000e-004	2.2000e-004	12.2806
Unrefrigerated Warehouse-No Rail	276849	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7737	14.7737	2.8000e-004	2.7000e-004	14.8636
Total		**0.2906**	**2.6420**	**2.2193**	**0.0159**		**0.2008**	**0.2008**		**0.2008**	**0.2008**	**0.0000**	**2,876.1418**	**2,876.1418**	**0.0551**	**0.0527**	**2,893.6455**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	1.03491e+007	2,291.1289	0.1361	0.0282	2,302.7190
Arena	5.08605e+006	1,125.9743	0.0669	0.0138	1,131.6703
Automobile Care Center	248100	54.9256	3.2600e-003	6.8000e-004	55.2034
General Light Industry	483795	107.1049	6.3600e-003	1.3200e-003	107.6467
General Office Building	1.2374e+006	273.9420	0.0163	3.3700e-003	275.3278
High Turnover (Sit Down Restaurant)	210168	46.5280	2.7600e-003	5.7000e-004	46.7634
Parking Lot	1.53331e+006	339.4520	0.0202	4.1700e-003	341.1692
Place of Worship	64092.5	14.1891	8.4000e-004	1.7000e-004	14.2609
Unrefrigerated Warehouse-No Rail	660972	146.3293	8.6900e-003	1.8000e-003	147.0695
Unrefrigerated Warehouse-No Rail	799997	177.1071	0.0105	2.1800e-003	178.0031
Total		**4,576.6812**	**0.2719**	**0.0563**	**4,599.8332**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	1.03491e+007	2,291.1289	0.1361	0.0282	2,302.7190
Arena	5.08605e+006	1,125.9743	0.0669	0.0138	1,131.6703

Automobile Care Center	248100	54.9256	3.2600e-003	6.8000e-004	55.2034
General Light Industry	483795	107.1049	6.3600e-003	1.3200e-003	107.6467
General Office Building	1.2374e+006	273.9420	0.0163	3.3700e-003	275.3278
High Turnover (Sit Down Restaurant)	210168	46.5280	2.7600e-003	5.7000e-004	46.7634
Parking Lot	1.53331e+006	339.4520	0.0202	4.1700e-003	341.1692
Place of Worship	64092.5	14.1891	8.4000e-004	1.7000e-004	14.2609
Unrefrigerated Warehouse-No Rail	660972	146.3293	8.6900e-003	1.8000e-003	147.0695
Unrefrigerated Warehouse-No Rail	799997	177.1071	0.0105	2.1800e-003	178.0031
Total		**4,576.6812**	**0.2719**	**0.0563**	**4,599.8332**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Unmitigated	17.4918	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2826					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	16.2072					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0500e-003	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Total	**17.4918**	**2.0000e-004**	**0.0224**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0437**	**0.0437**	**1.1000e-004**	**0.0000**	**0.0461**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2826					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	16.2072					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0500e-003	2.0000e-004	0.0224	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0437	0.0437	1.1000e-004	0.0000	0.0461
Total	**17.4918**	**2.0000e-004**	**0.0224**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0437**	**0.0437**	**1.1000e-004**	**0.0000**	**0.0461**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	1,441.7224	30.0195	0.7214	2,295.7499
Mitigated	1,441.7224	30.0140	0.7202	2,295.2847

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	803.989 / 51.3185	1,257.9422	26.2576	0.6309	2,004.9370
Automobile Care Center	2.82243 / 1.72988	5.6169	0.0923	2.2300e-003	8.2453
General Light Industry	13.5281 / 0	20.4974	0.4418	0.0106	33.0631
General Office Building	15.845 / 9.71143	31.5326	0.5179	0.0125	46.2885
High Turnover (Sit Down Restaurant)	2.10956 / 0.134653	3.3007	0.0689	1.6600e-003	5.2607
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.242489 / 0.379278	0.6613	7.9400e-003	1.9000e-004	0.8880
Unrefrigerated Warehouse-No Rail	80.6322 / 0	122.1713	2.6331	0.0632	197.0674
Total		**1,441.7224**	**30.0195**	**0.7214**	**2,295.7499**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	803.989 / 51.3185	1,257.9422	26.2528	0.6299	2,004.5300
Automobile Care Center	2.82243 / 1.72988	5.6169	0.0922	2.2300e-003	8.2439
General Light Industry	13.5281 / 0	20.4974	0.4417	0.0106	33.0563
General Office Building	15.845 / 9.71143	31.5326	0.5178	0.0125	46.2804
High Turnover (Sit Down Restaurant)	2.10956 / 0.134653	3.3007	0.0689	1.6500e-003	5.2596
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.242489 / 0.379278	0.6613	7.9300e-003	1.9000e-004	0.8879
Unrefrigerated Warehouse-No Rail	80.6322 / 0	122.1713	2.6327	0.0631	197.0266
Total		**1,441.7224**	**30.0140**	**0.7202**	**2,295.2847**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	39.3828	2.3275	0.0000	88.2594
Unmitigated	157.5311	9.3098	0.0000	353.0374

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	51.36	10.4256	0.6161	0.0000	23.3645
Automobile Care Center	114.6	23.2628	1.3748	0.0000	52.1334
General Light Industry	72.54	14.7250	0.8702	0.0000	32.9996
General Office Building	82.91	16.8300	0.9946	0.0000	37.7171
High Turnover (Sit Down Restaurant)	82.7	16.7874	0.9921	0.0000	37.6215
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	44.18	8.9681	0.5300	0.0000	20.0982
Unrefrigerated Warehouse-No Rail	327.76	66.5323	3.9320	0.0000	149.1032
Total		**157.5311**	**9.3098**	**0.0000**	**353.0374**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Arena	12.84	2.6064	0.1540	0.0000	5.8411
Automobile Care Center	28.65	5.8157	0.3437	0.0000	13.0333
General Light Industry	18.135	3.6812	0.2176	0.0000	8.2499
General Office Building	20.7275	4.2075	0.2487	0.0000	9.4293
High Turnover (Sit Down Restaurant)	20.675	4.1968	0.2480	0.0000	9.4054
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	11.045	2.2420	0.1325	0.0000	5.0246
Unrefrigerated Warehouse-No Rail	81.94	16.6331	0.9830	0.0000	37.2758
Total		**39.3828**	**2.3275**	**0.0000**	**88.2594**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

“2035 Project” CalEEMod™ Output

Future 2035 Emissions from the Coliseum Site Area With Development

Oakland Coliseum Project - 2035 Project Operational

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	12.90	1000sqft	0.70	12,900.00	0
Research & Development	1,500.13	1000sqft	14.70	1,500,126.00	0
Enclosed Parking with Elevator	13,040.00	Space	36.50	5,216,000.00	0
Parking Lot	4,326.00	Space	4.70	1,730,400.00	0
Arena	3,400.00	1000sqft	28.70	3,400,000.00	0
Arena	850.00	1000sqft	12.40	850,000.00	0
Hotel	875.00	Room	3.60	1,270,500.00	0
Apartments High Rise	4,000.00	Dwelling Unit	32.50	4,000,000.00	11440
Regional Shopping Center	415.00	1000sqft	6.60	415,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	488.07	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 Non-Default Data

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	120.00	0.00
tblEnergyUse	T24E	312.05	234.04

tblEnergyUse	T24E	1.48	1.04
tblEnergyUse	T24E	3.92	2.74
tblEnergyUse	T24E	5.01	3.51
tblEnergyUse	T24E	2.67	1.87
tblEnergyUse	T24E	2.74	1.92
tblEnergyUse	T24E	1.48	1.04
tblEnergyUse	T24NG	7,191.67	5,393.75
tblEnergyUse	T24NG	18.78	13.15
tblEnergyUse	T24NG	19.28	13.50
tblEnergyUse	T24NG	30.92	21.64
tblEnergyUse	T24NG	4.10	2.87
tblEnergyUse	T24NG	18.78	13.15
tblFireplaces	NumberGas	2,200.00	2,760.00
tblFireplaces	NumberWood	560.00	0.00
tblLandUse	LandUseSquareFeet	1,500,130.00	1,500,126.00
tblLandUse	LotAcreage	0.30	0.70
tblLandUse	LotAcreage	34.44	14.70
tblLandUse	LotAcreage	117.36	36.50
tblLandUse	LotAcreage	38.93	4.70
tblLandUse	LotAcreage	1,092.86	28.70
tblLandUse	LotAcreage	273.21	12.40
tblLandUse	LotAcreage	29.17	3.60
tblLandUse	LotAcreage	64.52	32.50
tblLandUse	LotAcreage	9.53	6.60
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	488.07
tblProjectCharacteristics	OperationalYear	2014	2035
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	0.28	0.00

tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	0.60	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	0.66	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	7.16	4.05
tblVehicleTrips	ST_TR	10.71	1.82
tblVehicleTrips	ST_TR	2.37	0.81
tblVehicleTrips	ST_TR	8.19	5.47
tblVehicleTrips	ST_TR	49.97	29.59
tblVehicleTrips	ST_TR	1.90	0.91
tblVehicleTrips	SU_TR	6.07	3.44
tblVehicleTrips	SU_TR	10.71	1.82
tblVehicleTrips	SU_TR	0.98	0.42
tblVehicleTrips	SU_TR	5.95	3.98
tblVehicleTrips	SU_TR	25.24	14.95
tblVehicleTrips	SU_TR	1.11	0.53
tblVehicleTrips	WD_TR	6.59	3.73
tblVehicleTrips	WD_TR	10.71	1.82

tblVehicleTrips	WD_TR	11.01	4.28
tblVehicleTrips	WD_TR	8.17	5.46
tblVehicleTrips	WD_TR	42.94	25.43
tblVehicleTrips	WD_TR	8.11	3.88
tblWater	IndoorWaterUseRate	260,616,102.49	277,400,000.00
tblWater	IndoorWaterUseRate	1,830,772,999.77	15,736,500.00
tblWater	IndoorWaterUseRate	2,292,765.35	168,345.00
tblWater	IndoorWaterUseRate	22,195,923.75	95,812,500.00
tblWater	IndoorWaterUseRate	30,740,096.42	16,662,250.00
tblWater	IndoorWaterUseRate	737,604,841.02	66,560,591.00
tblWater	OutdoorWaterUseRate	164,301,455.91	16,874,880.00
tblWater	OutdoorWaterUseRate	116,857,851.05	0.00
tblWater	OutdoorWaterUseRate	1,405,243.28	0.00
tblWater	OutdoorWaterUseRate	2,466,213.75	0.00
tblWater	OutdoorWaterUseRate	18,840,704.25	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	82.3356	0.3626	30.9905	5.4000e-003		0.3657	0.3657		0.3656	0.3656	25.5696	181.6398	207.2094	0.1694	2.4300e-003	211.5206

Energy	0.9799	8.8255	6.8744	0.0535		0.6771	0.6771		0.6771	0.6771	0.0000	32,916.6975	32,916.6975	1.5655	0.4632	33,093.1744
Mobile	15.8763	42.0936	184.8785	0.6605	42.1875	1.0545	43.2420	11.3429	0.9725	12.3154	0.0000	43,929.7551	43,929.7551	1.0399	0.0000	43,951.5939
Waste						0.0000	0.0000		0.0000	0.0000	608.5202	0.0000	608.5202	35.9625	0.0000	1,363.7330
Water						0.0000	0.0000		0.0000	0.0000	149.8518	578.8980	728.7498	15.4256	0.3705	1,167.5539
Total	**99.1918**	**51.2817**	**222.7434**	**0.7193**	**42.1875**	**2.0973**	**44.2848**	**11.3429**	**2.0152**	**13.3580**	**783.9416**	**77,606.9905**	**78,390.9321**	**54.1629**	**0.8362**	**79,787.5758**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	82.3356	0.3626	30.9905	5.4000e-003		0.3657	0.3657		0.3656	0.3656	25.5696	181.6398	207.2094	0.1694	2.4300e-003	211.5206
Energy	0.9799	8.8255	6.8744	0.0535		0.6771	0.6771		0.6771	0.6771	0.0000	32,916.6975	32,916.6975	1.5655	0.4632	33,093.1744
Mobile	15.8763	42.0936	184.8785	0.6605	42.1875	1.0545	43.2420	11.3429	0.9725	12.3154	0.0000	43,929.7551	43,929.7551	1.0399	0.0000	43,951.5939
Waste						0.0000	0.0000		0.0000	0.0000	152.1301	0.0000	152.1301	8.9906	0.0000	340.9333
Water						0.0000	0.0000		0.0000	0.0000	149.8518	578.8980	728.7498	15.4228	0.3700	1,167.3148
Total	**99.1918**	**51.2817**	**222.7434**	**0.7193**	**42.1875**	**2.0973**	**44.2848**	**11.3429**	**2.0152**	**13.3580**	**327.5514**	**77,606.9905**	**77,934.5419**	**27.1882**	**0.8356**	**78,764.5370**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**58.22**	**0.00**	**0.58**	**49.80**	**0.07**	**1.28**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	15.8763	42.0936	184.8785	0.6605	42.1875	1.0545	43.2420	11.3429	0.9725	12.3154	0.0000	43,929.7551	43,929.7551	1.0399	0.0000	43,951.5939
Unmitigated	15.8763	42.0936	184.8785	0.6605	42.1875	1.0545	43.2420	11.3429	0.9725	12.3154	0.0000	43,929.7551	43,929.7551	1.0399	0.0000	43,951.5939

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	14,920.00	16,200.00	13760.00	37,553,644	37,553,644
Arena	6,188.00	6,188.00	6188.00	16,442,754	16,442,754
Arena	1,547.00	1,547.00	1547.00	4,110,688	4,110,688
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	55.21	10.45	5.42	121,836	121,836
Hotel	4,777.50	4,786.25	3482.50	12,920,175	12,920,175
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	10,553.45	12,279.85	6204.25	28,375,651	28,375,651
Research & Development	5,820.50	1,365.12	795.07	13,047,554	13,047,554
Total	43,861.67	42,376.67	31,982.24	112,572,303	112,572,303

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	12.40	4.30	5.40	26.10	29.10	44.80	100	0	0
Arena	9.50	7.30	7.30	0.00	81.00	19.00	100	0	0
Arena	9.50	7.30	7.30	0.00	81.00	19.00	100	0	0
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	100	0	0
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	100	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.534279	0.061728	0.163535	0.108433	0.030557	0.004584	0.021278	0.063079	0.001942	0.003382	0.005694	0.000164	0.001344

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	0.9799	8.8255	6.8744	0.0535		0.6771	0.6771		0.6771	0.6771	0.0000	9,698.0205	9,698.0205	0.1859	0.1778	9,757.0410
NaturalGas Unmitigated	0.9799	8.8255	6.8744	0.0535		0.6771	0.6771		0.6771	0.6771	0.0000	9,698.0205	9,698.0205	0.1859	0.1778	9,757.0410
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	23,218.6771	23,218.6771	1.3796	0.2854	23,336.1334
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	23,218.6771	23,218.6771	1.3796	0.2854	23,336.1334

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	2.8223e+007	0.1522	1.3005	0.5534	8.3000e-003		0.1051	0.1051		0.1051	0.1051	0.0000	1,506.0868	1,506.0868	0.0289	0.0276	1,515.2526
Arena	1.70425e+007	0.0919	0.8354	0.7018	5.0100e-003		0.0635	0.0635		0.0635	0.0635	0.0000	909.4527	909.4527	0.0174	0.0167	914.9875

Arena	6.817e+007	0.3676	3.3417	2.8070	0.0201		0.2540	0.2540		0.2540	0.2540	0.0000	3,637.8108	3,637.8108	0.0697	0.0667	3,659.9499
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	187179	1.0100e-003	9.1800e-003	7.7100e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	9.9886	9.9886	1.9000e-004	1.8000e-004	10.0494
Hotel	3.65523e+007	0.1971	1.7918	1.5051	0.0108		0.1362	0.1362		0.1362	0.1362	0.0000	1,950.5691	1,950.5691	0.0374	0.0358	1,962.4400
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.48155e+006	7.9900e-003	0.0726	0.0610	4.4000e-004		5.5200e-003	5.5200e-003		5.5200e-003	5.5200e-003	0.0000	79.0612	79.0612	1.5200e-003	1.4500e-003	79.5423
Research & Development	3.00775e+007	0.1622	1.4744	1.2385	8.8500e-003		0.1121	0.1121		0.1121	0.1121	0.0000	1,605.0514	1,605.0514	0.0308	0.0294	1,614.8194
Total		**0.9799**	**8.8255**	**6.8744**	**0.0535**		**0.6771**	**0.6771**		**0.6771**	**0.6771**	**0.0000**	**9,698.0205**	**9,698.0205**	**0.1859**	**0.1778**	**9,757.0410**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	1.70425e+007	0.0919	0.8354	0.7018	5.0100e-003		0.0635	0.0635		0.0635	0.0635	0.0000	909.4527	909.4527	0.0174	0.0167	914.9875
Arena	6.817e+007	0.3676	3.3417	2.8070	0.0201		0.2540	0.2540		0.2540	0.2540	0.0000	3,637.8108	3,637.8108	0.0697	0.0667	3,659.9499
Apartments High Rise	2.8223e+007	0.1522	1.3005	0.5534	8.3000e-003		0.1051	0.1051		0.1051	0.1051	0.0000	1,506.0868	1,506.0868	0.0289	0.0276	1,515.2526
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	187179	1.0100e-003	9.1800e-003	7.7100e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	9.9886	9.9886	1.9000e-004	1.8000e-004	10.0494
Hotel	3.65523e+007	0.1971	1.7918	1.5051	0.0108		0.1362	0.1362		0.1362	0.1362	0.0000	1,950.5691	1,950.5691	0.0374	0.0358	1,962.4400
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.48155e+006	7.9900e-003	0.0726	0.0610	4.4000e-004		5.5200e-003	5.5200e-003		5.5200e-003	5.5200e-003	0.0000	79.0612	79.0612	1.5200e-003	1.4500e-003	79.5423
Research & Development	3.00775e+007	0.1622	1.4744	1.2385	8.8500e-003		0.1121	0.1121		0.1121	0.1121	0.0000	1,605.0514	1,605.0514	0.0308	0.0294	1,614.8194

Total		**0.9799**	**8.8255**	**6.8744**	**0.0535**		**0.6771**	**0.6771**		**0.6771**	**0.6771**	**0.0000**	**9,698.0205**	**9,698.0205**	**0.1859**	**0.1778**	**9,757.0410**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.41494e+007	3,132.4536	0.1861	0.0385	3,148.2998
Arena	2.6622e+007	5,893.7069	0.3502	0.0725	5,923.5214
Arena	6.6555e+006	1,473.4267	0.0876	0.0181	1,480.8804
Enclosed Parking with Elevator	2.9001e+007	6,420.3725	0.3815	0.0789	6,452.8513
General Office Building	159702	35.3556	2.1000e-003	4.3000e-004	35.5345
Hotel	1.05452e+007	2,334.5362	0.1387	0.0287	2,346.3459
Parking Lot	1.52275e+006	337.1142	0.0200	4.1400e-003	338.8196
Regional Shopping Center	4.47785e+006	991.3281	0.0589	0.0122	996.3429
Research & Development	1.1746e+007	2,600.3832	0.1545	0.0320	2,613.5378
Total		**23,218.6771**	**1.3796**	**0.2854**	**23,336.1334**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

Apartments High Rise	1.41494e+007	3,132.4536	0.1861	0.0385	3,148.2998
Arena	2.6622e+007	5,893.7069	0.3502	0.0725	5,923.5214
Arena	6.6555e+006	1,473.4267	0.0876	0.0181	1,480.8804
Enclosed Parking with Elevator	2.9001e+007	6,420.3725	0.3815	0.0789	6,452.8513
General Office Building	159702	35.3556	2.1000e-003	4.3000e-004	35.5345
Hotel	1.05452e+007	2,334.5362	0.1387	0.0287	2,346.3459
Parking Lot	1.52275e+006	337.1142	0.0200	4.1400e-003	338.8196
Regional Shopping Center	4.47785e+006	991.3281	0.0589	0.0122	996.3429
Research & Development	1.1746e+007	2,600.3832	0.1545	0.0320	2,613.5378
Total		**23,218.6771**	**1.3796**	**0.2854**	**23,336.1334**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	82.3356	0.3626	30.9905	5.4000e-003		0.3657	0.3657		0.3656	0.3656	25.5696	181.6398	207.2094	0.1694	2.4300e-003	211.5206
Unmitigated	82.3356	0.3626	30.9905	5.4000e-003		0.3657	0.3657		0.3656	0.3656	25.5696	181.6398	207.2094	0.1694	2.4300e-003	211.5206

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.4466					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	71.8414					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1423	0.0191	1.1713	3.8200e-003		0.2002	0.2002		0.2001	0.2001	25.5696	132.6883	158.2579	0.1221	2.4300e-003	161.5756
Landscaping	0.9053	0.3435	29.8192	1.5900e-003		0.1655	0.1655		0.1655	0.1655	0.0000	48.9515	48.9515	0.0473	0.0000	49.9450
Total	**82.3356**	**0.3626**	**30.9905**	**5.4100e-003**		**0.3657**	**0.3657**		**0.3656**	**0.3656**	**25.5696**	**181.6398**	**207.2094**	**0.1694**	**2.4300e-003**	**211.5206**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.4466					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	71.8414					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1423	0.0191	1.1713	3.8200e-003		0.2002	0.2002		0.2001	0.2001	25.5696	132.6883	158.2579	0.1221	2.4300e-003	161.5756
Landscaping	0.9053	0.3435	29.8192	1.5900e-003		0.1655	0.1655		0.1655	0.1655	0.0000	48.9515	48.9515	0.0473	0.0000	49.9450
Total	**82.3356**	**0.3626**	**30.9905**	**5.4100e-003**		**0.3657**	**0.3657**		**0.3656**	**0.3656**	**25.5696**	**181.6398**	**207.2094**	**0.1694**	**2.4300e-003**	**211.5206**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	728.7498	15.4256	0.3705	1,167.5539
Mitigated	728.7498	15.4228	0.3700	1,167.3148

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	277.4 / 16.8749	433.3828	9.0596	0.2177	691.1147
Arena	15.7365 / 0	23.8434	0.5139	0.0123	38.4604
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.168345 / 0	0.2551	5.5000e-003	1.3000e-004	0.4114
Hotel	95.8125 / 0	145.1720	3.1289	0.0751	234.1684
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	16.6623 / 0	25.2461	0.5441	0.0131	40.7230

Research & Development	66.5606 / 0	100.8504	2.1736	0.0522	162.6759
Total		**728.7498**	**15.4256**	**0.3705**	**1,167.5539**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	277.4 / 16.8749	433.3828	9.0580	0.2173	690.9743
Arena	15.7365 / 0	23.8434	0.5138	0.0123	38.4525
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.168345 / 0	0.2551	5.5000e-003	1.3000e-004	0.4114
Hotel	95.8125 / 0	145.1720	3.1283	0.0750	234.1199
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	16.6623 / 0	25.2461	0.5440	0.0130	40.7146
Research & Development	66.5606 / 0	100.8504	2.1732	0.0521	162.6422
Total		**728.7498**	**15.4228**	**0.3700**	**1,167.3148**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	152.1301	8.9906	0.0000	340.9333
Unmitigated	608.5202	35.9625	0.0000	1,363.7330

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	1840	373.5034	22.0734	0.0000	837.0451
Arena	116.96	23.7418	1.4031	0.0000	53.2070
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	12	2.4359	0.1440	0.0000	5.4590
Hotel	479.06	97.2449	5.7470	0.0000	217.9320
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	435.75	88.4533	5.2274	0.0000	198.2296
Research & Development	114	23.1410	1.3676	0.0000	51.8604
Total		**608.5202**	**35.9625**	**0.0000**	**1,363.7330**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	460	93.3758	5.5184	0.0000	209.2613
Arena	29.24	5.9355	0.3508	0.0000	13.3017
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	3	0.6090	0.0360	0.0000	1.3648
Hotel	119.765	24.3112	1.4368	0.0000	54.4830
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	108.938	22.1133	1.3069	0.0000	49.5574
Research & Development	28.5	5.7852	0.3419	0.0000	12.9651
Total		**152.1301**	**8.9906**	**0.0000**	**340.9333**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

“Existing Plan” CalEEMod™ Output

Existing 2013 Emissions from the Plan Area

Oakland Coliseum Plan - Existing (2013) Operational

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,864.35	1000sqft	104.87	1,864,350.00	0
General Office Building	40.80	1000sqft	0.94	40,800.00	0
Research & Development	192.92	1000sqft	10.71	192,920.00	0
Place of Worship	15.75	1000sqft	1.61	15,750.00	0
General Light Industry	1,191.86	1000sqft	66.23	1,191,860.00	0
Unrefrigerated Warehouse-No Rail	1,528.65	1000sqft	112.26	1,528,650.00	0
Parking Lot	40.00	Acre	40.00	1,742,400.00	0
Arena	615.00	1000sqft	8.67	615,000.00	0
Arena	1,251.40	1000sqft	103.20	1,251,400.00	0
Fast Food Restaurant with Drive Thru	9.90	1000sqft	1.95	9,900.00	0
High Turnover (Sit Down Restaurant)	24.75	1000sqft	1.28	24,750.00	0
Hotel	508.00	Room	60.63	457,000.00	0
Automobile Care Center	199.50	1000sqft	15.33	199,500.00	0
Convenience Market With Gas Pumps	11.00	1000sqft	2.11	11,000.00	0
Free-Standing Discount Superstore	152.30	1000sqft	222.10	152,300.00	0
Regional Shopping Center	17.00	1000sqft	1.66	17,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2013
Utility Company	Pacific Gas & Electric Company				

CO2 Intensity (lb/MWhr)	582.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 Non-Default Data

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	800.00	0.00
tblLandUse	LandUseSquareFeet	737,616.00	457,000.00
tblLandUse	LotAcreage	42.80	104.87
tblLandUse	LotAcreage	4.43	10.71
tblLandUse	LotAcreage	0.36	1.61
tblLandUse	LotAcreage	27.36	66.23
tblLandUse	LotAcreage	35.09	112.26
tblLandUse	LotAcreage	402.24	103.20
tblLandUse	LotAcreage	197.68	8.67
tblLandUse	LotAcreage	0.23	1.95
tblLandUse	LotAcreage	0.57	1.28
tblLandUse	LotAcreage	16.93	60.63
tblLandUse	LotAcreage	4.58	15.33
tblLandUse	LotAcreage	0.25	2.11
tblLandUse	LotAcreage	3.50	222.10
tblLandUse	LotAcreage	0.39	1.66
tblProjectCharacteristics	CO2IntensityFactor	641.35	582.77
tblProjectCharacteristics	OperationalYear	2014	2013
tblVehicleTrips	CC_TTP	48.00	28.00
tblVehicleTrips	CC_TTP	80.20	28.00
tblVehicleTrips	CC_TTP	78.80	64.70
tblVehicleTrips	CC_TTP	67.80	64.70
tblVehicleTrips	CC_TTP	72.50	64.70
tblVehicleTrips	CC_TTP	95.00	28.00
tblVehicleTrips	CC_TTP	0.00	28.00
tblVehicleTrips	CNW_TTP	19.00	13.00

tblVehicleTrips	CNW_TTP	19.00	13.00
tblVehicleTrips	CNW_TTP	5.00	13.00
tblVehicleTrips	CNW_TTP	41.00	13.00
tblVehicleTrips	CW_TTP	33.00	59.00
tblVehicleTrips	CW_TTP	0.80	59.00
tblVehicleTrips	CW_TTP	2.20	16.30
tblVehicleTrips	CW_TTP	13.20	16.30
tblVehicleTrips	CW_TTP	8.50	16.30
tblVehicleTrips	CW_TTP	0.00	59.00
tblVehicleTrips	DV_TP	0.28	0.00
tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	35.50	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	0.60	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00

tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	0.66	100.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	PR_TP	47.50	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	37.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	10.71	3.37
tblVehicleTrips	ST_TR	62.00	0.81
tblVehicleTrips	ST_TR	1,448.33	0.81
tblVehicleTrips	ST_TR	722.03	27.03
tblVehicleTrips	ST_TR	64.07	27.03
tblVehicleTrips	ST_TR	1.32	0.80
tblVehicleTrips	ST_TR	2.37	1.32
tblVehicleTrips	ST_TR	158.37	27.03
tblVehicleTrips	ST_TR	8.19	5.48
tblVehicleTrips	ST_TR	10.37	0.81
tblVehicleTrips	ST_TR	49.97	27.03

tblVehicleTrips	ST_TR	1.90	0.76
tblVehicleTrips	ST_TR	2.59	0.81
tblVehicleTrips	SU_TR	10.71	3.37
tblVehicleTrips	SU_TR	62.00	0.42
tblVehicleTrips	SU_TR	1,182.08	0.42
tblVehicleTrips	SU_TR	542.72	13.65
tblVehicleTrips	SU_TR	56.12	13.65
tblVehicleTrips	SU_TR	0.68	0.42
tblVehicleTrips	SU_TR	0.98	0.59
tblVehicleTrips	SU_TR	131.84	13.65
tblVehicleTrips	SU_TR	5.95	3.98
tblVehicleTrips	SU_TR	36.63	0.42
tblVehicleTrips	SU_TR	25.24	13.65
tblVehicleTrips	SU_TR	1.11	0.44
tblVehicleTrips	SU_TR	2.59	0.42
tblVehicleTrips	WD_TR	10.71	3.37
tblVehicleTrips	WD_TR	62.00	4.27
tblVehicleTrips	WD_TR	845.60	4.27
tblVehicleTrips	WD_TR	496.12	23.22
tblVehicleTrips	WD_TR	53.13	23.22
tblVehicleTrips	WD_TR	6.97	4.09
tblVehicleTrips	WD_TR	11.01	6.40
tblVehicleTrips	WD_TR	127.15	23.22
tblVehicleTrips	WD_TR	8.17	5.46
tblVehicleTrips	WD_TR	9.11	4.27
tblVehicleTrips	WD_TR	42.94	23.22
tblVehicleTrips	WD_TR	8.11	3.24
tblVehicleTrips	WD_TR	2.59	4.27

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	40.3615	7.3000e-004	0.0745	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	0.1369	0.1369	4.2000e-004	0.0000	0.1458
Energy	0.8306	7.5507	6.3426	0.0453		0.5739	0.5739		0.5739	0.5739	0.0000	26,815.9591	26,815.9591	1.0829	0.3422	26,944.7692
Mobile	33.3571	110.8049	371.2388	0.5307	35.3355	2.2239	37.5594	9.4940	2.0418	11.5357	0.0000	45,738.9897	45,738.9897	2.3407	0.0000	45,788.1449
Waste						0.0000	0.0000		0.0000	0.0000	1,420.3542	0.0000	1,420.3542	83.9405	0.0000	3,183.1052
Water						0.0000	0.0000		0.0000	0.0000	609.9508	3,010.3362	3,620.2870	62.7976	1.5102	5,407.2121
Total	**74.5491**	**118.3563**	**377.6559**	**0.5760**	**35.3355**	**2.7980**	**38.1335**	**9.4940**	**2.6159**	**12.1099**	**2,030.3050**	**75,565.4218**	**77,595.7268**	**150.1622**	**1.8524**	**81,323.3772**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	40.3615	7.3000e-004	0.0745	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	0.1369	0.1369	4.2000e-004	0.0000	0.1458
Energy	0.8306	7.5507	6.3426	0.0453		0.5739	0.5739		0.5739	0.5739	0.0000	26,815.9591	26,815.9591	1.0829	0.3422	26,944.7692

Mobile	33.3571	110.8049	371.2388	0.5307	35.3355	2.2239	37.5594	9.4940	2.0418	11.5357	0.0000	45,738.9897	45,738.9897	2.3407	0.0000	45,788.1449
Waste						0.0000	0.0000		0.0000	0.0000	355.0885	0.0000	355.0885	20.9851	0.0000	795.7763
Water						0.0000	0.0000		0.0000	0.0000	609.9508	3,010.3362	3,620.2870	62.7862	1.5079	5,406.2390
Total	**74.5491**	**118.3563**	**377.6559**	**0.5760**	**35.3355**	**2.7980**	**38.1335**	**9.4940**	**2.6159**	**12.1099**	**965.0394**	**75,565.4218**	**76,530.4612**	**87.1954**	**1.8500**	**78,935.0752**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**52.47**	**0.00**	**1.37**	**41.93**	**0.13**	**2.94**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	33.3571	110.8049	371.2388	0.5307	35.3355	2.2239	37.5594	9.4940	2.0418	11.5357	0.0000	45,738.9897	45,738.9897	2.3407	0.0000	45,788.1449
Unmitigated	33.3571	110.8049	371.2388	0.5307	35.3355	2.2239	37.5594	9.4940	2.0418	11.5357	0.0000	45,738.9897	45,738.9897	2.3407	0.0000	45,788.1449

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	2,071.23	2,071.23	2071.23	5,503,665	5,503,665
Arena	4,214.53	4,214.53	4214.53	11,198,839	11,198,839
Automobile Care Center	851.27	161.22	83.05	2,012,196	2,012,196
Convenience Market With Gas Pumps	46.94	8.89	4.58	110,948	110,948
Fast Food Restaurant with Drive Thru	229.92	267.57	135.15	618,214	618,214
Free-Standing Discount Superstore	3,537.12	4,116.20	2079.11	9,510,500	9,510,500
General Light Industry	4,876.47	953.24	501.77	11,551,783	11,551,783
General Office Building	11,937.06	2,469.93	1095.44	26,397,805	26,397,805
General Office Building	261.23	54.05	23.97	577,698	577,698
High Turnover (Sit Down Restaurant)	574.81	668.92	337.87	1,545,534	1,545,534
Hotel	2,775.59	2,782.38	2021.39	7,506,191	7,506,191

Parking Lot	0.00	0.00	0.00		
Place of Worship	67.21	12.73	6.56	158,858	158,858
Regional Shopping Center	394.82	459.46	232.07	1,061,579	1,061,579
Research & Development	625.52	146.55	85.61	1,402,196	1,402,196
Unrefrigerated Warehouse-No Rail	6,522.74	1,235.30	636.36	15,418,265	15,418,265
Total	38,986.45	19,622.18	13,528.69	94,574,271	94,574,271

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.50	7.30	7.30	0.00	81.00	19.00	100	0	0
Arena	9.50	7.30	7.30	0.00	81.00	19.00	100	0	0
Automobile Care Center	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Convenience Market With Gas	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Fast Food Restaurant with Drive	9.50	7.30	7.30	16.30	64.70	19.00	100	0	0
Free-Standing Discount	9.50	7.30	7.30	16.30	64.70	19.00	100	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	100	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	100	0	0
High Turnover (Sit Down	9.50	7.30	7.30	16.30	64.70	19.00	100	0	0
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	100	0	0
Place of Worship	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	100	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	100	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.542556	0.062211	0.168896	0.115895	0.031898	0.004750	0.018306	0.042929	0.001741	0.003743	0.005433	0.000213	0.001429

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	0.8306	7.5507	6.3426	0.0453		0.5739	0.5739		0.5739	0.5739	0.0000	8,219.8993	8,219.8993	0.1576	0.1507	8,269.9242
NaturalGas Unmitigated	0.8306	7.5507	6.3426	0.0453		0.5739	0.5739		0.5739	0.5739	0.0000	8,219.8993	8,219.8993	0.1576	0.1507	8,269.9242
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	18,596.0598	18,596.0598	0.9254	0.1915	18,674.8450
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	18,596.0598	18,596.0598	0.9254	0.1915	18,674.8450

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	1.57932e+007	0.0852	0.7742	0.6503	4.6500e-003		0.0588	0.0588		0.0588	0.0588	0.0000	842.7853	842.7853	0.0162	0.0155	847.9144
Arena	3.2136e+007	0.1733	1.5753	1.3233	9.4500e-003		0.1197	0.1197		0.1197	0.1197	0.0000	1,714.8968	1,714.8968	0.0329	0.0314	1,725.3334
Automobile Care Center	5.12316e+006	0.0276	0.2511	0.2110	1.5100e-003		0.0191	0.0191		0.0191	0.0191	0.0000	273.3913	273.3913	5.2400e-003	5.0100e-003	275.0551
Convenience Market With Gas Pumps	52800	2.8000e-004	2.5900e-003	2.1700e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8176	2.8176	5.0000e-005	5.0000e-005	2.8348
Fast Food Restaurant with Drive Thru	1.6831e+006	9.0800e-003	0.0825	0.0693	5.0000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	89.8166	89.8166	1.7200e-003	1.6500e-003	90.3632
Free-Standing Discount Superstore	731040	3.9400e-003	0.0358	0.0301	2.2000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003	0.0000	39.0111	39.0111	7.5000e-004	7.2000e-004	39.2485
General Light Industry	3.0607e+007	0.1650	1.5003	1.2603	9.0000e-003		0.1140	0.1140		0.1140	0.1140	0.0000	1,633.3042	1,633.3042	0.0313	0.0299	1,643.2442

General Office Building	3.78277e+007	0.2040	1.8543	1.5576	0.0111		0.1409	0.1409		0.1409	0.1409	0.0000	2,018.6281	2,018.6281	0.0387	0.0370	2,030.9131
General Office Building	827832	4.4600e-003	0.0406	0.0341	2.4000e-004		3.0800e-003	3.0800e-003		3.0800e-003	3.0800e-003	0.0000	44.1763	44.1763	8.5000e-004	8.1000e-004	44.4451
High Turnover (Sit Down Restaurant)	4.20775e+006	0.0227	0.2063	0.1733	1.2400e-003		0.0157	0.0157		0.0157	0.0157	0.0000	224.5414	224.5414	4.3000e-003	4.1200e-003	225.9080
Hotel	1.73889e+007	0.0938	0.8524	0.7160	5.1100e-003		0.0648	0.0648		0.0648	0.0648	0.0000	927.9353	927.9353	0.0178	0.0170	933.5825
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	404460	2.1800e-003	0.0198	0.0167	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.5835	21.5835	4.1000e-004	4.0000e-004	21.7149
Regional Shopping Center	81600	4.4000e-004	4.0000e-003	3.3600e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	4.3545	4.3545	8.0000e-005	8.0000e-005	4.3810
Research & Development	4.95419e+006	0.0267	0.2429	0.2040	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.3742	264.3742	5.0700e-003	4.8500e-003	265.9832
Unrefrigerated Warehouse-No Rail	2.21654e+006	0.0120	0.1087	0.0913	6.5000e-004		8.2600e-003	8.2600e-003		8.2600e-003	8.2600e-003	0.0000	118.2832	118.2832	2.2700e-003	2.1700e-003	119.0030
Total		**0.8306**	**7.5507**	**6.3426**	**0.0453**		**0.5739**	**0.5739**		**0.5739**	**0.5739**	**0.0000**	**8,219.8993**	**8,219.8993**	**0.1575**	**0.1507**	**8,269.9242**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	5.12316e+006	0.0276	0.2511	0.2110	1.5100e-003		0.0191	0.0191		0.0191	0.0191	0.0000	273.3913	273.3913	5.2400e-003	5.0100e-003	275.0551
Convenience Market With Gas Pumps	52800	2.8000e-004	2.5900e-003	2.1700e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8176	2.8176	5.0000e-005	5.0000e-005	2.8348
Fast Food Restaurant with Drive Thru	1.6831e+006	9.0800e-003	0.0825	0.0693	5.0000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	89.8166	89.8166	1.7200e-003	1.6500e-003	90.3632
Arena	1.57932e+007	0.0852	0.7742	0.6503	4.6500e-003		0.0588	0.0588		0.0588	0.0588	0.0000	842.7853	842.7853	0.0162	0.0155	847.9144
Arena	3.2136e+007	0.1733	1.5753	1.3233	9.4500e-003		0.1197	0.1197		0.1197	0.1197	0.0000	1,714.8968	1,714.8968	0.0329	0.0314	1,725.3334
Free-Standing Discount Superstore	731040	3.9400e-003	0.0358	0.0301	2.2000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003	0.0000	39.0111	39.0111	7.5000e-004	7.2000e-004	39.2485
General Light Industry	3.0607e+007	0.1650	1.5003	1.2603	9.0000e-003		0.1140	0.1140		0.1140	0.1140	0.0000	1,633.3042	1,633.3042	0.0313	0.0299	1,643.2442

General Office Building	3.78277e+007	0.2040	1.8543	1.5576	0.0111		0.1409	0.1409		0.1409	0.1409	0.0000	2,018.6281	2,018.6281	0.0387	0.0370	2,030.9131
General Office Building	827832	4.4600e-003	0.0406	0.0341	2.4000e-004		3.0800e-003	3.0800e-003		3.0800e-003	3.0800e-003	0.0000	44.1763	44.1763	8.5000e-004	8.1000e-004	44.4451
High Turnover (Sit Down Restaurant)	4.20775e+006	0.0227	0.2063	0.1733	1.2400e-003		0.0157	0.0157		0.0157	0.0157	0.0000	224.5414	224.5414	4.3000e-003	4.1200e-003	225.9080
Hotel	1.73889e+007	0.0938	0.8524	0.7160	5.1100e-003		0.0648	0.0648		0.0648	0.0648	0.0000	927.9353	927.9353	0.0178	0.0170	933.5825
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	404460	2.1800e-003	0.0198	0.0167	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.5835	21.5835	4.1000e-004	4.0000e-004	21.7149
Regional Shopping Center	81600	4.4000e-004	4.0000e-003	3.3600e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	4.3545	4.3545	8.0000e-005	8.0000e-005	4.3810
Research & Development	4.95419e+006	0.0267	0.2429	0.2040	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.3742	264.3742	5.0700e-003	4.8500e-003	265.9832
Unrefrigerated Warehouse-No Rail	2.21654e+006	0.0120	0.1087	0.0913	6.5000e-004		8.2600e-003	8.2600e-003		8.2600e-003	8.2600e-003	0.0000	118.2832	118.2832	2.2700e-003	2.1700e-003	119.0030
Total		**0.8306**	**7.5507**	**6.3426**	**0.0453**		**0.5739**	**0.5739**		**0.5739**	**0.5739**	**0.0000**	**8,219.8993**	**8,219.8993**	**0.1575**	**0.1507**	**8,269.9242**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	1.03491e+007	2,735.6755	0.1361	0.0282	2,747.2657
Arena	5.08605e+006	1,344.4466	0.0669	0.0138	1,350.1426
Automobile Care Center	1.64987e+006	436.1254	0.0217	4.4900e-003	437.9731
Convenience Market With Gas Pumps	127710	33.7589	1.6800e-003	3.5000e-004	33.9019
Fast Food Restaurant with Drive Thru	299376	79.1371	3.9400e-003	8.1000e-004	79.4723
Free-Standing Discount Superstore	1.7682e+006	467.4068	0.0233	4.8100e-003	469.3871
General Light Industry	9.85668e+006	2,605.5156	0.1297	0.0268	2,616.5543

General Office Building	2.58772e+007	6,840.3739	0.3404	0.0704	6,869.3543
General Office Building	566304	149.6968	7.4500e-003	1.5400e-003	150.3310
High Turnover (Sit Down Restaurant)	748440	197.8427	9.8500e-003	2.0400e-003	198.6808
Hotel	4.1587e+006	1,099.3109	0.0547	0.0113	1,103.9683
Parking Lot	1.53331e+006	405.3157	0.0202	4.1700e-003	407.0329
Place of Worship	130253	34.4310	1.7100e-003	3.5000e-004	34.5768
Regional Shopping Center	197370	52.1728	2.6000e-003	5.4000e-004	52.3938
Research & Development	1.59545e+006	421.7409	0.0210	4.3400e-003	423.5276
Unrefrigerated Warehouse-No Rail	6.40504e+006	1,693.1094	0.0843	0.0174	1,700.2825
Total		**18,596.0598**	**0.9254**	**0.1915**	**18,674.8450**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	1.03491e+007	2,735.6755	0.1361	0.0282	2,747.2657
Arena	5.08605e+006	1,344.4466	0.0669	0.0138	1,350.1426
Automobile Care Center	1.64987e+006	436.1254	0.0217	4.4900e-003	437.9731
Convenience Market With Gas Pumps	127710	33.7589	1.6800e-003	3.5000e-004	33.9019
Fast Food Restaurant with Drive-Thru	299376	79.1371	3.9400e-003	8.1000e-004	79.4723
Free-Standing Discount Superstore	1.7682e+006	467.4068	0.0233	4.8100e-003	469.3871
General Light Industry	9.85668e+006	2,605.5156	0.1297	0.0268	2,616.5543

General Office Building	2.58772e+007	6,840.3739	0.3404	0.0704	6,869.3543
General Office Building	566304	149.6968	7.4500e-003	1.5400e-003	150.3310
High Turnover (Sit Down Restaurant)	748440	197.8427	9.8500e-003	2.0400e-003	198.6808
Hotel	4.1587e+006	1,099.3109	0.0547	0.0113	1,103.9683
Parking Lot	1.53331e+006	405.3157	0.0202	4.1700e-003	407.0329
Place of Worship	130253	34.4310	1.7100e-003	3.5000e-004	34.5768
Regional Shopping Center	197370	52.1728	2.6000e-003	5.4000e-004	52.3938
Research & Development	1.59545e+006	421.7409	0.0210	4.3400e-003	423.5276
Unrefrigerated Warehouse-No Rail	6.40504e+006	1,693.1094	0.0843	0.0174	1,700.2825
Total		**18,596.0598**	**0.9254**	**0.1915**	**18,674.8450**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	40.3615	7.3000e-004	0.0745	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	0.1369	0.1369	4.2000e-004	0.0000	0.1458
Unmitigated	40.3615	7.3000e-004	0.0745	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	0.1369	0.1369	4.2000e-004	0.0000	0.1458

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.9757					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	36.3781					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.7000e-003	7.3000e-004	0.0745	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	0.1369	0.1369	4.2000e-004	0.0000	0.1458
Total	**40.3615**	**7.3000e-004**	**0.0745**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**	**0.0000**	**0.1369**	**0.1369**	**4.2000e-004**	**0.0000**	**0.1458**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.9757					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	36.3781					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.7000e-003	7.3000e-004	0.0745	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	0.1369	0.1369	4.2000e-004	0.0000	0.1458
Total	**40.3615**	**7.3000e-004**	**0.0745**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**	**0.0000**	**0.1369**	**0.1369**	**4.2000e-004**	**0.0000**	**0.1458**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	3,620.2870	62.7976	1.5102	5,407.2121
Mitigated	3,620.2870	62.7862	1.5079	5,406.2390

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	803.989 / 51.3185	1,452.5293	26.2576	0.6309	2,199.5241
Automobile Care Center	18.7692 / 11.5037	43.4441	0.6135	0.0148	60.9231
Convenience Market With Gas Pumps	0.814798 / 0.499392	1.8860	0.0266	6.4000e-004	2.6448
Fast Food Restaurant with Drive-Thru	3.00498 / 0.191807	5.4290	0.0981	2.3600e-003	8.2209
Free-Standing Discount Superstore	11.2812 / 6.91431	26.1121	0.3687	8.9100e-003	36.6179
General Light Industry	275.618 / 0	481.6687	9.0006	0.2161	737.6789
General Office Building	338.609 / 207.535	783.7623	11.0673	0.2675	1,099.0965
High Turnover (Sit Down Restaurant)	7.51246 / 0.479519	13.5724	0.2454	5.9000e-003	20.5523
Hotel	12.8863 / 1.43181	23.8448	0.4209	0.0101	35.8200

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.4928 / 0.77079	1.5743	0.0161	3.9000e-004	2.0351
Regional Shopping Center	1.25923 / 0.771788	2.9147	0.0412	9.9000e-004	4.0874
Research & Development	94.8576 / 0	165.7729	3.0977	0.0744	253.8824
Unrefrigerated Warehouse-No Rail	353.5 / 0	617.7764	11.5440	0.2772	946.1287
Total		**3,620.2870**	**62.7976**	**1.5102**	**5,407.2121**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	803.989 / 51.3185	1,452.5293	26.2528	0.6299	2,199.1171
Automobile Care Center	18.7692 / 11.5037	43.4441	0.6134	0.0148	60.9136
Convenience Market With Gas Pumps	0.814798 / 0.499392	1.8860	0.0266	6.4000e-004	2.6444
Fast Food Restaurant with Drive Thru	3.00498 / 0.191807	5.4290	0.0981	2.3500e-003	8.2194
Free-Standing Discount Superstore	11.2812 / 6.91431	26.1121	0.3687	8.9000e-003	36.6122
General Light Industry	275.618 / 0	481.6687	8.9990	0.2158	737.5394
General Office Building	338.609 / 207.535	783.7623	11.0652	0.2671	1,098.9252
High Turnover (Sit Down Restaurant)	7.51246 / 0.479519	13.5724	0.2453	5.8900e-003	20.5485
Hotel	12.8863 / 1.43181	23.8448	0.4208	0.0101	35.8135
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.4928 / 0.77079	1.5743	0.0161	3.9000e-004	2.0349

Regional Shopping Center	1.25923 / 0.771788	2.9147	0.0412	9.9000e-004	4.0867
Research & Development	94.8576 / 0	165.7729	3.0971	0.0743	253.8343
Unrefrigerated Warehouse-No Rail	353.5 / 0	617.7764	11.5419	0.2768	945.9498
Total		**3,620.2870**	**62.7862**	**1.5079**	**5,406.2390**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	355.0885	20.9851	0.0000	795.7763
Unmitigated	1,420.3542	83.9405	0.0000	3,183.1052

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	51.36	10.4256	0.6161	0.0000	23.3645

Automobile Care Center	762.09	154.6974	9.1424	0.0000	346.6868
Convenience Market With Gas Pumps	33.06	6.7109	0.3966	0.0000	15.0395
Fast Food Restaurant with Drive-Thru	114.04	23.1491	1.3681	0.0000	51.8786
Free-Standing Discount Superstore	655	132.9591	7.8577	0.0000	297.9699
General Light Industry	1477.91	300.0024	17.7296	0.0000	672.3247
General Office Building	1771.79	359.6574	21.2551	0.0000	806.0153
High Turnover (Sit Down Restaurant)	294.53	59.7869	3.5333	0.0000	133.9864
Hotel	278.13	56.4579	3.3366	0.0000	126.5257
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	89.78	18.2245	1.0770	0.0000	40.8423
Regional Shopping Center	17.85	3.6234	0.2141	0.0000	8.1203
Research & Development	14.66	2.9759	0.1759	0.0000	6.6691
Unrefrigerated Warehouse-No Rail	1436.93	291.6838	17.2380	0.0000	653.6822
Total		**1,420.3542**	**83.9405**	**0.0000**	**3,183.1052**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	12.84	2.6064	0.1540	0.0000	5.8411
Automobile Care Center	190.523	38.6744	2.2856	0.0000	86.6717
Convenience Market With Gas Pumps	8.265	1.6777	0.0992	0.0000	3.7599

Fast Food Restaurant with Drive-Thru	28.51	5.7873	0.3420	0.0000	12.9697
Free-Standing Discount Superstore	163.75	33.2398	1.9644	0.0000	74.4925
General Light Industry	369.478	75.0006	4.4324	0.0000	168.0812
General Office Building	442.947	89.9143	5.3138	0.0000	201.5038
High Turnover (Sit Down Restaurant)	73.6325	14.9467	0.8833	0.0000	33.4966
Hotel	69.5325	14.1145	0.8341	0.0000	31.6314
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	22.445	4.5561	0.2693	0.0000	10.2106
Regional Shopping Center	4.4625	0.9059	0.0535	0.0000	2.0301
Research & Development	3.665	0.7440	0.0440	0.0000	1.6673
Unrefrigerated Warehouse-No Rail	359.233	72.9210	4.3095	0.0000	163.4206
Total		**355.0885**	**20.9851**	**0.0000**	**795.7763**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

“Future Plan” CalEEMod™ Output

Future 2035 Emissions from the Plan Area

Oakland Coliseum Plan - 2035 Operational

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,067.57	1000sqft	18.10	1,067,573.00	0
General Office Building	16.90	1000sqft	0.39	16,900.00	0
Research & Development	9,373.10	1000sqft	165.00	9,373,101.00	0
General Light Industry	26.30	1000sqft	1.70	26,300.00	0
Unrefrigerated Warehouse-No Rail	1,142.21	1000sqft	81.70	1,142,213.00	0
Enclosed Parking with Elevator	22,235.00	Space	52.86	8,894,000.00	0
Parking Lot	4,704.00	Space	7.12	1,881,600.00	0
Arena	4,250.00	1000sqft	41.10	4,250,000.00	0
Hotel	1,383.00	Room	19.80	1,055,449.00	0
Apartments High Rise	5,750.00	Dwelling Unit	42.50	5,750,000.00	16445
Automobile Care Center	209.50	1000sqft	22.10	209,500.00	0
Regional Shopping Center	731.88	1000sqft	26.60	731,884.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	488.07	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 Non-Default Data

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	40235043	39566238
tblConstructionPhase	NumDays	500.00	0.00
tblEnergyUse	T24E	312.05	234.04
tblEnergyUse	T24E	1.48	1.04
tblEnergyUse	T24E	1.48	1.04
tblEnergyUse	T24E	3.92	2.74
tblEnergyUse	T24E	1.48	1.04
tblEnergyUse	T24E	5.01	3.51
tblEnergyUse	T24E	2.67	1.87
tblEnergyUse	T24E	2.74	1.92
tblEnergyUse	T24E	1.48	1.04
tblEnergyUse	T24E	0.29	0.20
tblEnergyUse	T24NG	7,191.67	5,393.75
tblEnergyUse	T24NG	18.78	13.15
tblEnergyUse	T24NG	18.78	13.15
tblEnergyUse	T24NG	18.78	13.15
tblEnergyUse	T24NG	19.28	13.50
tblEnergyUse	T24NG	30.92	21.64
tblEnergyUse	T24NG	4.10	2.87
tblEnergyUse	T24NG	18.78	13.15
tblEnergyUse	T24NG	1.24	0.87
tblFireplaces	NumberGas	3,162.50	3,967.50
tblFireplaces	NumberWood	805.00	0.00
tblLandUse	LandUseSquareFeet	1,067,570.00	1,067,573.00
tblLandUse	LandUseSquareFeet	9,373,100.00	9,373,101.00
tblLandUse	LandUseSquareFeet	1,142,210.00	1,142,213.00
tblLandUse	LandUseSquareFeet	2,008,116.00	1,055,449.00
tblLandUse	LandUseSquareFeet	731,880.00	731,884.00
tblLandUse	LotAcreage	24.51	18.10

tblLandUse	LotAcreage	215.18	165.00
tblLandUse	LotAcreage	0.60	1.70
tblLandUse	LotAcreage	26.22	81.70
tblLandUse	LotAcreage	200.11	52.86
tblLandUse	LotAcreage	42.34	7.12
tblLandUse	LotAcreage	1,366.07	41.10
tblLandUse	LotAcreage	46.10	19.80
tblLandUse	LotAcreage	92.74	42.50
tblLandUse	LotAcreage	4.81	22.10
tblLandUse	LotAcreage	16.80	26.60
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	488.07
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	1,008.56	593.90
tblVehicleTrips	CC_TTP	48.00	28.00
tblVehicleTrips	CC_TTP	0.00	28.00
tblVehicleTrips	CNW_TTP	19.00	13.00
tblVehicleTrips	CNW_TTP	19.00	13.00
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	41.00	19.00
tblVehicleTrips	CW_TTP	33.00	59.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	0.28	0.00
tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00

tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	0.60	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	0.66	100.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	7.16	4.04
tblVehicleTrips	ST_TR	10.71	1.82
tblVehicleTrips	ST_TR	62.00	0.81
tblVehicleTrips	ST_TR	1.32	0.81
tblVehicleTrips	ST_TR	2.37	1.79
tblVehicleTrips	ST_TR	8.19	5.48
tblVehicleTrips	ST_TR	49.97	27.03
tblVehicleTrips	ST_TR	1.90	0.78
tblVehicleTrips	ST_TR	2.59	0.81

tblVehicleTrips	SU_TR	6.07	3.43
tblVehicleTrips	SU_TR	10.71	1.82
tblVehicleTrips	SU_TR	62.00	0.42
tblVehicleTrips	SU_TR	0.68	0.42
tblVehicleTrips	SU_TR	0.98	0.74
tblVehicleTrips	SU_TR	5.95	3.98
tblVehicleTrips	SU_TR	25.24	13.65
tblVehicleTrips	SU_TR	1.11	0.43
tblVehicleTrips	SU_TR	2.59	0.42
tblVehicleTrips	WD_TR	6.59	3.72
tblVehicleTrips	WD_TR	10.71	1.82
tblVehicleTrips	WD_TR	62.00	4.27
tblVehicleTrips	WD_TR	6.97	4.27
tblVehicleTrips	WD_TR	11.01	8.34
tblVehicleTrips	WD_TR	8.17	5.46
tblVehicleTrips	WD_TR	42.94	23.22
tblVehicleTrips	WD_TR	8.11	3.75
tblVehicleTrips	WD_TR	2.59	4.27
tblWater	IndoorWaterUseRate	374,635,647.32	398,762,500.00
tblWater	IndoorWaterUseRate	1,830,772,999.77	15,736,500.00
tblWater	IndoorWaterUseRate	19,709,992.01	9,295,515.00
tblWater	IndoorWaterUseRate	6,081,875.00	604,058.00
tblWater	IndoorWaterUseRate	192,746,917.69	47,368,214.00
tblWater	IndoorWaterUseRate	35,082,242.91	151,438,500.00
tblWater	IndoorWaterUseRate	54,212,197.02	29,385,143.00
tblWater	IndoorWaterUseRate	4,608,696,536.53	415,884,491.00
tblWater	IndoorWaterUseRate	264,136,062.50	8,943,528.00
tblWater	OutdoorWaterUseRate	236,183,342.88	46,120,224.00
tblWater	OutdoorWaterUseRate	116,857,851.05	0.00
tblWater	OutdoorWaterUseRate	12,080,317.69	0.00

tblWater	OutdoorWaterUseRate	118,135,207.61	0.00
tblWater	OutdoorWaterUseRate	3,898,026.99	0.00
tblWater	OutdoorWaterUseRate	33,226,830.43	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	153.7371	0.5220	44.6405	7.7800e-003		0.5261	0.5261		0.5259	0.5259	36.7564	261.2865	298.0429	0.2440	3.5000e-003	304.2499
Energy	1.9861	17.9361	14.2915	0.1083		1.3722	1.3722		1.3722	1.3722	0.0000	67,188.0307	67,188.0307	3.2010	0.9447	67,548.1036
Mobile	33.5464	90.3146	393.1951	1.4283	91.3549	2.2765	93.6314	24.5624	2.0993	26.6617	0.0000	95,006.1155	95,006.1155	2.2445	0.0000	95,053.2507
Waste						0.0000	0.0000		0.0000	0.0000	1,522.5114	0.0000	1,522.5114	89.9779	0.0000	3,412.0461
Water						0.0000	0.0000		0.0000	0.0000	341.8152	1,326.3900	1,668.2052	35.1865	0.8453	2,669.1569
Total	**189.2696**	**108.7727**	**452.1272**	**1.5444**	**91.3549**	**4.1747**	**95.5296**	**24.5624**	**3.9975**	**28.5599**	**1,901.0829**	**163,781.8227**	**165,682.9056**	**130.8538**	**1.7935**	**168,986.8073**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	153.7371	0.5220	44.6405	7.7800e-003		0.5261	0.5261		0.5259	0.5259	36.7564	261.2865	298.0429	0.2440	3.5000e-003	304.2499
Energy	1.9861	17.9361	14.2915	0.1083		1.3722	1.3722		1.3722	1.3722	0.0000	67,188.0307	67,188.0307	3.2010	0.9447	67,548.1036
Mobile	33.5464	90.3146	393.1951	1.4283	91.3549	2.2765	93.6314	24.5624	2.0993	26.6617	0.0000	95,006.1155	95,006.1155	2.2445	0.0000	95,053.2507
Waste						0.0000	0.0000		0.0000	0.0000	380.6279	0.0000	380.6279	22.4945	0.0000	853.0115
Water						0.0000	0.0000		0.0000	0.0000	341.8152	1,326.3900	1,668.2052	35.1801	0.8440	2,668.6116
Total	**189.2696**	**108.7727**	**452.1272**	**1.5444**	**91.3549**	**4.1747**	**95.5296**	**24.5624**	**3.9975**	**28.5599**	**759.1994**	**163,781.8227**	**164,541.0220**	**63.3640**	**1.7921**	**166,427.2273**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**60.06**	**0.00**	**0.69**	**51.58**	**0.07**	**1.51**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	33.5464	90.3146	393.1951	1.4283	91.3549	2.2765	93.6314	24.5624	2.0993	26.6617	0.0000	95,006.1155	95,006.1155	2.2445	0.0000	95,053.2507
Unmitigated	33.5464	90.3146	393.1951	1.4283	91.3549	2.2765	93.6314	24.5624	2.0993	26.6617	0.0000	95,006.1155	95,006.1155	2.2445	0.0000	95,053.2507

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	21,406.41	23,257.95	19717.29	53,876,440	53,876,440
Arena	7,734.52	7,734.52	7734.52	20,552,168	20,552,168
Automobile Care Center	893.94	169.30	87.21	2,113,058	2,113,058

Enclosed Parking with Elevator	0.00	0.00	0.00		
General Light Industry	112.22	21.25	10.95	265,267	265,267
General Office Building	8,905.14	1,915.07	793.25	19,713,210	19,713,210
General Office Building	140.97	30.32	12.56	312,066	312,066
Hotel	7,102.99	7,120.38	5172.92	19,276,777	19,276,777
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	13,768.11	16,022.19	8092.85	37,425,902	37,425,902
Research & Development	35,164.06	7,345.80	4031.53	78,127,303	78,127,303
Unrefrigerated Warehouse-No Rail	5,166.23	978.40	504.02	12,107,436	12,107,436
Total	100,394.59	64,595.17	46,157.11	243,769,628	243,769,628

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	12.40	4.30	5.40	26.10	29.10	44.80	100	0	0
Arena	9.50	7.30	7.30	0.00	81.00	19.00	100	0	0
Automobile Care Center	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	100	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	100	0	0
Hotel	9.50	7.30	7.30	19.40	61.60	13.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	19.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	0.00	100	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	100	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	28.00	19.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.534279	0.061728	0.163535	0.108433	0.030557	0.004584	0.021278	0.063079	0.001942	0.003382	0.005694	0.000164	0.001344

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	1.9861	17.9361	14.2915	0.1083		1.3722	1.3722		1.3722	1.3722	0.0000	19,655.5498	19,655.5498	0.3767	0.3604	19,775.1702
NaturalGas Unmitigated	1.9861	17.9361	14.2915	0.1083		1.3722	1.3722		1.3722	1.3722	0.0000	19,655.5498	19,655.5498	0.3767	0.3604	19,775.1702
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	47,532.4809	47,532.4809	2.8243	0.5843	47,772.9334
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	47,532.4809	47,532.4809	2.8243	0.5843	47,772.9334

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	4.05706e+007	0.2188	1.8694	0.7955	0.0119		0.1512	0.1512		0.1512	0.1512	0.0000	2,165.0005	2,165.0005	0.0415	0.0397	2,178.1763
Arena	8.51955e+007	0.4594	4.1763	3.5081	0.0251		0.3174	0.3174		0.3174	0.3174	0.0000	4,546.3563	4,546.3563	0.0871	0.0834	4,574.0247
Automobile Care Center	4.19964e+006	0.0227	0.2059	0.1729	1.2400e-003		0.0157	0.0157		0.0157	0.0157	0.0000	224.1086	224.1086	4.3000e-003	4.1100e-003	225.4725
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	527210	2.8400e-003	0.0258	0.0217	1.6000e-004		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003	0.0000	28.1339	28.1339	5.4000e-004	5.2000e-004	28.3051
General Office Building	1.54862e+007	0.0835	0.7591	0.6377	4.5500e-003		0.0577	0.0577		0.0577	0.0577	0.0000	826.4034	826.4034	0.0158	0.0152	831.4327
General Office Building	245151	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0822	13.0822	2.5000e-004	2.4000e-004	13.1618
Hotel	3.03695e+007	0.1638	1.4887	1.2505	8.9300e-003		0.1131	0.1131		0.1131	0.1131	0.0000	1,620.6316	1,620.6316	0.0311	0.0297	1,630.4945

Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.61283e+006	0.0141	0.1281	0.1076	7.7000e-004		9.7300e-003	9.7300e-003		9.7300e-003	9.7300e-003	0.0000	139.4303	139.4303	2.6700e-003	2.5600e-003	140.2789
Research & Development	1.87893e+008	1.0132	9.2105	7.7368	0.0553		0.7000	0.7000		0.7000	0.7000	0.0000	10,026.6958	10,026.6958	0.1922	0.1838	10,087.7166
Unrefrigerated Warehouse-No Rail	1.23131e+006	6.6400e-003	0.0604	0.0507	3.6000e-004		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	65.7072	65.7072	1.2600e-003	1.2000e-003	66.1070
Total		**1.9861**	**17.9361**	**14.2915**	**0.1083**		**1.3722**	**1.3722**		**1.3722**	**1.3722**	**0.0000**	**19,655.5498**	**19,655.5498**	**0.3767**	**0.3604**	**19,775.1702**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	4.05706e+007	0.2188	1.8694	0.7955	0.0119		0.1512	0.1512		0.1512	0.1512	0.0000	2,165.0005	2,165.0005	0.0415	0.0397	2,178.1763
Arena	8.51955e+007	0.4594	4.1763	3.5081	0.0251		0.3174	0.3174		0.3174	0.3174	0.0000	4,546.3563	4,546.3563	0.0871	0.0834	4,574.0247
Automobile Care Center	4.19964e+006	0.0227	0.2059	0.1729	1.2400e-003		0.0157	0.0157		0.0157	0.0157	0.0000	224.1086	224.1086	4.3000e-003	4.1100e-003	225.4725
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	527210	2.8400e-003	0.0258	0.0217	1.6000e-004		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003	0.0000	28.1339	28.1339	5.4000e-004	5.2000e-004	28.3051
General Office Building	1.54862e+007	0.0835	0.7591	0.6377	4.5500e-003		0.0577	0.0577		0.0577	0.0577	0.0000	826.4034	826.4034	0.0158	0.0152	831.4327
General Office Building	245151	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0822	13.0822	2.5000e-004	2.4000e-004	13.1618
Hotel	3.03695e+007	0.1638	1.4887	1.2505	8.9300e-003		0.1131	0.1131		0.1131	0.1131	0.0000	1,620.6316	1,620.6316	0.0311	0.0297	1,630.4945
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.61283e+006	0.0141	0.1281	0.1076	7.7000e-004		9.7300e-003	9.7300e-003		9.7300e-003	9.7300e-003	0.0000	139.4303	139.4303	2.6700e-003	2.5600e-003	140.2789
Research & Development	1.87893e+008	1.0132	9.2105	7.7368	0.0553		0.7000	0.7000		0.7000	0.7000	0.0000	10,026.6958	10,026.6958	0.1922	0.1838	10,087.7166
Unrefrigerated Warehouse-No Rail	1.23131e+006	6.6400e-003	0.0604	0.0507	3.6000e-004		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	65.7072	65.7072	1.2600e-003	1.2000e-003	66.1070

Total		**1.9861**	**17.9361**	**14.2915**	**0.1083**		**1.3722**	**1.3722**		**1.3722**	**1.3722**	**0.0000**	**19,655.5498**	**19,655.5498**	**0.3767**	**0.3604**	**19,775.1702**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.03397e+007	4,502.8989	0.2676	0.0554	4,525.6777
Arena	3.32605e+007	7,363.3701	0.4375	0.0905	7,400.6192
Automobile Care Center	1.63955e+006	362.9708	0.0216	4.4600e-003	364.8070
Enclosed Parking with Elevator	4.94862e+007	10,955.4974	0.6510	0.1347	11,010.9180
General Light Industry	205824	45.5663	2.7100e-003	5.6000e-004	45.7968
General Office Building	1.32134e+007	2,925.2354	0.1738	0.0360	2,940.0333
General Office Building	209171	46.3074	2.7500e-003	5.7000e-004	46.5416
Hotel	8.75917e+006	1,939.1476	0.1152	0.0238	1,948.9572
Parking Lot	1.65581e+006	366.5708	0.0218	4.5100e-003	368.4251
Regional Shopping Center	7.89556e+006	1,747.9582	0.1039	0.0215	1,756.8006
Research & Development	7.33539e+007	16,239.4380	0.9649	0.1996	16,321.5884
Unrefrigerated Warehouse-No Rail	4.6865e+006	1,037.5200	0.0617	0.0128	1,042.7685
Total		**47,532.4808**	**2.8243**	**0.5843**	**47,772.9335**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.03397e+007	4,502.8989	0.2676	0.0554	4,525.6777
Arena	3.32605e+007	7,363.3701	0.4375	0.0905	7,400.6192
Automobile Care Center	1.63955e+006	362.9708	0.0216	4.4600e-003	364.8070
Enclosed Parking with Elevator	4.94862e+007	10,955.4974	0.6510	0.1347	11,010.9180
General Light Industry	205824	45.5663	2.7100e-003	5.6000e-004	45.7968
General Office Building	1.32134e+007	2,925.2354	0.1738	0.0360	2,940.0333
General Office Building	209171	46.3074	2.7500e-003	5.7000e-004	46.5416
Hotel	8.75917e+006	1,939.1476	0.1152	0.0238	1,948.9572
Parking Lot	1.65581e+006	366.5708	0.0218	4.5100e-003	368.4251
Regional Shopping Center	7.89556e+006	1,747.9582	0.1039	0.0215	1,756.8006
Research & Development	7.33539e+007	16,239.4380	0.9649	0.1996	16,321.5884
Unrefrigerated Warehouse-No Rail	4.6865e+006	1,037.5200	0.0617	0.0128	1,042.7685
Total		**47,532.4808**	**2.8243**	**0.5843**	**47,772.9335**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	153.7371	0.5220	44.6405	7.7800e-003		0.5261	0.5261		0.5259	0.5259	36.7564	261.2865	298.0429	0.2440	3.5000e-003	304.2499
Unmitigated	153.7371	0.5220	44.6405	7.7800e-003		0.5261	0.5261		0.5259	0.5259	36.7564	261.2865	298.0429	0.2440	3.5000e-003	304.2499

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	17.8794					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	134.3434					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2046	0.0275	1.6838	5.4900e-003		0.2878	0.2878		0.2877	0.2877	36.7564	190.7394	227.4957	0.1755	3.5000e-003	232.2649
Landscaping	1.3098	0.4945	42.9568	2.2900e-003		0.2382	0.2382		0.2382	0.2382	0.0000	70.5471	70.5471	0.0685	0.0000	71.9850
Total	**153.7371**	**0.5220**	**44.6405**	**7.7800e-003**		**0.5261**	**0.5261**		**0.5259**	**0.5259**	**36.7564**	**261.2865**	**298.0429**	**0.2440**	**3.5000e-003**	**304.2499**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	17.8794					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	134.3434					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Hearth	0.2046	0.0275	1.6838	5.4900e-003		0.2878	0.2878		0.2877	0.2877	36.7564	190.7394	227.4957	0.1755	3.5000e-003	232.2649
Landscaping	1.3098	0.4945	42.9568	2.2900e-003		0.2382	0.2382		0.2382	0.2382	0.0000	70.5471	70.5471	0.0685	0.0000	71.9850
Total	**153.7371**	**0.5220**	**44.6405**	**7.7800e-003**		**0.5261**	**0.5261**		**0.5259**	**0.5259**	**36.7564**	**261.2865**	**298.0429**	**0.2440**	**3.5000e-003**	**304.2499**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	1,668.2052	35.1865	0.8453	2,669.1569
Mitigated	1,668.2052	35.1801	0.8440	2,668.6116

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	398.762 / 46.1202	639.9280	13.0242	0.3131	1,010.5033
Arena	15.7365 / 0	23.8434	0.5139	0.0123	38.4604
Automobile Care Center	9.29552 / 0	14.0843	0.3036	7.2900e-003	22.7185
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000

General Light Industry	0.604058 / 0	0.9153	0.0197	4.7000e-004	1.4763
General Office Building	47.3682 / 0	71.7708	1.5469	0.0371	115.7692
Hotel	151.439 / 0	229.4546	4.9454	0.1188	370.1198
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	29.3851 / 0	44.5234	0.9596	0.0230	71.8181
Research & Development	415.884 / 0	630.1345	13.5812	0.3261	1,016.4330
Unrefrigerated Warehouse-No Rail	8.94353 / 0	13.5509	0.2921	7.0100e-003	21.8582
Total		**1,668.2052**	**35.1865**	**0.8453**	**2,669.1569**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	398.762 / 46.1202	639.9280	13.0218	0.3126	1,010.3015
Arena	15.7365 / 0	23.8434	0.5138	0.0123	38.4525
Automobile Care Center	9.29552 / 0	14.0843	0.3035	7.2800e-003	22.7138
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Light Industry	0.604058 / 0	0.9153	0.0197	4.7000e-004	1.4760
General Office Building	47.3682 / 0	71.7708	1.5466	0.0371	115.7452
Hotel	151.439 / 0	229.4546	4.9445	0.1186	370.0432
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	29.3851 / 0	44.5234	0.9594	0.0230	71.8032

Research & Development	415.884 / 0	630.1345	13.5787	0.3256	1,016.2225
Unrefrigerated Warehouse-No Rail	8.94353 / 0	13.5509	0.2920	7.0000e-003	21.8537
Total		**1,668.2052**	**35.1801**	**0.8440**	**2,668.6116**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	380.6279	22.4945	0.0000	853.0115
Unmitigated	1,522.5114	89.9779	0.0000	3,412.0461

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	2645	536.9111	31.7305	0.0000	1,203.2524
Arena	116.96	23.7418	1.4031	0.0000	53.2070

Automobile Care Center	800.29	162.4516	9.6006	0.0000	364.0646
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	32.61	6.6195	0.3912	0.0000	14.8348
General Office Building	593.9	120.5563	7.1247	0.0000	270.1745
Hotel	757.19	153.7027	9.0836	0.0000	344.4577
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	768.47	155.9925	9.2189	0.0000	349.5892
Research & Development	712.29	144.5884	8.5449	0.0000	324.0320
Unrefrigerated Warehouse-No Rail	1073.68	217.9473	12.8803	0.0000	488.4340
Total		**1,522.5114**	**89.9779**	**0.0000**	**3,412.0462**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	661.25	134.2278	7.9326	0.0000	300.8131
Arena	29.24	5.9355	0.3508	0.0000	13.3017
Automobile Care Center	200.072	40.6129	2.4002	0.0000	91.0162
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	8.1525	1.6549	0.0978	0.0000	3.7087
General Office Building	148.475	30.1391	1.7812	0.0000	67.5436
Hotel	189.298	38.4257	2.2709	0.0000	86.1144

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	192.118	38.9981	2.3047	0.0000	87.3973
Research & Development	178.072	36.1471	2.1362	0.0000	81.0080
Unrefrigerated Warehouse-No Rail	268.42	54.4868	3.2201	0.0000	122.1085
Total		**380.6278**	**22.4945**	**0.0000**	**853.0115**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

APPENDIX 4.3

List of Potential Plant and Wildlife Species Occurring or Known to Occur in the Project Area

APPENDIX 4.3A

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
Fish					
Chinook salmon Central Valley spring run ESU; *Oncorhynchus tshawytscha*	FT, ST	USFWS	Anadromous; migrates through San Francisco Bay and Delta; spawns in upper Sacramento River and tributaries. Adults need access to natal streams; eggs; fry need cool water with adequate dissolved oxygen; clean gravel; juveniles migrate out to the ocean after only a few months in the river.	HP	Low. This run of chinook salmon migrates through the Central and North Bay to reach spawning grounds in the Central Valley. However there is some potential for this fish to use any part of the Bay for foraging. There is no CNDDB record within 5 miles of the planning area and the planning area is located outside of the designated critical habitat.
Chinook salmon Sacramento River Winter run ESU; *Oncorhynchus tshawytscha*	FE, SE	USFWS	Anadromous; migrates through SF Bay and Delta; spawns in upper Sacramento River and its tributaries. Adults need access to natal streams; eggs and fry need cool water with adequate dissolved oxygen; clean gravel; juveniles migrate out to the ocean after only a few months in the river.	HP	**Low.** This run of chinook salmon migrates through the Central and North Bay to reach spawning grounds in the Central Valley However there is some potential for this fish to use any part of the Bay for foraging. There is no CNDDB record within 5 miles of the planning area and the planning area is located outside of the designated critical habitat.

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
Coho salmon-central California coast ESU; *Oncorhynchus kisutch*	FE, SE	USFWS	Anadromous; Migrates through and spawns in coastal rivers and streams from Santa Cruz to Mendocino County. Needs cool clear water and gravel beds free of excessive silt required for spawning.	HP	**None.** Coho salmon were last documented from the San Francisco Bay estuary stream in the early-to-mid 1980s.The latest documentation from the vicinity of the planning area is from San Lorenzo Creek pre-1960's (Leidy et al., 2005). There is no CNDDB record within 5 miles of the planning area and the planning area is located outside of the designated critical habitat.
Delta smelt; *Hypomesus transpacificus*	FT S	USFWS	Endemic to California; occurs only in the brackish and freshwaters of the Sacramento-San Joaquin River Delta. Exhibits seasonal migration within the estuary, moving upstream before spawning.	A	**None.** This species is included due to the expanse of the USFWS quadrangle search. However, this species is known to use the Sacramento-San Joaquin Delta, which is designated as critical habitat for this species. There is no CNDDB record within 5 miles of the planning area.
Longfin smelt; *Hypomesus transpacificus*	ST	CNDDB	Anadromous; found throughout San Francisco Estuary, occupying different regions of the Estuary throughout the year.	HP	**Low.** Longfin smelt are known to inhabit the entire Bay Delta, including the south bay at various times of the year. However they are thought to prefer deeper waters and channels and are not expected in large numbers in the vicinity of the planning area.

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
Pacific Herring, *Clupea pallasii*	Managed State Fishery	CDFW	In California, Pacific herring are in the open ocean during spring and summer. Beginning in October, schools of adult herring migrate into bays and estuaries to spawn on substrate such as marine vegetation, rocky intertidal areas, and man-made structures such as pier pilings and riprap.	HP	**Moderate.** This species may be present in the plan waters during fall and spring. No anecdotal evidence was found that the area supports large spawning, however, rip rap lining along the shore may provide opportunity to spawn. Nearest CNDDB record is from South Bay sampling in 1995.
North American green sturgeon, southern DPS; *Acipenser medirostris*	FT	USFWS	Anadromous; Pacific-southern DPS includes coastal spawning populations from the Russian river south to the Sacramento river Found in nearshore oceanic waters; bays; and estuaries. Prefers to spawn in lower reaches of large rivers with swift currents and large cobble.	CH	**Moderate.** This species is known to live and feed in San Francisco Bay as it migrates between the ocean and the Sacramento River. They are expected to use the Central and North Bay more than the South Bay due to the location of the Sacramento River delta. There is no CNDDB record within 5 miles of the planning area. All of San Francisco Bay is designated as Critical Habitat for this species.
Steelhead Central California Coast DPS; *Oncorhynchus mykiss irideus*	FT	USFWS, CNDDB	Anadromous; from the Russian River to Aptos Creek, and the drainages of San Francisco; San Pablo; and Suisun Bays eastward to Chipps Island at the confluence of the Sacramento and San Joaquin Rivers. Tributary streams to Suisun Marsh including Suisun Creek; Green Valley Creek; and an unnamed tributary to Cordelia Slough	CH	**High.** This DPS is known to spawn in San Leandro Creek and travel through San Leandro Bay during migration within the vicinity of the planning area. There is no CNDDB record within 5 miles of the planning area. All of San Francisco Bay is designated as Critical Habitat for this species.

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
Steelhead Central Valley DPS; *Oncorhynchus mykiss irideus*	FT	USFWS	Anadromous; Sacramento and San Joaquin Rivers and their tributaries; does not include steelhead from San Francisco Bay drainages; but it migrates through the San Francisco Bay and Sacramento-San Joaquin delta.	HP	**Low.** This DPS migrates through the Central and North Bay to reach spawning grounds in the Central Valley. However there is some potential for this fish to use any part of the Bay for foraging. There is no CNDDB record within 5 miles of the planning area and the planning area is located outside of the designated critical habitat.
Tidewater Goby; *Eucyclogobius newberryi*	FE, SSC	USFWS, CNDDB	Endemic to California; found primarily in waters of coastal lagoons, estuaries, and marshes often in sandy shallows with low salinity levels.	HP	**None**. This species is extirpated from San Francisco Bay in San Francisco and Alameda counties (USFWS, 2013)
Marine Mammals					
California Sea Lion; *Zalophus californianus*	MMPA		Found year-round in the San Francisco Bay Estuary, and breed in southern California. They spend time in the pelagic zones of the open ocean, near shore waters and also land. They haul out on offshore rocks, sandy beaches, and floating docks, wharfs and other man-made structures.	HP	**Moderate.** This species is known to forage throughout San Francisco Bay and may forage in the waters adjacent to the planning area.

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
Harbor Seal; *Phoca vitulina*	MMPA		Found year-round in the San Francisco Bay Estuary. They feed in the deeper waters of San Francisco Bay near the Golden Gate Bridge and along the deeper channels extending into the North and South Bay. March to June, Pacific harbor seals pup at multiple sites along the shores of San Francisco Bay.	HP	**High.** This species is known to haul out at nearby Breakwater Island in Alameda Island, and is expected to forage in waters adjacent to planning area.
Mammals					
Alameda Island Mole; *Scapacus latimanus parvus*	FC	USFWS, CNDDB	Scapanus latimanus parvus is known only from Alameda Island, Alameda with the last known specimen collected in 1958. It may also occupy salt marsh areas around the eastern and southern margins of San Francisco Bay.	P	**None.** No observational records confirm the existence of an extant population of the Alameda Island mole. CDFW reports that despite intensive trapping programs for the saltmarsh harvest mouse and the Salt-marsh wandering shrew no salt-marsh inhabiting mole populations have been reported from salt marshes around the margins of the San Francisco Bay.
American Badger; *Taxidea taxus*	SSC	CNDDB	Found throughout most of the state in open areas; plains and prairies; farmland and woodland edges. Prefers friable soils for constructing deep burrows.	A	**None.** The grasslands in the vicinity of the planning area are small and fragmented. The home ranges required vary from 338 to 1,326 acres (CDFW, 2013). The last CNDDB record of an American Badger within 5 miles of the plan area is from 1930.

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
Hoary bat; *Lasiurus cinereus*		CNDDB	Prefers woodlands; mainly coniferous forests; roosts in dense foliage of medium to large trees along forest borders; hunts over open areas or lakes.	A	**None.** There are no woodlands in the planning area vicinity, and trees that are present are not in dense groupings. The most recent CNDDB record is from 1951 found in an unspecified part of Oakland.
Pallid bat; *Antrozous pallidus*	SSC	CNDDB	Found throughout the state. Roosts include crevices in rocky outcrops and cliffs, caves, mines, trees and various human structures such as bridges, bat boxes, and buildings. Forage over open shrub-steppe grasslands, oak savannah grasslands, open Ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards.	HP	**Low.** Compromised habitat for this species exists in the vicinity of the planning area. The most recent CNDDB record is from 1943 found 3 miles east of Oakland
Salt-marsh harvest mouse; *Reithrodontomys raviventris*	FE, SE	CNDDB	Endemic to salt and brackish marshes of the San Francisco; San Pablo; and Suisun Bays. Pickleweed is primary habitat. Requires upland areas for flood escape.	HP	**High.** The most recent CNDDB record is from 2003 in marshlands just north of San Mateo Bridge, and this species is assumed to be present in Arrowhead Marsh .
Salt-marsh wandering shrew; *Sorex vagrans halicoetes*		CNDDB	Endemic to south San Francisco bay in stands of salt marsh in San Mateo, Santa Clara, Alameda and Contra Costa counties. Elevation range approximately 6 to 9 feet in tidal *Salicornia* marsh with dense cover and continuous ground moisture.	HP	**Moderate.** Habitat for this species exists, and it is thought to occur in small remnant stands of salt marsh found around in San Mateo, Santa Clara, Alameda and Contra Costa counties. The most recent CNDDB record is from 1957 near the Oakland Airport.

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
Silver-haired bat; *Lasionycteris noctivagans*		CNDDB	Temperate; northern hardwoods with ponds or streams nearby. Typical day roost is behind loose tree bark; hollow snags; and bird nests; prefers willow; maple and ash trees.	HP	**Low.** Compromised habitat for this species exists in the vicinity of the planning area. The most recent CNDDB record is from 1984 found in an unspecified part of Alameda County.
Townsend's big-eared bat *Corynorhinus townsendii*	SSC	Alameda Point Draft EIR, 2013	Caves and buildings in the vicinity of Douglas fir woodlands	HP	**Low.** Compromised habitat for this species exists in the vicinity of the planning area. There is no recent CNDDB record for this species; however, the 2013 Alameda Point Draft EIR refers to reports of this species in buildings along the northern Alameda Island shoreline.
Reptiles					
Alameda whipsnake; *Masticophis lateralis euryxanthus*	FT, ST	USFWS	Chaparral; northern coastal sage scrub; coastal sage; grassland; and oak woodland communities of the East Bay in Contra Costa, Alameda, and parts of San Joaquin and Santa Clara Counties	A	**None.** This species is relative well documented, and known populations of this species occur higher up in the Oakland hills, and the planning area is located outside of the designated critical habitat (USFWS, 2006).
Amphibians					
California red-legged frog; *Rana draytonii*	FT	USFWS	Requires slow moving or still water for juvenile development. Occurs in freshwater marshes; stock ponds; and riparian habitats. May aestivate in rodent burrows or cracks during dry periods.	A	**None**. This species would have to pass through unsuitable urban or saltwater habitat to reach any pockets of freshwater marsh in the planning area. The planning area is located outside of the designated critical habitat (USFWS, 2010).

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
California tiger salamander; *Ambystoma californiense*	FT, ST	USFWS	Ponds and vernal pools in grasslands; and oak woodlands	A	**None.** This species would have to pass through unsuitable urban or saltwater habitat to reach any pockets of freshwater marsh in the planning area. The planning area is located outside of the designated critical habitat (USFWS, 2011).
Birds					
Alameda song sparrow; *Melospiza melodia pusillula*	SSC	CNDDB	Tidal salt marshes in south San Francisco Bay. Requires exposed ground for foraging and upper marsh vegetation for nesting.	P	**High.** According to CNDDB, species is present within planning area.
American kestrel; *Falco sparverius*	Section 3503.5 CFGC	Alameda Point Draft EIR	American Kestrels occupy habitats ranging from deserts and grasslands to alpine meadows. Most often seen perching on telephone wires along roadsides, in open country with short vegetation and few trees.	P	**High.** Suitable roosting and foraging habitat present in the planning area. Individuals observed within planning area (ISP 2008), though there is no CNDDB record within 5 miles of the planning area.
Burrowing owl; *Athene cunicularia*	SSC	CNDDB, GGAS, personal observations	Open arid and semiarid habitats with short emergent vegetation; including grasslands; deserts; agricultural fields; ruderal areas and open landscaped areas throughout much of the State. Diet primarily includes insects and mice.	P	**High**. The planning area includes open habitat with short emergent vegetation. CNDDB lists historic nest sites within planning area from 1983, and a breeding colony currently exists year-round at Arrowhead Marsh, adjacent to the planning area.

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
California black rail; *Laterallus jamaicensis coturniculus*	ST; State fully protected	CNDDB	Tidal salt marshes of northern San Francisco Bay; primarily in San Pablo and Suisun Bays. Prefers muted or fully tidal marshes; prefers upper marsh away from urban areas with a high proportion of Salicornia, Scripus maritime, Juncus, and Typha.	HP	**Low.** Suitable habitat present in the planning area. Species has not been detected in San Leandro Bay during recent yearly surveys performed by ISP. The most recent CNDDB record is from 1995 in adjacent Arrowhead Marsh.
California brown pelican; *Pelecanus occidentalis californicus*	Delisted in 2009; State Fully Protected	USFWS	Coastal; range from the Gulf of California to southern British Columbia. Nest on islands in the Gulf of California and along the coast to West Anacapa and Santa Barbara Islands. Important habitat during nonbreeding season includes offshore rocks, islands, sandbars, breakwaters, and pilings.	P	**High.** Suitable roosting and foraging habitat present in the planning area. Has been observed within planning area (ISP 2010), though there is no CNDDB record within 5 miles of the planning area.
California clapper rail; *Rallus longirostris obsoletus*	FE, SE	USFWS, CNDDB	Salt marshes and brackish marshes traversed by tidal sloughs in the vicinity of the San Francisco Bay. Associated with Salicornia native Spartina spp. dominated salt marshes.	P	**High.** Suitable habitat exists on planning area and, according to CNDDB (2006) and ISP, species is present within planning area along MLK Jr. Regional Shoreline. The most recent CNDDB record is from 2010 in adjacent Arrowhead Marsh.
California gull; *Larus californicus*	CDFW Watchlist	Alameda point	Breeds primarily at lakes and marshes in interior western North America from Canada south to eastern California and Colorado. Forage in flight or pick up objects while swimming, walking or wading and the primarily eat insects, fish, and eggs.	P	**High.** Planning area provides several suitable foraging areas. Observed within planning area (ISP 2008), though there is no CNDDB record within 5 miles of the planning area.

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
California least tern; *Sternula antillarum browni*	FE, SE	USFWS, CNDDB, DFG 2010	Abandoned salt ponds and along estuarine shores in San Francisco Bay. Feeds primarily in shallow estuaries or lagoons where small fish are abundant. Nests on barren to sparsely vegetated site near water; usually on sandy or gravelly substrate.	HP	**Moderate.** MLK Regional Shoreline provides suitable foraging habitat within planning area. Historic breeding grounds at Alameda Naval Air Station (5 mi NW from planning area). The most recent CNDDB record is from 1992 on Bay Farm Island.
Cooper's hawk; *Accipiter cooperii*	CDFW Watchlist; Section 3503.5 CFGC	CNDDB	Wooded habitats throughout the State. Ranging from deep forests to leafy subdivisions and backyards. Typically nests in pines; oaks; Douglas firs; beeches; spruces; and other tree species; often on flat ground rather than hillsides; and in dense woods. Known to nest locally in Bay Area urban neighborhoods.	HP	**High.** Planning area contains suitable foraging and roosting habitat, and potential nesting habitat near soccer field. The most recent CNDDB record is from 2006 along Urban Chimes creek between Delmont Ave and I-580 in Oakland, about 3 miles from the planning area.
Double-crested cormorant; *Phalacrocorax auritus*	Former SSC	Alameda Point Draft EIR	Brackish and freshwater habitats on lakes, rivers, swamps, bays, and coasts.	P	**High.** Suitable foraging habitat exists within planning area. There is no CNDDB record within 5 miles of the planning area, though there is a large nesting colony on the nearby Bay Bridge.
Great blue heron; *Ardea herodias*	Not listed	CNDDB, ISP 2008	Found along calm freshwater and seacoasts. Usually nests in trees near water; but colonies can be found away from water.	P	**High.** MLK Jr. Regional Shoreline provides suitable foraging habitat within planning area. The most recent CNDDB record is from 1990 at Lake Chabot in the San Leandro hills.

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
Great egret; *Ardea alba*	Protected rookeries	ISP	Salt and freshwater marshes; marshy ponds and tidal flats.	P	**High.** Suitable foraging habitat within planning area along MLK Jr. Regional Shoreline. Observed within planning area (ISP 2008). Known rookeries at Lake Merritt in Oakland and Bay Farm Island, though CNDDB does not have a record within 5 miles of the planning area.
Northern harrier; *Circus cyaneus*	SSC	Alameda Point Draft EIR	Sloughs; wet meadows; marshlands; swamps; prairies; plains; grasslands; and shrublands; large forest openings; open; low woody or herbaceous vegetation for nesting and hunting; nest on ground.	HP	**High.** Lack of suitable nesting habitat, but foraging habitat present. There is no CNDDB record within 5 miles of the planning area.
Osprey; *Pandion haliaetus*	SSC; CDFW watchlist; Section 3503.5 CFGC	Alameda point Draft EIR	Nests near lakes, reservoirs, and streams along riparian forest edges	HP	**Moderate.** Potential nesting habitat; foraging habitat present. There is no CNDDB record within 5 miles of the planning area, but nesting has occurred on Alameda Island.
Peregrine falcon; *Falco peregrinus anatum*	Fully protected	Alameda Point Draft EIR	Frequently nests near water on ledges of rocky cliffs or buildings; also found along rivers and coastlines or in cities.	P	**High.** Though there is no CNDDB record within 5 miles of the planning area, there is a known nest and territory on Fruitvale Bridge, 0.9 miles from planning area. Suitable foraging habitat with abundant prey species present within planning area.

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
Red-tailed hawk; *Buteo jamaicensis*	Section 3503.5 CFGC	ISP	Inhabits open habitat, including desert, scrublands, grasslands, roadsides, fields and pastures, parks, and broken woodland. Nest in the crowns of tall trees on cliff ledges, or on artificial structures such as transmission towers.	P	**High.** Suitable nesting habitat within planning area. Have been observed foraging within planning area (ISP 2010) (E. Jepsen, pers. obs.), though there is no CNDDB record within 5 miles of the planning area
Readhead; *Aythya Americana*	SSC	ISP 2010	Occur year round in California. Nest in freshwater emergent wetlands. During nonbreeding season, forage and rest on large deep bodies of water and may form rafts far from shore. Food is mostly obtained by diving >1 m in depth. Mostly feed on pond weeds.	HP	**Low.** Have been observed within planning area (ISP 2010); however, no suitable habitat for breeding exists within planning area and foraging habitat is limited. There is no CNDDB record within 5 miles of the planning area
San Francisco saltmarsh common yellowthroat; *Geothlypis trichas sinuosa*	SSC	CNDDB; ISP 2008	Endemic to the greater San Francisco Bay region. Associated with emergent wetlands. Typically inhabits low; dense vegetation near water. Nests near the ground in grasses, herbaceous vegetation	P	**High.** Suitable nesting and foraging habitat within planning area. Most recent CNDDB record is from 1995 at Arrowhead Marsh and MLK Jr. Regional Shoreline.
Snowy egret; *Egretta thula*	California Special Animals List	ISP 2008	Most common along the coast, though they do breed patchily in inland wetlands. Nest colonially, usually on protected islands, and often with other small herons. They concentrate on mudflats, beaches, and wetlands, but also forage in wet agricultural fields and along the edges of rivers and lakes.	P	**High.** Suitable foraging habitat within planning area along MLK Jr. Regional Shoreline. Observed within planning area (ISP 2008). Known rookeries at Lake Merritt in Oakland and Bay Farm Island, though there is no CNDDB record within 5 miles of the planning area

Table 4.3A-1: Wildlife Listed Species, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Status	Source	General Habitat Description	Habitat Code (Source)	Occurrence Potential
Western snowy plover; *Charadrius alexandrinus nivosus*	FT	CNDDB, USFWS	Coastal and interior populations found distributed through State and includes sandy beaches; large alkali lake shorelines; and salt pond levees; dunes. Require sandy; gravelly or friable soils for nesting.	P	**Moderate.** Suitable habitat exists within planning area. CNDDB shows presence of species within planning area in 1979.
White-tailed kite; *Elanus leucurus*	SSC	Alameda Point Draft EIR	Open grasslands, meadows, or marshes for foraging close to isolated, dense topped trees for nesting and perching.	HP	**High.** Suitable foraging habitat. There is no CNDDB record within 5 miles of the planning area; however, they have successfully nested in a light industrial neighborhood near Arrowhead Marsh ((M. Lowe, pers. obs.) Alameda Point EIR).

Common Name Acronyms: Distinct Population Segment (DPS); Evolutionarily Significant Unit (ESU)

Status Codes: Federal Endangered [FE]; Federal Threatened [FT]; Federal Species of Concern [FSC]; Federal Candidate [FC], State Endangered [SE]; State Threatened [ST]; State Species of Special Concern [SSC]; California Rare Plant Rank (CRPR) Plants Rare, Threatened, or Endangered in California and Elsewhere and Seriously Threatened in California [CRPR 1B.1]; CRPR Plants Rare, Threatened, or Endangered in California and Elsewhere and Fairly Threatened in California [CRPR 1B.2]; CRPR Plants Rare, Threatened, or Endangered in California and Elsewhere and Not Very Threatened in California [CRPR 1B.3]; CRPR Plants Fairly Rare, Threatened, or Endangered in California, But More Common Elsewhere (CRPR 2.2); and CRPR Plants Not Very Rare, Threatened, or Endangered in California, But More Common Elsewhere [CRPR 2.3].

Habitat Codes: Absent - no habitat present and no further work needed [A]; Habitat Present - habitat is, or may be present, species may be present [HP]; Present - the species is present [P]; and Critical Habitat - planning area footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present [CH].

APPENDIX 4.3B

Table 4.3B-1: Special-Status Plant Species with Potential to occur within the Project Area

Scientific name[1] / Common name	Listing Status[2] Federal	State	RPR*	Source[3]	Flowering Period	Habitat Preferences and Elevation Range[4]	NOTES - Potential to Occur at the Project Area[5]
Amsinckia lunaris Bent-flowered fiddleneck			1B.2	CNPS CNDDB	Mar-June	Coastal bluff scrub, cismontane woodland, and valley and foothill grassland. 10-1,640 feet	**None.** No suitable habitat within the plan area. Currently in Alameda County, the species is only known from the Berkeley Hills 5.5 miles northeast of the plan area on EBMUD land.
Arctostaphylos pallida Pallid manzanita	FT	SE	1B.1	USFWS CNPS CNDDB	Dec-Mar	Siliceous shale, sandy or gravelly. Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub. 607-1,525 feet	**None.** No suitable habitat in the plan area. Below known elevation range. Known from fewer than 10 occurrences in the Contra Costa Hills of the Diablo Range.
Astragalus tener var. tener Alkali milk-vetch			1B.2	CNPS CNDDB	Mar-June	Alkaline. Playas, valley and foothill grassland (adobe clay), and vernal pools. 3-200 feet	**None.** No suitable alkaline habitat in the plan. All recorded Alameda County occurrences are historic (pre-1938).
Atriplex joaquinana San Joaquin spearscale			1B.2	CNPS CNDDB	Apr-Oct	Alkaline. Chenopod scrub, meadows and seeps, playas, and valley and foothill grassland. 5-2,740 feet	**None.** No suitable alkaline habitat in the plan area.

Table 4.3B-1: Special-Status Plant Species with Potential to occur within the Project Area

Scientific name[1] / Common name	Listing Status[2] Federal	State	RPR*	Source[3]	Flowering Period	Habitat Preferences and Elevation Range[4]	NOTES - Potential to Occur at the Project Area[5]
Balsamorhiza macrolepis var. macrolepis Big-scale balsamroot			1B.2	CNPS CNDDB	Mar-June	Sometimes serpentinite. Chaparral, cismontane woodland, and valley and foothill grassland. 295-5,100 feet	**None.** No suitable habitat in the plan area. Below known elevation range. Nearest CNDDB occurrences approximately 4 miles east of the plan area in the Oakland Hills on Fairmont Ridge.
California macrophylla Round-leaved filaree			1B.1	CNPS CNDDB	Mar-May	Clay. Cismontane woodland and valley and foothill grassland. 50-660 feet	**None.** No clay habitat in the plan area. Below known elevation range. Nearest current CNDDB occurrence is approximately 26 miles east of the area in the Los Vaqueros watershed.
Calystegia purpurata ssp. *saxicola* Coastal bluff morning-glory			1B.2	CNPS	Apr-Sept	Coastal bluff scrub, coastal dunes, coastal scrub, and North Coast coniferous forest. 33-342 feet	**None.** No suitable habitat in the plan area.
Centromadia parryi ssp. *congdonii* Congdon's tarplant			1B.1	CNPS CNDDB	May-Nov	Valley and foothill grassland (alkaline). 0-755 feet	**None.** No suitable alkaline habitat in the plan area. Nearest current CNDDB occurrences approximately 12 miles northeast of the plan area in San Ramon.
Chloropyron maritimum ssp. *palustre* Point Reyes bird's-beak			1B.2	CNPS CNDDB	June-Oct	Marshes and swamps (coastal salt). 0-35 feet	**None.** Limited coastal salt marsh habitat in the plan area. All known occurrences in Alameda County are historic (pre-1917). In 1991 the marshes and sloughs in the area were searched for this species and none were found. Presumed extirpated in Alameda County. Nearest current known populations exist on Pt. Reyes approximately 40 miles northwest of the plan area.

Table 4.3B-1: Special-Status Plant Species with Potential to occur within the Project Area

Scientific name[1]	Listing Status[2]			Source[3]	Flowering Period	Habitat Preferences and Elevation Range[4]	NOTES - Potential to Occur at the Project Area[5]
Common name	**Federal**	**State**	**RPR***				
Chorizanthe cuspidata var. *cuspidata* San Francisco Bay spineflower			1B.2	CNPS CNDDB	Apr-Jul	Sandy. Coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub. 10-700 feet	**None.** No suitable habitat in the plan area. Presumed extirpated in Alameda County.
Chorizanthe robusta var. *robusta* Robust spineflower	FE		1B.1	USFWS CNPS CNDDB	Apr-Sept	Sandy or gravelly. Chaparral (maritime), cismontane woodland (openings), coastal dunes, and coastal scrub. 10-980 feet	**None.** No suitable habitat in the plan area. Presumed extirpated in Alameda County. Now known from only six extant occurrences.
Clarkia franciscana Presidio clarkia	FE	SE	1B.1	USFWS CNPS CNDDB	May-July	Mesic, sometimes serpentinite. Broadleafed upland forest, coastal bluff scrub, coastal prairie, and coastal scrub. 80-1,100 feet.	**None.** No suitable serpentine habitat in the plan area. Below known elevation range. Known from fewer than 5 occurrences. Restricted to serpentine grasslands in San Francisco and Alameda Counties. The populations in Alameda County are only from the Oakland Hills.
Dirca occidentalis western leatherwood			1B.2	CNPS CNDDB	Jan-Mar	Mesic. Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland. 80-1,295 feet	**None.** No suitable habitat in the plan area. Below known elevation range.

Table 4.3B-1: Special-Status Plant Species with Potential to occur within the Project Area

Scientific name[1] / Common name	Listing Status[2] Federal	State	RPR*	Source[3]	Flowering Period	Habitat Preferences and Elevation Range[4]	NOTES - Potential to Occur at the Project Area[5]
Eriogonum luteolum var. caninum Tiburon buckwheat			1B.2	CNPS CNDDB	May-Sept	Serpentinite, sandy to gravelly. Chaparral, Cismontane woodland, Coastal prairie, and valley and foothill grassland. 0-2,300 feet	**None.** No suitable serpentine habitat in the plan area.
Fritillaria liliacea Fragrant fritillary			1B.2	CNPS CNDDB	Feb-Apr	Often serpentinite. Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland. Adobe or clay-rich soils in coastal prairie or native bunchgrass grasslands. 10-1,345 feet	**None.** No serpentine soils and no suitable habitat in the plan area. Nearest CNDDB occurrence in Anthony Chabot Regional Park approximately 4 miles southeast of the plan area. This is the only currently known population in Alameda County.
Gilia capitata ssp. chamissonis Blue coast gilia			1B.1	CNPS	Apr-Jul	Coastal dunes and coastal scrub. 7-652 feet	**None.** No suitable habitat in the plan area. Only known to occur in San Francisco, Marin, and Sonoma Counties.
Helianthella castanea Diablo helianthella			1B.2	CNPS CNDDB	Mar-June	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. 200-4,265 feet	**None.** No suitable habitat in the plan area. Below known elevation range. Nearest CNDDB occurrence in Anthony Chabot Regional Park approximately 4.5 miles southeast of the plan area.

Table 4.3B-1: Special-Status Plant Species with Potential to occur within the Project Area

Scientific name[1]	Listing Status[2]			Source[3]	Flowering Period	Habitat Preferences and Elevation Range[4]	NOTES - Potential to Occur at the Project Area[5]
Common name	**Federal**	**State**	**RPR***				
Hoita strobilina Loma Prieta hoita			1B.1	CNPS CNDDB	May-Jul	Usually serpentinite, mesic. Chaparral, cismontane woodland, and riparian woodland. 100-2820 feet	**None.** No suitable habitat in the plan area. Below known elevation range. Presumed extirpated in Alameda County.
Holocarpha macradenia Santa Cruz tarplant	FT	SE	1B.1	USFWS CNPS CNDDB	Jun-Oct	Often clay, sandy. Coastal prairie, coastal scrub, and valley and foothill grassland. 35-720 feet	**None.** No suitable habitat in the plan area. Natural populations are restricted to coastal terrace prairie habitat in Santa Cruz and Monterey Counties. All Alameda County occurrences are historic (pre-1915). Considered extirpated in Alameda County.
Horkelia cuneata var. sericea Kellogg's horkelia			1B.1	CNPS CNDDB	Apr-Sept	Sandy or gravelly, openings. Closed-cone coniferous forest, chaparral (maritime), coastal dunes, and coastal scrub. 30-660 feet	**None.** No suitable habitat in the plan area. Occurrence from the Crocker Hills probably last remaining location in S.F. Bay area.
Lasthenia conjugens Contra Costa goldfields	FE		1B.1	CNPS USFWS	Mar-June	Mesic. Cismontane woodland, playas (alkaline), valley and foothill grassland, and vernal pools. 0-1,540 feet	**None**. No suitable habitat in the plan area. Nearest current CNDDB occurrence is approximately 20 miles southeast at Don Edwards NWR.
Layia carnosa Beach layia	FE	SE	1B.1	USFWS	Mar-Jul	Coastal dunes and coastal scrub (sandy). 0-195 feet	**None.** No suitable habitat in the plan area.

Table 4.3B-1: Special-Status Plant Species with Potential to occur within the Project Area

Scientific name[1] / Common name	Listing Status[2] Federal	State	RPR*	Source[3]	Flowering Period	Habitat Preferences and Elevation Range[4]	NOTES - Potential to Occur at the Project Area[5]
Meconella oregano Oregon meconella			1B.1	CNPS	Mar-Apr	Coastal prairie and coastal scrub. 820-2,035 feet	**None.** No suitable habitat in the plan area. Below known elevation range. Known in CA only from five occurrences.
Micropus amphibolus Mt. Diablo cottonweed			3.2	CNPS	Mar-May	Rocky. Broadleafed upland forest, chaparral, cismontane woodland, and valley and foothill grassland. 150-2,710 feet	**None.** No suitable habitat in the plan area. Below known elevation range. All occurrence records are historic (pre-1961) in Alameda County.
Monolopia gracilens woodland woolythreads			1B.2	CNPS CNDDB	Mar-Jul	Serpentine. Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, North Coast coniferous forest (openings), and valley and foothill grassland. 330-3,940 feet	**None.** No serpentine in the plan area. Below known elevation range. One historic occurrence record for Alameda County.
Plagiobothrys chorisianus var. chorisianus Choris' popcorn-flower			1B.2	CNPS CNDDB	Mar-June	Mesic. Chaparral, coastal prairie, and coastal scrub. 49-522 feet	**None.** No suitable habitat in the plan area. Below known elevation range. Occurrence in Alameda County is historic (1890) and considered extirpated in Alameda County.
Plagiobothrys diffuses San Francisco popcorn-flower		SE	1B.1	CNPS CNDDB	Mar-June	Coastal prairie and valley and foothill grassland. 50-590 feet	**None.** No suitable habitat in the plan area. Below known elevation range. Known from approximately 10 occurrences. Only East Bay and Alameda County occurrence in the Oakland Hills.

Table 4.3B-1: Special-Status Plant Species with Potential to occur within the Project Area

Scientific name[1] / **Common name**	**Listing Status**[2] **Federal**	**State**	**RPR***	**Source**[3]	**Flowering Period**	**Habitat Preferences and Elevation Range**[4]	**NOTES - Potential to Occur at the Project Area**[5]
Polygonum marinense Marin knotweed			3.1	CNPS CNDDB	April-October	Marshes and swamps (coastal salt or brackish). 3-30 feet.	**Low.** Limited suitable coastal salt marsh habitat in the plan area. The CNDDB record for Alameda County is historic (1863). Known from fewer than 20 occurrences.
Sanicula maritima Adobe sanicle		SR	1B.1	CNPS CNDDB	Feb-May	Clay, serpentinite. Chaparral, Coastal prairie, meadows and seeps, and valley and foothill grassland. 100-790 feet	**None.** No serpentine or clay soils in the plan area. Below known elevation range. Known from fewer than twenty occurrences.
Streptanthus albidus ssp. peramoenus Most beautiful jewel-flower			1B.2	CNPS CNDDB	Mar-Oct	Serpentinite. Chaparral, cismontane woodland, and valley and foothill grassland. 310-3,280 feet	**None.** No serpentine soils in the plan area. Below known elevation range.
Stuckenia filiformis ssp. alpina Slender-leaved pondweed			2B.2	CNPS	May-July	Marshes and swamps (assorted shallow freshwater). 985-7,050 feet	**None. F**reshwater marsh at the recently created Edgewood Marsh is below known elevation range. This species is only known from one location in Alameda County, 6.5 miles north in Sibley Regional Park.
Suaeda californica California seablite	FE		1B.1	USFWS CNPS CNDDB	Jul-Oct	Marshes and swamps (coastal salt). 0-50 feet	**None.** All occurrences in Alameda County are historic (pre-1958) and presumed extirpated in Alameda County. Limited suitable coastal salt marsh habitat in the plan area. Now extant only in Morro Bay and near Cayucos Pt., San Luis Obispo County.

Table 4.3B-1: Special-Status Plant Species with Potential to occur within the Project Area

Scientific name[1] / **Common name**	**Listing Status**[2] **Federal**	**State**	**RPR***	**Source**[3]	**Flowering Period**	**Habitat Preferences and Elevation Range**[4]	**NOTES - Potential to Occur at the Project Area**[5]
Trifolium hydrophilum Saline clover	SOC		1B.2	CNPS CNDDB	Apr-June	Marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools. 0-100 feet	**Low.** Limited salt marsh habitat in the plan area and no alkaline habitat. This species is only known from 2 locations in Alameda County, Newark and Livermore Valley. Nearest current CNPS occurrences approximately 18 miles southeast of the plan area in Dublin, Livermore Valley.

1. Jepson eFlora (Baldwin et al. 2012a); CNPS Online Inventory (CNPS 2013); CalFlora (CalFlora 2013) and other sources.
2. Conservation status definitions are as follows:

U.S. Fish and Wildlife Service designations:
FE: Endangered: Any species in danger of extinction throughout all or a significant portion of its range.
FT: Threatened: Any species likely to become endangered within the foreseeable future.

California Department of Fish and Wildlife designations:
SE: Endangered: Any species at risk of becoming extinct in all or a significant portion of its range.
SR: Rare: Any species not currently threatened with extinction, but in such small numbers throughout its range that it may become endangered if its present environment worsen

California Rare Plant Ranks:
1A: Presumed extirpated in California and either rare or extinct elsewhere.
1B: Plants rare, threatened or endangered in California and elsewhere.
1B.1: Plants rare, threatened or endangered in California and elsewhere; seriously threatened in California.
1B.2: Plants rare, threatened or endangered in California and elsewhere; moderately threatened in California.
2B.2: Plants rare, threatened, or endangered in California, but more common elsewhere.
2B.3: Plants rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California.
3:1: Plants which more information is needed; seriously threatened in California.
3:2: Plants which more information is needed; moderately threatened in California.

*As of September 2010 CDFW changed the name of "CNPS List" to "California Rare Plant Rank" (or Rare Plant Rank, RPR) (CDFG 2010).

3. Source Information from CNDDB (CDFW 2013), USFWS (USFWS 2013a), and CNPS *Online Inventory* (CNPS 2013).

4. Habitat and elevation range information from CNDDB (CDFW 2013) and CNPS *Online Inventory* (CNPS 2013).

5. Information on known locations in the vicinity of the project limits was compiled from CNDDB (CDFW 2013), CNPS *Online Inventory* (CNPS 2013), CalFlora (CalFlora 2013), Lake (2010), and USFWS (2013b, c, d). **Low:** Habitat within the project limits and/or project vicinity satisfies very few of the species' requirements and/or range of the species overlaps with the vicinity of the project limits, but not the project limits itself. The species' presence within the project limits is unlikely.

APPENDIX 4.7

List of Identified Environmental Cases

Area A2

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
H90 H103 H118 H119	T0600100859	Malibu Grand Prix Malibu Fun Center Castle	8000 S Coliseum Way 8010 S Coliseum Way	Southeast Corner	LUST Id: 01-0934	HIST CORTESE LUST SLIC Alameda County CS CA FID UST SWEEPS UST HIST UST Notify 65	**GW:** TPH-G & Benzene **Soil:** TPH-G, BTEX, PCBs, phenanthrene, lead, naphthalene	Open	Site investigation activities have identified two environmental concerns for the site: Fuel leaks from two former underground storage tanks (USTs) located in the southern portion of the site. Prior to 1989, the Malibu Grand Prix facility maintained two 6,000-gallon underground storage tanks (USTs) containing marine mix gasoline. The two USTs were removed on March 29, 1989 and February 1, 1990, respectively. Free-phase fuel was observed floating on water in the tank excavations during both tank removals. During the tank removal on March 29, 1989, soil samples collected from the tank excavation contained benzene at concentrations ranging from 7.3 to 33 milligrams per kilogram (mg/kg) and total petroleum hydrocarbons as gasoline (TPHg) at concentrations ranging from 50 to 150 mg/kg. During the tank removal on February 1, 1990, soil samples collected from the tank excavation contained benzene at concentrations ranging from 0.07 to 0.31 mg/kg and TPHg at concentrations ranging from 26 to 79 mg/kg. Subsequent site investigations from 1990 to 1996 that included soil and groundwater sampling detected fuel hydrocarbons and oxygenates in soil and groundwater over a wide area beneath the site. Benzene and TPHg were detected in groundwater samples collected from monitoring wells at the site at concentrations up to 2,700 and 20,000 micrograms per liter (a g/L), respectively. Imported fill material was observed that contained a tar-like substance. The fill material is present throughout the site and appears to have been placed between 1955 and 1975. Known chemicals of concern in the imported fill include polychlorinated biphenyls, phenanthrene, napthalene, pyrene, and lead. ACEH has requested but not recieved additional information to evaluate these environmental concerns.
L135 L136 L135 L137	T0600100990	Vacant Lot Diversified Investments Quality Tune-Up #29 625 - 659 Hegenberger Rd Oakland International Trade Center	625 Hegenberger Rd 625 - 659 Hegenberger Rd	Eastern Portion	LUST Id: 01-1073	HIST CORTESE LUST Alameda County CS CA FID UST SWEEPS UST HAZNET US Brownfields FINDS	**GW:** TPH-G, BTEX, MTBE **Soil:** TPH-G, TPH-D, TPH-MO	Closed	HAZNET: Oil/water separation sludge; Aqueous solution with total organic residues less than 10 percent According to the Envirostor website, the property contained an active gasoline service station between the mid 1960s and the mid 1970s. In 1988 and 1990 a site investigation was conducted which indicated the presence of TPH-G, TPH-D, and TPH-Mo in Site soils. In 1993 the fuel system and tanks were removed and site investigation, groundwater monitoring, and remedial action began. In 1996 soil was excavated and treated onsite and from 2000 to 2002 in situ bio-remediation conducted. Benzene, TPH-G, and MTBE concentrations in site groundwater ranged from ND<0.3 to 16,000 µg/L; ND<50 to 72,000 µg/L; and ND<5.0 to 2,100 µg/L, respectively. In 2009 the Site was granted closure; however a Land Use Limitation appears to be in place at the property. Depth to groundwater beneath the site ranges from 4 to 8 fbg. Groundwater flow direction is listed as ranging from the southwest to the northwest.
J109 J120 J121 J122 J123 J124 J125	NA	675 Hegeneberger Rd 675 Hegenberger Rd, Hegenberger Loop Intersection Environmental Innovations Corp Oakland Airport Connector Risk Level 1 Area	675 Hegenberger Rd	Northern Portion	NA	ERNS CHMIRS FTTS HIST FTTS FINDS NPDES	NA	NA	**ERNS DATABASE DATA** Spill into creek of shore pac polymer Paint thinner dumped into creek

Area A2

OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
J141 J142	T0600102239	Moose Lodge #324	690 Hegenberger Rd	Approximately 260 feet west of Parcel A2	LUST Id: 01-2430	HIST CORTESE LUST Alameda County CS HAZNET	**GW:** Petroleum Hydrocarbons **Soil:** Petroleum Hydrocarbons	Open	One 10,000-gallon gasoline UST was removed on August 21, 1995. No holes or cracks were observed in the tank. However, the sidewalls of the tank pit were reported to have staining and a slight odor. 60 cubic yards of soil was excavated. Petroleum hydrocarbons were detected in soil and groundwater and a subsequent investigation was performed to determine if soil or groundwater was impacted beneath the dispenser island. HAZNET: Unspecified oil-containing waste
H144 H145 H146 H147 H148 H149 H150 H151 H152	T0600100104	Khalil N Rooshan Hegenberger Arco Arco Products Company BP West Coast Products LLC 04494 Arco # 4494	566 Hegenberger Rd	Approximately 350 feet west of Parcel A2	LUST Id: 01-0112	HIST CORTESE LUST SWEEPS UST Alameda County CS HIST UST HAZNET UST US HIST Auto Stat CHMIRS	**GW:** TPH-G, TPH-D, TPH-MO, BTEX **Soil:** TPH-G, TPH-D, TPH-MO, BTEX	Closed	The Arco #4494 site is an active gasoline station. In 1988 one UST was removed from the site. Soil samples collected from the tank cavity contained concentrations of TPH-G (11 mg/kg), TPH-D (370 mg/kg), and TPH-MO (4,800 mg/kg). Subsequent site investigations detected elevated concentrations of TPH-G, TPH-D, TPH-MO, and BTEX over a wide area of the site. Groundwater monitoring was conducted at the site from 1989 to 1996 and then again from 2000 to 2007. Concentrations of TPH-G ranged from ND<50 to 78,000 µg/L. Concentrations of benzene ranged from ND<0.5 to 2,900 µg/L. Concentrations of MTBE ranged from 1.8 to 18,800 µg/L. In 2009, the Alameda County Department of Health Services granted closure to the site. According to EnviroStor, residual pollution remaining in soil beneath the Site included concentrations of TPH-G, TPH-D, and Benzene of up to 33 mg/kg, 36 mg/kg, and 1.3 mg/kg respectively. Maximum concentrations of up to 1.8 µg/L of MTBE remain in groundwater.
L154 L155 L156	NA	Public Storage	680 Hegenberger Rd	Approximately 170 feet west of Parcel A2	NA	HAZNET US HIST Cleaners	Potential PCE	NA	HAZNET:Unspecified oil-containing waste
L163 L164 L165	NA	Trailmoile Inc Zayaf Enterprises Inc DBA Mida's Shop	640 Hegenberger Rd	Approximately 150 feet west of Parcel A2	NA	RCRA SQG FINDS HAZNET US HIST Auto Stat	Potential Petroleum Hydrocarbons	NA	HAZNET: Aqueous solution with total organic residues less than 10 percent
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									
J126 J127 J128 J129 J130	NA	Homebase #35 Texas Instruments Inc Tesoro Gasoline Digas Oakland NC Trucking	633 Hegenberger Rd	Eastern Portion of Parcel A2	NA	HAZNET FINDS RCRA SQG	NA	NA	HAZNET: Off-specification, aged or surplus organics

Area A7

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
I88 I94 I95 I101 I102	SLT2O156162 01340108 80001612	Aero Quality Plating DHS Superfund Allied Signal Inc and Purex Industries Aero Quality Plating Honeywell International & Purex Industries Inc	710 73rd Ave	Western Portion	SLT2O156162	RCRA SQG HIST CORTESE SLIC LIENS VCP Envirostor HWP RCRA-TSDF CERCLIS CORRACTS 2020 COR ACTION FINDS RCRA SQG HAZNET US Brownfields CA BOND EXP. PLAN	**GW:** PCE, TCE, and cis-1,2-DCE **Soil:** PCE, TCE, and cis-1,2-DCE	Open	DTSC conducted environmental investigations and removed aboveground tanks and shallow soil between 1987 and 1989. Subsequent groundwater monitoring conducted or overseen by DTSC indicated that shallow groundwater had been impacted by VOCs. A removal action work plan (RAW) for the site was prepared under DTSC oversight in 2008 . In 2009, in accordance with the RAW, shallow groundwater remediation began with the injection of a substrate mixture into the subsurface through temporary borings. In accordance with the O&M Plan, the effectiveness of the groundwater remedy is being evaluated by semiannual groundwater monitoring. The hydraulic gradient in shallow groundwater is relatively flat and, based on historical data, has trended to the south/southwest since at least 1994. The hydraulic gradient in the deeper aquifer has trended primarily to the west toward San Leandro Bay.
A3 A4 I100 I105	1400015	Union Pacific Oakland Coliseum Site City of Oakland Otto's Foreign Auto Salvage	700 73rd Ave	Western Portion	1400015	HIST CAL SITES RESPONSE CORTESE Envirostor FINDS HAZNET CERC-NFRAP	**GW:** PCBs, TPH-G, TPH-D, PCBs, VOCs **Soil:** TPH-G, TPH-D, PCBs, PCE, Addtl. VOCs	Open	The land was acquired by Central Pacific Railroad in March 1895. Melrose Station occupied the southwest comer of the Site. This depot building was retired in 1933 and removed. From September 1959 to March 1992, the Site was operated as an auto salvage yard (Otto's Foreign Auto Salvage) under two successive tenants. A small building was located onsite (along the eastern boundary in the southern portion of the Site) during operation as Otto's Foreign Auto Salvage. The Site has been unoccupied since 1992. Site Investigation activities were conducted between 1998 and 2004, and concluded that the site soils and shallow groundwater beneath the Site had been impacted with PCBs, VOCs, and petroleum hydrocarbons. Maximum groundwater concentrations of benzene, Aroclor 1254, TPH-D, and TPH-G have been detected at 49 µg/L, 140 µg/L, 390,000 µg/L, and 14,000 µg/L, respectively. In 2006 a soil removal action was initiated. Due to the presence of PCE in the soil beyond the excavation limits and concentrations in the excavated soil above the anticipated waste disposal criteria, the excavated soils were backfilled into the excavation. The remaining soil was graded over the Site. Currently, a Remedial Action Work Plan is being prepared for the site. The depth to groundwater beneath the Site ranges from six to nine fbg. The groundwater flow direction of the upper water-bearing zone is toward the south.
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
G173 G174 G175 G176 G177	T0600102118	Omega Termite 12062 Alameda County Environmental Health Omega Termite Control Inc Allen Kanady	807 75th Ave	Approximately 550 feet southeast of Parcel A7	LUST Id: 01-2302	HAZNET FINDS LUST HIST CORTESE Alameda County CS RCRA SQG	**GW:** TPH-G, BTEX, MTBE **Soil:** TPH-G, BTEX, MTBE	Closed	In 1996, three gasoline USTs were removed from the subject property. Analysis of soil and groundwater samples collected during the tank removal activities revealed that a release had occurred from the tank system. TPH-G, benzene, and MTBE were reported in the soil samples at concentrations up to 4,300 mg/kg, 13 mg/kg, and 25 mg/kg, respectively. TPH-G, Benzene, and MTBE were reported in the tank cavity water sample at concentrations up to 48,000 µg/L, 4,100 µg/L, and ND<130 µg/L, respectively. In 2000 an additional excavation action was initiated. During the excavation activities, a 500-gallon waste oil UST was discovered at the eastern end of the excavation. A total of 7,400 gallons of hydrocarbon-impacted groundwater were pumped from the excavation, treated on-site, and discharged to the sanitary sewer system under an East Bay Municipal Utility District permit. Between 2007 and 2009 an ozone micro-sparge system was operated on site. In 2010 the Alameda County Environmental Health (ACEH) issued a no further action letter however a Land Use Limitation appears to be in place at the property. Historical depth to groundwater beneath the site ranges from 3.5 to 10 fbg. Groundwater flow direction is generally to the northwest.
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									
I89 I104	NA	Union Pacific Railroad	699 73rd Ave	Eastern Portion of Parce A7	NA	HAZNET	NA	NA	HAZNET: Unspecified oil-containing waste; Polychlorinated biphenyls and material containing PCBs
E87 E93	NA	City of Oakland	728 73rd Ave	Southeast Portion of Parce A7	NA	HAZNET	NA	NA	HAZNET: Other inorganic solid waste; Asbestos containing waste

Area A9

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
A1 A2 A5 A7 A91 A92 A96 A97 A98 A99 G84	T0600192699	Oakland Coliseum Oakland Coliseum Joint Venture Oakland/Alameda County Colliseum Complex Verizon Wireless- 815053 Tutor Saliba Oakland Athletics Baseball Club	7000 Coliseum Way	Southern Portion	LUST Id: 01-2508	LUST FINDS EMI HAZNET CHMIRS RCRA SQG	**GW:** TPH-G, Benzene, MTBE **Soil:** TPH-G, BTEX, MTBE	Closed	In 1999 a UST was removed from and contamination was observed in the overburden. Soil concentrations from sidewall samples contained maximum concentrations of TPH-G of 240 mg/kg, benzene of 0.79 mg/kg, and MTBE of 5.8 mg/kg. Water samples collected during the tank removal contained maximum concentrations of TPH-G of 58,000 µg/L, benzene of 1,000 µg/L, and MTBE of 65,000 µg/L. In 2000 a site investigation was conducted. Groundwater samples from the investigation contained maximum concentrations of TPH-G of 94 µg/L and MTBE of 210 µg/L. The site was granted closure in 2000. Based on site investigation activities the groundwater flow direction was determined to be to the northeast. HAZNET: Polychlorinated biphenyls and material containing PCBs; asbestos containing waste; Unspecified oil-containing waste Diesel release from big rig.
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									

Area A23

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
C43 C45 C59 C77 C78 C81	T0600100878	796 66th Ave Cruise America Inc. Cruise America Inc/ McGuire Hester	796 66th Ave	Northeast Portion	T0600100878	US BROWNFIELDS FINDS HAZNET CA FIDS UST HIST CORTESE LUST Alameda County CS SWEEPS UST UST	**GW:** TPH-G, TPH-D, MTBE **Soil:** TPH-G, TPH-D, MTBE	Closed	HAZNET: Waste oil and mixed oil From 1957 to 1988 the site was occupied by McGuire Hester, a construction company. Prior to 1956 the site was reportedly a slaughter and meat packing facility. In 1987, three USTs were removed from three separate tank pits. TPH-G and TPH-D was detected in soil samples collected from the tank cavities at concentrations up to 758 and 492 mg/kg, respectively. According to the EnviroStor website, groundwater observed in the excavations had visible a hydrocarbon sheen. A waste oil tank remains on site. Between 1987 and 2001 several site investigations and remedial actions were conducted on site; including the additional excavation of contaminated soils in the vicinity of one of the former USTs. During this time period, concentrations of TPH-D, TPH-G, and TPH-MO were detected at concentrations up to 1,750, 270, and 32,000 mg/kg, respectively. Groundwater samples collected contained TPH-MO, TPH-D, and MTBE at concentrations up to 60,000, 2,300, and 13,000 µg/L, respectively. Furthermore, during excavation activities buried timbers with creosote were uncovered. In 2001 an additional UST was removed from the site. Soil samples collected from the tank cavity dispenser area contained TPH-G concentrations up to 280 mg/kg. Benzene and MTBE were detected at concentrations up 53 and 13 mg/kg, respectively. TPH-G and MTBE were detected in groundwater collected from the tank pit excavation at 44,000 and 42,000 µg/L, respectively. In 2004 a twelve point ozone sparging system was installed on site. The system was operated through 2006. In 2008 additional soil borings were advanced on site to determine the effectiveness of the system. Groundwater and soil sampling results indicated significant TPH-G, MTBE, and TBA was still present. Due to the presence of contaminants, additional excavation was performed. During excavation activities a debris layer consisting of black stained soil, trash, wood, and cardboard was observed at approximately 6.5 fbg. According to the EnviroStor website, the debris and stained soil appears to have been placed with the fill material that was used to fill in low lying wetlands at the site prior to 1956. In 2009 the Alameda County Environmental Health (ACEH) issued a no further action letter however a Land Use Limitation appears to be in place at the property. Based on review of available documents on the EnviroStor website, depth to groundwater ranges from 3.5 to 8 feet below grade. Historical data indicates the groundwater flow direction trends to the southeast.
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
C131 C132 C133 C134	T0600100058	Allied Crane Inc. Lift Equipment Rebuilders Allied Crane Maintenance	727 66th Ave	Approximately 110 feet north/northwest of Parcel A23	LUST Id: 01-1073	CERC-NFRAP HAZNET HIST US Auto Stat HIST CORTESE LUST Alameda County CS CA FID UST SWEEPS UST	**GW:** Petroleum Hydrocarbons **Soil:** Petroleum Hydrocarbons	Open	According to the EnviroStor website, a UST was removed from the site. However, a tank removal report or analytical data for site soils or groundwater is not yet available. The Alameda County Environmental Health (ACEH) transferred oversight of the project to the San Francisco Regional Water Quality Control Board in 2012. Historical depth to groundwater and groundwater flow direction for the site is unknown at this time.
K115 K116	T0600101055	Chris Hickey Peck & Hills Company	701 66th Ave	Approximately 110 feet north/northwest of Parcel A23	LUST Id: 01-1145	HAZNET LUST HIST CORTESE	**GW:** Petroleum Hydrocarbons **Soil:** Petroleum Hydrocarbons	Closed	HAZNET: Asbestos containing waste No Clean Up actions listed
K110 K111 K112	NA	Baldwin Street Garage Sherwin Williams Store #8143 Art Sign Company	555 66th Ave	Approximately 110 feet north/northwest of Parcel A23	NA	US HIST Auto Stat HAZNET EMI	Potential Petroleum Hydrocarbons	NA	HAZNET: Unspecified solvent mixture
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									
C46	NA	East Bay Municipal	559 66th Ave	Approximately 110 feet north/northwest of Parcel A23	NA	HAZNET	NA	NA	HAZNET: Contaminated soil from site clean-up
K114	NA	Precision Diesel Inc	701 66th Ave	Approximately 110 feet north/northwest of Parcel A23	NA	HAZNET	NA	NA	HAZNET: Aqueous solution with total organic residues less than 10 percent

Area A26

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
H85 H86	T0600101692	GMC Truck Center	8099 S Coliseum Way	Center Portion	LUST Id: 01-1826	RCRA SQG FINDS HIST UST LUST Alameda County CS HIST CORTESE CA FID UST SWEEPS UST EMI	**GW:** TPH-G, TPH-D, TPH-MO, TPH-as mineral spirits, MTBE **Soil:** TPH-G, TPH-D, TPH-MO, Benzene	Open	In 1993 four USTs were removed from the site. During UST removal activities iimpacted soils surrounding the USTs were excavated and disposed of off-site. Several site investigations were conducted between 1993 and 1997. Maximum soil concentrations of TPH-D, TPH-G, TPH-MO, and benzene were detected at 7,000, 8,400, 3,900, and 310,000 mg/kg, respectively. Maximum groundwater concentrations of TPH-G, TPH-D, TPH-MO, TPH as mineral spirits, and MTBE were detected at 780, 110,000, 170,000, 520,000, and 21 µg/L, respectively. In 2011, the Alameda County Environmental Health (ACEH) issued a letter stating that "your case is currently not in compliance with Alameda County Environmental Health's (ACEH) April 18, 2000 Final Notice of Violation" and that "the site appears uncharacterized, and reports documenting groundwater sampling have not been received." Recent groundwater sampling data, conducted between 2010 and 2011, indicates the site is still impacted with TPH-D (maximum concentration 7,500 µg/L), TPH-MO (maximum concentration 3,600 µg/L), and MTBE (maximum concentration 18 µg/L). Based on review of available documents, depth to groundwater ranges from 4 to 8.5 feet below grade. Historical data indicates the groundwater flow direction trends to the north.
H106 H107	T0600101696	CALTRANS Oakland Maintenance Station CALTRANS Materials Lab Dist 4	555 Hegenberger Rd	Eastern Portion	LUST Id: 01-1830	HIST CORTESE LUST Alameda County CS RCRA SQG FINDS	**GW:** TPH-G, TPH-D, TPH-MO, benzene **Soil:** TPH-G, TPH-D, TPH-MO, benzene	Open	In 1994, the four USTs and associated product piping were excavated and removed from the Site. Limited over-excavation was conducted of the tank pits due to obvious signs of contamination. Soil samples collected from the tank excavation were reported to have concentrations of TPH-G as high as 480 mg/kg, TPH-D at 380 mg/kg, O&G at 2,200 mg/kg, and benzene at 1.8 mg/kg. In 1995 five monitoring wells were installed on site. Groundwater monitoring was conducted between 1995 and 1996 and a single event in 1998. Annual groundwater monitoring resumed on Site between March 2001 and May 2005. No groundwater sampling events were conducted between 2005 and September 2011. Groundwater sampling has resumed and is currently conducted on a semi-annual basis. Maximum concentrations of TPH-G, TPH-D, benzene, and MTBE from the most recent sampling event (3/21/13) were detected at 4,900, 1,000, 930, and ND<0.26 µg/L. The depth to groundwater beneath the Site ranges from 3 to 6.5 fbg. The groundwater flow direction is generally toward the southwest.
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
H160 H161 H162	T0600102123	Hegenberger Shell Rich Jameson Shell Service Station	540 Hegenberger Rd	Approximately 150 feet east of Parcel A26.	LUST Id: 01-2308	HIST CORTESE LUST CA FID UST SWEEPS UST HIST UST Alameda County CS RCRA SQG FINDS HAZNET	**GW:** TPH-G, TPH-D, benzene, MTBE **Soil:** TPH-G, TPH-D, benzene, MTBE	Open	In 1996, one soil sample and three soil vapor samples were collected from the site. The soil sample contained 3,400 mg/kg TPH-G, 17 mg/kg benzene, and 720 mg/kg MTBE. The soil vapor samples contained elevated concentrations of TPH-G, benzene, and MTBE as well. Between 1998 and 2012 several subsurface investigations were conducted. Soil samples collected as part of those investigations contained maximum concentrations of TPH-D, TPH-G, benzene, and MTBE of 108, 3,400, 39, and 240 mg/kg, respectively. Maximum grab groundwater concentrations of 5,780 µg/L of TPH-D, 200,000 µg/L TPH-G, 11,000 µg/L of benzene, and 1,3000,000 µg/L of MTBE were detected. Between 1999 and 2003 groundwater extraction was conducted on site. In 2003 a groundwater extraction system was installed on site and was operated until 2005. Quarterly groundwater monitoring was conducted at the site between 1998 and 2009. The depth to groundwater beneath the Site ranges from 4 to 10 fbg. The groundwater flow direction is generally toward the north or east.
L188 L189	NA	South Coliseum and Hegenberger Rd	South Coliseum and Hegenberger Rd	Approximately 80 feet south	NA	ERNS	Petroleum Hydrocarbons	NA	
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									

Area AA1

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
E26 E27	NA	711 71st Ave City of Oakland Environmental Services	711 71st Ave	Parcel AA1	NA	US Brownfields FINDS HAZNET	**Soil:** TPH-D, TPH-MO, Metals **GW:** cis-1,2-DCE	Open	Based on a site assessment performed in 2011, shallow soil at the site has been affected by TPH-d, TPH-mo, and metals. Grab groundwater samples collected at the Site contained cis-1,2-dichloroethene at a concentration of 11 µg/L.
E38 E39 E40 E41 E42	1390004	Western Colloid Western Colloid Prod Inc Western Colloid Products Western Colloid NC Inc WCNC Corp DBA Werstern Colloid Products	700 71st Ave	Parcel AA1	NA	CERC-NFRAP NPDES EMI Envirostor WDS FINDS HAZNET	**Soil:** carbazole and benzo(a)anthracene **GW:** unknown		Since 1980, Western Colloid has manufactured roofing and paving materials at this site. Prior to that, Challenge Cook manufactured concrete trucks onsite. Both the Oakland Office of Emergency Services and the Alameda County Department of Environmental Health, Hazardous Materials Division conduct site inspections because of the hazardous substances and materials which are stored on site. Historic inspections have note that the following chemicals have been stored on site in 55-gallon steel drums: texanol ester alcohol, ethylene glycol, 1,1,1-trichloroethane, methyl ethyl ketone, xylene, waste oil, and troysanpolyphase AF1. A Preliminary Assessment was completed in January 2001 for the Site under an EPA Preliminary Assessment / Site Investigation (PASI) grant. The report noted that raw hazardous materials were stored on-site in 55-gallon drums. Environmental contaminants detected above EPA industrial soil Preliminary Remediation Goals (PRGs) at the Western Colloid site include carbazole up to 240 mg/kg, and benzo(a) anthracene as high as 15 mg/kg. The assessment recommended No Further Action under CERCLA but that DTSC's Hazardous Waste Management Program continue oversight as a generator.
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									
E13	NA	East Bay MUD	7127 San Leandro St	Parcel AA1	NA	HAZNET	NA	NA	HAZNET: Other inorganic solid waste

Area AA2

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
D17 D33 D34 D58 D69 D80 D82	SL0600110030	Bayview Environmental Services Inc Romic Environmental Technologies Corp SA Russo Window Framing Inc	6925 San Leandro St	Parcel AA2	01S0588	HAZNET SLIC HWT PADS FINDS	**Soil:** Heavy range hydrocarbons **GW:** Unknown	Closed	In 2000 trenching activities at the site revealed the presence of various types of debris buried within the fill material covering the site. The debris included bricks and mortar, metal slag deposits, vehicle tires, and several water heater tanks. Site soils were excavated that contained greater than 5,000 mg/kg total petroleum hydrocarbons as motor oil (TPH-mo). Areas that could not be excavated without compromising existing infrastructure at the site were not required to be excavated. A Soil Management Plan is in place which contains protocols for managing potential future contact with and/or exposure to subsurface soils in areas where residual or unknown contaminants may still exist at the site. The site was grated closure in 2003.
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
D117	NA	7001 Snell Street	7001 Snell Street	Approximately 140 feet southeast of AA2	NA	US Brownfields FINDS	Soil: TPH-D, TPH-MO, metals GW: 1,2-DCE, TPH-MO, MTBE	Open	Site Investigation conducted in 2009 found TPH-D, TPH-Mo, and metals in site soils. Grab groundwater samples contained 1,2-DCE, TPH-MO, and MTBE.
D21 D29 D30 D31 D61 D65 D72	1990030	Standard Iron and Metal Company Standard Iron Metal Coliseum Gardens	801 69th Ave	Approximately 250 feet northeast of Parcel AA2	NA	CHMIRS VCP Envirostor CERCLIS FINDS SPILLS 90 HAZNET	Site 1 - **Soil:** arsenic, mercury, TPH-D, TPH-MO Site 2 - **Soil:** TPH-D, TPH-MO, metals, PCBs, PAHs **GW:** TPH-D, TPH-MO Site 3 - **Soil:** metals, PCBs, TPH-D, TPH-MO	CERTIFIED AS OF 6/27/2007	The Site consists of four properties (Sites 1-3 and the New Park) located near the Oakland Coliseum BART Station in Oakland. Site 1(811 69th Avenue)was a former acetylene gas plant and then was converted into a park/ballfield by the City of Oakland. Site 2 (801 69th Avenue) was formerly operated by Standard Iron and Metal. Site 3 (920-954 66th Avenue) was previously operated by Capitol Recycling. The site was impacted with TPH-D, TPH-MO, PCBs, PAHs, metals. In 2006 and 2007 several removal actions were completed.
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									

Area AA3

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
B56 B74	NA	6815 San Leandro St Laidlaw	6815 San Leandro St	Parcel AA3	NA	US HIST Auto Stat HAZNET	Potential Petroleum Hydrocarbon	NA	
D11 D19 D75	NA	6825 San Leandro St East Bay Truck and Auto Repair	6825 San Leandro St	Parcel AA3	NA	US HIST Auto Stat HAZNET NPDES	Potential Petroleum Hydrocarbon	NA	
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									

Area AA4

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
B9 B32 B36	NA	DJ Moto LLC DBA Susuki of Oakland Firestone Store	6601 San Leandro St	Parcel AA4	NA	HAZNET HIST UST CA FID UST SWEEPS UST	Potential Petroleum Hydrocarbon	NA	HAZNET: Latex waste 1 UST: Regular
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
C22 B18 B47 B51 B55 B71 B73 B166	T0600101488	Union Oil SS#3135 Tosco Corporation #30473 Conoco Phillips #253135	845 66th Ave 6535 San Leandro St (across street)	Approximately 70 feet to the northwest of Parcel AA4	LUST Id: 01-1613	CA FID UST HIST CORTESE LUST Alameda County CS SWEEPS UST HAZNET UST Notify 65 US HIST Auto Stat HIST UST	**Soil:** TPH-G, TPH-D, MTBE, Bezene **GW:** TPH-G, TPH-D, MTBE, benzene	Open	Environmental investigation and assessment activities began in 1988. There are currently eleven monitoring wells installed at the site. Remedial activities conducted at the site include excavation of approximately 2,100 cubic yards of soil during tank removal and station upgrade activities, removal of approximately 25,000 gallons of groundwater during UST replacement and removal, an 8-hour dual-phase pilot test, and installing oxygen releasing compound on site. Groundwater samples were collected in December 2012 contained maximum TPH-D concentration of 480 µg/L, TPH-G concentration of 970 µg/L, and MTBE concentration of 8.9 µg/L. Groundwater flow direction is generally to the south/southeast. Under review for closure.
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									
B8	NA	LFR Inc	6617 San Leandro St	Parcel AA4	NA	HAZNET	NA	NA	HAZNET: Other inorganic solid waste
B12	NA	Rondeaux Bay Construction	6603 San Leandro St	Parcel AA4	NA	HAZNET	NA	NA	HAZNET: Oil/water separation sludge
B14 B15 B67	NA	Brand of California Brand of Calif National Surface Cleaning Inc	6607 San Leandro St	Parcel AA4	NA	FTTS HIST FTTS RCRA NonGen / NLR FINDS HAZNET	NA	NA	HAZNET: Asbestos containing waste; Other inorganic solid waste
B52	NA	Marks Redwood LLC	6613 San Leandro St	Parcel AA4	NA	HAZNET	NA	NA	HAZNET: Polychlorinated biphenyls and material containing PCBs; other inorganic solid waste
B53	NA	Mechants Metal Refinishing	852 66th Ave	Parcel AA4	NA	HAZNET	NA	NA	HAZNET: Other organic solids
B108 B229 B230 B231 B232	NA	Fruitvale Business Center 66TH Avenue Demolition and Leveling RMT Landscape Contractor City of Oakland Dept of Environmental Services	915 66th Ave	Approximately 250 feeet northeast	NA	CA FID UST SWEEPS UST HAZNET NPDES WMUDS/SWAT HIST UST WDS	NA	NA	HAZNET: Waste oil and mixed oil
B170 B171	NA	Capitol Waste Recycling	928 66th Ave	Approximately 250 feeet northeast	NA	WDS SWF/LF	NA	NA	
B220	NA	Fruitvale Business Center	905 66th Ave	Approximately 250 feeet northeast	NA	HAZNET	NA	NA	

Area AA5

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
NA	T10000000969	Lions Creek Crossing, Phase IV	800 69th Ave	Approximately 120 feet northwest of Parcel AA5.	NA	NA	**Soil**: TPH-G, TPH-D, TPH-MO, Benzene, metals **GW:** TPH-D and Benzene	Closed	Site cleanup activities involved the excavation and removal of approximately 4,960 CY of soil and approximately 398,600 gallons of groundwater from multiple areas at the Site. Post removal concentrations of TPH-G ranged from ND to 39 mg/kg; TPHd ranged from 1.7 mg/kg to 81 mg/kg; TPHMO ranged from ND to 270 mg/kg; Benzene ranged from ND to 0.017 mg/kg; Lead ranged from <5.1 mg/kg to 76 mg/kg;. and Arsenic ranged from 1.8 mg/kg to 9.9 mg/kg. Post remediation maximum concentrations in groundwater of TPH-D were 190µg/L and bezene 0.97 µg/L. The site was granted closure in 2010.
D168 D169	T0600101284	Silva Associates Roofing Company	814 69th Ave	Approximately 120 feet northwest of Parcel AA5.	LUST Id: 01-1390	HIST UST HIST CORTESE LUST Alameda County CS CA FID UST SWEEPS UST	**Soil**: TPH-G, BTEX, MTBE **GW:** TPH-G, BTEX, MTBE	Closed	In 1990 one UST was removed from the site. Maximum concentrations TPH-G of 180 mg/kg and benzene of 0.9 mg/kg were detected in soils from the tank cavity. Additional excavation was performed later that year. In 1992 and 1997 two separate site investigations were conducted. Onegrab groundwater sample collected from the 1997 investigation contained concentrations of MTBE at 12µg/L. Site closure was granted in 1998.
D21 D29 D30 D31 D61 D65 D72	1990030	Standard Iron and Metal Company Standard Iron Metal Coliseum Gardens	801 69th Ave	Approximately 200 feet northwest of Parcel AA5.	NA	CHMIRS VCP Envirostor CERCLIS FINDS SPILLS 90 HAZNET	Site 1 - **Soil:** arsenic, mercury, TPH-D, TPH-MO Site 2 - **Soil:** TPH-D, TPH-MO, metals, PCBs, PAHs **GW:** TPH-D, TPH-MO Site 3 - **Soil:** metals, PCBs, TPH-D, TPH-MO	CERTIFIED AS OF 6/27/2007	The Site consists of four properties (Sites 1-3 and the New Park) located near the Oakland Coliseum BART Station in Oakland. Site 1(811 69th Avenue)was a former acetylene gas plant and then was converted into a park/ballfield by the City of Oakland. Site 2 (801 69th Avenue) was formerly operated by Standard Iron and Metal. Site 3 (920-954 66th Avenue) was previously operated by Capitol Recycling. The site was impacted with TPH-D, TPH-MO, PCBs, PAHs, metals. In 2006 and 2007 several removal actions were completed.
D222 D223	SLT2O155161	Ace Reyclers Enterprises Ace Recycling Inc	830 69th Ave	Approximately 200 feet northwest of Parcel AA5.	NA	HIST CORTESE SLIC	**Soil**: TPH-G, TPH-D, TPH-MO, Benzene, metals **GW:** TPH-D and Benzene	Closed	Part of Lions Creek Crossing, Phase IV project.
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									

Area AA6

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
F54 F70 F83	1750032	L&M Plating Inc A/C Body Shop	902 71st Ave	Approximately 50 feet north of Parcel AA6	NA	HAZNET Envirostor CERC-NFRAP	HAZNET Envirostor CERC-NFRAP	Inactive	Site screening indicates that further information is needed to determine whether a release has occurred. HAZNET: Metal sludge (Alkaline solution (pH >= 12.5) with metals)
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									
F16 F23 F37 F63	NA	George E. Masker Painting Contractors	877 71st Ave	Approximately 50 feet northeast of Parcel AA6	NA	FINDS HAZNET FTTS	NA	NA	HAZNET: Unspecified oil-containing waste; Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)

Area B6

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
AS570 AS571 AS572 AS573 AS574 AS575 AS576 AS577 AS578	T0600100660	7200 Edgewater Dr Paccar Automotive AMB Properties Dependable Highway Express City of Pinole Grand Auto Warehouse	7200 Edgewater Dr	Northwestern Portion (B6)	LUST Id: 01-0716	ERNS FINDS EMI CA HIST Auto Stat HIST CORTESE LUST Alameda County CS CUPA Listing WDS HAZNET HIST UST	**GW:** TPH-G, BTEX, TPH-D **Soil:** TPH-G, TPH-D, TPH-MO, BTEX, PAHs, PCBs, and addtl SVOCs	Closed	In 1987 two USTs were reportedly removed from the site. In 1991 a release of approximately 80 gallons of hydraulic oil was reported. Contaminated soil was subsequently excavated and disposed of off-site. A grab groundwater sample collected from the hydraulic oil pit detected elevated concentrations of TPH-G and BTEX. Between 1992 and 1993 soil and groundwater investigations were conducted on site. Groundwater analyses indicated the presence of TPH-D. Additionally, soil samples suggested that fill material located throughout the site contains concentrations of PAHs, PCBs, TPH-D, TPH-MO, and SVOCs. The site was granted closure in 1995. Groundwater monitoring and sampling was conducted at the Site between 1992 and 1994. However, no depth to groundwater or groundwater flow direction information was available. HAZNET: Unspecified organic liquid mixture; Asbestos containing waste
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									

Parcel B

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
AP616 AP717 AP718	T0600100715 T06019722113	Hooton Property Port of Oakland / Lincoln Property FFE Oakland Terminal	7307 F Edgewater Dr 7303-7307 Edgewater Dr 7307 Edgewater Dr	Parcel B11	LUST Id: 01-0778	HIST CORTESE LUST SLIC Alameda County CS HAZNET RCRA SQG FINDS EMI	Site soil and groundwater are impacted with heavy range hydrocarbons, BTEX, chlorinated solvents, and PAHs.	Closed	The case is listed as closed as of 1998.
AQ622 AQ623 AQ624 AQ625 AQ626 AQ627 AQ628 AQ629 AQ630 AQ631 AQ632	T0600100375	City of Oakland / Public Works Agency 1X City of Oakland City of Oakland Municipal Service C	7101 Edgewater Dr	Parcel B10	LUST Id: 01-0411	HAZNET EMI HIST CORTESE LUST SLIC Alameda County CS FINDS UST WDS	Site soil and groundwater are impacted with TPH-G, benzene, TBA, MTBE, and other fuel oxygenates.	Open	The site is currently open and undergoing remediation.
O190 O191 O192	NA	Clark Construction Group Inc. Cranbrook Group Inc.	7677 Oakport St	Parcel B7	NA	HAZNET US HIST Auto Stat	Potential Petroleum Hydrocarbons	NA	HAZNET: Asbestos containing waste
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									
243	NA	Port of Oakland	Oakport St and Hassler Wy	Parcel B7	NA	RCRA NonGen / NLR FINDS	NA	NA	
P210	NA	Bruce Bauer	7401 Oakport St	Parcel B7	NA	HAZNET	NA	NA	HAZNET: Other inorganic solid waste
P214	NA	Coliseum Lexus of Oakland	7273 Oakport St	Parcel B7	NA	HAZNET	NA	NA	HAZNET: Unspecified oil-containing waste
P215 P216 P217 P218 P219	NA	Infiniti of Oakland Hendrick Automotive Group	7201 Oakport St	Parcel B7	NA	RCRA SQG HAZNET FINDS	NA	NA	HAZNET: Unspecified oil-containing waste
AS560 AS561 AS562	NA	Metro Furniture Metropolitan Furniture	7220 Edgewater Dr.	Parcel B8	NA	RCRA-SQG FINDS EMI WDS HAZNET	NA	NA	HAZNET: Laboratory waste chemicals
AP542 AP543 AP544	NA	Rainin Instruments LLC KR Properties Inc.	7500 Edgewater Dr	Parcel B9	NA	HAZNET EMI FINDS	NA	NA	HAZNET: Laboratory waste chemicals; Unspecified oil-containing waste
AQ553 AQ554 AQ555	NA	Everett Graphics Inc	7300 Edgewater Dr	Parcel B9	NA	HAZNET FINDS RCRA LQG EMI	NA	NA	HAZNET: Unspecified solvent mixture
AP609 AP610 AP611	NA	Mitsubishi Electric US Inc. RS Hughes Company Inc ADA Signal Processors Inc.	7303 Edgewater Dr	Parcel B11	NA	HAZNET RCRA-SQG FINDS	NA	NA	HAZNET: Waste oil and mixed oil
AP612	NA	Equity Office Properties	7307 Edgewaer Dr	Parcel B11	NA	HAZNET	NA	NA	HAZNET: Other inorganic solid waste; Asbestos containing waste
AP613 AP614	NA	TAB label Co. Production Robotics Inc	7305 Edgewater Dr.	Parcel B11	NA	HAZNET RCRA-SQG FINDS	NA	NA	HAZNET: Unspecified organic liquid mixture

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
O178 O179 O180 O181 O182 O183 O184 O185	T0600100656	California Generator Service Corp Goodyear Tire and Rubber Co Goodyear Commercial Tire and Serv Murphy's Inc Tire Engineering Hertz Equipment Rental	7727 Oakport St	Parcel C1	LUST Id: 01-0712	HAZNET FINDS HIST CORTESE LUST Alameda County CS CA FID UST SWEEPS UST HIST UST	Site soil and groundwater impacted with heavy range hydrocarbons. Additionally, TCE, bis (2-ethyhexyl)phthalate, and methylnaphthalene found in site soils prior to over excavation activities.	Closed	Case granted closure in 1994. HAZNET: Other organic solids
O186	NA	7717 Oakport St	7717 Oakport St	Parcel C1	NA	US HIST Auto Stat	Potential Petroleum Hydrocarbons	NA	
AH437 AH537 AH538 AH539 AH540	NA	7700 Edgewater Dr Edgewater Park Plaza 1X San Fran Girl Scouts Council San Francisco Bay Girl Scouts Council	7700 Edgewater Dr	Parcel C2	NA	US HIST Auto Stat HAZNET	Potential Petroleum Hydrocarbons	NA	HAZNET: Waste oil and mixed oil
AH438	SLT2O168272	Edgewater Corp Center	700 Edgewater Dr.	Parcel C2	NA	SLIC	Unknown	Open	
N274 N275 N276	NA	Peak Engineering Inc S & S Trucking S N Sands Corp DBA S & S Trucking	477 Roland Way	Parcel C3	NA	HAZNET RCRA SQG FINDS HWT	Unknown	NA	HAZNET: Contaminated soil from site clean-up
N193 N194	NA	Ardenbrook	7901 Oakport St	Parcel C4	NA	HAZNET US HIST Auto Stat	Potential Petroleum Hydrocarbons	NA	HAZNET: Polychlorinated biphenyls and material containing PCBs; Asbestos containing waste
N197 N198 N199 N200 N201 N202	T0600101168 T0619719469	Ryder Transportation Svcs Western Truck Center Rnetal Service Corporation #557 Ryder Truck Rental	8001 Oakport St	Parcel C4	LUST Id: 01-1271	HAZNET RCRA SQG FINDS HIST CORTESE LUST Alameda County CS CA FIDS UST HIST UST SWEEPS UST	Site soils and groundwater impacted with TPH-G, TPH-D, TPH-MO, and BTEX.	Closed	Site granted closure in 2000.
N240 N241 N242	T0600101335	Superior Tiles Sterling Autobody #89	7801 Oakport St	Parcel C4	LUST Id: 01-1446	HIST CORTESE LUST Alameda County CS CA HIST Auto Stat HAZNET	Site soils and groundwater impacted with TPH-G and BTEX.	Closed	Site granted closure in 1994.
BI870 BI871 BI872 BI873	T0600178164	Oakland Cigarette Service TD Rowe TD Rowe of Northern California The Korea Times	8134 Capwell Dr.	Parcel C12	NA	CA FID UST SWEEPS UST LUST Alameda County CS HAZNET	Residual concentrations of TPH-G and MTBE remain in site groundwater and soil.	Closed	Site granted closure in 2006. A limited land use restriction appears to be in place.
BI879 BI880	NA	Stanley Custom Care	7920 Capwell Dr.	Parcel C14	NA	HAZNET US HIST Auto Stat	Potential Petroleum Hydrocarbons	NA	HAZNET: Waste oil and mixed oil
BQ977 BQ978	T0600100711	BOC Group Inc. President Tuxedo	8383 Capwell Dr.	Parcel C16	LUST Id: 01-0774	HIST CORTESE LUST Alameda County CS HAZNET	Site soil and groundwater impacted with petroleum hydrocarbons and BTEX.	Closed	Site granted closure in 1993.
BS990 BS991 BS992 BS1004	NA	California Motor Express Delta Lines Inc.	333 Hegenberger Rd.	Parcel C23	NA	RCRA NonGen / NLR FINDS US HIST Auto Stat	Potential Petroleum Hydrocarbons	NA	
BS1067 BS1068 BS1069 BS1070 BS1071 BS1072 BS1073	T0600101567	Pacific Bell (Q3-650) Pacific Bell Penske Truck Leasing Nestle Waters of North America Rollins Leasing Corp. Rollins Leasing Corp. #141-B Rollins Truck Leasing	295 Hegenberger Rd.	Parcel C23	LUST Id: 01-1696	RCRA-SQG FINDS HIST CORTESE LUST Alameda County CS HAZNET UST CA FIDS UST SWEEPS UST	Site soil and groundwater impacted with heavy range hydrocarbons.	Closed	Site granted closure in 1996.
BS1085 BS1086 BS1087 BS1088 BS1089 BS1090 BS1091 BS1092 BS1093 BS1094 BS1095 BS1096	T0600101245	Equilon Enterprises Sunny Airport Shell Bay Airport Shell Shell Oil Co Shell #13-5691 Hegenberger Shell	285 Hegenberger Rd.	Parcel C23	LUST Id: 01-1350	HAZNET UST RCRA-SQG HIST CORTESE LUST EMI US HIST Auto Stat Alameda County CS FINDS CA FIDS UST HIST UST	Site soils and groundwater impacted with TPH-D, TPH-G, TPH-MO, BTEX, and MTBE. Based on the most recent groundwater monitoring report (01/05/12), groundwater flow direction is to the northwest.	Closed	Site granted closure in 2013. A liimited land use restriction appears to be in place.
AO566 AO567 AO568 AO569 AO579 AO580 AO581 AO582 AO583	T0600102238	Edgewater Chevron Chevron Products Co. Edgewater Super Stop 451 Hegenberger Rd. Chevron #9-1851 91851	451 Hegenberger Rd.	Parcel C28	LUST Id: 01-2429	HAZNET US HIST Auto Stat CA FID UST UST SWEEPS UST LUST HIST CORTESE Alameda County CS HIST UST	Site soils and groundwater impacted with TPH-D, TPH-G, TPH-MO, BTEX, and MTBE. Based on the most recent groundwater monitoring report (02/28/13), groundwater flow direction is to the southwest.	Open	Site under review for closure.

AO636 AO637 AO638 AO639 AO640 AO641 AO642 AO643 AO644	T0600101476	Union Oil SS#5043 CRLLC 76 #5191 Kayo Oil Co #2705191 Unocal Service Station #5043 RO Airport Union Service Tosco Corporation Station #30787 Unocal #5043	449 Hegenberger Rd.	Parcel C28	LUST Id: 01-1601	HIST UST HAZNET US HIST Auto Stat HIST CORTESE LUST Alameda County CS HIST UST UST CHMIRS	Site soils and groundwater impacted with TPH-D, TPH-G, TPH-MO, BTEX, and MTBE. Based on the most recent groundwater monitoring report (01/15/13), groundwater flow direction is to the southeast	Open	Site assessment on going.
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
1166	NA	280 Hegenberger Rd.	280 Hegenberger Rd.	Approximately 200 feet Southeast of Parcel C24	NA	US HIST Cleaners	Potential PCE impacts.	NA	
BS1045 BS1046 BS1047 AO606 AO607 AO608	T0600102125	A G E Muffler Wheel Aligning & Brake Shop A G E Service Precision Trucking School Precision Trucking School McMorgan and Company Light Keepers LLC	300 Hegenberger Rd. 444 Hegenberger Rd.	Approximately 150 feet southeast of Parcel C23	LUST Id: 01-2310	US HIST Auto Stat LUST Alameda County CS HIST CORTESE LUST HAZNET	Site soils and groundwater impacted with TPH-D, TPH-G, and BTEX. Groundwater flow direction for the site is generally to the northwest.	Open	Site assessment on going.
BS1097	NA	294 Hegenberger Rd.	294 Hegenberger Rd.	Approximately 200 feet Southeast of Parcel C23	NA	US HIST Cleaners	Potential Petroleum Hydrocarbon impacts.	NA	
AO604 AO605	T0600101417	Union Bank	460 Hegenberger Rd.	Approximately 300 feet northeast of Parcel C28	LUST ID: 01-1534	RCRA-SQG FINDS HIST CORTESE LUST CA FID UST Alameda County CS HIST UST SWEEPS UST ENF HAZNET	Site soils and groundwater impacted with TPH-D, TPH-G, TPH-MO, and BTEX.	Closed	Site was granted closure in 1994.
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									
O187	NA	Horizon High Reach	7711 Oakport St	Parcel C1	NA	HAZNET	NA	NA	HAZNET: Waste oil and mixed oil; Liquids with halogenated organic compounds >= 1,000 Mg./L
AH536	NA	RJR Polymers Inc.	7750 Edgewater Dr.	Parcel C3	NA	HAZNET	NA	NA	HAZNET: Unspecified solvent mixture
AC384 AC385	NA	Milligan-Spika Company	465 Roland Way	Parcel C3	NA	EMI FINDS	NA	NA	
N318 N319 N320	NA	Sterling Environmental Corporation	469 Roland Way	Parcel C3	NA	FTTS HIST FTTS US AIRS FINDS	NA	NA	
N172	NA	Healthsouth Medical Clinic	7817 Oakport St	Parcel C4	NA	HAZNET	NA	NA	HAZNET: Photochemicals/photoprocessing waste
N261	NA	480 Roland LLC	480 Roland Way	Parcel C4	NA	HAZNET	NA	NA	HAZNET: Unspecified oil-containing waste
N279	NA	Star Roofing Company	474 Roland Way	Parcel C4	NA	HAZNET	NA	NA	HAZNET: Aqueous solution with total organic residues less than 10 percent
M227 M228	NA	OTO LLC DBA One Toyota of Oakland Superior Toyota of Oakland	8181 Oakport St	Parcel C4	NA	HAZNET FINDS	NA	NA	HAZNET: Unspecified organic liquid mixture
AN534	NA	Alameda County Community Food Bank	7900 Edgewater Dr.	Parcel C6	NA	HAZNET	NA	NA	HAZNET: Asbestos containing waste
AN533	NA	1X Pacific Bell	8000 Edgewater Dr.	Parcel C7	NA	HAZNET	NA	NA	HAZNET: Polychlorinated biphenyls and material containing PCBs
AH541	NA	Pardeel and Edgewater	Pardee and Edgewater	Parcel C8	NA	CHMIRS	NA	NA	
AH617 AH618 AH619 AH620 AH621	NA	Edwards Lifesciences - NOVACOR World Heart Inc. Baxter Healthcare Corporation	7799 Pardee Ln	Parcel C8	NA	HAZNET RCRA-SQG FINDS EMI CHMIRS	NA	NA	HAZNET: Laboratory waste chemicals; Other inorganic solid waste An unknown substance was added to a container of nitric acid, causing a release of fumes.
AT645	NA	Montgomery Watson Harza	425 Roland Wy.	Parcel C9	NA	HAZNET	NA	NA	HAZNET:Other inorganic solid waste
BB709	NA	San Francisco Estuary Institute	7770 Pardee Ln	Parcel C9	NA	HAZNET	NA	NA	HAZNET: Laboratory waste chemicals; Unspecified organic liquid mixture
BB776	NA	Nationwide Advertising Service	7750 Pardee Ln	Parcel C9	NA	HAZNET	NA	NA	HAZNET: Photochemicals/photoprocessing waste
BK859	NA	Boehm Irrevocable Liquidating Trust	400 Roland Way	Parcel C9	NA	HAZNET	NA	NA	Waste Category: Asbestos containing waste Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
AT586	NA	RJR Polymers Inc.	7875 Edgewater Dr.	Parcel C11	NA	HAZNET	NA	NA	HAZNET: Unspecified organic liquid mixture
AN585	NA	Charcoal Companion, Inc.	7955 Edgewater Dr.	Parcel C11	NA	HAZNET	NA	NA	HAZNET: Off-specification, aged or surplus organics; other organic solids
AN532	NA	Photon Press Inc.	8100 Edgewater Dr.	Parcel C12	NA	EMI	NA	NA	
AN558 AN584	NA	System 99 Youthful Tooth	8201 Edgewater Dr.	Parcel C12	NA	RCRA NONGEN/NLR FINDS HAZNET	NA	NA	HAZNET: Photochemicals/photoprocessing waste
AN587 AN588 AN589 AN590 AN591	NA	Youthful Tooth Company Bright Now Dental Oakland Dental X-Ray Lab Consumer Dental Dennis W Arndt DMD	8105 Edgewater Dr.	Parcel C12	NA	HAZNET	NA	NA	HAZNET: Photochemicals/photoprocessing waste
AN596 AN597 AN598 AN599	NA	Photon Press Inc. BTS Group Polkell Protectors	8001 Edgewater Dr.	Parcel C12	NA	HAZNET RCRA-SQG FINDS EMI	NA	NA	HAZNET: Unspecified solvent mixture; Laboratory waste chemicals; Photochemicals/photoprocessing waste; Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
AV602 AV603	NA	ACS Asbestos Hazard Mgmt Inc Inwood Credit Union	8301 Edgewater Dr	Parcel C13	NA	RCRA-CESQG FINDS HAZNET	NA	NA	HAZNET: Other organic solids
AV633	NA	Pacific Aerial Surveys	8407 Edgewater Dr	Parcel C13	NA	HAZNET	NA	NA	HAZNET: Photochemicals/photoprocessing waste
AV634 AV635	NA	Venquest Trading, Inc.	8399 Edgewater Dr	Parcel C13	NA	ICIS FINDS	NA	NA	FIFRA 14A Action For Penalty
BQ976	NA	Clamp Swing Pricing Co.	8386 Capwell Dr.	Parcel C13	NA	HAZNET	NA	NA	Asbestos containing waste.
BQ978 BQ980	NA	Center for Employment Training Global Environmental Network, Inc.	8390 Capwell Dr.	Parcel C13	NA	HAZNET FINDS	NA	NA	HAZNET: Waste oil and mixed oil; Other organic solids
BI834	NA	All American Transit Parts Inc.	7980 Capwell Dr.	Parcel C14	NA	RCRA-SQG FINDS	NA	NA	
BI876	NA	Capwell Commercial LLC	8000 Capwell Dr.	Parcel C14	NA	HAZNET	NA	NA	Waste Category: Asbestos containing waste Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)

Parcel C

BI834	NA	All American Transit Parts Inc.	7980 Capwell Dr.	Parcel C14	NA	RCRA-SQG FINDS	NA	NA	
BI877	NA	Farc Inc.	7960 Capwell Dr.	Parcel C14	NA	HAZNET	NA	NA	Waste Category: Asbestos containing waste Disposal Method: Disposal, Land Fill
BI878	NA	Ornalux Design Co	7928 Capwell Dr.	Parcel C14	NA	HAZNET	NA	NA	Aqueous solution with total organic residues less than 10 percent
BI882	NA	Images Unlimited	8001 Capwell Dr.	Parcel C14	NA	HAZNET	NA	NA	Waste Category: Unspecified oil-containing waste
BI883	NA	ACC Associates	7977 Capwell Dr.	Parcel C14	NA	HAZNET	NA	NA	Waste Category: Waste oil and mixed oil Disposal Method: Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
BK884 BK885 BK886	NA	Webcore Oakland Office and Yard Webcore Builders Inc. Webcore Paramount Builders Supply	7801 Capwell Dr.	Parcel C14	NA	NPDES HAZNET	NA	NA	NPDES: Facility Status: Terminated Waste Category: Laboratory waste chemicals, latex, Other inorganic solid waste
BI875	NA	COSCHEM Inc.	8108 Capwell Dr.	Parcel C15	NA	EMI	NA	NA	EMI: Facility Id: 6149
BI881	NA	Masonic Building & Holdings Assoc of East Bay	8105 Capwell Dr.	Parcel C15	NA	HAZNET	NA	NA	Waste Category: Asbestos containing waste Disposal Method: Disposal, Land Fill
BQ909	NA	ACME Fixture and Casework Inc	8370 Capwell Dr.	Parcel C15	NA	EMI	NA	NA	
BQ988	NA	Conway Engineering Inc.	8393 Capwell Dr.	Parcel C16	NA	HAZNET	NA	NA	HAZNET: Liquids with halogenated organic compounds >= 1,000 Mg./L
BQ993 BQ994 BQ995 BQ996 BQ997	NA	Mane California Brands California Brands Flavors Mane Inc. Smith Bio-Science Labs	411 Pendelton Wy.	Parcel C16	NA	HAZNET RCRA-SQG FINDS	NA	NA	HAZNET: Laboratory waste chemicals; Other organic solids
BQ984 BQ985 BQ986	NA	AMTECH Elevator Services AMTECH Reliable Elevator Co. 1X AMTECH Reliable Elevator	415 Pendelton Wy.	Parcel C17	NA	HAZNET RCRA-SQG FINDS	NA	NA	HAZNET: Unspecified oil-containing waste; Unspecified oil-containing waste; Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
AO652	NA	Sir Speedy Printing Center	433-E Hegenber Rd.	Parcel C19	NA	HAZNET	NA	NA	HAZNET: Photochemicals/photoprocessing waste
BQ913 BQ914	NA	NATECH - IET	416 Pendelton Wy.	Parcel C21	NA	FTTS HIST FTTS FINDS	NA	NA	Lead and Asbestos Investigation
BQ1000	NA	NATECH International, Inc.	406 Pendelton Wy.	Parcel C21	NA	FTTS HIST FTTS FINDS	NA	NA	Lead
BQ1001	NA	Bay Rubber Co.	404 Pendelton Wy.	Parcel C21	NA	HAZNET	NA	NA	HAZNET: Liquids with halogenated organic compounds >= 1,000 Mg./L
BS1063	NA	KW Fund I Haggan LP	303 Hegenberger Rd.	Parcel C22	NA	HAZNET	NA	NA	Waste Category: Unspecified aqueous solution
AO535	NA	Port of Oakland	455 Hegenberger Rd.	Parcel C28	NA	HAZNET	NA	NA	HAZNET: Aqueous solution with total organic residues less than 10 percent; Asbestos containing materials;
AO549 AO550 AO551 AO552	NA	WAL-MART Division 1 Store # 5457	8400 Edgewater Dr.	Parcel C28	NA	AST HAZNET RCRA-SQG FINDS	NA	NA	HAZNET: Other organic solids; Alkaline solution without metals pH >= 12.5
AO559	NA	Wingstop	8450 B Edgewater Dr.	Parcel C28	NA	ENF	NA	NA	Mop Water to Storm drain
239	NA	Port of Oakland	8201 Oakport St	Parcel C28	NA	HAZNET	NA	NA	HAZNET: Laboratory waste chemicals; Unspecified organic liquid mixture
M153	NA	Holiday Inn	400 Hegenberger Rd.	Approximately 150 feet southeast of Parcel C23	NA	HAZNET	NA	NA	HAZNET: Unspecified organic liquid mixture
AO646	NA	294 Hegenberger Rd	294 Hegenberger Rd	Located approximately 150 fee southeast of C24	NA	CHMIRS	NA	NA	A company was cleaning out the Storm Drain at Naval Air Station and came upon a substance

Parcel D

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
CV1261 CV1262 CV1263 CV1264	T0600100939	United Parcel Ser CAOAK United Parcel Service Oakland HUB	8400 Pardee Dr.	Parcel D5	LUST: 01-1017	NPDES LUST Alameda County CS CHMIRS WDS UST RCRA - SQG CA FID UST SWEEPS UST HIST UST	Site soils and groundwater impacted with TPH-G, TPH-D, and BTEX. The groundwater flow direction for the site is generally to the south southwest.	Open	Site under asssessment.
BS1121 BS1122 BS1124	T0600101598	BLDG. K101 YARD Marriot Courtyard	265 Hegenberger Rd.	Parcel D7	LUST Id: 01-1727 SLIC Id: 01S0195	CA FIDS UST SWEEPS UST HIST UST LUST HIST CORTESE SLIC Alameda County CS	Site soil and groundwater potentially impacted with TPH-G, BTEX, Chlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, and total metals.	Closed	The site was granted closure in 1998.
1306	T0600100567	Federal Express	8455 Pardee Dr.	Parcel D12	LUST: 01-0615	NPDES LUST Alameda County CS WDS	Site soils and groundwater impacted with TPH-G, TPH-D, and BTEX	Closed	The site was granted closure in 1993.
1340	1990029	Hegenberger Annex Site	77 Hegenberger Rd.	Parcel D17	NA	VCP	Fill material at the site contains elevated concentrations of PAHs and total copper, lead, molybdenum, and zinc at concentrations greater than background levels. Additionally, elevated TPH-D and TPH-MO detected in several soil and groundwater samples from the site.	Closed	The site is listed as No Further Action as of 2005.
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
CT1237 CT1238	T0600100634	General Tire Service	240 Hegenberger Rd.	Approximately 150 feet east of Parcel D7	LUST id: 01-0689	CORTESE LUST CA FID UST HIST UST US HIST Auto Stat	No information available.	Closed	Site granted closure in 1995.
NA	T0600100432	Diablo Cellular	106 – 110 Hegenberger Road	Approximately 150 feet southeast of Parcel D3	NA	LUST	Site soils and groundwater potentially impacted with TPH-G, BTEX, and lead.	Closed	Site granted closure in 2001.
NA	T0600102280	MOIA, Sierra Academy	9465 Earhart Road	Approximately 280 feet southwest of Parcel D2	NA	LUST	Site soil and groundwater potentially impacted with TPH-G, BTEX, and MTBE.	Closed	Site granted closure in 1999.
NA	T0600192727	AMERIFLIGHT	9171 Earhart Road	Approximately 280 feet southwest of Parcel D2	NA	LUST	Site soil and groundwater potentially impacted with TPH-Jet Fuel, TPH-AV Gas, lead, BTEX, and MTBE	Closed	Site granted closure in 2004.
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									

Parcel E

EDR Site No.	Geotracker ID	Site Name(s)	Site Address	Location	Facility ID	EDR Databases	COCs	Status	Comments
ON PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
CE1149 CE1150	T0600100493	Oakport Wet Weather Treatment EBMUD	5597 Oakport St	Parcel E	LUST Id: 01-0540	AST HIST CORTESE LUST Alameda County CS CHMIRS	Site soil and groundwater are potentially impacted with TPH-G, TPH-D, and BTEX.	Closed	Site granted closure in 1996.
OFF PARCEL SITES WITH POTENTIAL ENVIRONMENTAL CONCERNS									
SITES WITH MINIMAL IDENTIFIED ENVIROMENTAL IMPACT									
750	NA	Oakport Center	5885 Oakport St	Parcel E	NA	UST	NA	NA	
CE1143 CE1144 CE1145 CE1146	NA	Oakport Materials Storage Yard EBMUD Oakport Storage Center Oakport (Giacomazzi) Oakport Materials Storage Yard	5601 Oakport St	Parcel E	NA	HIST UST RCRA SQG SWEEPS UST CA FID UST	NA	NA	Two USTs: Diesel and Regular

APPENDIX 4.13

Traffic Appendices

A: Traffic Count Data Sheets for New Counts Collected In 2012

FEHR PEERS

TECHNICAL TRANSPORTATION APPENDIX

COLISEUM AREA SPECIFIC PLAN EIR

June 2014

WC12-2923

Appendix A: Intersections Previously Identified as having Significant and Unavoidable Impacts

Appendix B: Existing Count Data Source and Date

Appendix C: Volume Figures

Appendix D: Intersection Count Data Sheets

Appendix E: Intersection LOS Summary

Appendix F: LOS Calculation Worksheets – Existing Conditions

Appendix G: Freeway LOS Summary

Appendix H: Freeway LOS Calculation Worksheets

Appendix I: MXD Methodology Memorandum

Appendix J: LOS Calculation Worksheets – Existing Plus Coliseum Site Conditions

Appendix K: LOS Calculation Worksheets – 2020 No Project Conditions

Appendix L: LOS Calculation Worksheets – 2035 Plus Coliseum Site Conditions

Appendix M: LOS Calculation Worksheets – 2035 Plus Specific Plan Buildout Conditions

Appendix N: CMP Analysis Calculations

Appendix O: Queuing Analysis Summary

Appendix P: Collisions Analysis Summary

Appendix A

Intersections Previously Identified as having Significant and Unavoidable Impacts

FEHR PEERS

APPENDIX A
SUMMARY OF INTERSECTIONS PREVIOUSLY IDENTIFIED AS HAVING SIGNIFICANT AND UNAVOIDABLE IMPACTS

Intersection	EIR/Project Document	Document Status[a]	Existing Conditions			Future Conditions		
			Year	AM LOS	PM LOS	Year	AM LOS	PM LOS
7th Street/8th Street/ 5th Avenue	Oak to Ninth Avenue DEIR	C	2004	B	B	2025	B	F
7th Street/12th Street (SB)/14th Avenue	Oak to Ninth Avenue DEIR	C	2004	C	C	2025	C	F
16th Street/23rd Avenue	Oak to Ninth Avenue DEIR	C	2004	B	C	2025	B	E
23rd Avenue/ Northbound I-880 On-Ramp	Central Estuary Implementation Guide SEIR	D	2009	N/A	N/A	2035	F	D
23rd Avenue/29th Avenue/Park Street	Central Estuary Implementation Guide SEIR	D	2009	A	A	2035	F	E
Adeline Street/ 5th Street	Oakland Army Base Auto Mall Project SEIR	C	2005	C	C	2025	F	F
Alcatraz Avenue/ College Avenue (City of Berkeley)	Safeway Shopping Center – College and Claremont Avenues DEIR	C	2010	N/A	F	2035	N/A	F
Alcatraz Avenue/ Claremont Avenue (City of Berkeley)	Safeway Shopping Center – College and Claremont Avenues DEIR	C	2010	N/A	C(F)	2035	N/A	F(F)
Ashby Avenue/ Claremont Avenue (City of Berkeley)	Safeway Shopping Center – College and Claremont Avenues DEIR	C	2010	N/A	D	2035	N/A	F
Ashby Avenue/ College Avenue (City of Berkeley)	Safeway Shopping Center – College and Claremont Avenues DEIR	C	2010	N/A	E	2035	N/A	F
Atlantic Avenue/ Webster Street (City of Alameda)	Oakland Army Base Auto Mall Project SEIR	C	2005	C	C	2025	E	F
Broadway/3rd Street	Jack London Square Redevelopment DEIR	C	2003	B	B	2025	B	F
Broadway/5th Street	Oak to Ninth Avenue DEIR	C	2004	C	F	2025	E	F
Broadway/5th Street	Oakland Army Base Auto Mall Project SEIR	C	2005	C	E	2025	F	F
Broadway/7th Street	Oak to Ninth Avenue DEIR	C	2004	B	B	2025	B	E
Broadway/12th Street	Jack London Square Redevelopment DEIR	C	2003	B	B	2025	B	E
Broadway/23rd Street	Broadway and West Grand Avenue DEIR	C	2004	C	D	2025	C	E
Broadway/ West Grand Avenue	Broadway & West Grand Avenue DEIR	C	2004	C	D	2025	C	E
	1800 San Pablo Avenue Project SEIR	F	2011	C	B	2035	F	F
Broadway/Hawthorne Avenue/Brook Street	Kaiser Permanente Oakland Medical Center Master Plan DEIR	C	2004	C	C	2025	C	E
Broadway/ MacArthur Boulevard	Kaiser Permanente Oakland Medical Center Master Plan DEIR	C	2004	C	C	2025	C	E

Appendix A (Continued)
SUMMARY OF INTERSECTIONS PREVIOUSLY IDENTIFIED AS HAVING SIGNIFICANT AND UNAVOIDABLE IMPACTS

Intersection	EIR/Project Document	Document Status[a]	Existing Conditions			Future Conditions		
			Year	AM LOS	PM LOS	Year	AM LOS	PM LOS
	MacArthur BART Transit Village DEIR	C	2006	D	D	2030	F	F
	Alta Bates Summit Hospital DEIR	C	2009	C	C	2035	E	D
Broadway/38th Street (South)	Kaiser Permanente Oakland Medical Center Master Plan DEIR	C	2004/ 2005	C	E	2025	A	A
Broadway/51st Avenue/Pleasant Valley Avenue	5175 Broadway Project Env. Review Checklist	C	2007	D	E	2025	F	F
	Safeway Redevelopment Project: Broadway and Pleasant Valley Avenue DEIR	F	2010	N/A	D	2035	N/A	F
Broadway/Coronado Avenue	5175 Broadway Project Env. Review Checklist	C	2007	E	F	2025	F	F
Brush Street/ 11th Street/I-980 Westbound On-Ramp	Kaiser Center Redevelopment Project DEIR	F	2008	C	B	2030	E	B
Brush Street/West Grand Avenue	Alta Bates Summit Hospital DEIR	C	2009	E(F)	F(F)	2035	F(F)	F(F)
Brush Street/ 17th Street	1800 San Pablo Avenue Project SEIR	F	2011	E	B	2035	F	F
Brush Street/ 18th Street	1800 San Pablo Avenue Project SEIR	F	2011	A	A	2035	F	B
Castro Street/ 17th Street/I-980 Eastbound Off-Ramp	Uptown Mixed Use Project DEIR	C	2003	C	C	2025	C	E
	Kaiser Center Redevelopment Project DEIR	F	2008	C	C	2030	E	D
	1800 San Pablo Avenue Project SEIR	F	2011	C	C	2035	F	F
Castro Street/ 18th Street	1800 San Pablo Avenue Project SEIR	F	2011	A	A	2035	B	F
Coliseum Way/ Northbound I-880 Ramps	Central Estuary Implementation Guide SEIR	D	2009	D	D	2035	F	F
East 7th Street/23rd Avenue	Gateway Community Development Project	D	2004	B	B	2025	F	B
East 7th Street/ Kennedy Street	Gateway Community Development Project	D	2004	A	C	2025	B	F
East 8th Street/ Fruitvale Avenue	Gateway Community Development Project	D	2004	B	C	2025	C	E
East 9th Street/ Fruitvale Avenue	Gateway Community Development Project	D	2004	D	E	2025	F	F
East 9th Street/1-880 Northbound Off-Ramp	Gateway Community Development Project	D	2004	F	F	2025	F	F
East 12th Street/22nd Avenue	Gateway Community Development Project	D	2004	B	D	2025	C	F

Appendix A (Continued)
SUMMARY OF INTERSECTIONS PREVIOUSLY IDENTIFIED AS HAVING SIGNIFICANT AND UNAVOIDABLE IMPACTS

Intersection	EIR/Project Document	Document Status[a]	Existing Conditions			Future Conditions		
			Year	AM LOS	PM LOS	Year	AM LOS	PM LOS
East 12th Street/23rd Avenue	Gateway Community Development Project	D	2004	C	B	2025	E	D
East 12th Street/ 22nd Avenue/23rd Avenue	Central Estuary Implementation Guide SEIR	D	2009	C	C	2035	D	F
East 12th Street/25th Avenue	Gateway Community Development Project	D	2004	F	F	2025	F	F
East 12th Street/26th Avenue	Gateway Community Development Project	D	2004	D	B	2025	F	C
East 12th Street/29th Avenue	Gateway Community Development Project	D	2004	B	B	2025	D	E
	Central Estuary Implementation Guide SEIR	D	2009	B	B	2035	D	E
East 12th Street/30th Avenue	Gateway Community Development Project	D	2004	C	B	2025	F	C
East 12th Street/ Derby Avenue	Gateway Community Development Project	D	2004	C	C	2025	F	F
East 12th Street/ Fruitvale Avenue	Gateway Community Development Project	D	2004	C	C	2025	F	F
Embarcadero/ 5th Avenue	Oak to Ninth Avenue DEIR	C	2004	F	F	2025	D	F
Embarcadero/ Broadway	Oak to Ninth Avenue DEIR	C	2004	A	A	2025	B	F
Embarcadero/ I-880 Northbound Off-Ramp	Oak to Ninth Avenue DEIR	C	2004	B	B	2025	B	F
Embarcadero/ I-880 Southbound Off-Ramp	Oak to Ninth Avenue DEIR	C	2004	B	B	2025	D	E
Embarcadero/ Webster Street	Jack London Square Redevelopment DEIR	C	2003	A	B	2025	E	F
Fernside Boulevard/ High Street (City of Alameda)	Central Estuary Implementation Guide SEIR	D	2009	C	C	2035	F	E
Fernside Boulevard/ Tilden Way/Blanding Avenue (City of Alameda)	Central Estuary Implementation Guide SEIR	D	2009	C	C	2035	E	E
Foothill Boulevard/ 14th Avenue (Eastbound)	Oak to Ninth Avenue DEIR	C	2004	C	C	2025	C	F
Foothill Boulevard/ 14th Avenue (Westbound)	Oak to Ninth Avenue DEIR	C	2004	B	B	2025	E	C
Foothill Boulevard/ Fruitvale Avenue	Gateway Community Development Project	D	2004	E	E	2025	F	F
Ford Street/29th Avenue	Central Estuary Implementation Guide SEIR	D	2009	A	B	2035	D	E

Appendix A (Continued)
SUMMARY OF INTERSECTIONS PREVIOUSLY IDENTIFIED AS HAVING SIGNIFICANT AND UNAVOIDABLE IMPACTS

Intersection	EIR/Project Document	Document Status[a]	Existing Conditions			Future Conditions		
			Year	AM LOS	PM LOS	Year	AM LOS	PM LOS
Franklin Street/ 2nd Street	Jack London Square Redevelopment DEIR	C	2003	F	B	2025	F	B
Franklin Street/ 3rd Street	Jack London Square Redevelopment DEIR	C	2003	F	B	2025	F	D
Franklin Street/ 17th Street	Uptown Mixed Use Project DEIR	C	2003	B	B	2025	E	D
Frontage Road/ West Grand Avenue	Uptown Mixed Use Project DEIR	C	2003	C	E	2025	F	F
Fruitvale Avenue/East 9th Street	Fruitvale Transit Village II Transportation Impact Analysis	D	2009	D	E	2035	F	F
Fruitvale Avenue/ East 12th Street	Central Estuary Implementation Guide SEIR	D	2009	C	C	2035	E	E
Fruitvale Avenue/ International Blvd	Fruitvale Transit Village II Transportation Impact Analysis	D	2009	B	B	2035	F	F
Fruitvale Avenue/San Leandro Street	Fruitvale Transit Village II Transportation Impact Analysis	D	2009	C	C	2035	F	F
Golf Links Road/I-580 Ramps	Oak Knoll ADSEIR	D	2009	E	E			
Grand Avenue/ El Embarcadero	Kaiser Center Redevelopment Project DEIR	F	2008	C	F	2030	C	F
Grand Avenue/ MacArthur Boulevard/ I-580 EB Off-Ramp	Kaiser Center Redevelopment Project DEIR	F	2008	D	E	2030	E	F
Harrison Street/ 7th Street	Jack London Square Redevelopment DEIR	C	2003	B	B	2025	C	E
Harrison Street/ 20th Street/Kaiser Center Access Road	Kaiser Center Redevelopment Project DEIR	F	2008	C	C	2030	E	F
Harrison Street/ 21st Street	Kaiser Center Redevelopment Project DEIR	F	2008	A	B	2030	B	F
Harrison Street/ 27th Street/ 24th Street/Bay Place	Kaiser Center Redevelopment Project DEIR	F	2008	C	D	2030	F	F
	The Shops at Broadway Retail Project	D	2009	N/A	E	2035	N/A	F
Harrison Street/ 29th Street	Alta Bates Summit Hospital DEIR	C	2009	A(E)	A(E)	2035	F(F)	C(F)
Harrison Street/ Grand Avenue	Oak to Ninth Avenue DEIR	C	2004	C	C	2025	F	D
	Uptown Mixed Use Project DEIR	C	2003	C	D	2030	F	F
Harrison Street/ Lakeside Drive	Kaiser Center Redevelopment Project DEIR	F	2008	A	B	2030	C	E
Harrison Street/ Lakeside Drive	Kaiser Center Redevelopment Project DEIR	F	2008	A	B	2030	C	E

Appendix A (Continued)
SUMMARY OF INTERSECTIONS PREVIOUSLY IDENTIFIED AS HAVING SIGNIFICANT AND UNAVOIDABLE IMPACTS

Intersection	EIR/Project Document	Document Status[a]	Existing Conditions			Future Conditions		
			Year	AM LOS	PM LOS	Year	AM LOS	PM LOS
Harrison Street/ MacArthur Boulevard/ Santa Clara Avenue	Kaiser Center Redevelopment Project DEIR	F	2008	C	B	2030	F	C
Harrison Street/ Stanley Place/I-580 Eastbound Off-Ramp	Kaiser Center Redevelopment Project DEIR	F	2008	C	B	2030	F	C
Howe Street/Pleasant Valley Avenue	Safeway Redevelopment Project: Broadway and Pleasant Valley Avenue DEIR	F	2010	N/A	A(F)	2035	N/A	A(F)
I-880 Northbound Off-Ramp/7th Street	Oakland Army Base Auto Mall Project SEIR	C	2005	B	B	2025	C	E
International Blvd/ 29th Avenue	Gateway Community Development Project	D	2004	B	C	2025	C	F
International Blvd/ 34th Avenue	Fruitvale Transit Village II Transportation Impact Analysis	D	2009	A	A	2035	E	C
International Blvd/ 38th Avenue	Fruitvale Transit Village II Transportation Impact Analysis	D	2009	B	A	2035	F	D
International Blvd/ 42nd Avenue	Fruitvale Transit Village II Transportation Impact Analysis	D	2009	D	D	2035	F	F
	Central Estuary Implementation Guide SEIR	D	2009	C	C	2035	F	F
International Blvd/ 98th Avenue	Arcadia Park DEIR	C	2004/ 2005	C	D	2025	D	F
International Blvd/ High Street	Gateway Community Development Project	D	2004	C	D	2025	D	E
	Central Estuary Implementation Guide SEIR	D	2009	B	B	2035	E	F
Jackson Street/ 5th Street	Oak to Ninth Avenue DEIR	C	2004	B	B	2025	B	B
Jackson Street/ 6th Street/ I-880 Northbound Off-Ramp	Oak to Ninth Avenue DEIR	C	2004	C	C	2025	F	F
	Kaiser Center Redevelopment Project DEIR	F	2008	F	F	2030	F	F
	325 7th Street Project DEIR	F	2006	E	E	2030	F	F
Kaiser Center Access Road/21st Street	Kaiser Center Redevelopment Project DEIR	F	2008	B	B	2030	B	E
Lakeshore Avenue/ Foothill Boulevard	Oak to Ninth Avenue DEIR	C	2004	C	B	2025	E	B
Lakeshore Avenue/ Lake Park Avenue	Oak to Ninth Avenue DEIR	C	2004	D	D	2025	D	E
Lakeshore Avenue/ MacArthur Boulevard/ I-580 Eastbound On-Ramp	Oak to Ninth Avenue DEIR	C	2004	C	E	2025	C	F
	Kaiser Center Redevelopment Project DEIR	F	2008	C	D	2030	F	F

Appendix A (Continued)
SUMMARY OF INTERSECTIONS PREVIOUSLY IDENTIFIED AS HAVING SIGNIFICANT AND UNAVOIDABLE IMPACTS

Intersection	EIR/Project Document	Document Status[a]	Existing Conditions			Future Conditions		
			Year	AM LOS	PM LOS	Year	AM LOS	PM LOS
Lincoln Avenue/Park Street/Tilden Way	Central Estuary Implementation Guide SEIR	D	2009	B	B	2035	D	F
Mandela Parkway/ 7th Street	Oakland Army Base Auto Mall Project SEIR	C	2005	B	B	2025	E	F
Manila Avenue/West MacArthur Blvd	Kaiser Permanente Oakland Medical Center Master Plan DEIR	C	2004/ 2005	C	C	2025	E	D
Maritime Street/7th Street	Oakland Army Base Auto Mall Project SEIR	C	2005	C	C	2025	F	F
Market Street/ 3rd Street	Jack London Square Redevelopment DEIR	C	2003	C	C	2025	E	F
Market Street/ 5th Street	Jack London Square Redevelopment DEIR	C	2003	B	B	2025	E	F
Market Street/ 7th Street	Jack London Square Redevelopment DEIR	C	2003	C	C	2025	F	F
Market Street/ 40th Street	MacArthur BART Transit Village EIR	C	2006	B	C	2030	E	D
Market Street/ West MacArthur Blvd	MacArthur BART Transit Village EIR	C	2006	B	C	2030	F	F
	Kaiser Permanente Oakland Medical Center Master Plan DEIR	C	2004/ 2005	B	C	2025	B	E
Market Street/ West Grand Avenue	Oak to Ninth Avenue DEIR	C	2004	B	B	2025	B	E
	Oakland Army Base Auto Mall Project SEIR	C	2004	B	B	2025	B	E
Martin Luther King Jr. Way/5th Street	Jack London Square Redevelopment DEIR	C	2003			2025	E	F
Northgate Avenue/ 27th Street/I-980 On-Ramp	Alta Bates Summit Hospital DEIR	C	2009	C	C	2035	E	F
Northgate Avenue/ West Grand Avenue	Kaiser Center Redevelopment Project DEIR	F	2008	C	B	2030	C	C
Oak Street/5th Street/ I-880 Southbound On-Ramp	Oak to Ninth Avenue DEIR	C	2004	B	B	2025	D	F
	Kaiser Center Redevelopment Project DEIR	F	2008	E	F	2030	F	F
	325 7th Street Project DEIR	F	2006	D	F	2030	F	F
Oak Street/ 7th Street	Kaiser Center Redevelopment Project DEIR	F	2008	A	B	2030	B	F
Oak Street/ 14th Street	Kaiser Center Redevelopment Project DEIR	F	2008	B	C	2030	D	F
Oakland Ave/ MacArthur Blvd/ Santa Clara Ave/ I-580 WB Ramps	Kaiser Center Redevelopment Project DEIR	F	2008	C	B	2030	F	C

Appendix A (Continued)
SUMMARY OF INTERSECTIONS PREVIOUSLY IDENTIFIED AS HAVING SIGNIFICANT AND UNAVOIDABLE IMPACTS

Intersection	EIR/Project Document	Document Status[a]	Existing Conditions			Future Conditions		
			Year	AM LOS	PM LOS	Year	AM LOS	PM LOS
Oakland Avenue/ Monte Vista Avenue	Kaiser Center Redevelopment Project DEIR	F	2007	B	B	2030	D	F
Oakland Avenue/ Perry Place/I-580 Eastbound Ramps	Kaiser Center Redevelopment Project DEIR	F	2008	B	F	2030	F	F
	Alta Bates Summit Hospital DEIR	C	2009	B	D	2035	F	F
Oakport Street/High Street/Southbound I-880 Off-Ramp	Central Estuary Implementation Guide SEIR	D	2009	D	E	2035	F	F
Piedmont Avenue/ Pleasant Valley Ave	Kaiser Permanente Oakland Medical Center Master Plan DEIR	C	2004/ 2005	B	D	2025	C	F
	Safeway Redevelopment Project: Broadway and Pleasant Valley Avenue DEIR	F	2010	N/A	E	2035	N/A	F
Piedmont Avenue/ MacArthur Blvd	Alta Bates Summit Hospital DEIR	C	2009	C	C	2035	E	D
Powell Street/ Christie Street (City of Emeryville)	Oakland Army Base Auto Mall Project SEIR	C	2005	C	E	2025	C	F
Powell Street/ Hollis Street (City of Emeryville)	Oakland Army Base Auto Mall Project SEIR	C	2005	C	C	2025	C	F
Powell Street/ I-80 NB Ramps (City of Emeryville)	Oakland Army Base Auto Mall Project SEIR	C	2005	C	E	2025	C	F
San Leandro Street/ 35th Avenue	Fruitvale Transit Village II Transportation Impact Analysis	D	2009	A	B	2035	F	F
San Leandro Street/ 37th Avenue	Fruitvale Transit Village II Transportation Impact Analysis	D	2009	A	B	2035	F	F
San Leandro Street/ High Street	Central Estuary Implementation Guide SEIR	D	2009	C	C	2035	F	F
San Leandro Street/ 85th Avenue	Arcadia Park DEIR	C	2004/ 2005	B	B	2025	B	E
San Leandro Street/ 98th Avenue	Arcadia Park DEIR	C	2004/ 2005	D	D	2025	D	F
San Leandro Street/ East 10th Street/ Fruitvale Avenue	Gateway Community Development Project	D	2004	C	C	2025	F	F
	Central Estuary Implementation Guide SEIR	D	2009	B	C	2035	F	D
San Pablo Avenue/ 27th Street	Uptown Mixed Use Project DEIR	C	2003	A	B	2025	B	E
San Pablo Avenue/ 40th Street	Oakland Army Base Auto Mall Project SEIR	C	2005	C	E	2025	C	F

Appendix A (Continued)
SUMMARY OF INTERSECTIONS PREVIOUSLY IDENTIFIED AS HAVING SIGNIFICANT AND UNAVOIDABLE IMPACTS

Intersection	EIR/Project Document	Document Status[a]	Existing Conditions			Future Conditions		
			Year	AM LOS	PM LOS	Year	AM LOS	PM LOS
San Pablo Avenue/ 20th Street	Uptown Mixed Use Project DEIR	C	2003	B	B	2025	C	F
	1800 San Pablo Avenue Project SEIR	F	2011	B	C	2035	F	F
San Pablo Avenue/ 19th Street/Jefferson Street	1800 San Pablo Avenue Project SEIR	F	2011	C	C	2035	F	F
San Pablo Avenue/ 18th Street	1800 San Pablo Avenue Project SEIR	F	2011	B	C	2035	D	F
San Pablo Avenue/ West Grand Avenue	Uptown Mixed Use Project DEIR	C	2003	B	B	2025	C	F
	Alta Bates Summit Hospital DEIR	C	2009	B	B	2035	C	F
	Emerald Views Residential Development DEIR	D	2009	B	C	2030	B	F
	1800 San Pablo Avenue Project SEIR	F	2011	B	B	2035	F	F
Shafter Avenue/West MacArthur Blvd	Kaiser Permanente Oakland Medical Center Master Plan DEIR	C	2004/ 2005	C	C	2025	E	D
Shattuck Avenue/ 52nd Street	MacArthur BART Transit Village EIR	C	2006	D	D	2030	F	D
Stanford Avenue/ San Pablo Avenue (City of Emeryville)	Oakland Army Base Auto Mall Project SEIR	C	2005	C	C	2025	C	E
Telegraph Avenue/ 19th Street	Uptown Mixed Use Project DEIR	C	2003	B	B	2025	F	E
Telegraph Avenue/ 23rd Street	Broadway & West Grand Avenue DEIR	C	2004	C	D	2025	D	F
Telegraph Avenue/ 24th Street	Broadway & West Grand Avenue DEIR	C	2004	B	C	2025	B	F
Telegraph Avenue/ 27th Street	Kaiser Center Redevelopment Project DEIR	F	2008	B	C	2030	C	F
	Alta Bates Summit Hospital DEIR	C	2009	B	D	2035	F	F
Telegraph Avenue/ 38th Street	MacArthur BART Transit Village EIR	C	2006	B	C	2030	D	F
Telegraph Avenue/ 40th Street	MacArthur BART Transit Village EIR	C	2006	C	C	2030	F	F
Telegraph Avenue/ 51st Street	MacArthur BART Transit Village EIR	C	2006	D	D	2030	F	F
Telegraph Avenue/ 52nd Street/ Claremont Avenue	MacArthur BART Transit Village EIR	C	2006	B	B	2030	F	E
Telegraph Avenue/ Grand Avenue	Alta Bates Summit Hospital DEIR	C	2009	C	C	2035	E	F
	1800 San Pablo Avenue Project SEIR	F	2011	C	C	2035	F	F
Telegraph Avenue/ MacArthur Boulevard	MacArthur BART Transit Village DEIR	C	2006	B	B	2030	E	F

Appendix A (Continued)
SUMMARY OF INTERSECTIONS PREVIOUSLY IDENTIFIED AS HAVING SIGNIFICANT AND UNAVOIDABLE IMPACTS

Intersection	EIR/Project Document	Document Status[a]	Existing Conditions			Future Conditions		
			Year	AM LOS	PM LOS	Year	AM LOS	PM LOS
	Alta Bates Summit Hospital DEIR	C	2009	C	B	2035	E	F
Telegraph Avenue/ Thomas L. Berkley Way	Uptown Mixed Use Project DEIR	C	2003	B	B	2025	F	F
Telegraph Avenue/ West Grand Avenue	Uptown Mixed Use Project DEIR	C	2003	C	C	2025	E	E
	Kaiser Center Redevelopment Project DEIR	F	2008	C	C	2030	D	E
Telegraph Avenue/ William Street	Uptown Mixed Use Project DEIR	C	2003	A	A	2025	E	E
Webster Street/ 8th Street	Oak to Ninth Avenue DEIR	C	2004	C	E	2025	D	E
West Grand Avenue/ I-880 Frontage Road	Oakland Army Base Auto Mall Project SEIR	C	2005	C	C	2025	F	F
	2012 Oakland Army Base Project IS/Addendum	C	2002	C	C	2035	F	F
West Grand Avenue/ Mandela Parkway	Oakland Army Base Auto Mall Project SEIR	C	2005	B	B	2025	E	F
West Grand Avenue/ Maritime Street	Oakland Army Base Auto Mall Project SEIR	C	2005	C	C	2025	F	F
West Street/40th Street	MacArthur BART Transit Village DEIR	C	2006	B	B	2030	B	E

[a] C = Certified, D = Draft environmental document published, F = Final environmental document published.

SOURCE: City of Oakland, 2007-2014 Housing Element Draft EIR, 2010, Fehr & Peers, 2013.

Appendix B
Existing Count Data Source and Date

FEHR PEERS

Appendix B - Existing Count Data Source and Date

Intersection Name	Jurisdiction	Traffic Control	Count Info			Source of Counts
			AM Date	PM Date	Sun Date	
1. Mountain Blvd/SR 13 NB On-Ramp	Oakland	SSSC	Jun-13	Jun-13		
2. Rusting Ave/I-580 WB On-Ramp/Mountain Blvd	Oakland	SSSC	Jun-13	Jun-13		
3. Kuhnle Ave/Mountain Blvd/I-580 WB Off-Ramp	Oakland	SSSC	Oct-12	Oct-12		
4. Seminary Ave/Kuhnle Ave/I-580 EB On-Ramp/Sunnymere Ave	Oakland	AWSC	Oct-12	Oct-12		
5. Seminary Ave/I-580 EB Off-Ramp/Overdale Ave	Oakland	SSSC	Oct-12	Oct-12		
6. Edwards Ave/I-580 WB On-Ramp/Mountain Blvd	Oakland	SIG	Oct-12	Oct-12	Sep-13	
7. Edwards Ave/I-580 EB Off-Ramp	Oakland	SIG	Oct-12	Oct-12	Sep-13	
8. 98th Ave/I-580 EB Off-Ramp/Golf Links Road	Oakland	SIG	Oct-12	Oct-12	Sep-13	
9. I-580 WB Ramps/Golf Links Road	Oakland	SIG	Oct-12	Oct-12	Sep-13	
10. 98th Ave/I-580 EB On-Ramp	Oakland	SSSC	Oct-12	Oct-12	Sep-13	
11. Seminary Ave/S MacArthur Blvd	Oakland	SIG	Jun-13	Jun-13		
12. Seminary Ave/N MacArthur Blvd/Camden St	Oakland	SIG	Jun-13	Jun-13	Sep-13	
13. 73rd Ave/Foothill Blvd/MacArthur Blvd	Oakland	SIG	Oct-12	Oct-12		
14. High St/Courtland Ave	Oakland	SIG	Jun-13	Jun-13		
15. 14th Ave/Foothill Blvd	Oakland	SIG	Jun-13	Jun-13		
16. 23rd Ave/Foothill Blvd	Oakland	SIG	Jun-13	Jun-13		
17. Fruitvale Ave/Foothill Blvd	Oakland	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
18. Coolidge Ave/Foothill Blvd	Oakland	SIG	Jun-13	Jun-13		
19. 35th Ave/Foothill Blvd	Oakland	SIG	May-12	May-12		39th Avenue Reservoir Replacement Project
20. 38th Ave/Foothill Blvd	Oakland	SIG	Jun-13	Jun-13		
21. 42nd Ave/Foothill Blvd	Oakland	SIG	Jun-13	Jun-13		
22. High St/Foothill Blvd	Oakland	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
23. Seminary Ave/Foothill Blvd	Oakland	SIG	Jun-13	Jun-13		
24. Havenscourt Blvd/Foothill Blvd	Oakland	SIG	Jun-13	Jun-13		
25. 42nd Ave/Bond St	Oakland	SIG	Jun-13	Jun-13		
26. High St/Bond St	Oakland	SIG	Jun-13	Jun-13		
27. 42nd Ave/Bancroft Ave	Oakland	SIG	Jun-13	Jun-13		
28. High St/Bancroft Ave	Oakland	SIG	Jun-13	Jun-13		
29. Seminary Ave/Bancroft Ave	Oakland	SIG	Jun-13	Jun-13		
30. Havenscourt Blvd/Bancroft Ave	Oakland	SIG	Jun-13	Jun-13		
31. 73rd Ave/Bancroft Ave	Oakland	SIG	May-13	May-13	Sep-13	
32. 23rd Ave/International Blvd	Oakland	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
33. Fruitvale Ave/International Blvd	Oakland	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
34. 42nd Ave/International Blvd	Oakland	SIG	Apr-09	Apr-09		42nd Avenue-High Street Access Improvement
35. High St/International Blvd	Oakland	SIG	Sep-11	Sep-11		42nd Avenue-High Street Access Improvement
36. Seminary Ave/International Blvd	Oakland	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
37. 66th Ave/International Blvd	Oakland	SIG	Apr-11	Apr-11	Sep-13	Lions Creek Crossings MND / Coliseum City Counts 2013
38. Havenscourt Blvd/International Blvd	Oakland	SIG	Sep-09	Sep-09	Sep-13	East Bay BRT FEIR/S / Coliseum City Counts 2013
39. 73rd Avenue/Hegenberger Rd/International Blvd	Oakland	SIG	Sep-09	Sep-09	Sep-13	East Bay BRT FEIR/S / Coliseum City Counts 2013
40. 98th Ave/International Blvd	Oakland	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
41. Davis St/Callan Ave/E 14th St	San Leandro	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
42. Estudillo Ave/E 14th St	San Leandro	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
43. San Leandro Blvd/E 14th St	San Leandro	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
44. 5th Ave/E 12th St	Oakland	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
45. 14th Ave/E 12th St	Oakland	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
46. 22nd Ave/E 12th St	Oakland	SIG	2009	2009		Central Estuary DEIR
47. 23rd Ave/E 12th St	Oakland	SIG	Jun-13	Jun-13		
48. 29th Ave/E 12th St	Oakland	SIG	2009	2009		Central Estuary DEIR
49. Fruitvale Ave/E 12th St	Oakland	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
50. High St/E 12th St	Oakland	SIG	2009	2009		Central Estuary DEIR

Appendix B - Existing Count Data Source and Date

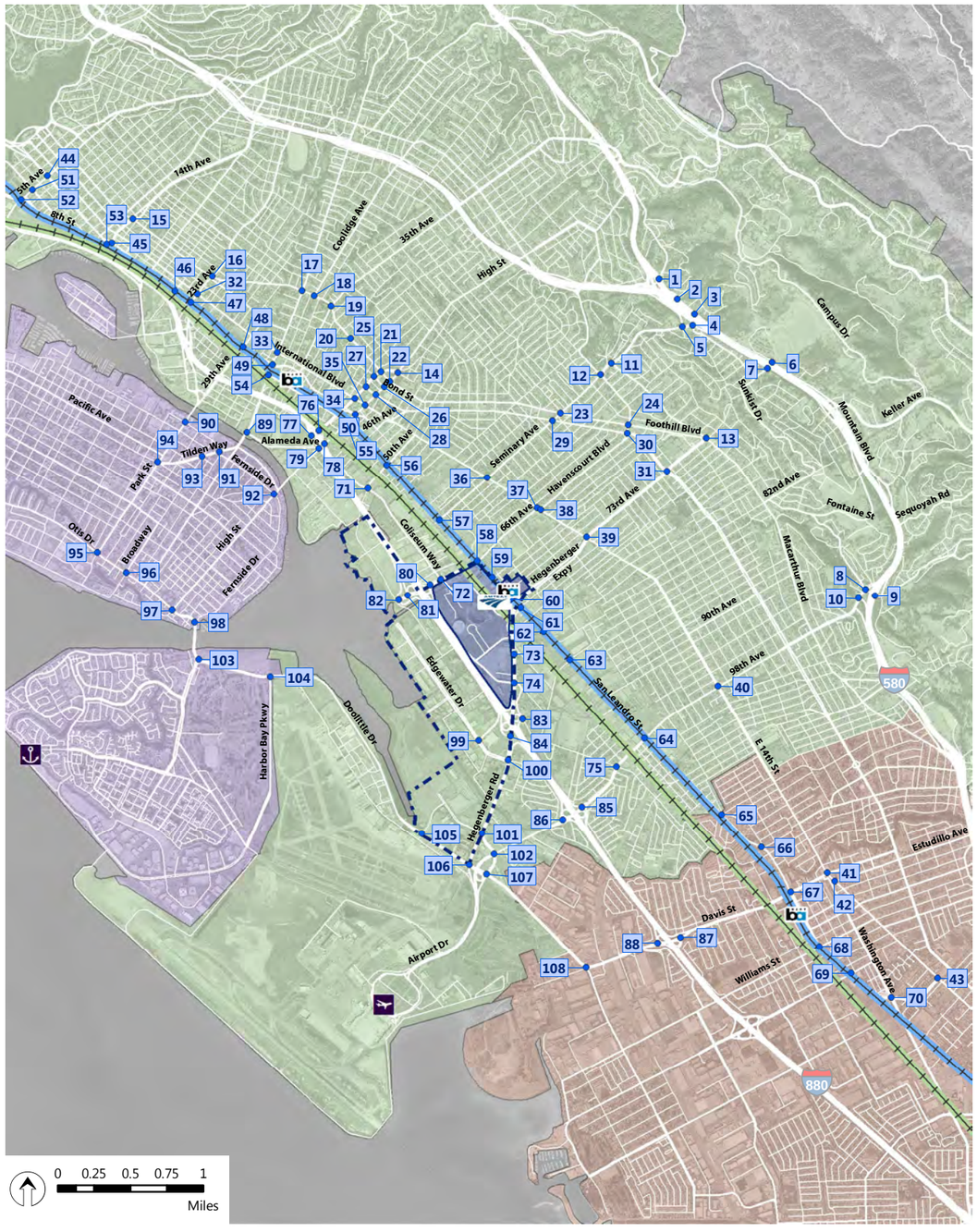
Intersection Name	Jurisdiction	Traffic Control	Count Info			Source of Counts
			AM Date	PM Date	Sun Date	
51. 5th Ave/E 10th St	Oakland	SIG	Jun-13	Jun-13		
52. 5th Ave/E 8th St	Oakland	SIG	May-12	May-12		Lake Merritt Specific Plan
53. 14th Ave/E 8th St	Oakland	SIG	Jun-13	Jun-13		
54. Fruitvale Ave/San Leandro St	Oakland	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
55. High St/San Leandro St	Oakland	SIG	Sep-11	Sep-11		42nd Avenue-High Street Access Improvement
56. 50th Ave/San Leandro St	Oakland	SIG	May-13	May-13	Sep-13	
57. Seminary Ave/San Leandro St	Oakland	SIG	May-13	May-13		
58. 66th Ave/San Leandro St	Oakland	SIG	Apr-11	Apr-11	Sep-13	Lions Creek Crossings MND / Coliseum City Counts 2013
59. 69th Ave/San Leandro St	Oakland	SIG	Apr-11	Apr-11		Lions Creek Crossings MND
60. Hegenberger Road On-Ramp/73rd Avenue/San Leandro St	Oakland	SIG	Apr-11	Apr-11		Lions Creek Crossings MND
61. Hegenberger Road Off-Ramp/San Leandro St	Oakland	SIG	Apr-11	Apr-11		Lions Creek Crossings MND
62. 81st Avenue/San Leandro St	Oakland	SIG	May-13	May-13		
63. 85th Avenue/San Leandro St	Oakland	SIG	May-13	May-13		
64. 98th Avenue/San Leandro St	Oakland	SIG	Sep-09	Sep-09	Sep-13	East Bay BRT FEIR/S / Coliseum City Counts 2013
65. Park Street (west)/San Leandro Boulevard	San Leandro	SSSC	Sep-09	Sep-09		East Bay BRT FEIR/S
66. Park Street (east)/San Leandro Boulevard	San Leandro	SSSC	Sep-09	Sep-09		East Bay BRT FEIR/S
67. Davis Street/San Leandro Boulevard	San Leandro	SIG	Sep-09	Sep-09		East Bay BRT FEIR/S
68. Williams St/San Leandro Boulevard	San Leandro	SIG	Jun-13	Jun-13		
69. Marina Blvd/San Leandro Boulevard	San Leandro	SIG	May-07	May-07		Kaiser San Leandro
70. Washington Ave/San Leandro Boulevard	San Leandro	SIG	Jun-13	Jun-13		
71. 50th Ave/Coliseum Way	Oakland	SSSC	May-13	May-13	Sep-13	
72. 66th Ave/Coliseum Access/Coliseum Way	Oakland	SIG	Jun-13	Jun-13	Sep-13	
73. Hegenberger Rd/Baldwin St	Oakland	SIG	May-13	May-13	Sep-13	
74. Hegenberger Rd/Coliseum Way	Oakland	SIG	Apr-11	Apr-11	Sep-13	Lions Creek Crossings MND / Coliseum City Counts 2013
75. 98th Ave/Edes Ave	Oakland	SIG	May-13	May-13		
76. 42nd Ave/I-880 NB Ramps	Oakland	SIG	Sep-11	Sep-11		42nd Avenue-High Street Access Improvement
77. 42nd Ave/I-880 SB Ramps	Oakland	SIG	Sep-11	Sep-11		42nd Avenue-High Street Access Improvement
78. High St/Coliseum Way	Oakland	SIG	Sep-11	Sep-11		42nd Avenue-High Street Access Improvement
79. High St/Oakport St/I-880 SB Off-Ramp	Oakland	SIG	Sep-11	Sep-11		42nd Avenue-High Street Access Improvement
80. 66th Ave/Coliseum Way	Oakland	SIG	Apr-11	Apr-11	Sep-13	Lions Creek Crossings MND / Coliseum City Counts 2013
81. Zhone Way/I-880 SB Off-Ramp	Oakland	SIG	Apr-11	Apr-11	Sep-13	Lions Creek Crossings MND / Coliseum City Counts 2013
82. Zhone Way/Oakport St	Oakland	SIG	May-13	May-13	Sep-13	
83. I-880 NB Ramps/Edes Ave	Oakland	SIG	May-13	May-13	Sep-13	
84. Hegenberger Rd/I-880 SB Off-Ramp	Oakland	SIG	May-13	May-13	Sep-13	
85. 98th Ave/I-880 NB Ramps	Oakland	SIG	May-13	May-13		
86. 98th Ave/I-880 SB Ramps	Oakland	SIG	May-13	May-13		
87. Davis St/I-880 NB Off-Ramp	San Leandro	SIG	Jun-13	Jun-13		
88. Davis St/I-880 SB Off-Ramp	San Leandro	SIG	May-07	May-07		Kaiser San Leandro
89. Fruitvale Ave/Alameda Ave	Oakland	SIG	2009	2009		Central Estuary DEIR
90. Park St/Blanding Ave	Alameda	SIG	2006/2007	2006/2007		Alameda GP Transportation Element Update DEIR
91. Tilden Way/Blanding Ave/Fernside Blvd	Alameda	SIG	2009	2009		Central Estuary DEIR
92. High St/Fernside Blvd	Alameda	SIG	2009	2009		Central Estuary DEIR
93. Tilden Way/Broadway	Alameda	SIG	2006/2007	2006/2007		Alameda GP Transportation Element Update DEIR
94. Park St/Tilden Way/Lincoln Ave	Alameda	SIG	2009	2009		Central Estuary DEIR
95. Park St/Otis Dr	Alameda	SIG	2006/2007	2006/2007		Alameda GP Transportation Element Update DEIR
96. Broadway/Otis Dr	Alameda	SIG	2006/2007	2006/2007		Alameda GP Transportation Element Update DEIR
97. High St/Otis Dr	Alameda	SIG	2006/2007	2006/2007		Alameda GP Transportation Element Update DEIR
98. Fernside Blvd/Otis Dr	Alameda	SIG	2006/2007	2006/2007		Alameda GP Transportation Element Update DEIR
99. Oakport St/Edgewater Dr	Oakland	SIG	May-13	May-13		
100. Hegenberger Rd/Edgewater Dr	Oakland	SIG	May-13	May-13	Sep-13	

Appendix B - Existing Count Data Source and Date

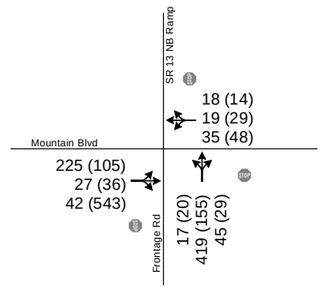
Intersection Name	Jurisdiction	Traffic Control	Count Info			Source of Counts
			AM Date	PM Date	Sun Date	
101. Hegenberger Rd/Airport Access Rd/Pardee Dr	Oakland	SIG	May-13	May-13		
102. 98th Ave/Airport Access Rd	Oakland	SIG	May-13	May-13		
103. Dolittle Dr/Otis Dr/Island Dr	Alameda	SIG	2006/2007	2006/2007		Alameda GP Transportation Element Update DEIR
104. Dolittle Dr/Harbor Bay Pkwy	Alameda	SIG	2006/2007	2006/2007		Alameda GP Transportation Element Update DEIR
105. Swan Way/Dolittle Dr	Oakland	SIG	May-13	May-13		
106. Hegenberger Rd/Dolittle Dr	Oakland	SIG	May-13	May-13		
107. Airport Access Rd/Dolittle Dr	Oakland	SIG	May-13	May-13		
108. Davis St/Dolittle Dr	San Leandro	SIG	May-13	May-13		

Appendix C
Volume Figures

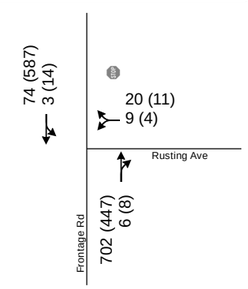
FEHR PEERS



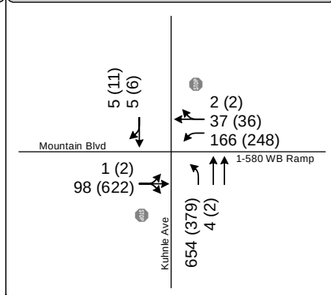
1. Mountain Blvd & SR 13 NB Off-Ramp



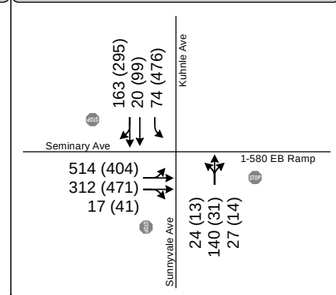
2. Rusting Ave & Frontage Rd



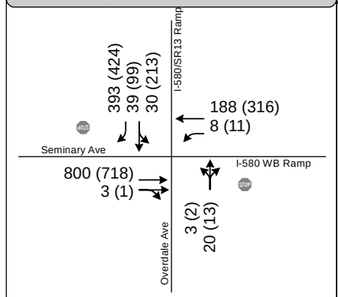
3. I-580 WB Off-Ramp & Kuhnle Ave



4. I-580 EB Off-Ramp & Kuhnle Ave



5. Seminary Ave & I-580 WB On-Ramp



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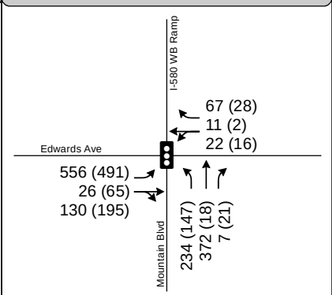
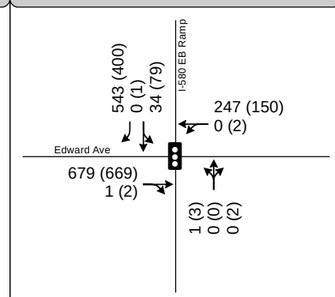
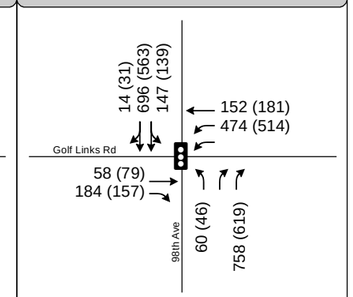


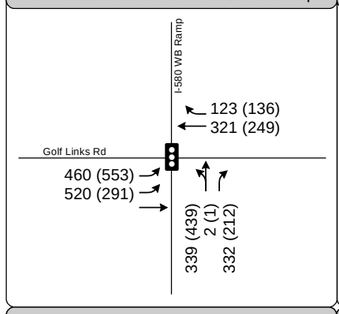
7. Edwards Ave & I-580 EB Off-Ramp



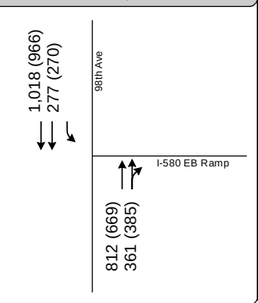
8. Golf Links Rd & 98th Ave



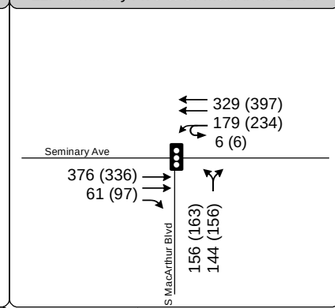
9. Golf Links Rd & I-580 WB On-Ramp



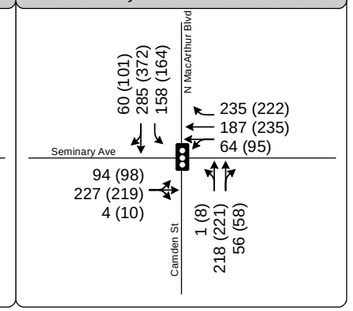
10. I-580 EB On-Ramp & 98th Ave



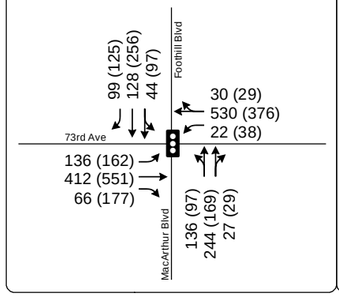
11. Seminary Ave & S. MacArthur Blvd



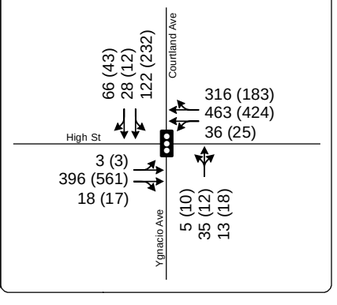
12. Seminary Ave & N. MacArthur Blvd



13. 73rd Ave & Foothill Blvd



14. High St & Courtland Ave



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C1.a

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Conditions

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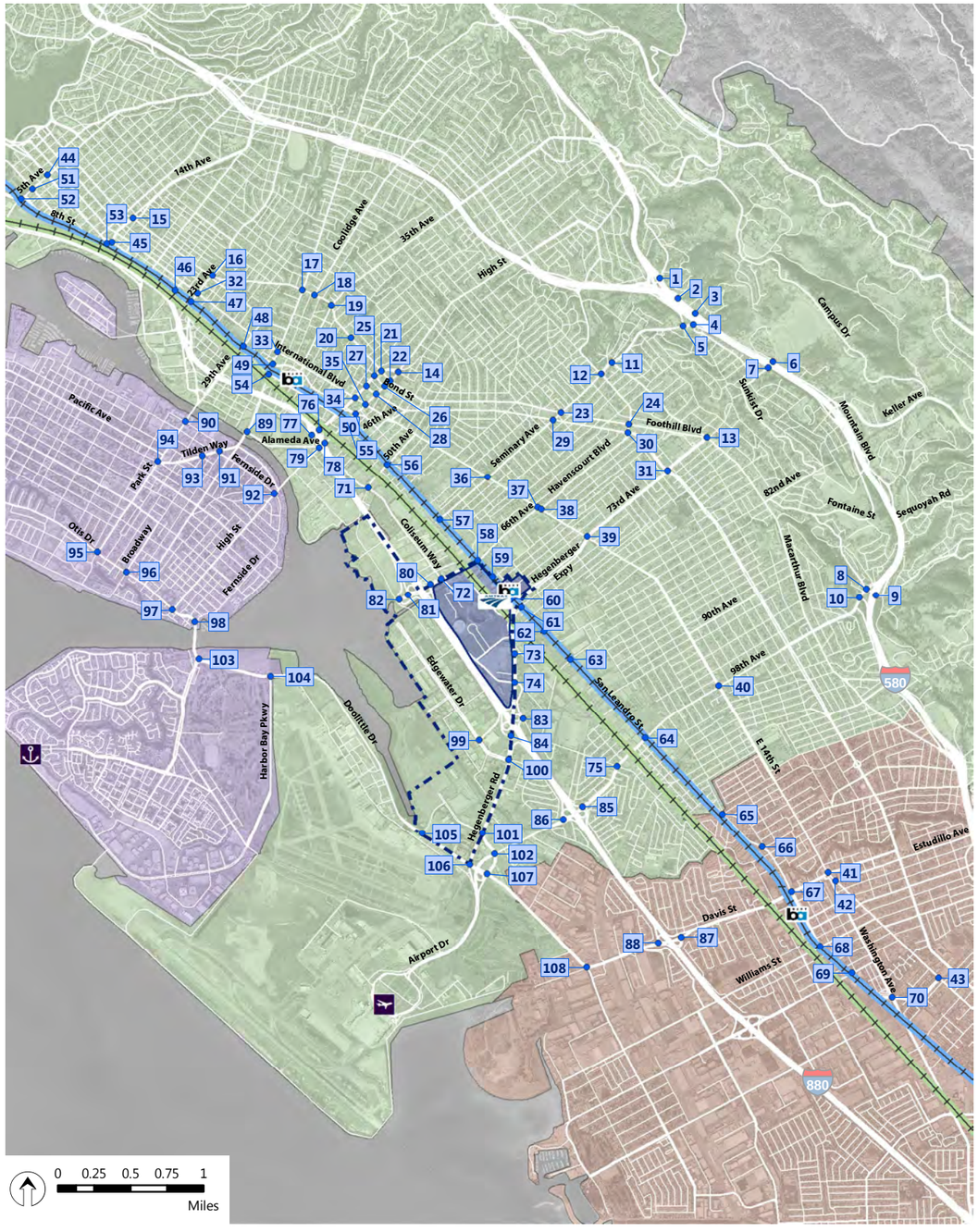
Date: January, 2014

FEHR PEERS



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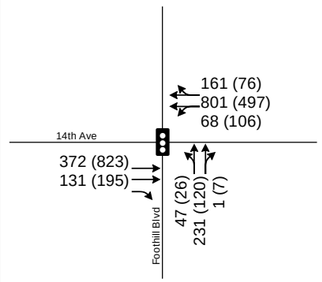

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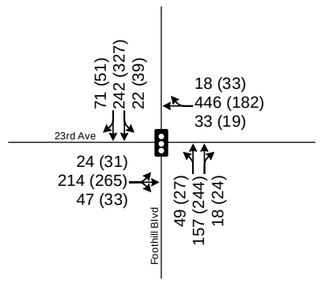

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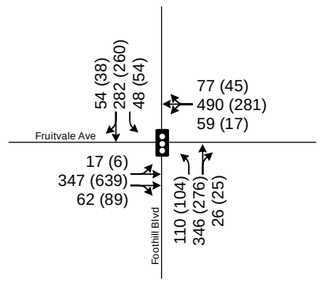
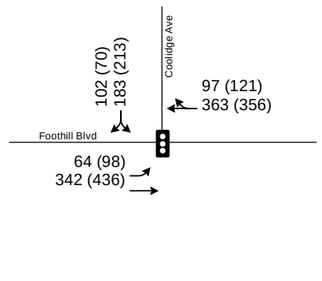
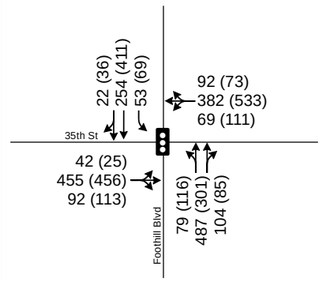


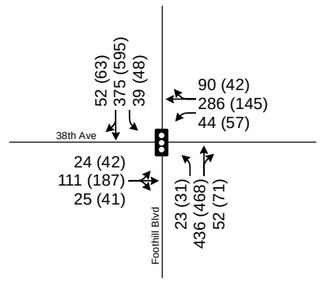
18. Foothill Blvd & Coolidge Ave



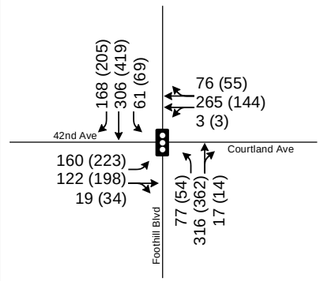
19. 35th St & Foothill Blvd



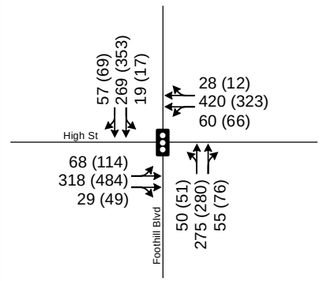
20. 38th Ave & Foothill Blvd



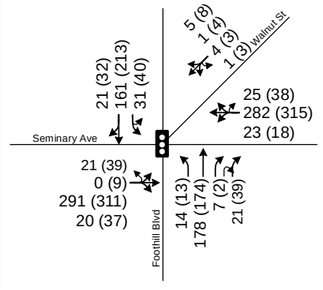
21. Courtland Ave & Foothill Blvd



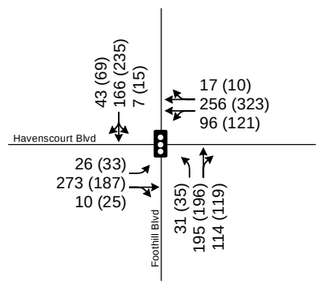
22. High St & Foothill Blvd



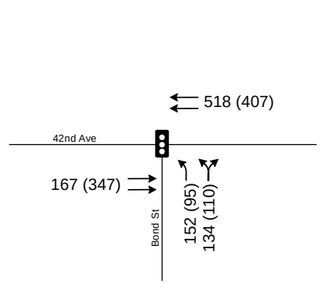
23. Seminary Ave & Foothill Blvd



24. Havenscourt Blvd & Foothill Blvd



25. 42nd Ave & Bond St



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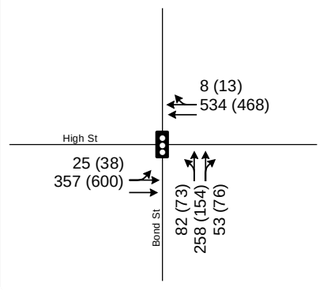
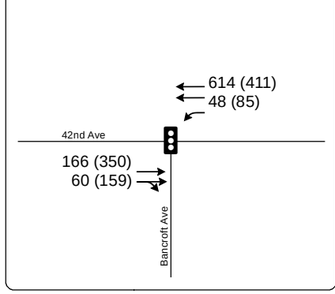
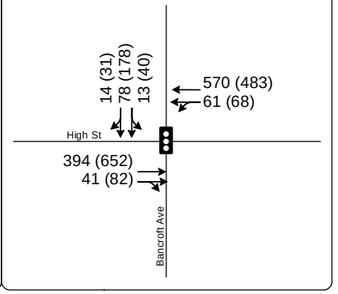


27. 42nd Ave & Bancroft Ave



28. High St & Bancroft Ave



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C1.b

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\Ex_Conditions_B.mxd

Date: January, 2014

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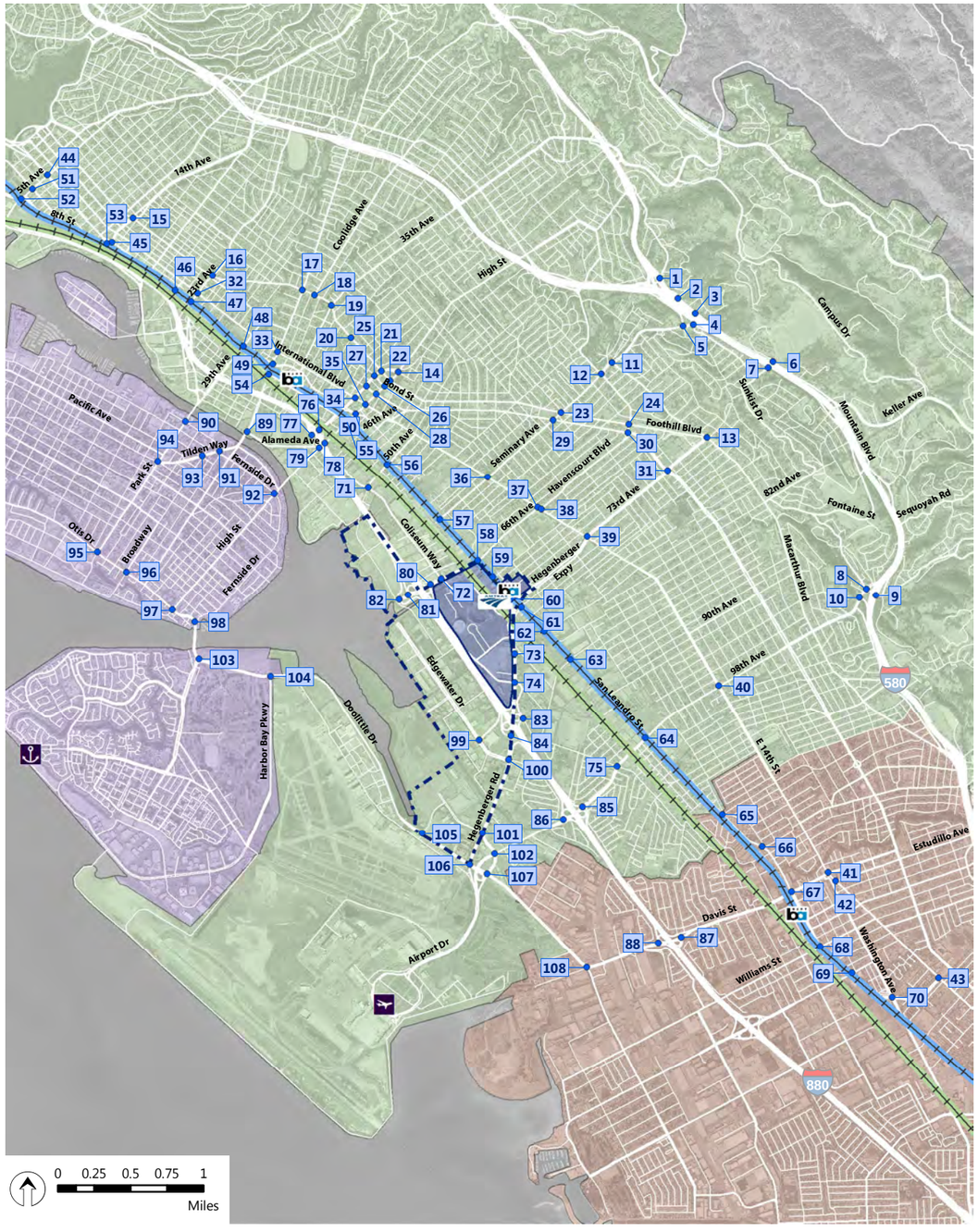
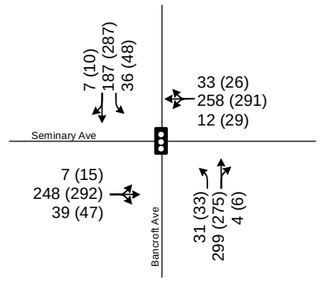
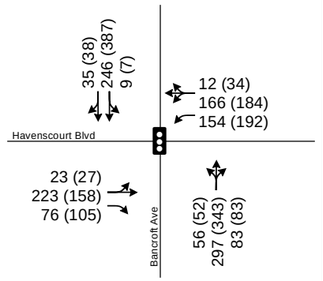


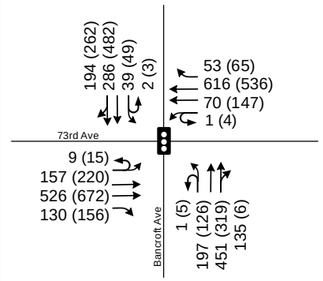
29. Seminary Ave & Bancroft Ave



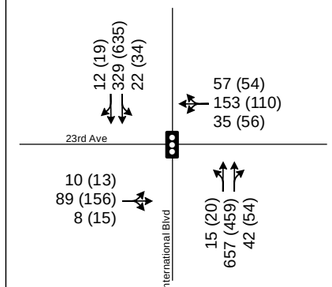
30. Havenscourt Blvd & International Blvd



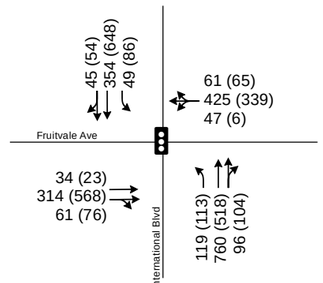
31. 73rd Ave & Bancroft Ave



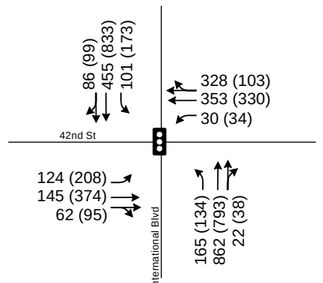
32. 23rd Ave & International Blvd



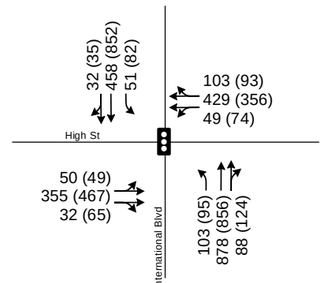
33. Fruitvale Ave & International Blvd



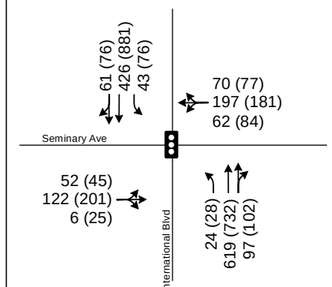
34. 42nd St & International Blvd



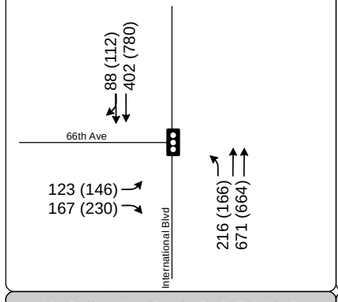
35. High St & International Blvd



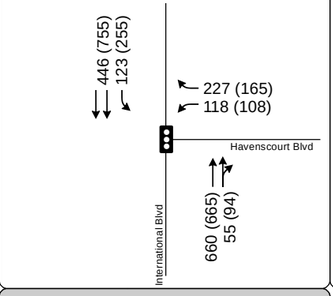
36. Seminary Ave & International Blvd



37. 66th Ave & International Blvd



38. Havenscourt Blvd & International Blvd



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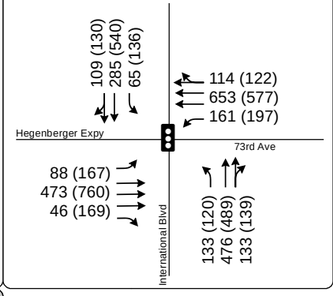
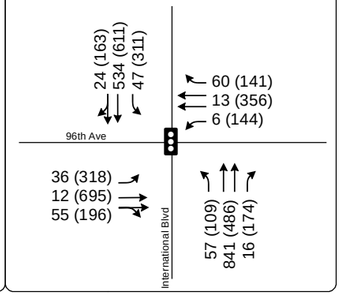
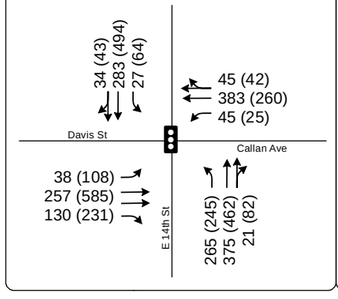


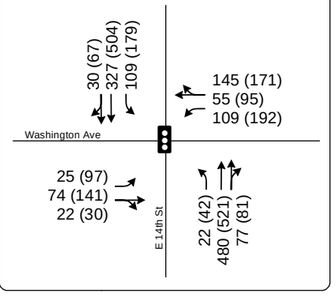
40. 98th Ave & International Blvd



41. Callan Ave/Davis St & E 14th St



42. Washington/Estudilo Ave & E 14th St



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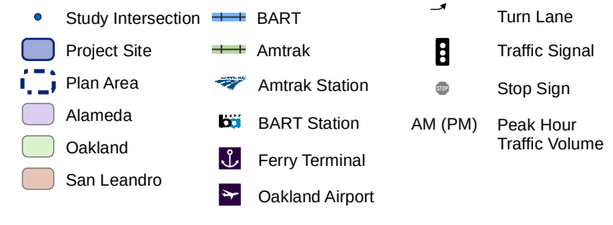

Figure C1.c

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\Ex_Conditions_C.mxd

Date: January, 2014

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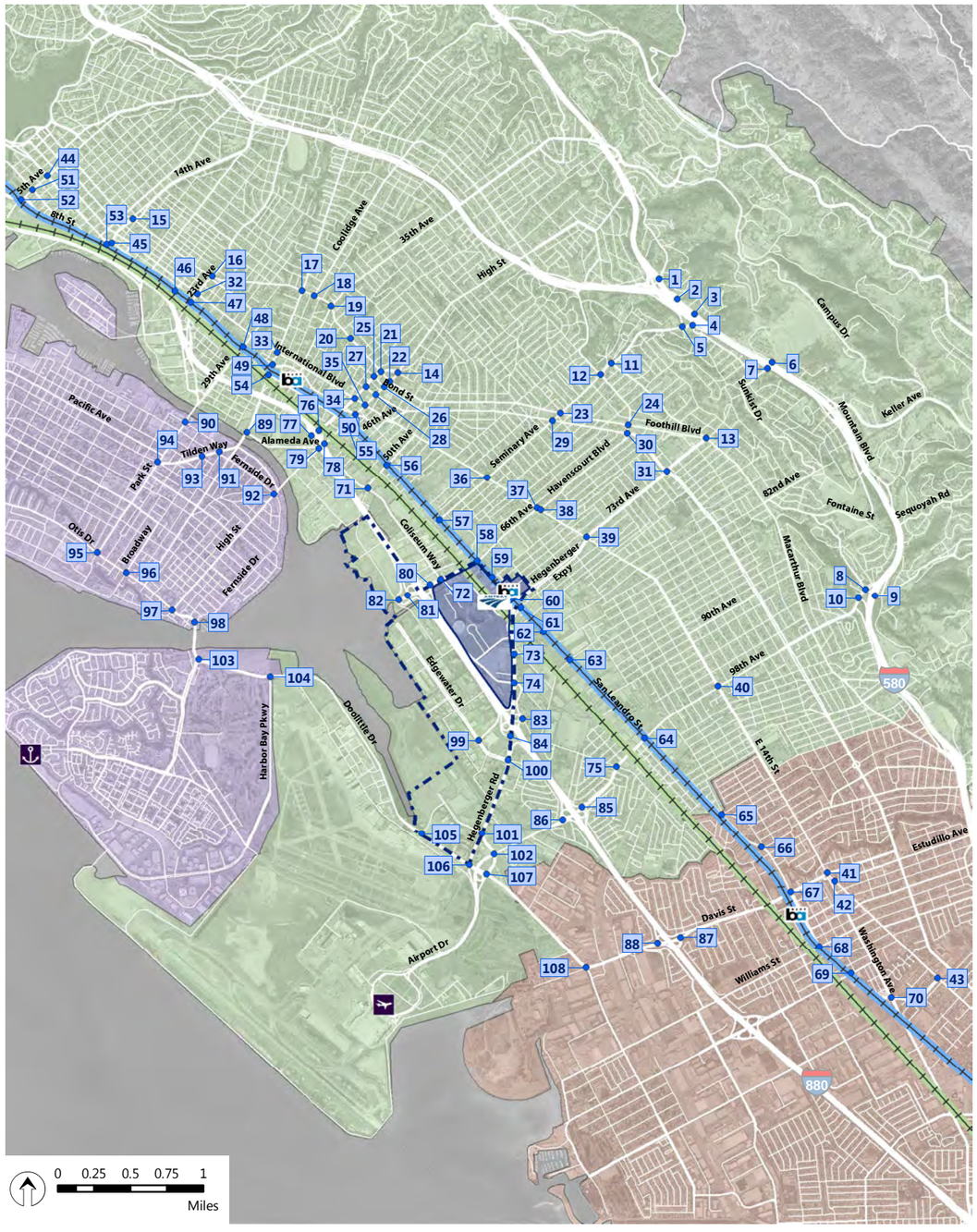
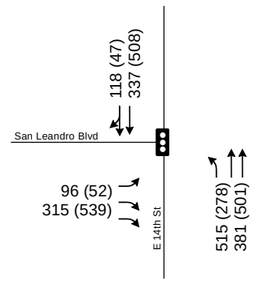
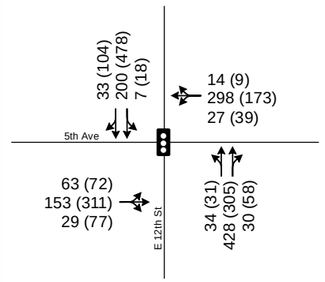


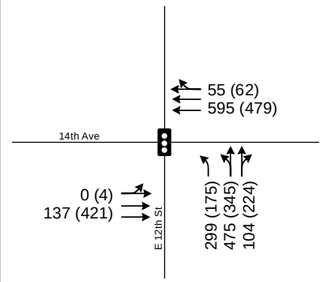
43.San Leandro Blvd & E 14th St



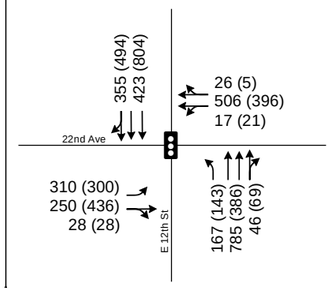
44. 5th Ave & E 12th St



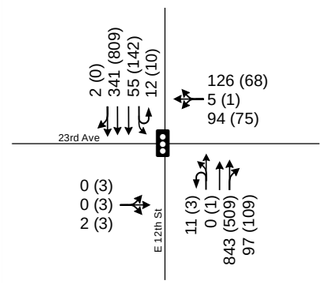
45. 14th Ave & E 12th St



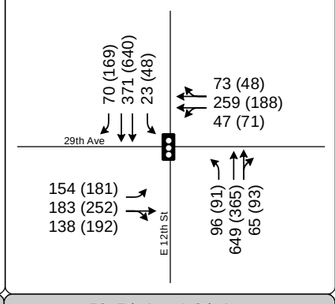
46. 22nd Ave & E 12th St



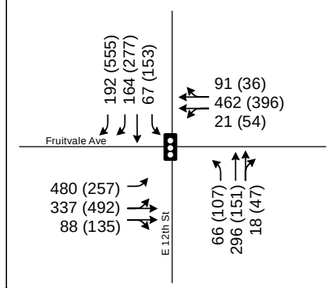
47. 23rd Ave & E 12th St



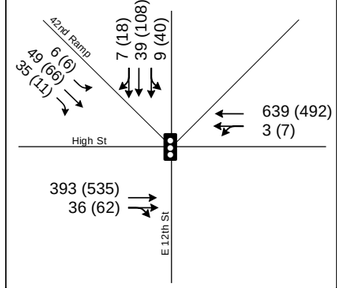
48. 29th Ave & E 12th St



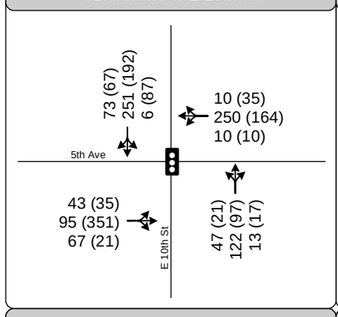
49. Fruitvale Ave & E 12th St



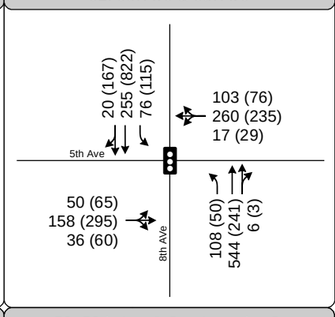
50. High St & E 12th St



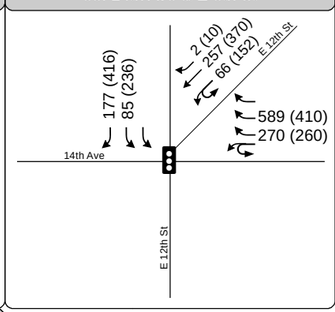
51. 5th Ave & E 10th St



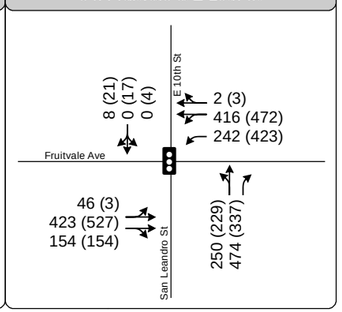
52. 5th Ave & 8th Ave



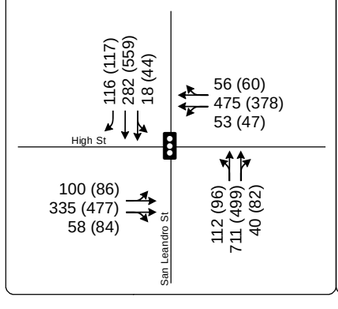
53. 14th Ave & E 8th St



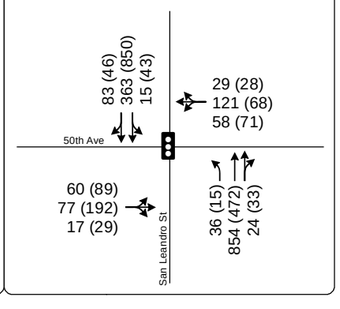
54. Fruitvale & E 10th St



55. High St & San Leandro St



56. 50th Ave & San Leandro St



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C1.d

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\Ex_Conditions_D.mxd

Date: January, 2014

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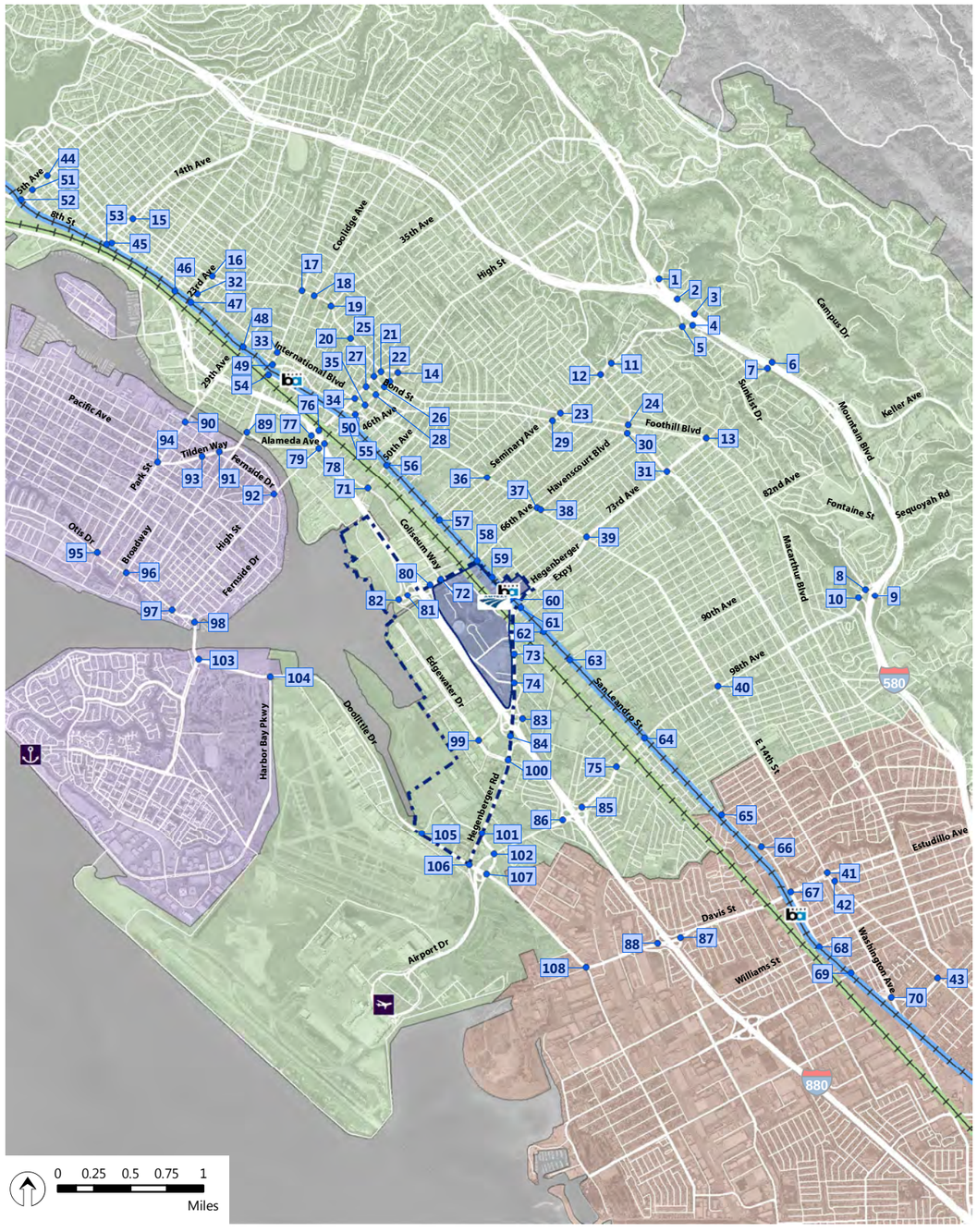
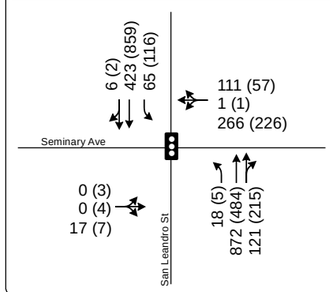
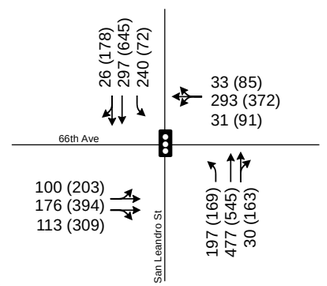


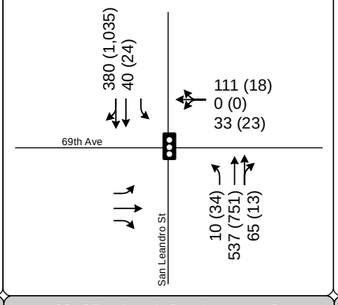
57. Seminary Ave & San Leandro St



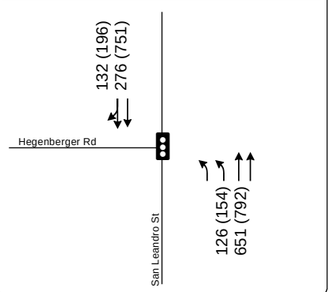
58. 66th Ave & San Leandro St



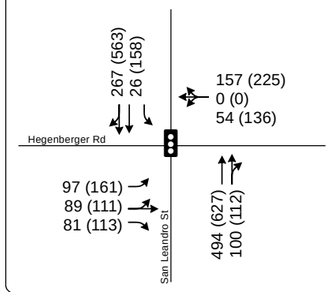
59. 69th Ave & San Leandro St



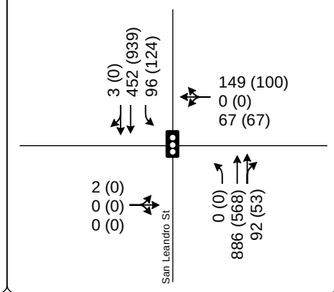
60. Hegenberger Ramp & San Leandro St



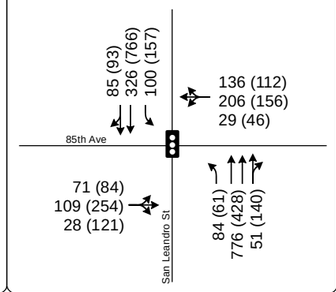
61. Hegenberger Ramp & San Leandro St



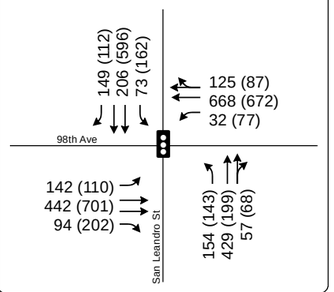
62. 81st Ave & San Leandro St



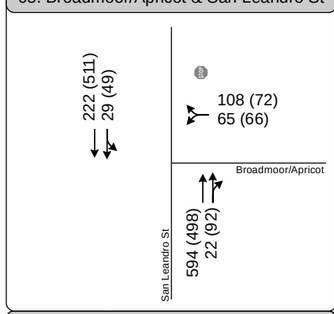
63. 85th Ave & San Leandro St



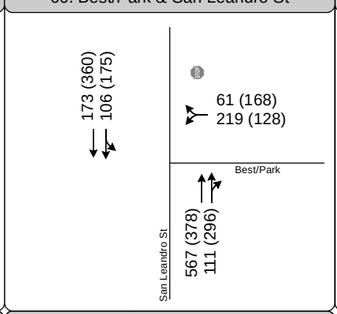
64. 98th Ave & San Leandro St



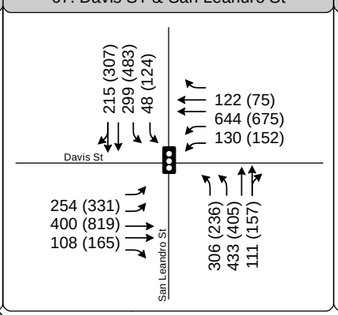
65. Broadmoor/Apricot & San Leandro St



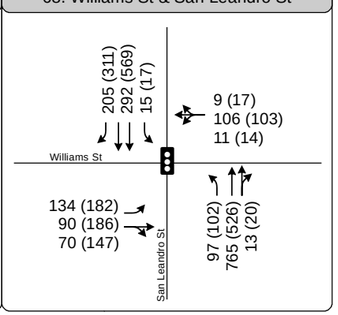
66. Best/Park & San Leandro St



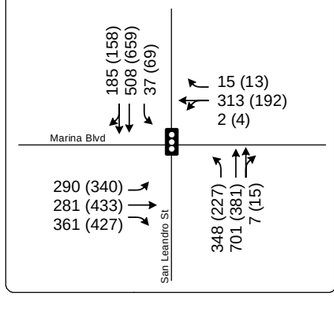
67. Davis ST & San Leandro St



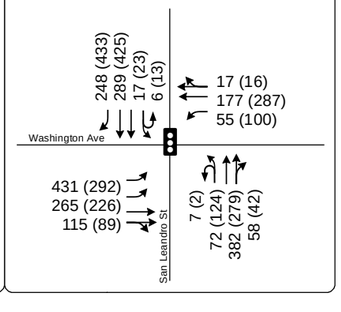
68. Williams St & San Leandro St



69. Marina Blvd & San Leandro St



70. Washington Ave & San Leandro St



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C1.e

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\Ex_Conditions_E.mxd

Date: January, 2014

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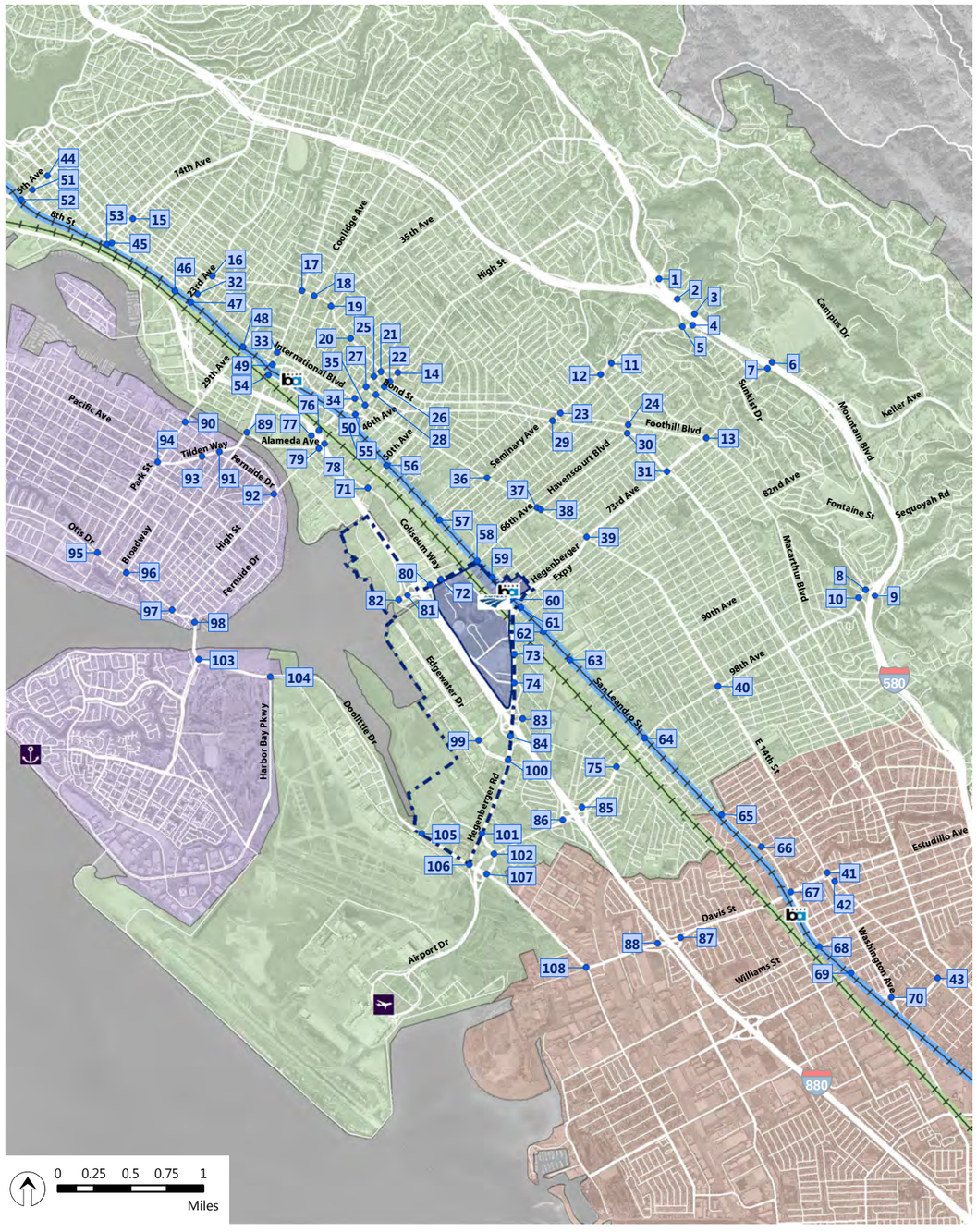
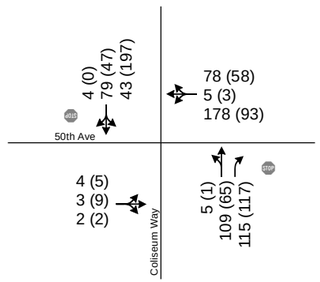
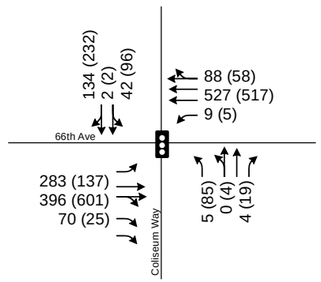


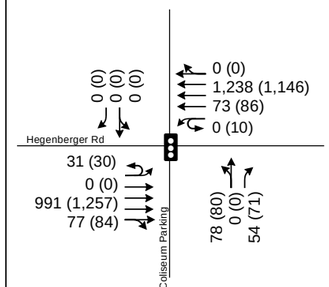
71. 50th Ave & Coliseum Way



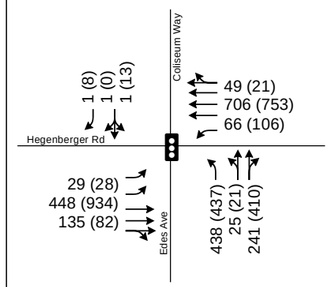
72. 66th Ave & Coliseum Way



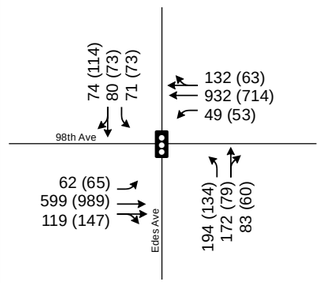
73. Hegenberger Rd & Coliseum Parking



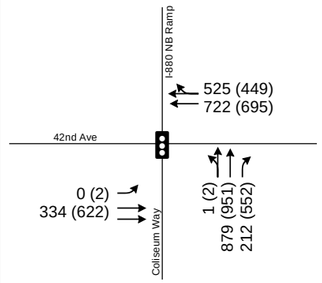
74. Hegenberger Rd & Coliseum Way



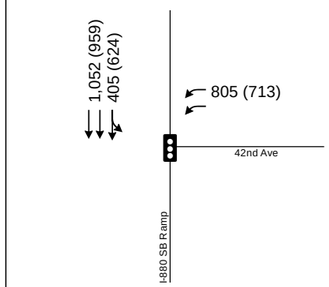
75. 98th Ave & Edes Ave



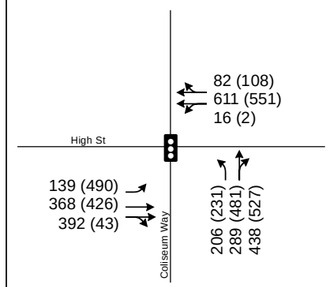
76. 42nd Ave & I-880 NB Ramps



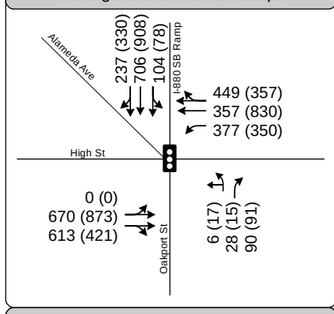
77. 42nd Ave & I-880 SB Ramps



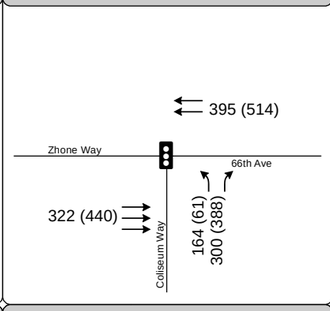
78. High St & Coliseum Way



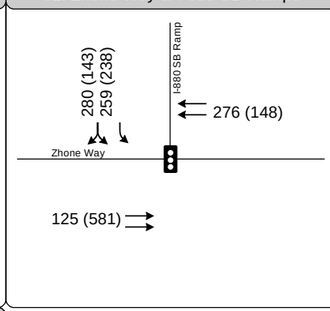
79. High St & I-880 SB Ramps



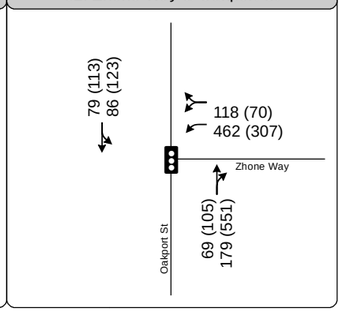
80. 66th Ave & Coliseum Way



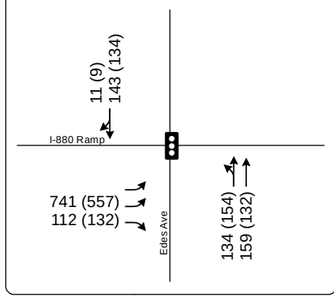
81. Zhone Way & I-880 SB Ramps



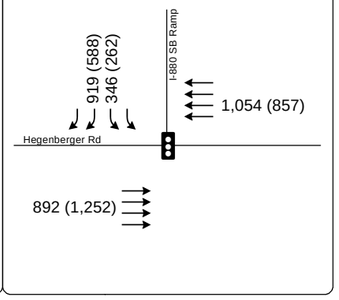
82. Zhone Way & Oakport St



83. I-880 Off-Ramps & Edes Ave



84. Hegenberger Rd & I-880 SB Ramps



Legend

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- AM (PM) Peak Hour Traffic Volume

Figure C1.f

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Conditions

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Date: January, 2014

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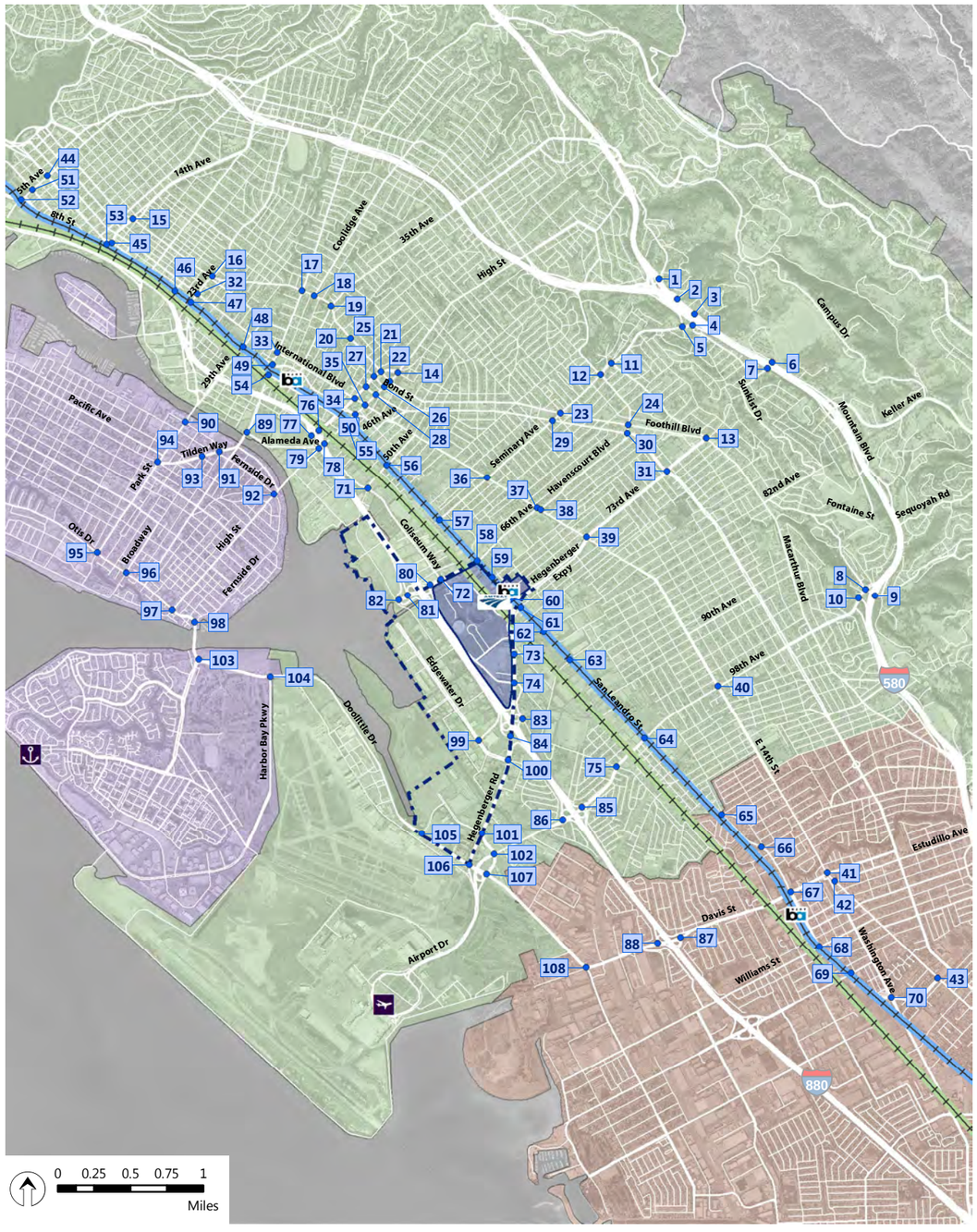
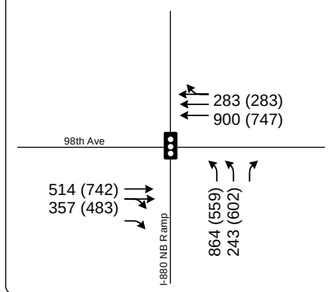
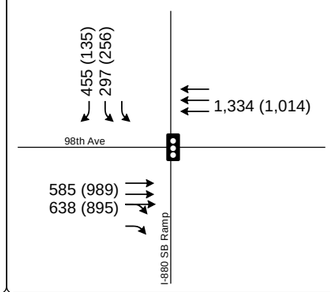


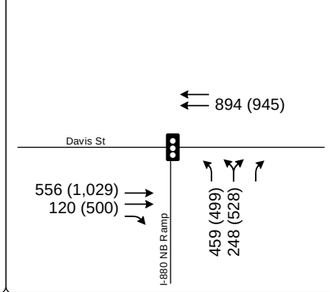
85. 98th Ave & I-880 NB Ramps



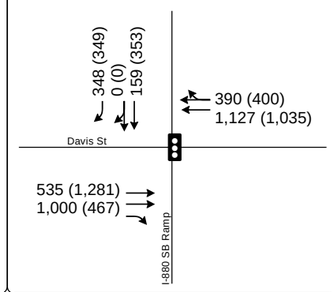
86. 98th AVe & I-880 SB Ramps



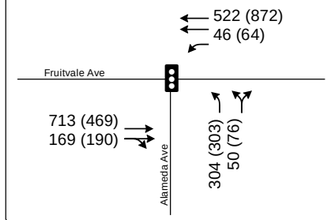
87. Davis St & I-880 NB Ramps



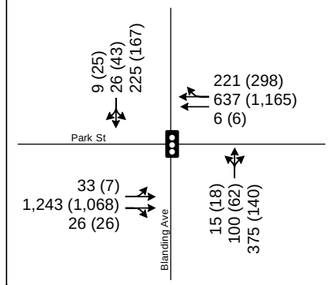
88. Davis St & I-880 SB Ramps



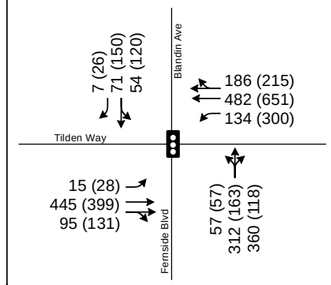
89. Fruitvale Ave & Alameda Ave



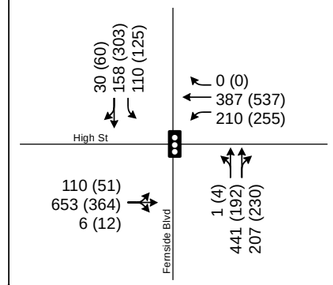
90. Park St & Blanding Ave



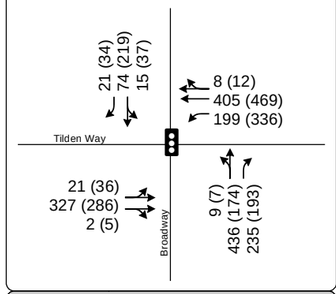
91. Tilden Way & Fernside/Blanding



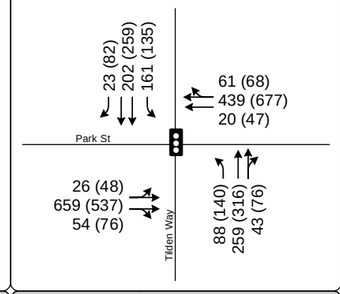
92. High St & Fernside Blvd



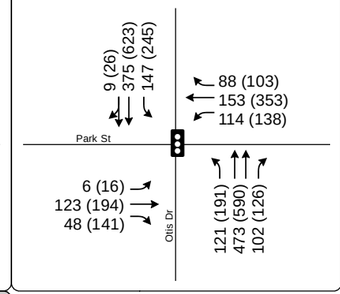
93. Tilden Way & Broadway



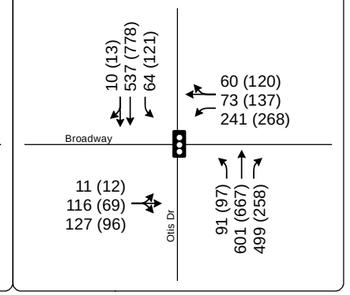
94. Park St & Tilden Way



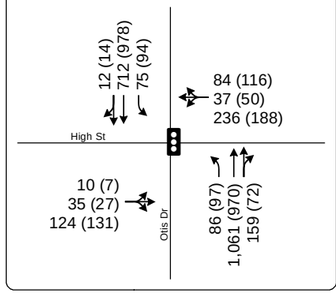
95. Park St & Otis Dr



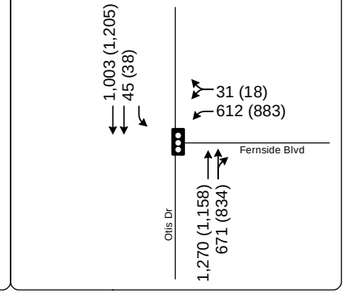
96. Broadway & Otis Dr



97. High St & Otis Dr



98.Fernside Blvd & Otis Dr



Legend

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- Amtrak
- Amtrak Station
- BART Station
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- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C1.g

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Conditions

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Date: January, 2014

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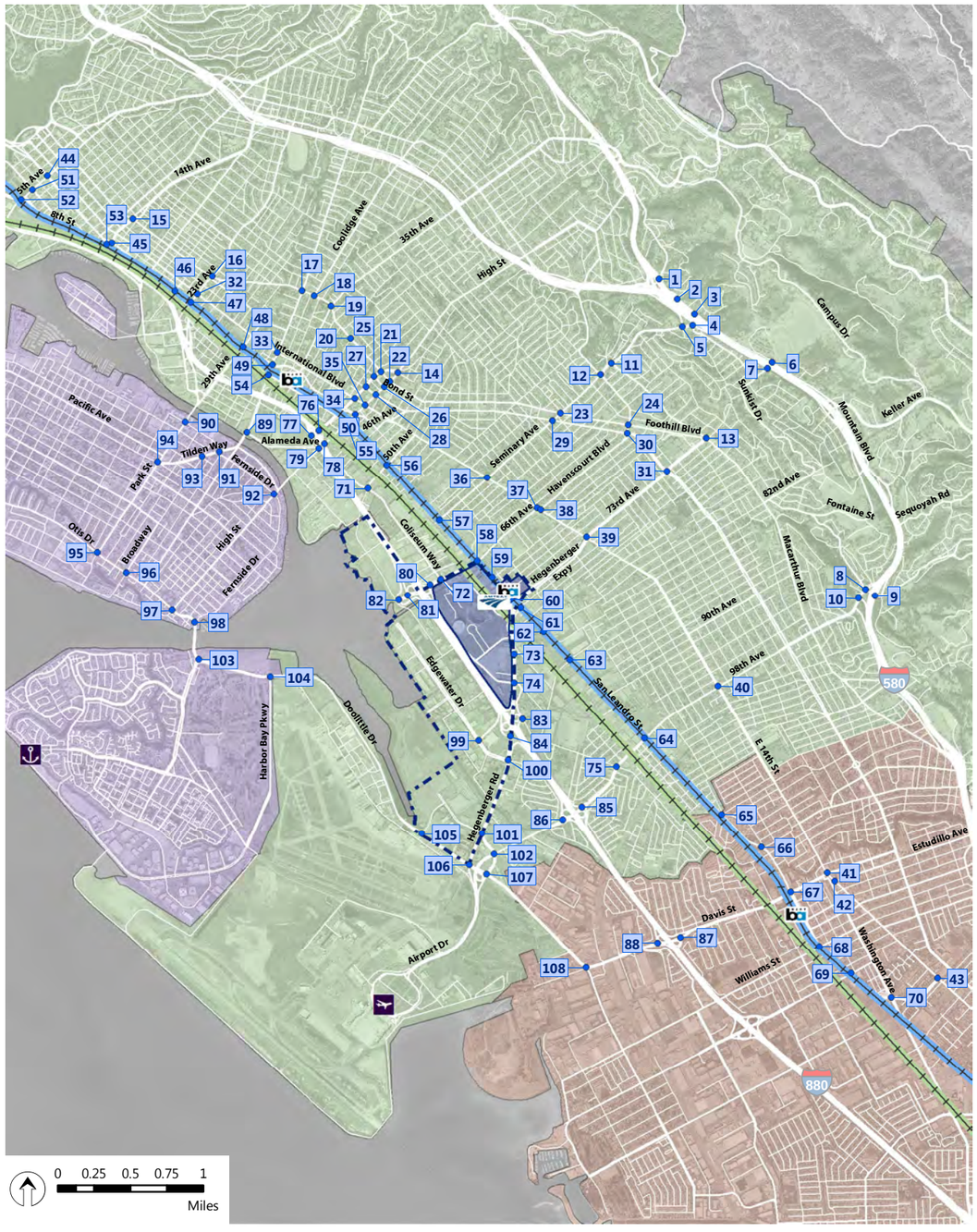
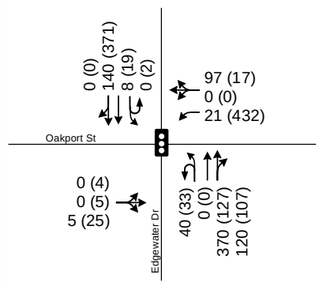
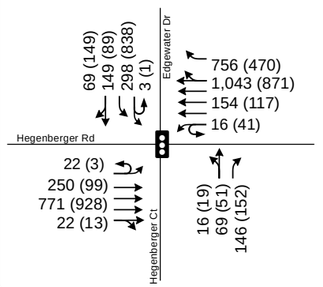


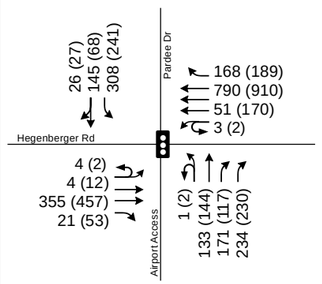
99. Oakport St & Edgewater Dr



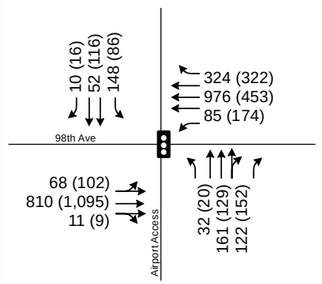
100. Hegenberger Rd & Edgewater Dr



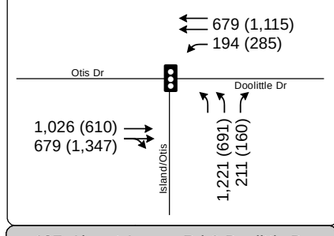
101. Hegenberger Rd & Parade Dr



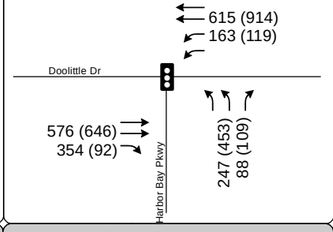
102. 98th Ave & Airport Acess Rd



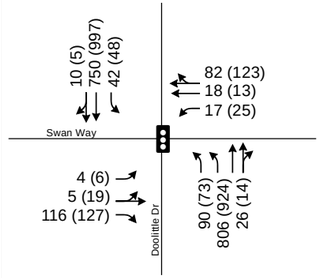
103. Doolittle/Otis & Island Dr



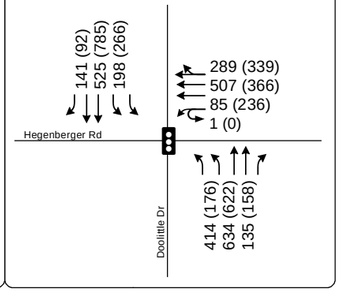
104. Doolittle Dr & Harbor Bay Pkwy



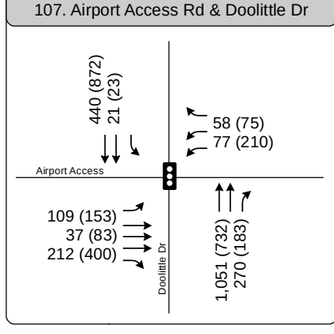
105. Swan Way & Doolittle Dr



106. Hegenberger Rd & Doolittle Dr



107. Airport Access Rd & Doolittle Dr



108. Davis St & Doolittle Dr

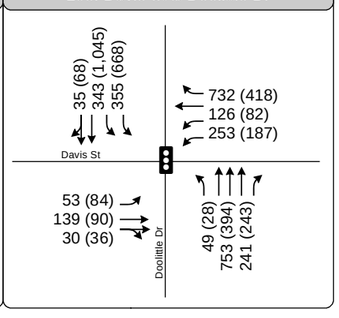


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Figure C1.h

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Conditions

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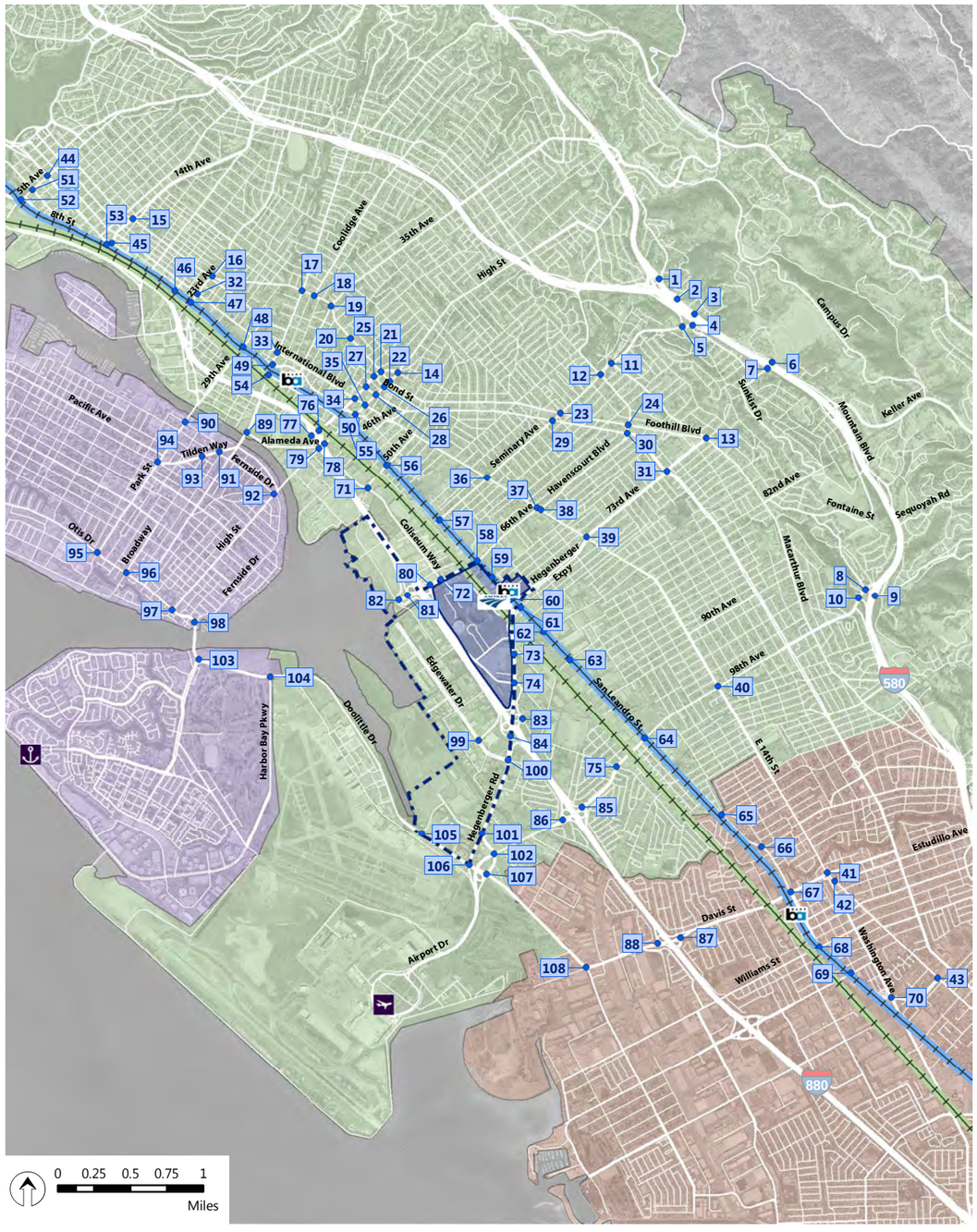
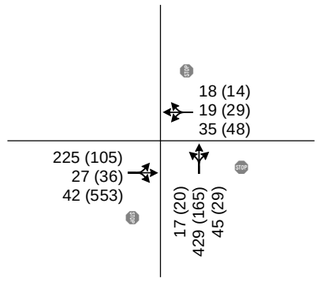
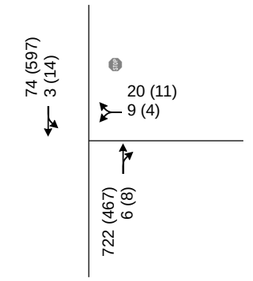


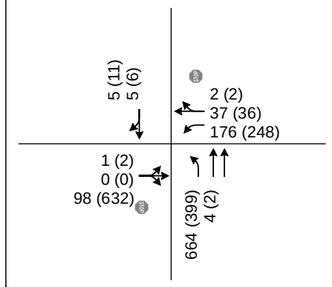
1. Mountain Blvd & SR 13 NB Off-Ramp



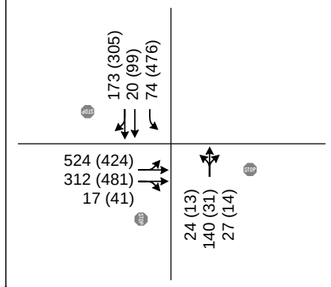
2. Rusting Ave & Frontage Rd



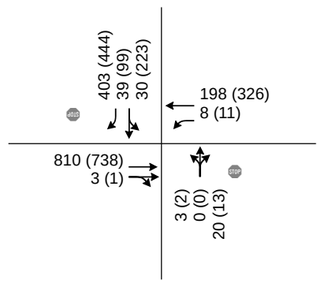
3. I-580 WB Off-Ramp & Kuhnle Ave



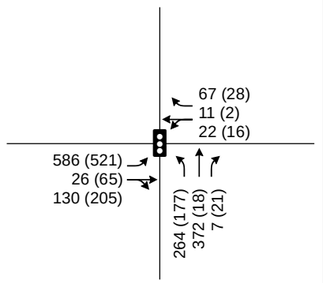
4. I-580 EB Off-Ramp & Kuhnle Ave



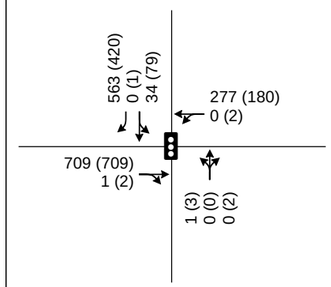
5. Seminary Ave & I-580 WB On-Ramp



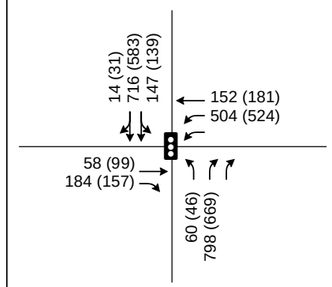
6. Edwards Ave & I-580 WB On-Ramp



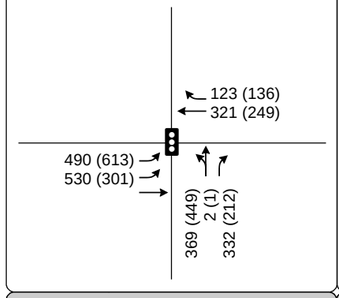
7. Edwards Ave & I-580 EB Off-Ramp



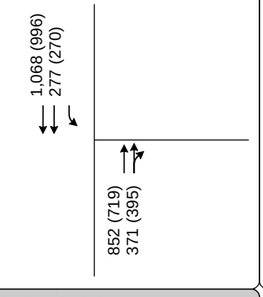
8. Golf Links Rd & 98th Ave



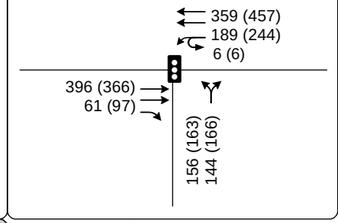
9. Golf Links Rd & I-580 WB On-Ramp



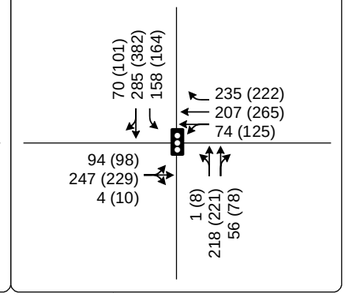
10. I-580 EB On-Ramp & 98th Ave



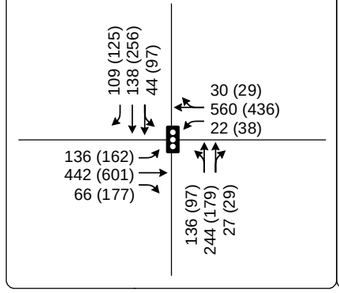
11. Seminary Ave & S. MacArthur Blvd



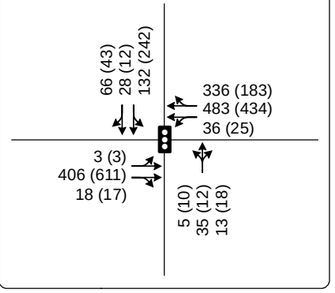
12. Seminary Ave & N. MacArthur Blvd



13. 73rd Ave & Foothill Blvd



14. High St & Courtland Ave



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C2.a

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Plus Project Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\ExPP_Conditions_A.mxd

Date: January, 2014

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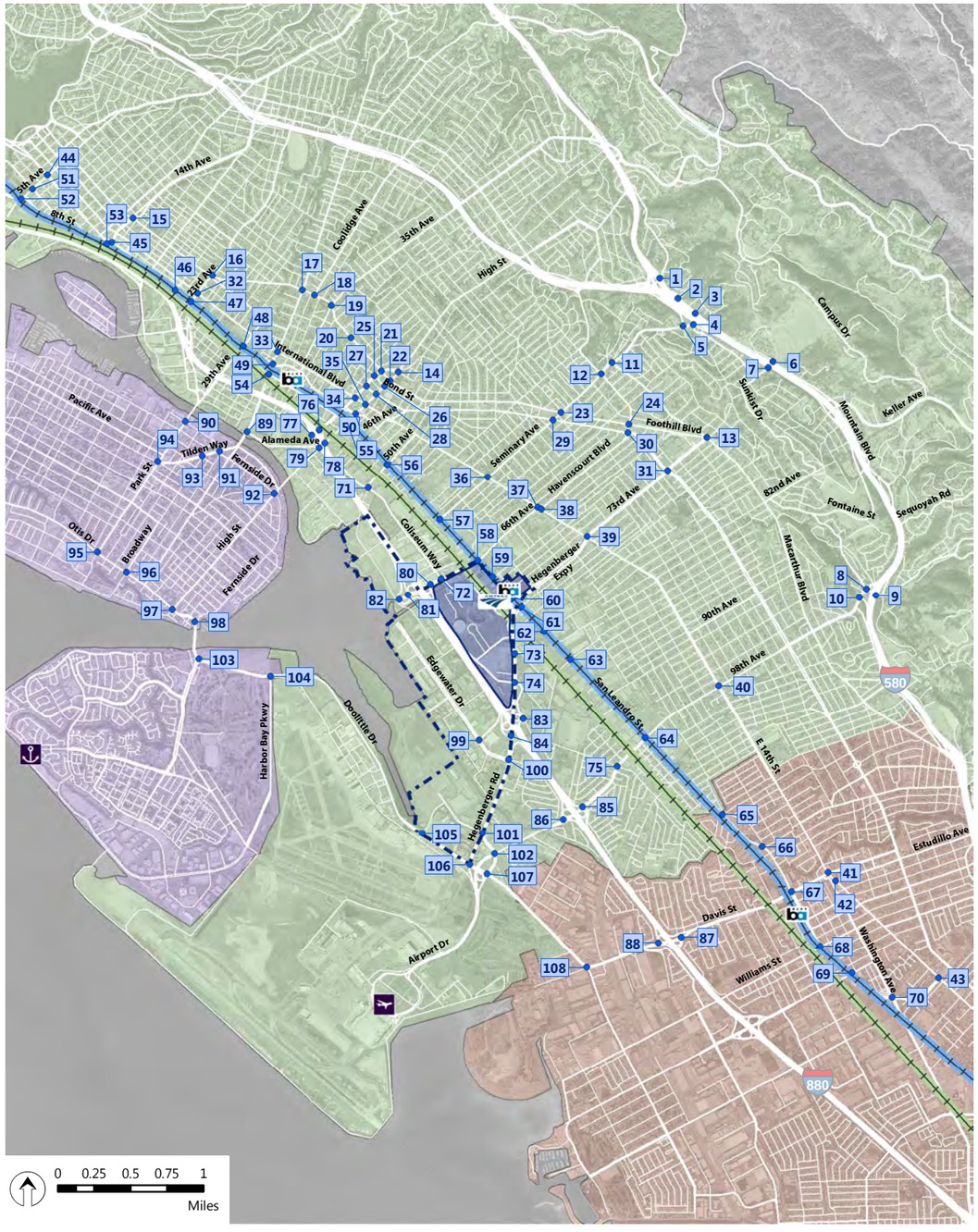
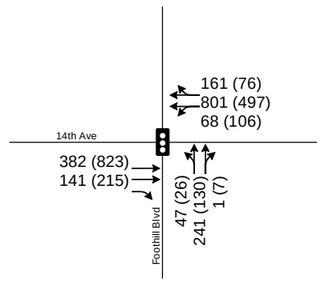
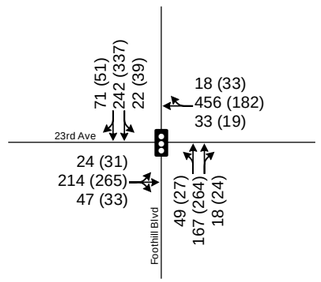


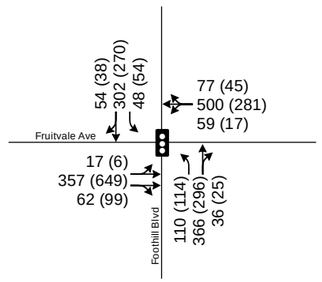
15. 14th Ave & Foothill Blvd



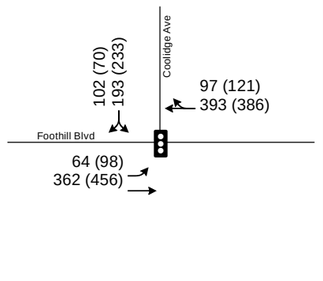
16. 23rd Ave & Foothill Blvd



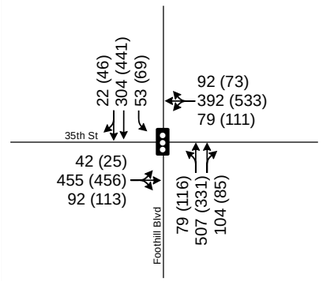
17. Fruitvale Ave & Foothill Blvd



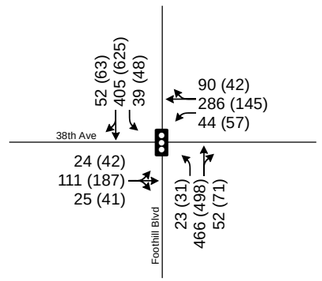
18. Foothill Blvd & Coolidge Ave



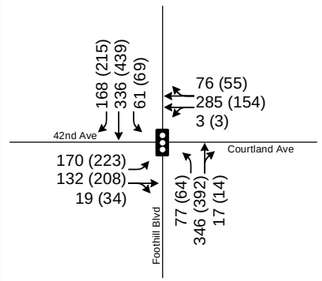
19. 35th St & Foothill Blvd



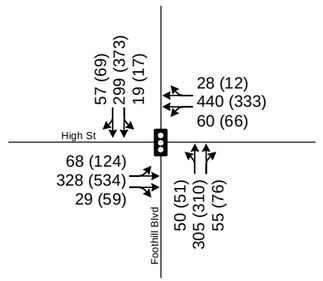
20. 38th Ave & Foothill Blvd



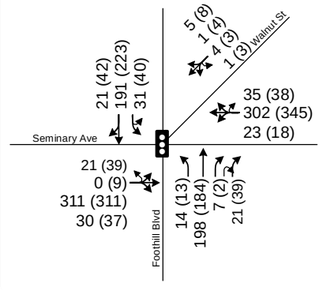
21. Courtland Ave & Foothill Blvd



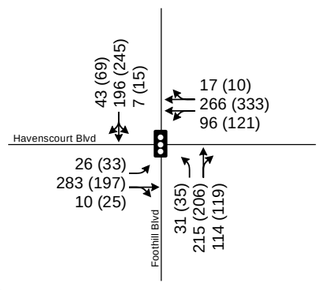
22. High St & Foothill Blvd



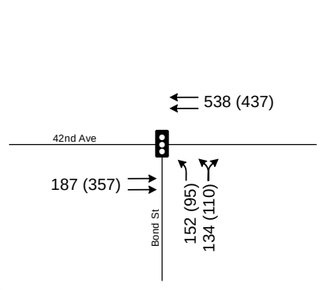
23. Seminary Ave & Foothill Blvd



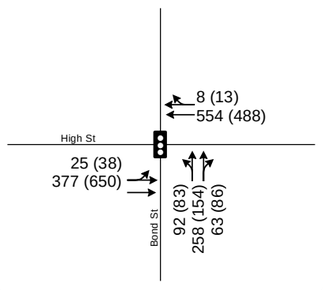
24. Havenscourt Blvd & Foothill Blvd



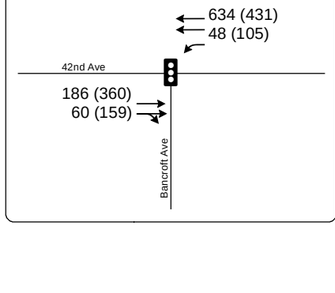
25. 42nd Ave & Bond St



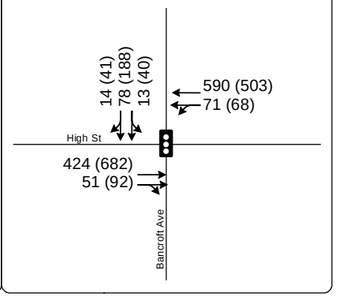
26. High St & Bond St



27. 42nd Ave & Bancroft Ave



28. High St & Bancroft Ave



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C2.b

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Plus Project Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\ExPP_Conditions_B.mxd

Date: January, 2014

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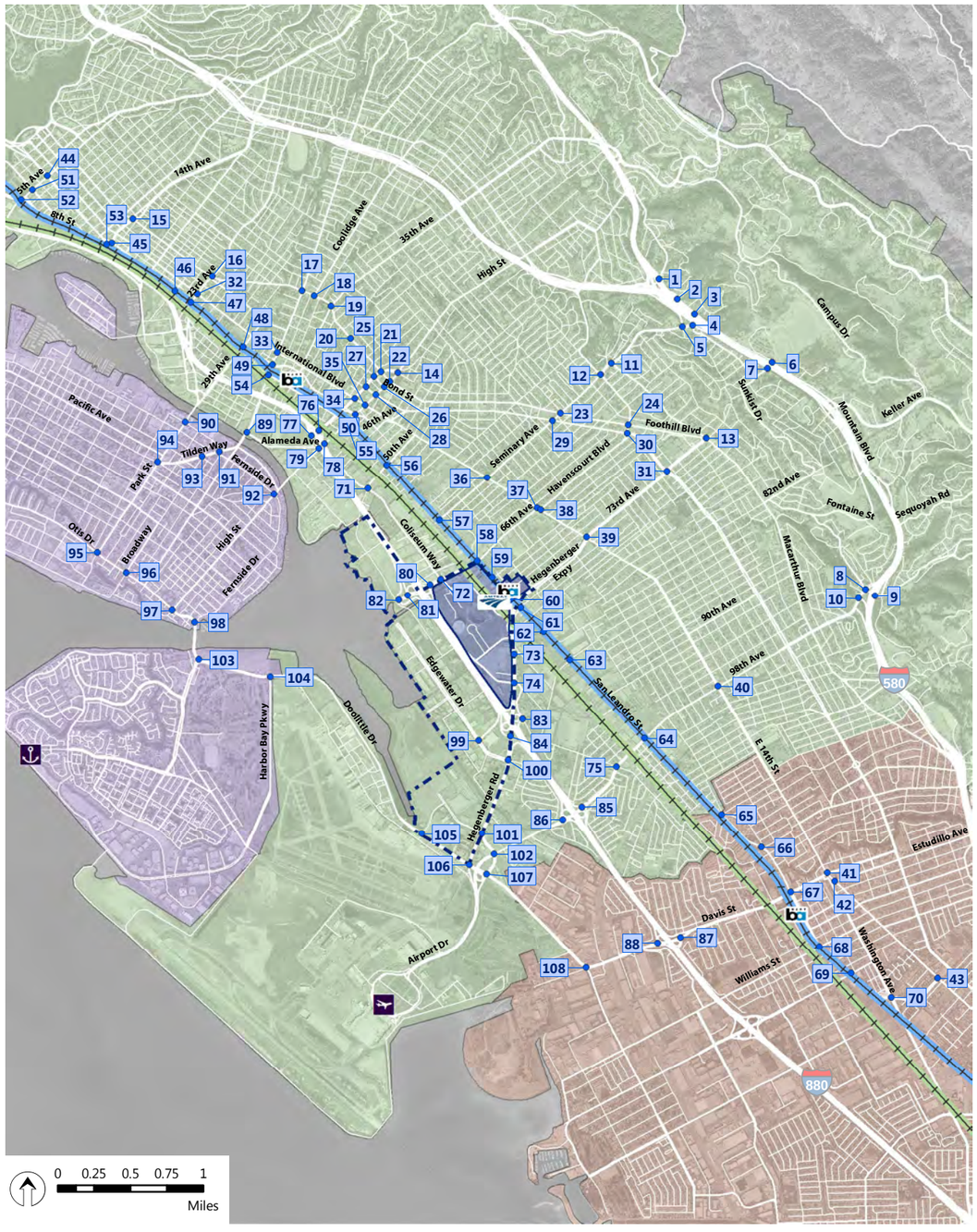

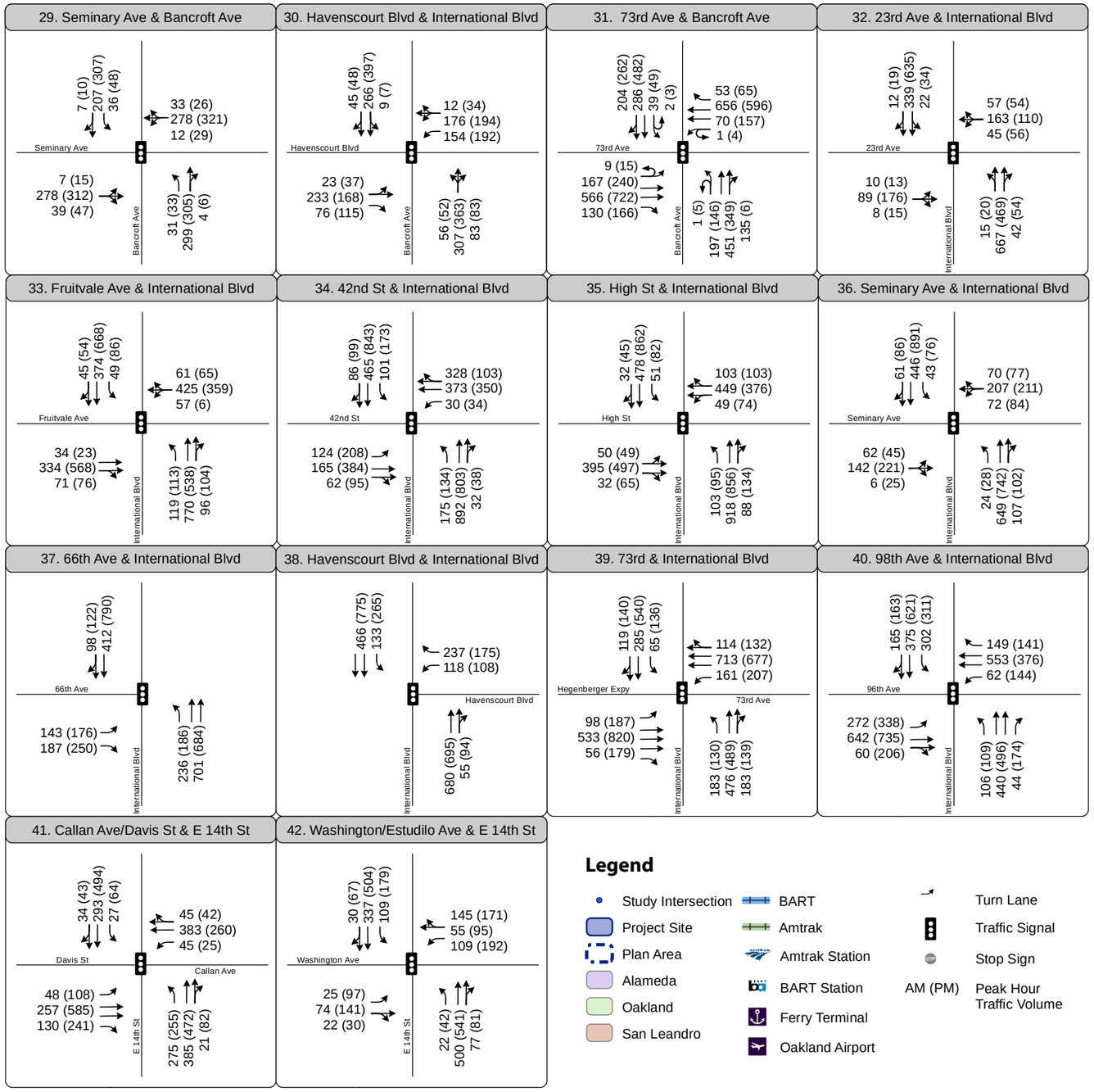

Figure C2.c

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Plus Project Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\ExPP_Conditions_C.mxd

Date: January, 2014

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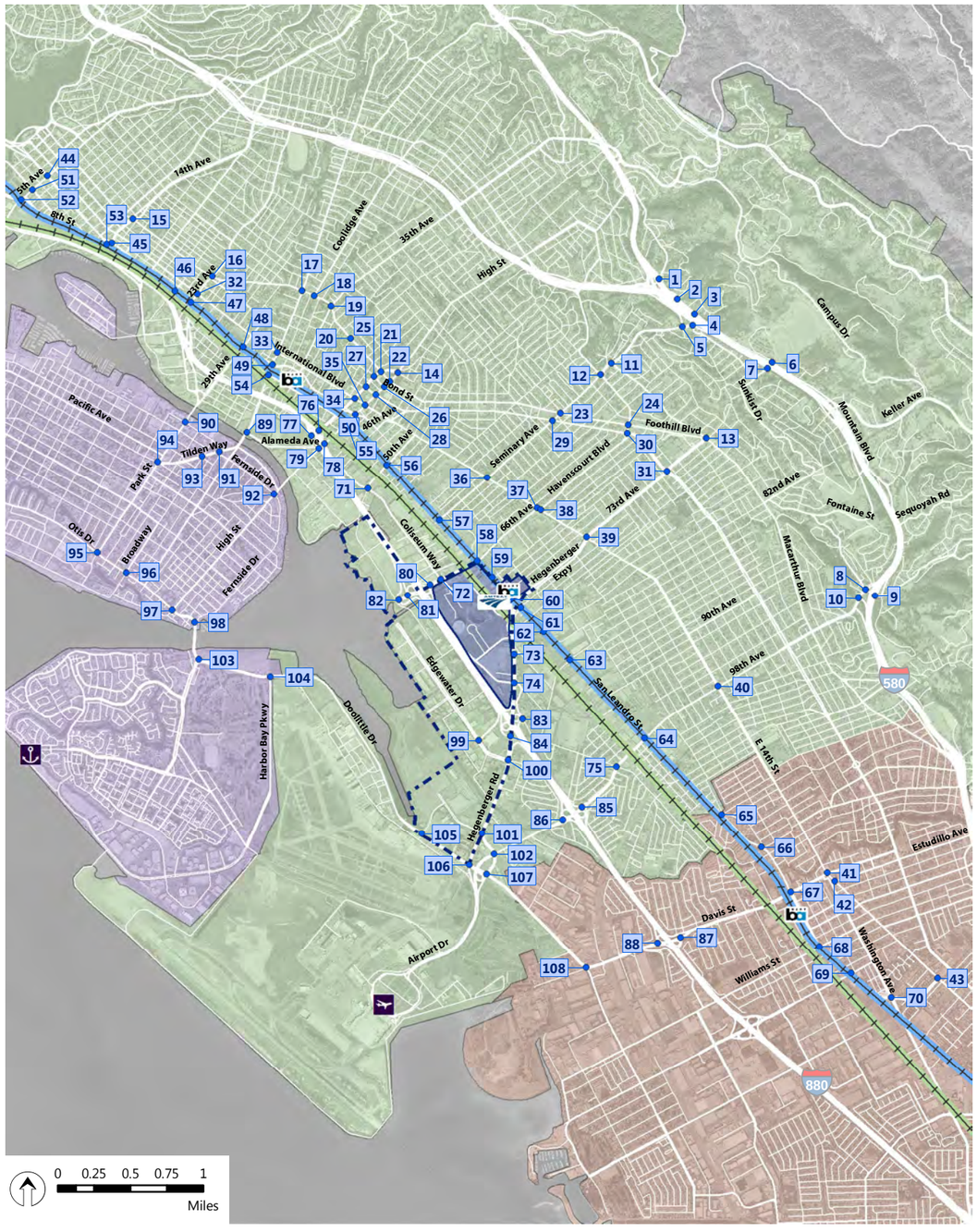
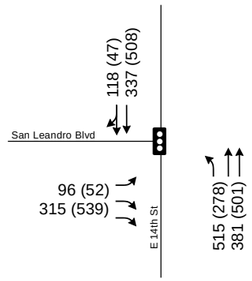
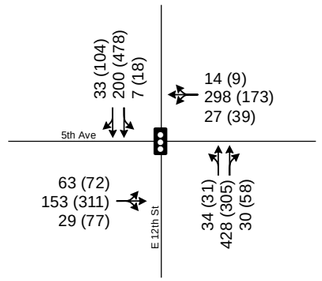


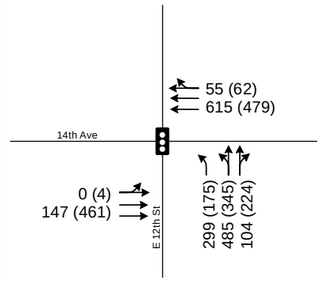
43.San Leandro Blvd & E 14th St



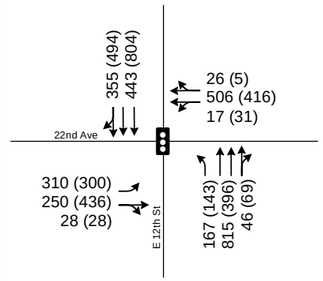
44. 5th Ave & E 12th St



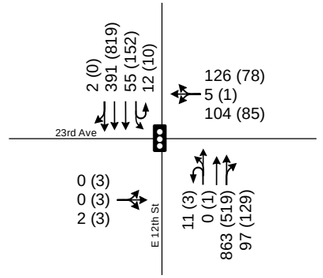
45. 14th Ave & E 12th St



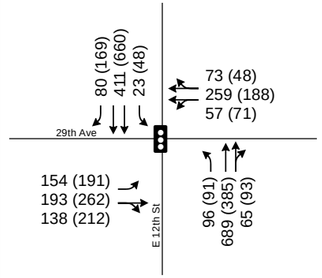
46. 22nd Ave & E 12th St



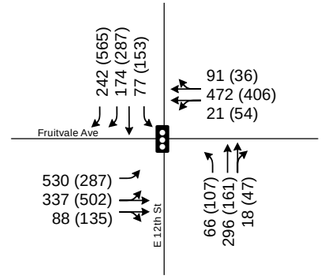
47. 23rd Ave & E 12th St



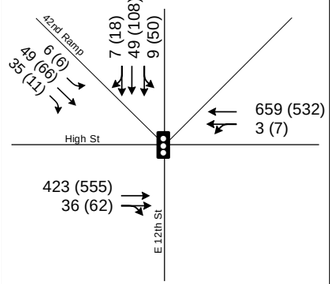
48. 29th Ave & E 12th St



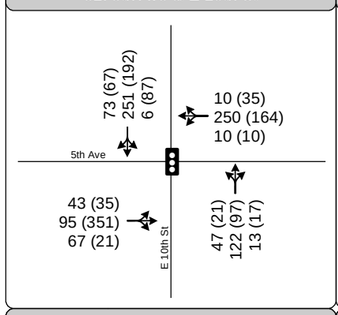
49. Fruitvale Ave & E 12th St



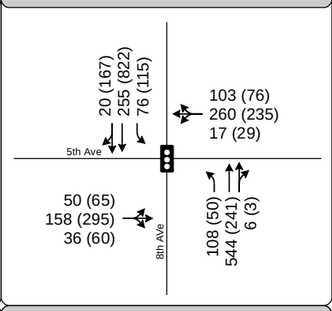
50. High St & E 12th St



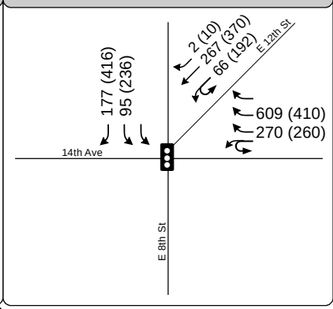
51. 5th Ave & E 10th St



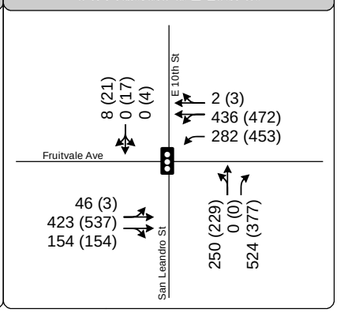
52. 5th Ave & 8th Ave



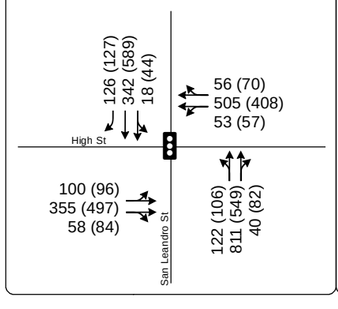
53. 14th Ave & E 8th St



54. Fruitvale & E 10th St



55. High St & San Leandro St



56. 50th Ave & San Leandro St

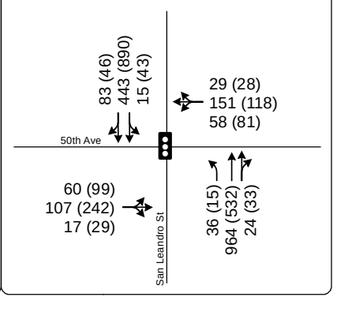


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Figure C2.d

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Plus Project Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\ExPP_Conditions_D.mxd

Date: January, 2014

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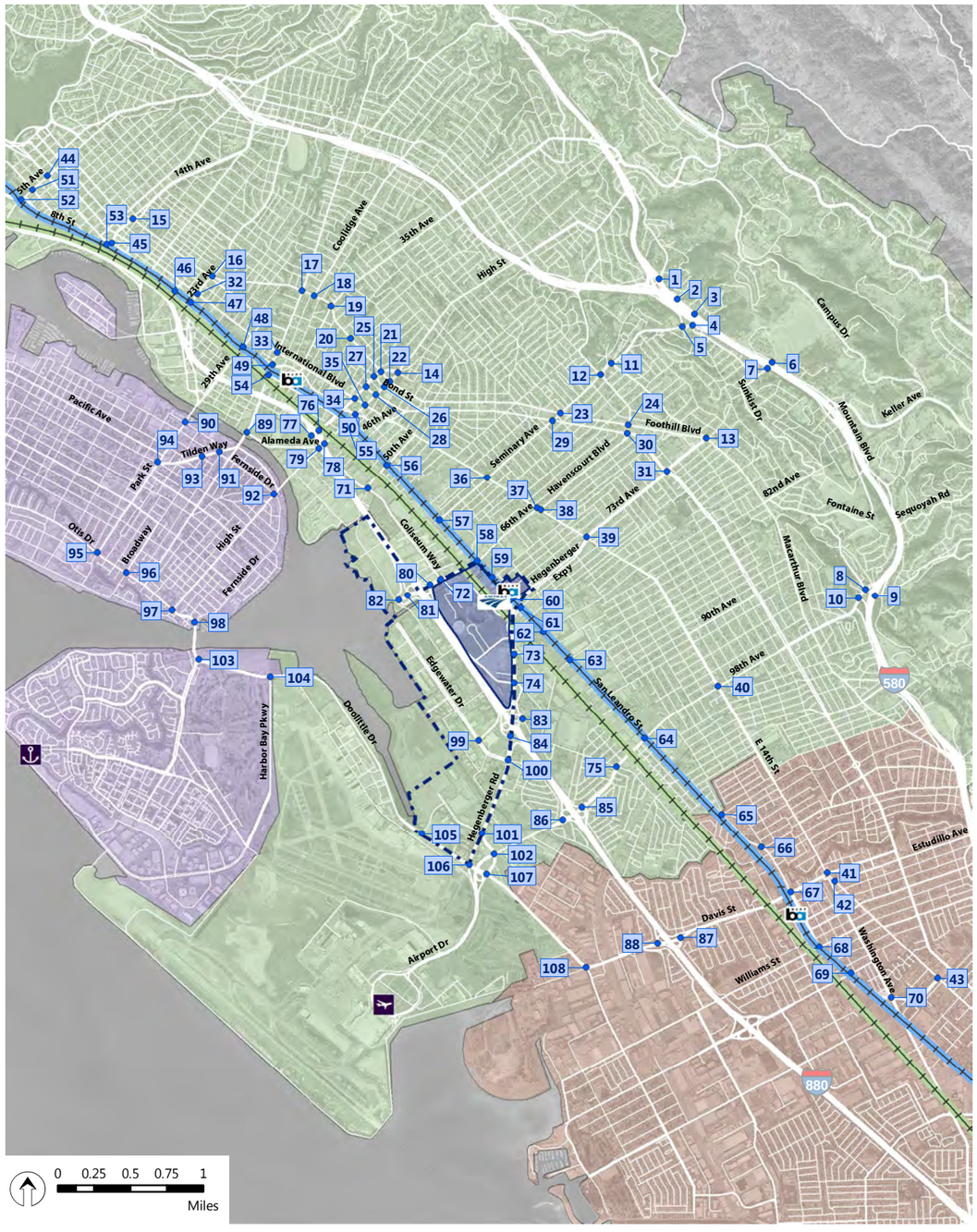
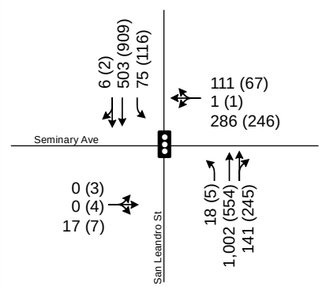
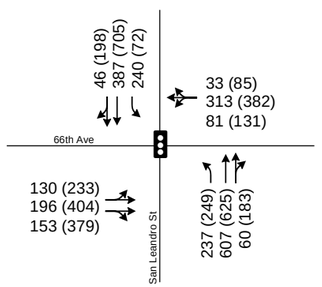


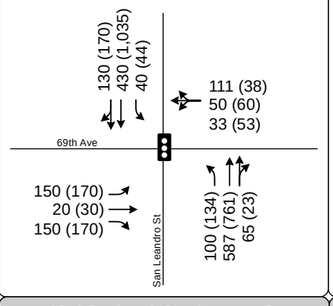
57. Seminary Ave & San Leandro St



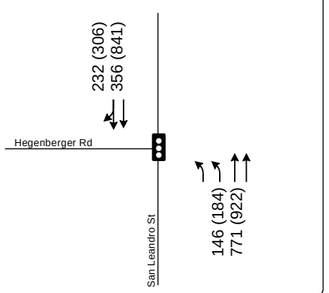
58. 66th Ave & San Leandro St



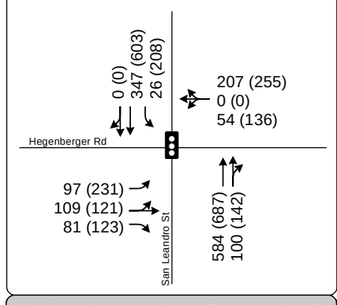
59. 69th Ave & San Leandro St



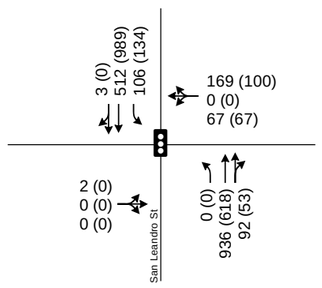
60. Hegenberger Ramp & San Leandro St



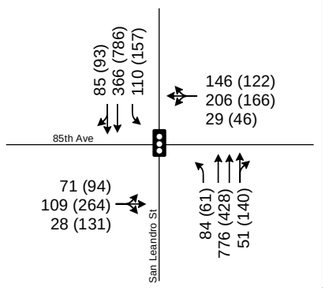
61. Hegenberger Ramp & San Leandro St



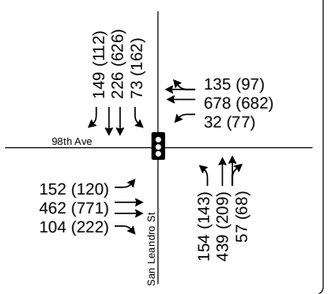
62. 81st Ave & San Leandro St



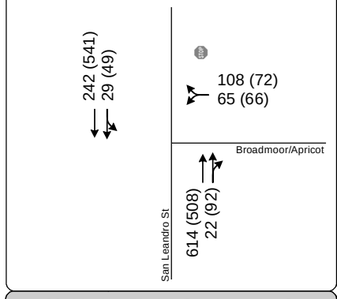
63. 85th Ave & San Leandro St



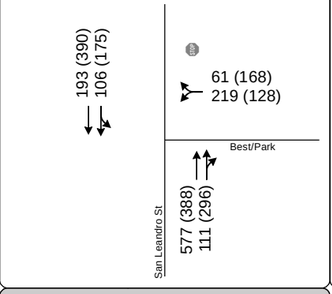
64. 98th Ave & San Leandro St



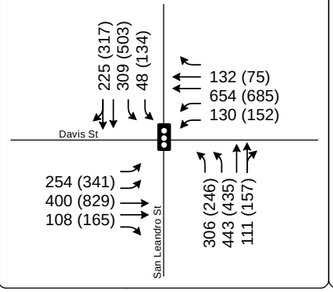
65. Broadmoor/Apricot & San Leandro St



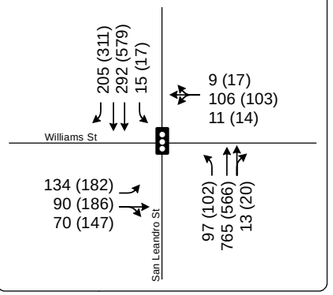
66. Best/Park & San Leandro St



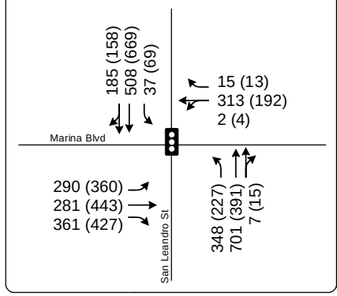
67. Davis ST & San Leandro St



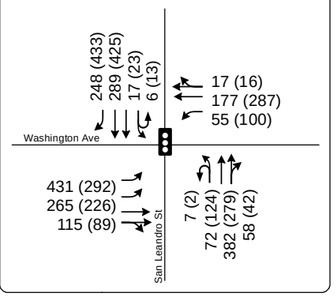
68. Williams St & San Leandro St



69. Marina Blvd & San Leandro St



70. Washington Ave & San Leandro St



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C2.e

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Plus Project Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\ExPP_Conditions_E.mxd

Date: January, 2014

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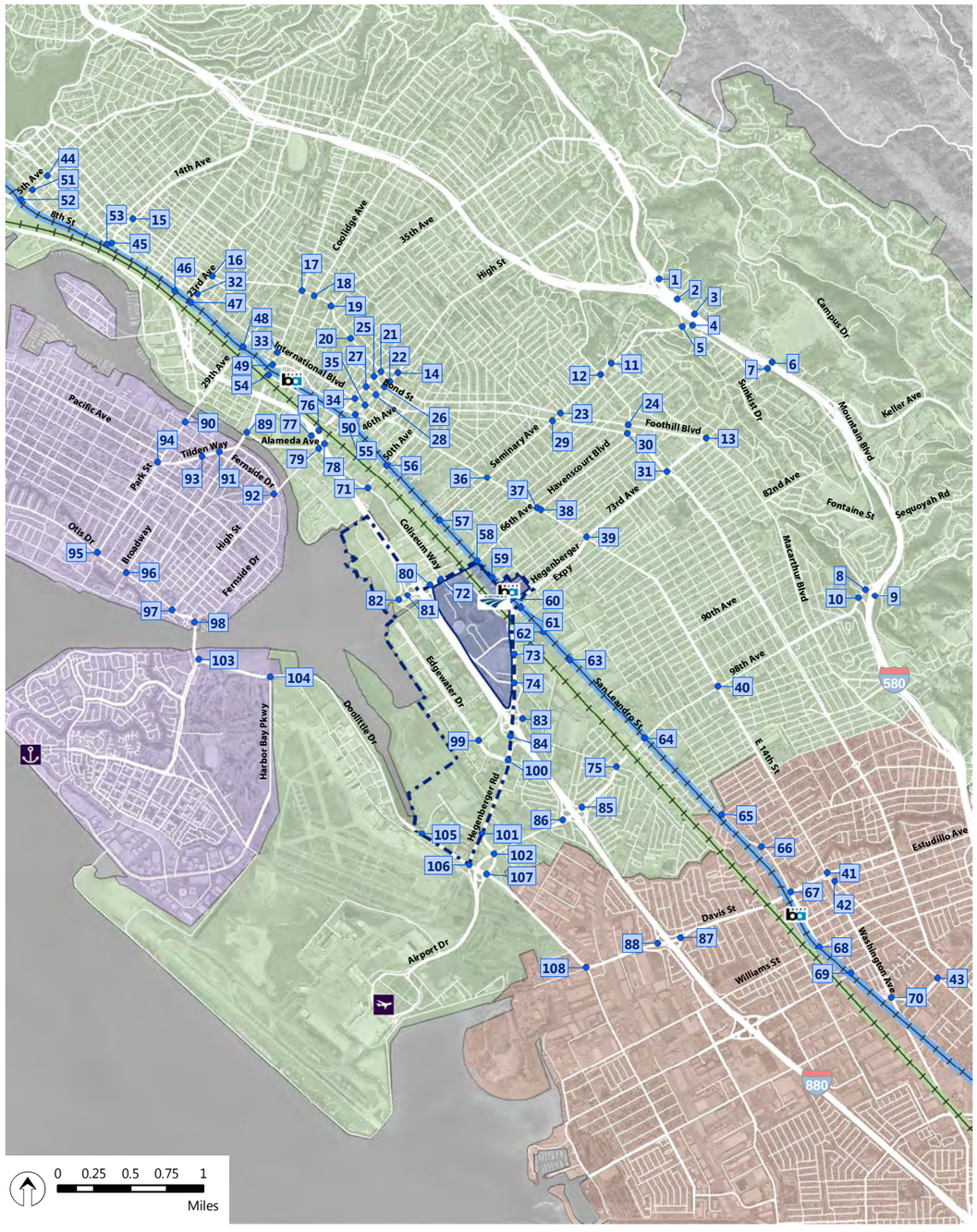
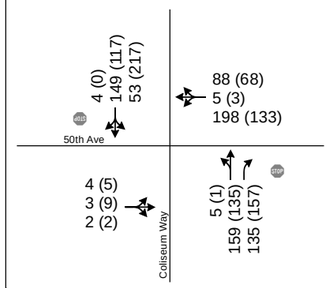
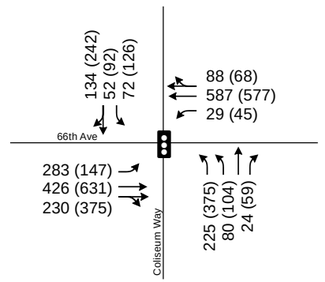


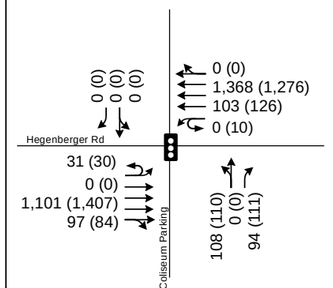
71. 50th Ave & Coliseum Way



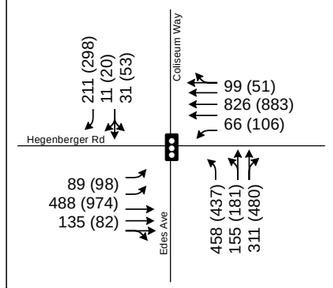
72. 66th Ave & Coliseum Way



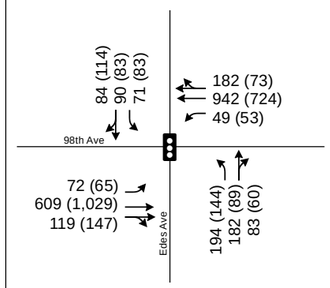
73. Hegenberger Rd & Coliseum Parking



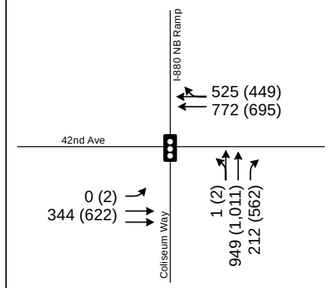
74. Hegenberger Rd & Coliseum Way



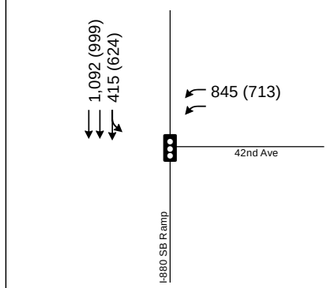
75. 98th Ave & Edes Ave



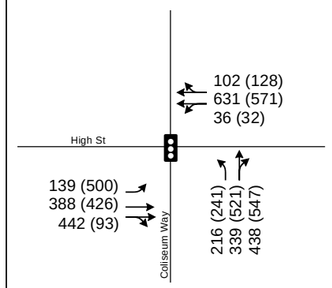
76. 42nd Ave & I-880 NB Ramps



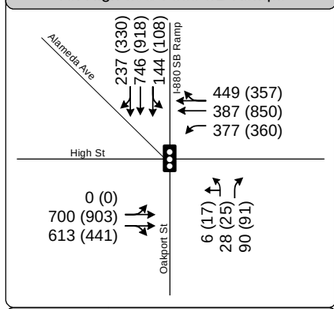
77. 42nd Ave & I-880 SB Ramps



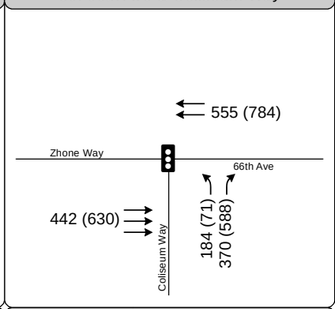
78. High St & Coliseum Way



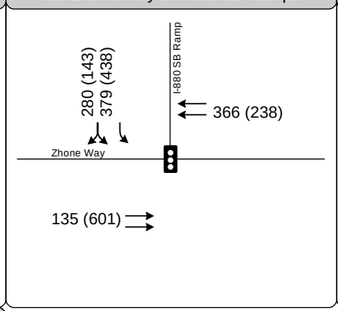
79. High St & I-880 SB Ramps



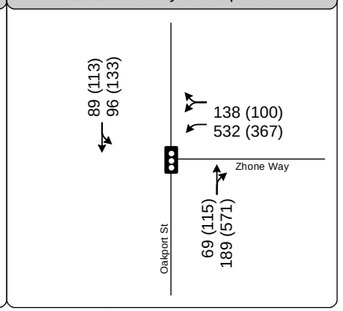
80. 66th Ave & Coliseum Way



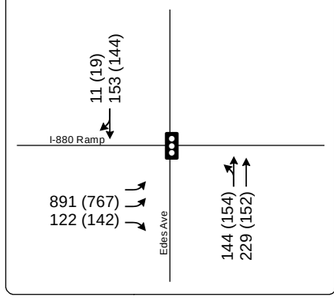
81. Zhone Way & I-880 SB Ramps



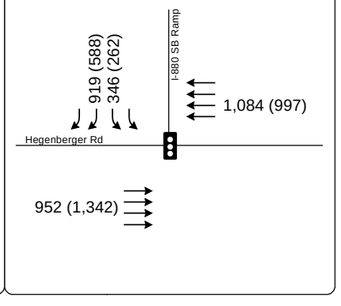
82. Zhone Way & Oakport St



83. I-880 Off-Ramps & Edes Ave



84. Hegenberger Rd & I-880 SB Ramps



Legend

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- AM (PM) Peak Hour Traffic Volume

Figure C2.f

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Plus Project Conditions

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Date: January, 2014

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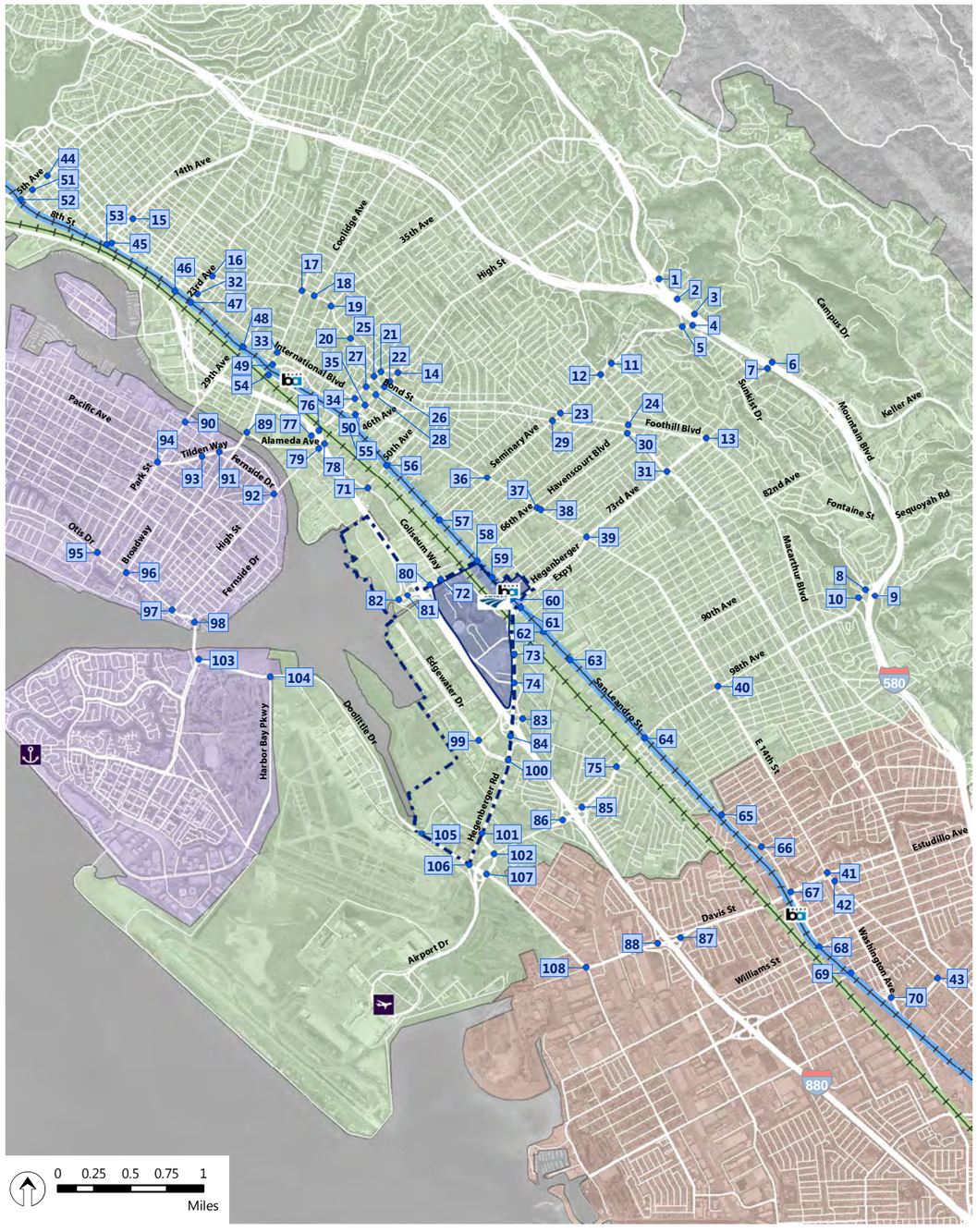
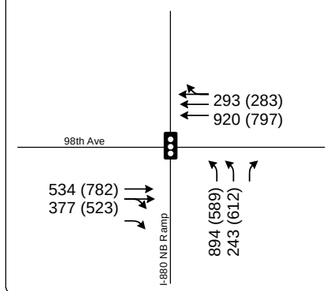
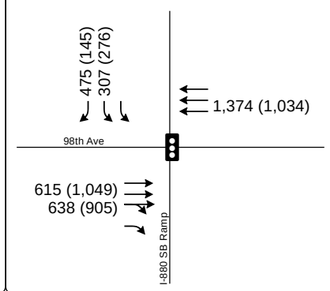


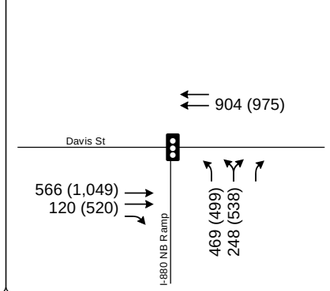
85. 98th Ave & I-880 NB Ramps



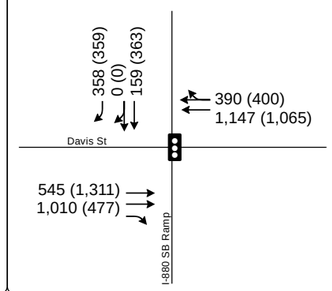
86. 98th AVe & I-880 SB Ramps



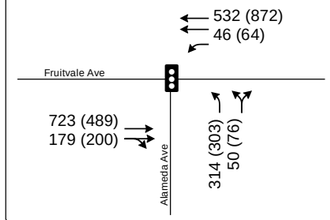
87. Davis St & I-880 NB Ramps



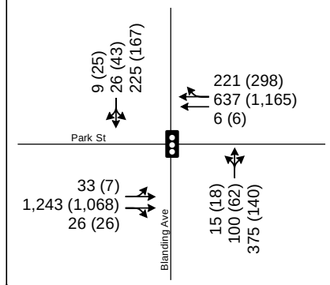
88. Davis St & I-880 SB Ramps



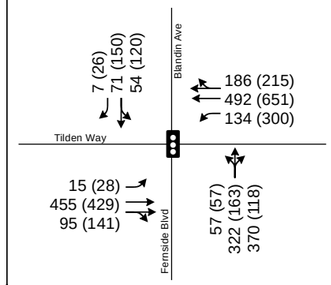
89. Fruitvale Ave & Alameda Ave



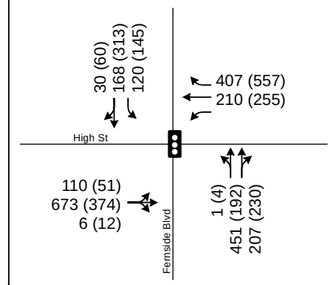
90. Park St & Blanding Ave



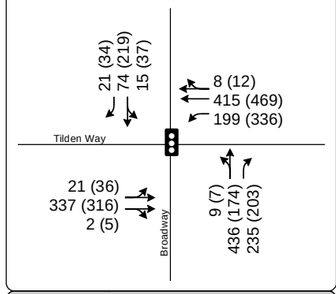
91. Tilden Way & Fernside/Blanding



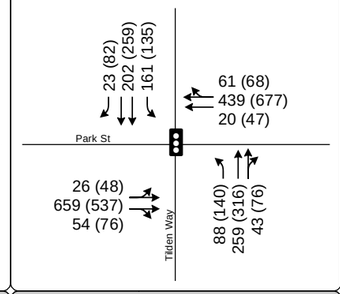
92. High St & Fernside Blvd



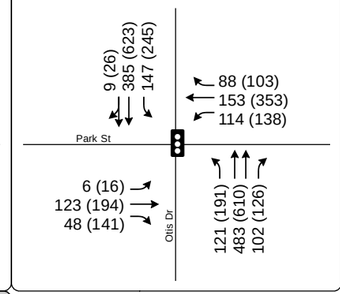
93. Tilden Way & Broadway



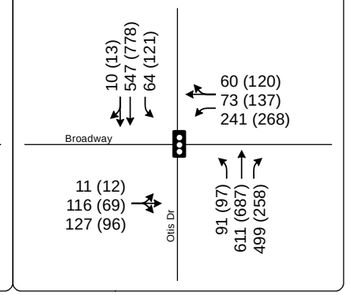
94. Park St & Tilden Way



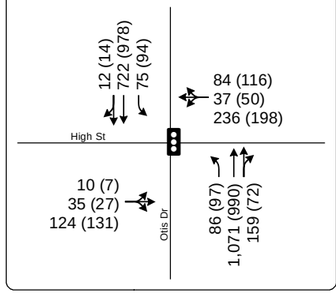
95. Park St & Otis Dr



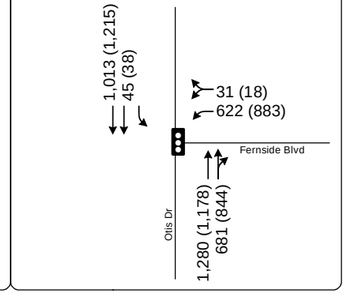
96. Broadway & Otis Dr



97. High St & Otis Dr



98.Fernside Blvd & Otis Dr



Legend

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- Amtrak
- Amtrak Station
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- Stop Sign
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Figure C2.g

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Plus Project Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\ExPP_Conditions_G.mxd

Date: January, 2014

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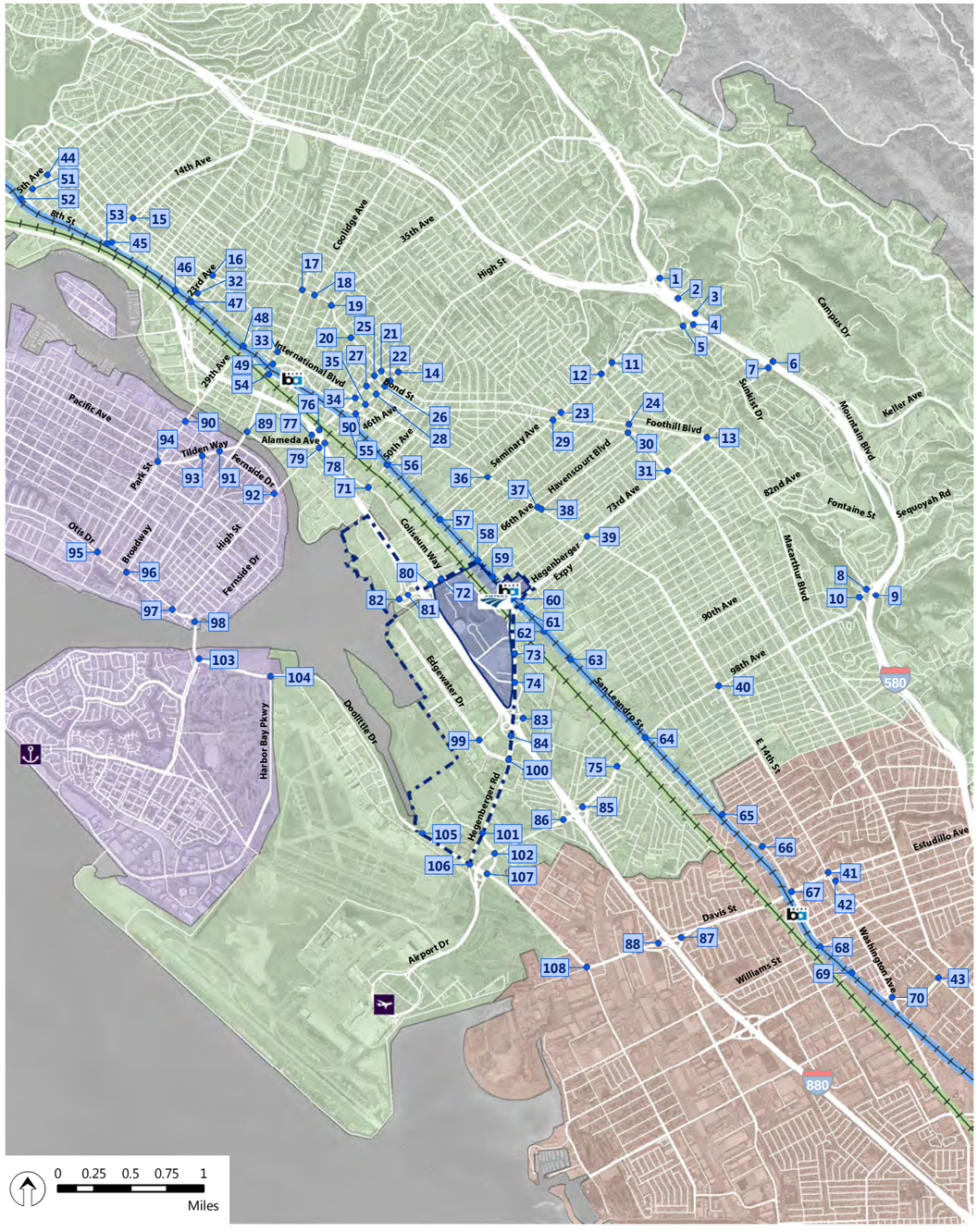
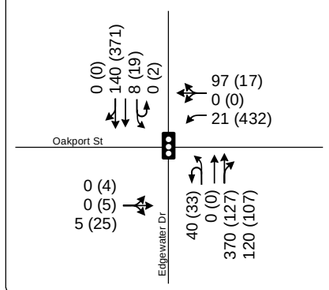
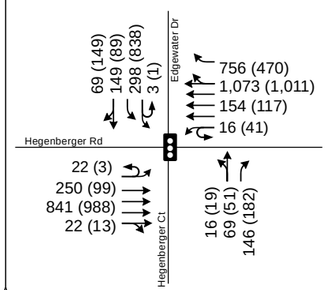


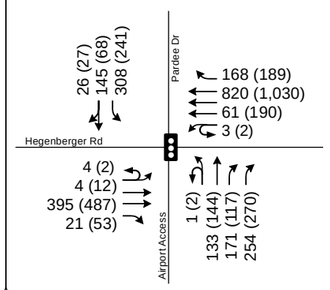
99. Oakport St & Edgewater Dr



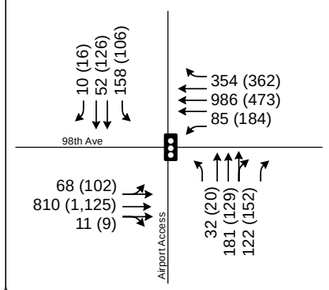
100. Hegenberger Rd & Edgewater Dr



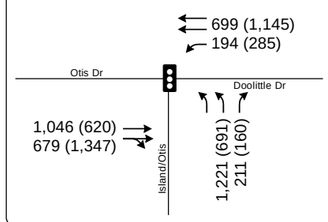
101. Hegenberger Rd & Parade Dr



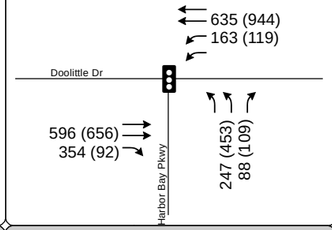
102. 98th Ave & Airport Acess Rd



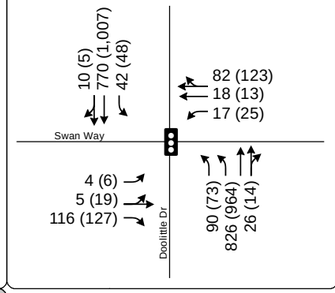
103. Doolittle/Otis & Island Dr



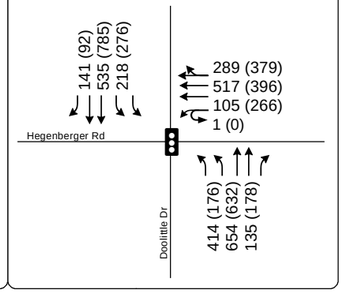
104. Doolittle Dr & Harbor Bay Pkwy



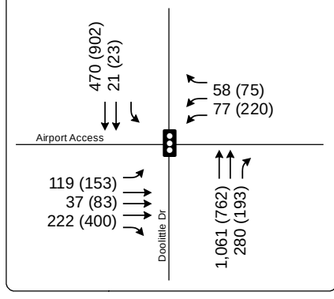
105. Swan Way & Doolittle Dr



106. Hegenberger Rd & Doolittle Dr



107. Airport Access Rd & Doolittle Dr



108. Davis St & Doolittle Dr

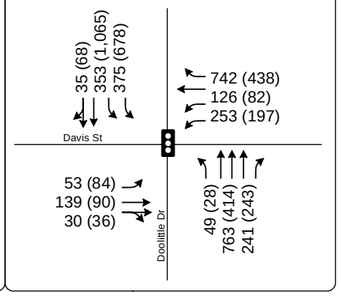


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Figure C2.h

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - Existing Plus Project Conditions

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Date: January, 2014

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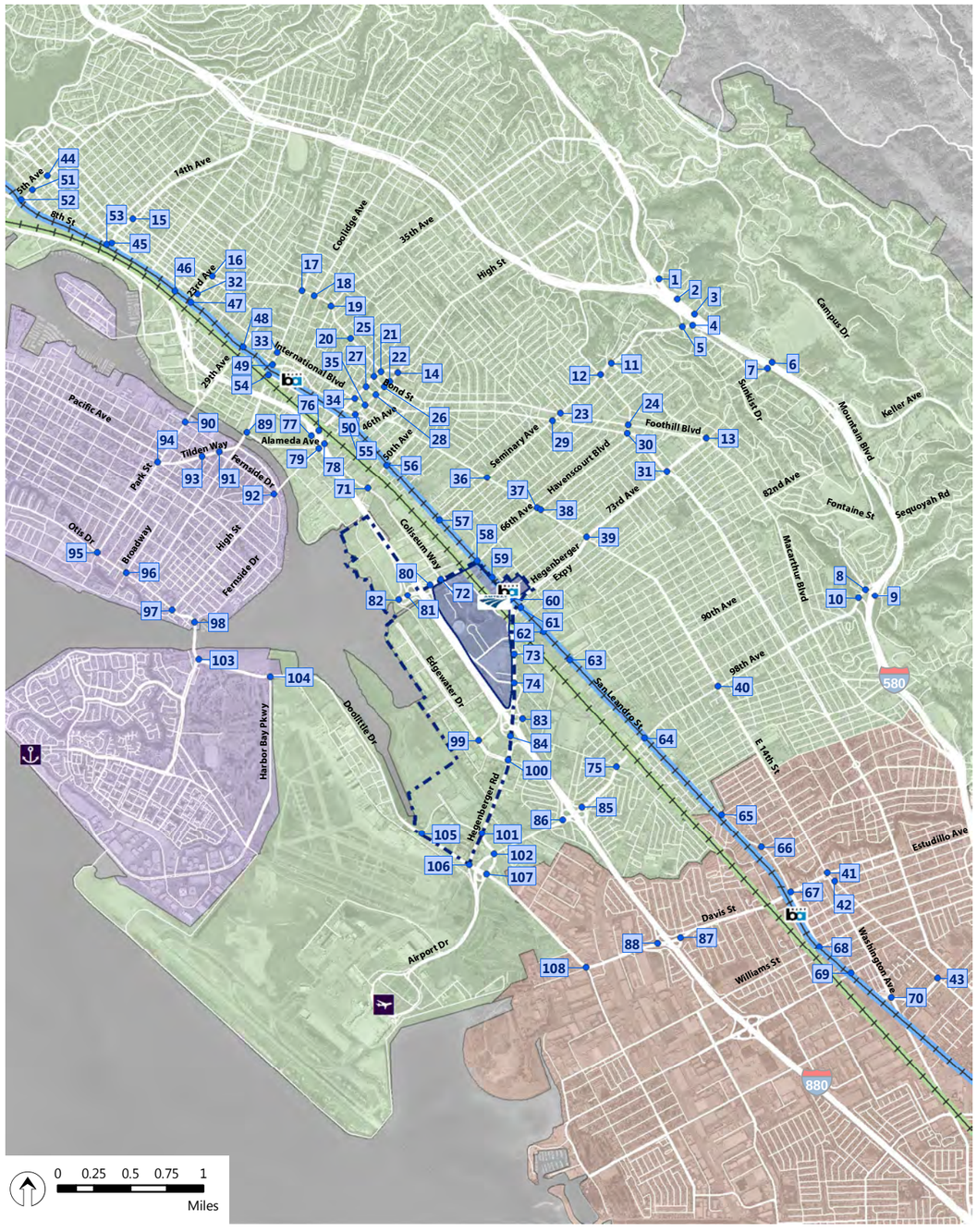
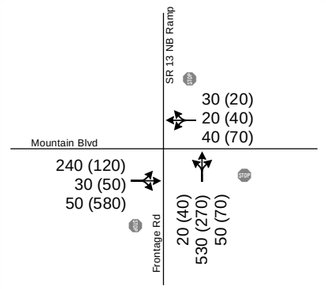
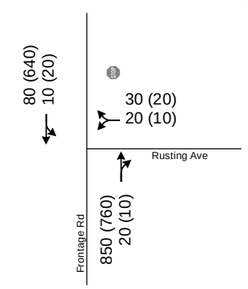


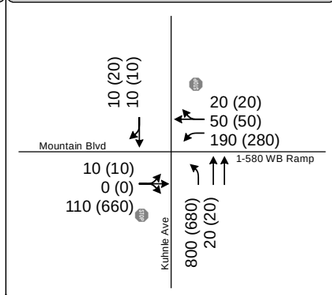
1. Mountain Blvd & SR 13 NB Off-Ramp



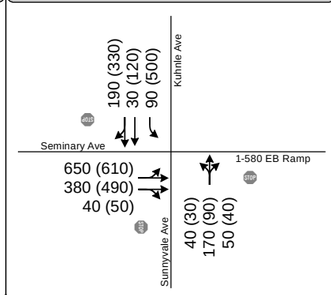
2. Rusting Ave & Frontage Rd



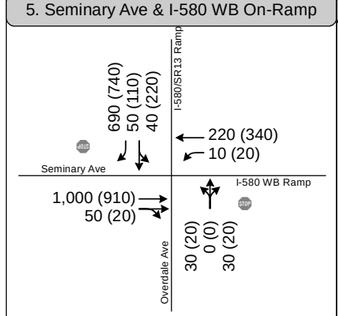
3. I-580 WB Off-Ramp & Kuhnle Ave



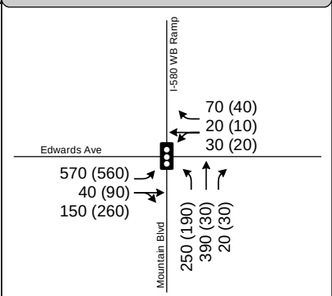
4. I-580 EB Off-Ramp & Kuhnle Ave



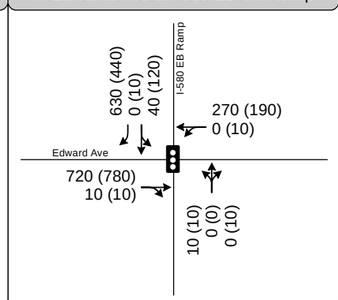
5. Seminary Ave & I-580 WB On-Ramp



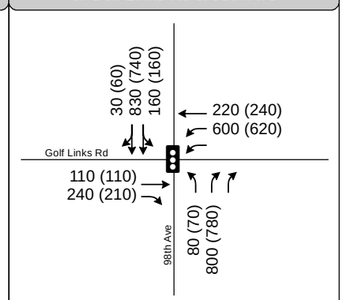
6. Edwards Ave & I-580 WB On-Ramp



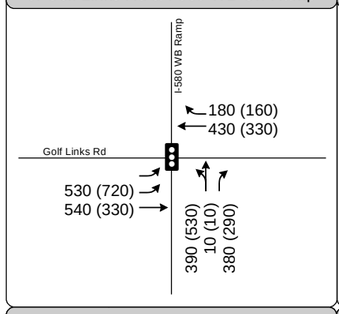
7. Edwards Ave & I-580 EB Off-Ramp



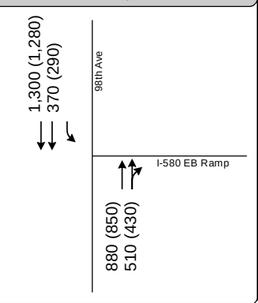
8. Golf Links Rd & 98th Ave



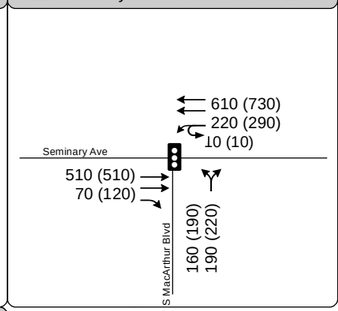
9. Golf Links Rd & I-580 WB On-Ramp



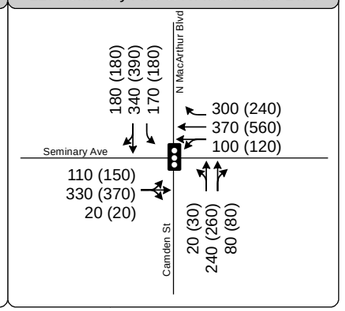
10. I-580 EB On-Ramp & 98th Ave



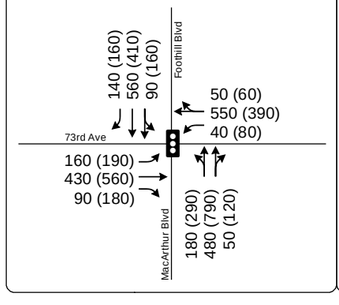
11. Seminary Ave & S. MacArthur Blvd



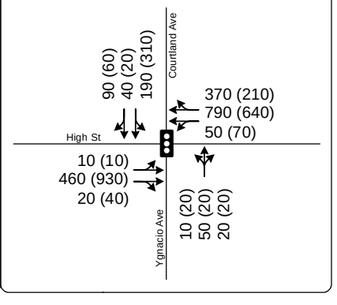
12. Seminary Ave & N. MacArthur Blvd



13. 73rd Ave & Foothill Blvd



14. High St & Courtland Ave



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C3.a

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 No Project Conditions

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Date: January, 2014

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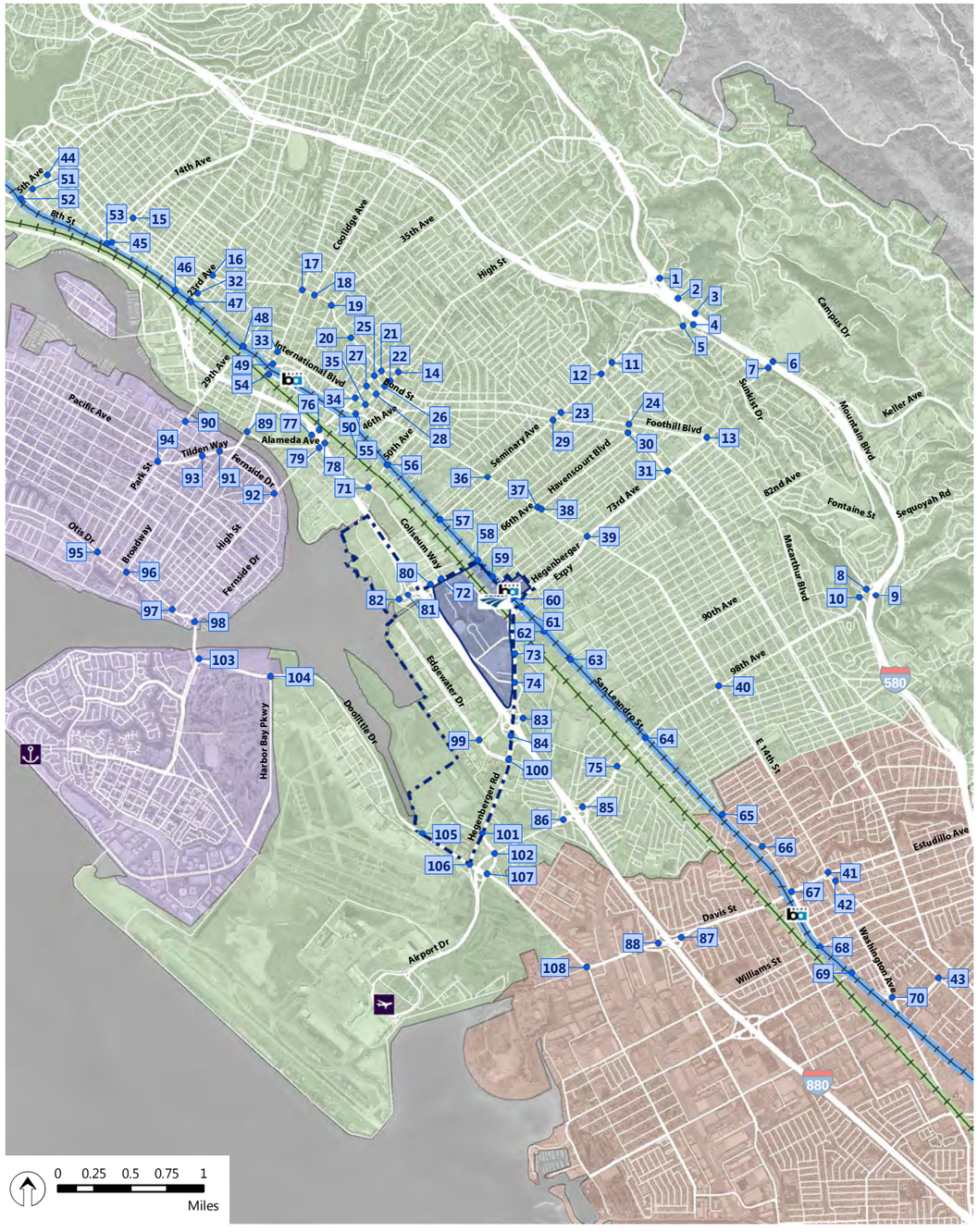

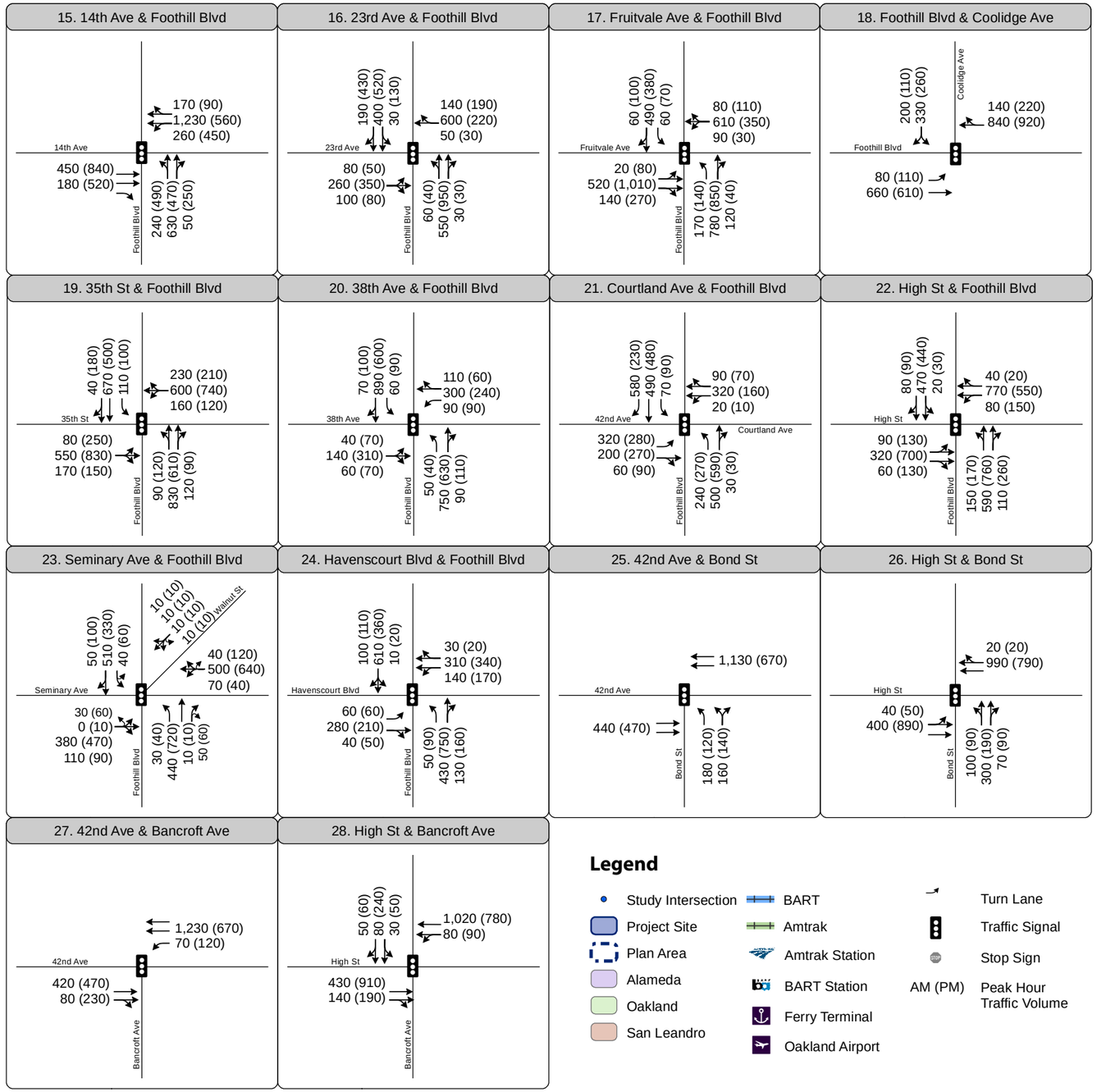

Figure C3.b

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 No Project Conditions

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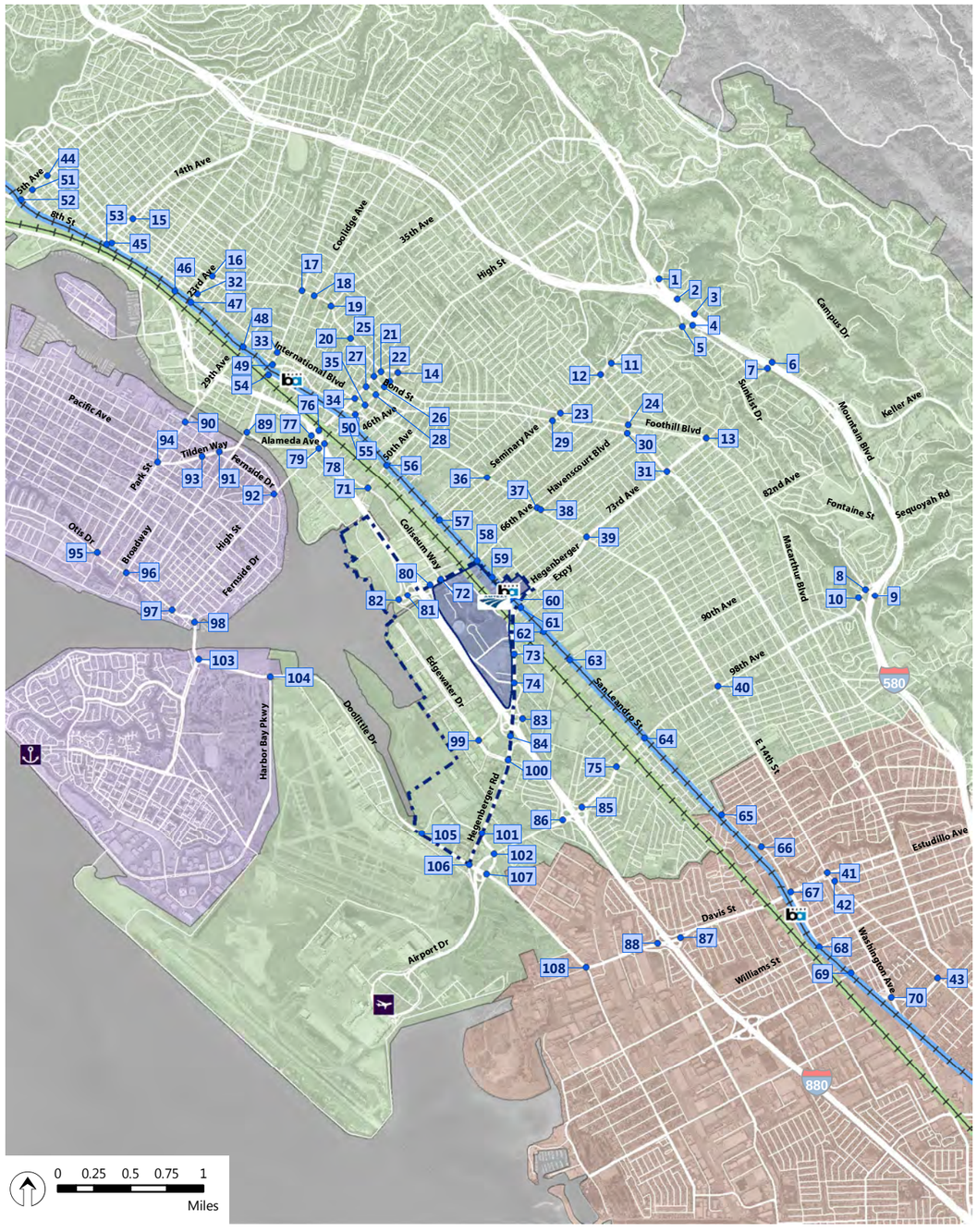
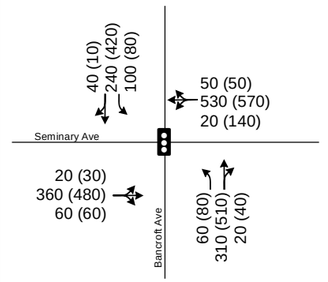
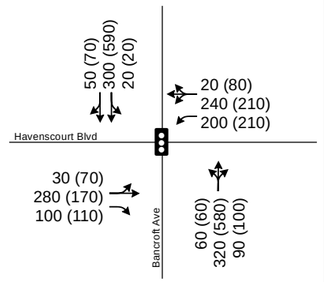


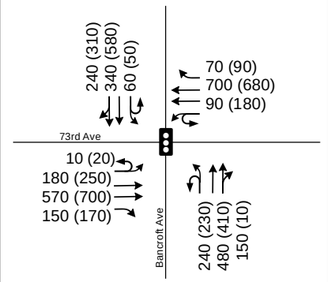
29. Seminary Ave & Bancroft Ave



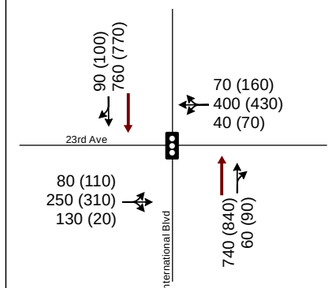
30. Havenscourt Blvd & International Blvd



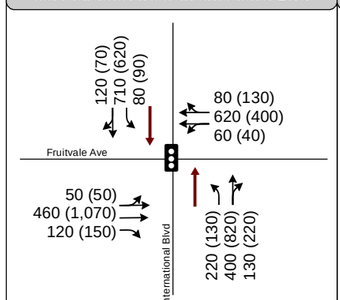
31. 73rd Ave & Bancroft Ave



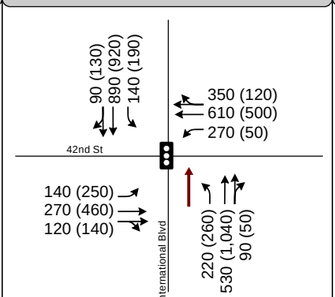
32. 23rd Ave & International Blvd



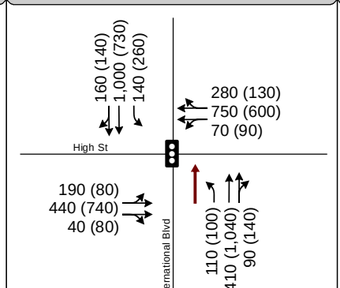
33. Fruitvale Ave & International Blvd



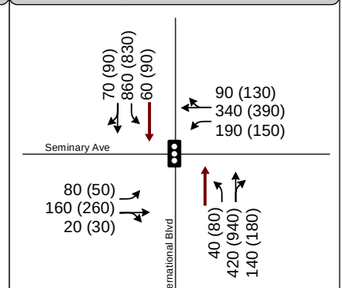
34. 42nd St & International Blvd



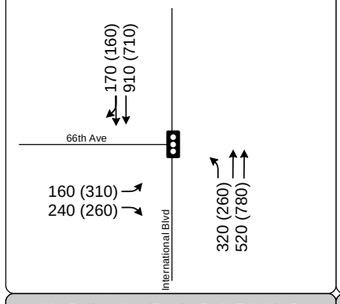
35. High St & International Blvd



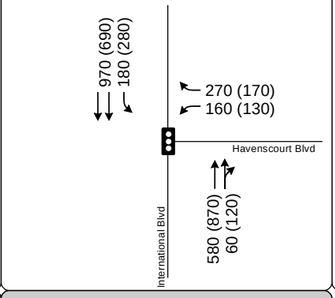
36. Seminary Ave & International Blvd



37. 66th Ave & International Blvd



38. Havenscourt Blvd & International Blvd



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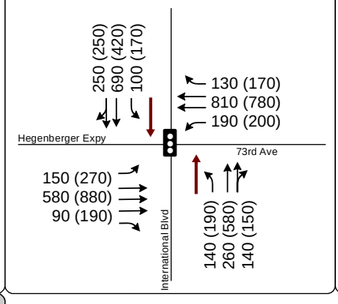
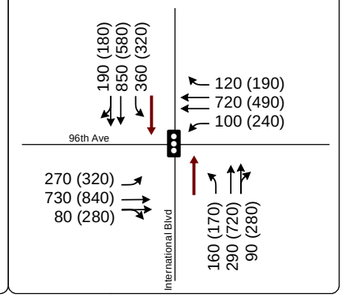
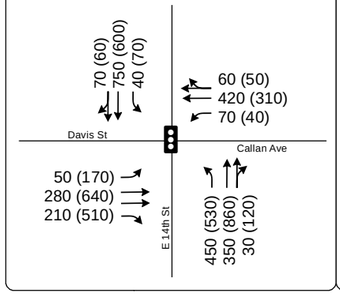


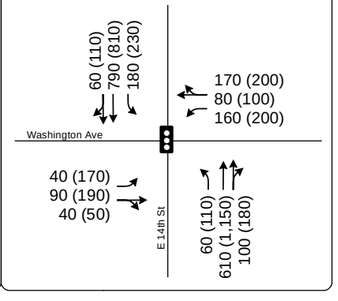
40. 98th Ave & International Blvd



41. Callan Ave/Davis St & E 14th St



42. Washington/Estudilo Ave & E 14th St



Legend

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- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
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- Oakland Airport
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- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume
- Bus Only Lane

Figure C3.c

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 No Project Conditions

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Date: January, 2014

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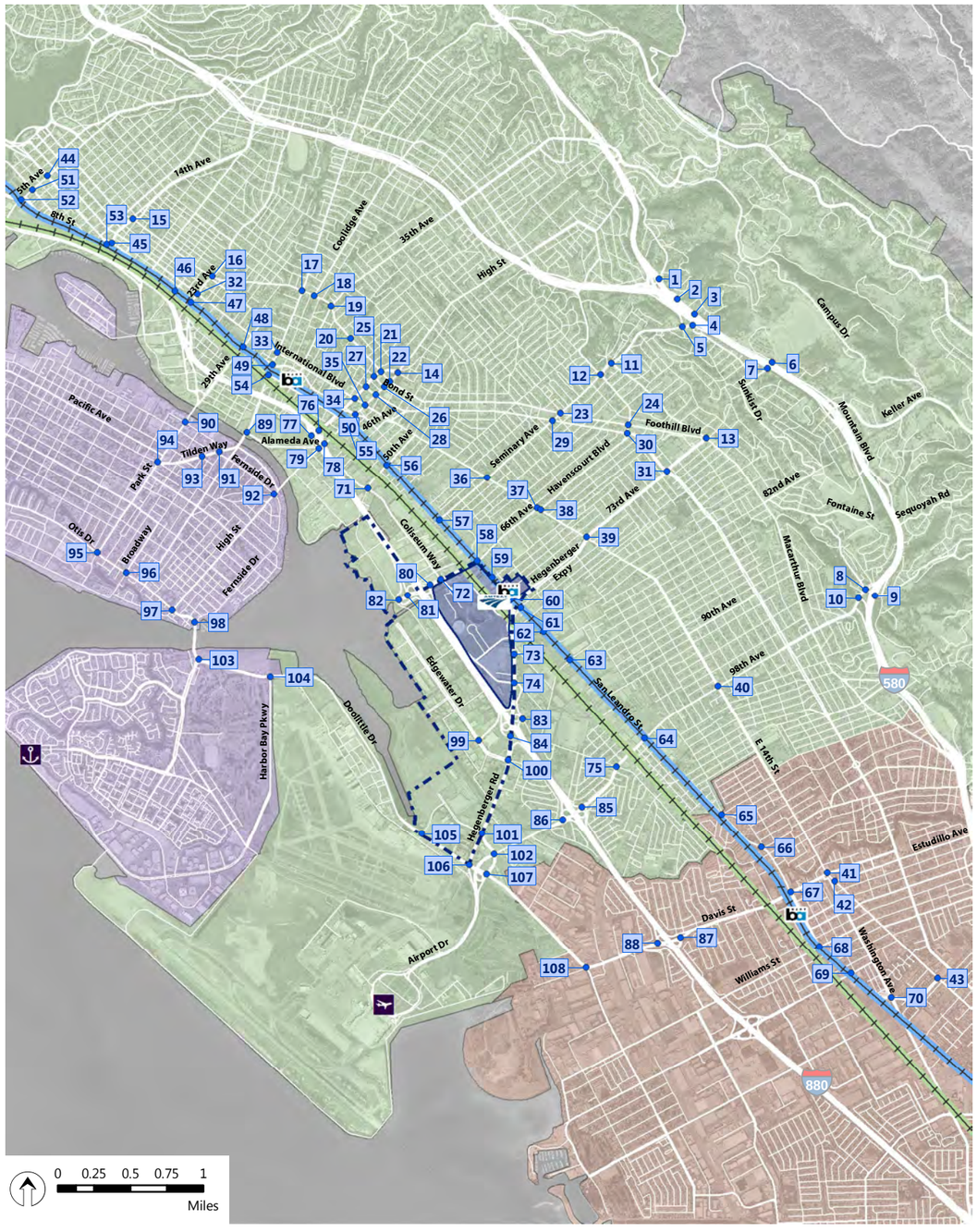
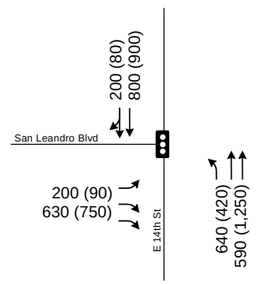
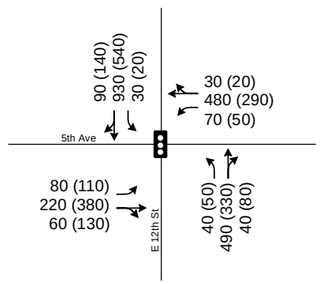


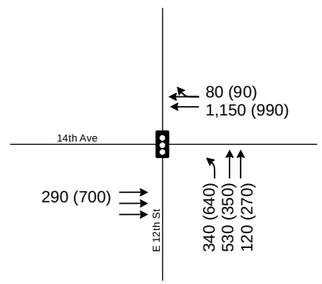
43.San Leandro Blvd & E 14th St



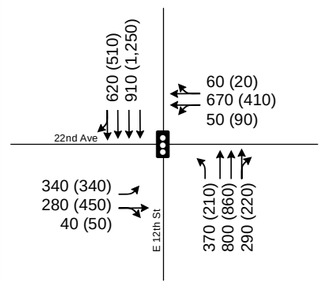
44. 5th Ave & E 12th St



45. 14th Ave & E 12th St



46. 22nd Ave & E 12th St



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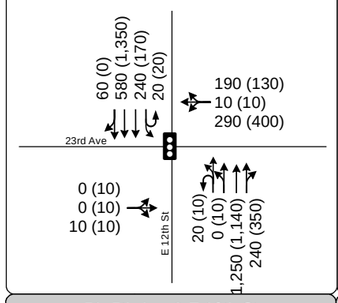
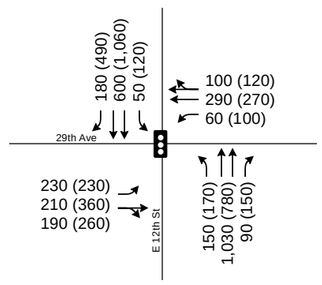
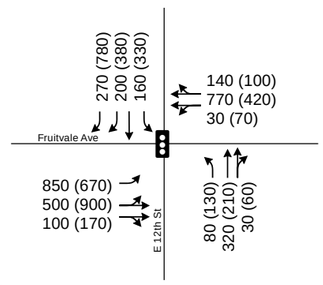


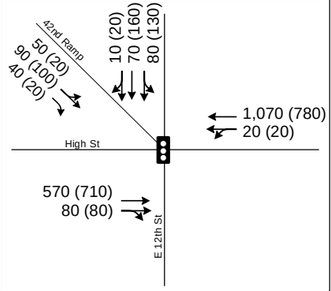
48. 29th Ave & E 12th St



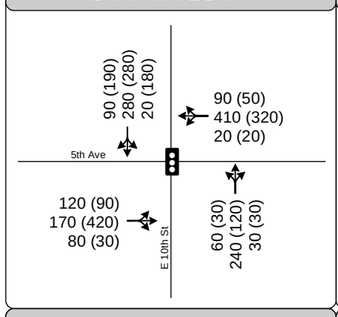
49. Fruitvale Ave & E 12th St



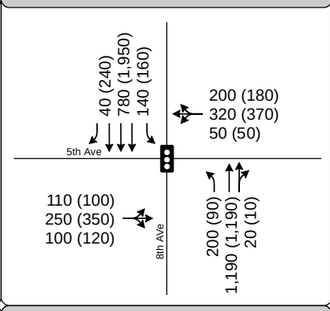
50. High St & E 12th St



51. 5th Ave & E 10th St



52. 5th Ave & 8th Ave



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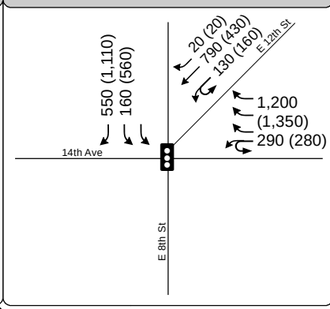
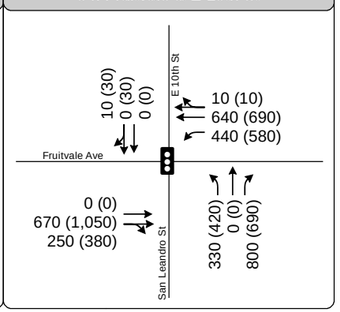
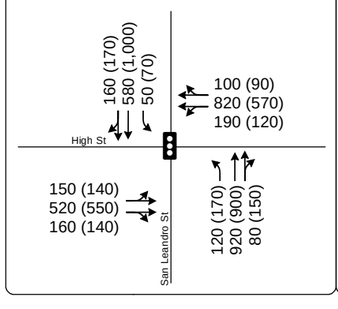


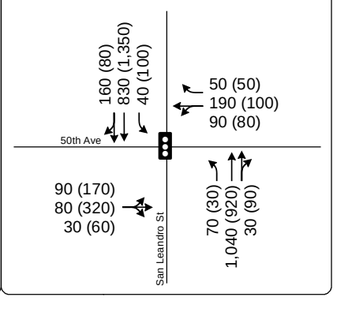
54. Fruitvale & E 10th St



55. High St & San Leandro St



56. 50th Ave & San Leandro St



Legend

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- San Leandro
- BART
- Amtrak
- Amtrak Station
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- Stop Sign
- AM (PM) Peak Hour Traffic Volume
- Bus Only Lane

Figure C3.d

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 No Project Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\NP_2035_Conditions_D.mxd

Date: January, 2014

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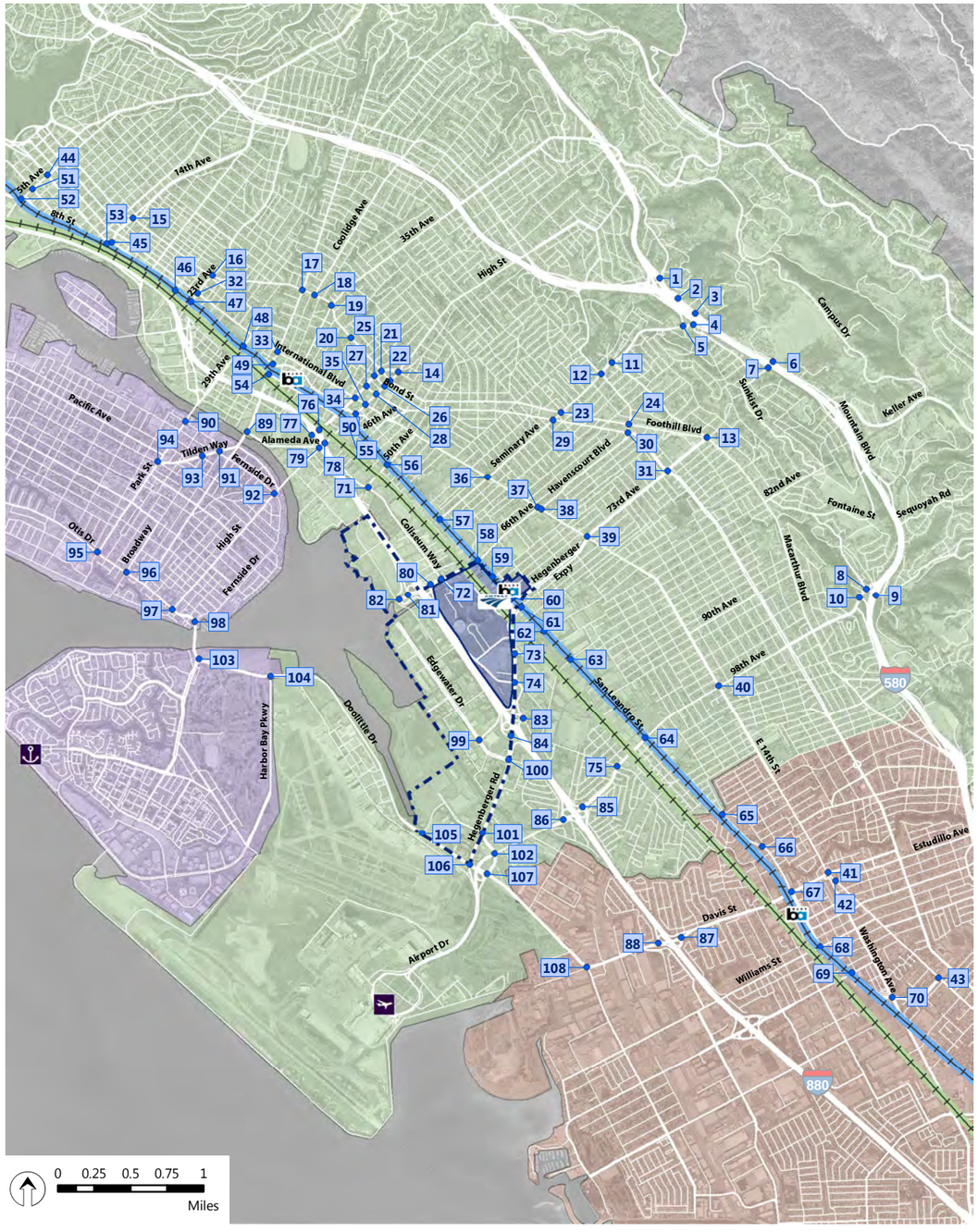
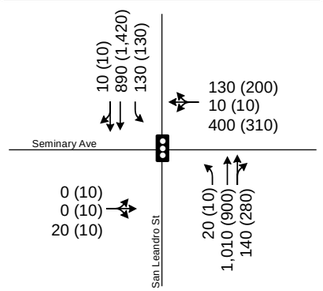
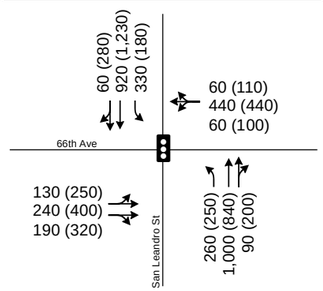


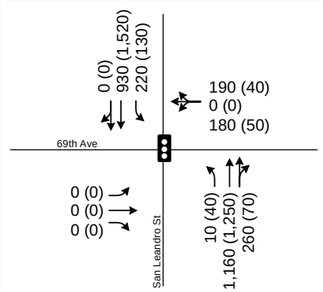
57. Seminary Ave & San Leandro St



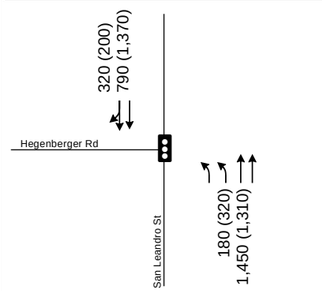
58. 66th Ave & San Leandro St



59. 69th Ave & San Leandro St



60. Hegenberger Ramp & San Leandro St



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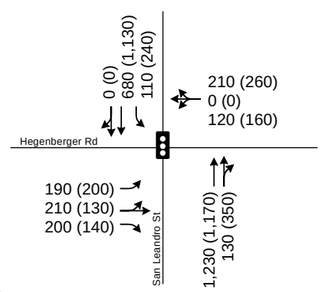
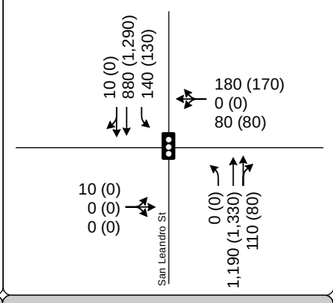
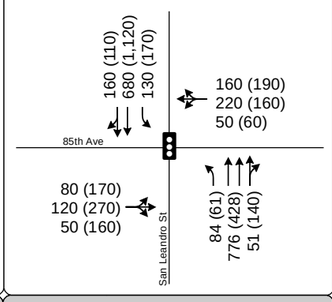


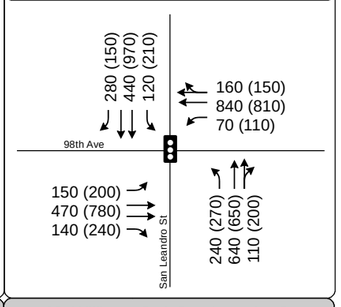
62. 81st Ave & San Leandro St



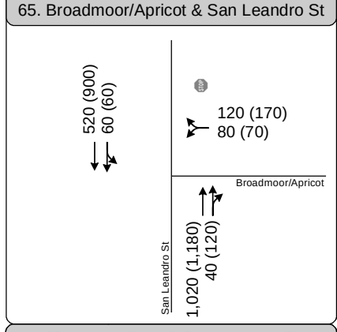
63. 85th Ave & San Leandro St



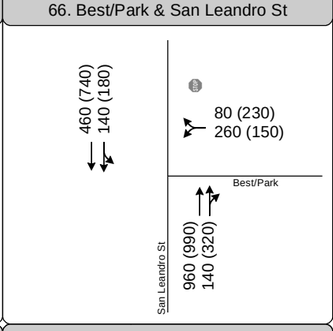
64. 98th Ave & San Leandro St



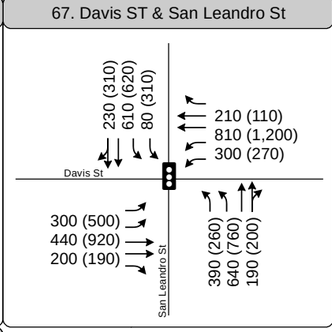
65. Broadmoor/Apricot & San Leandro St



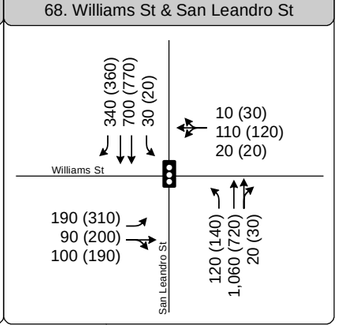
66. Best/Park & San Leandro St



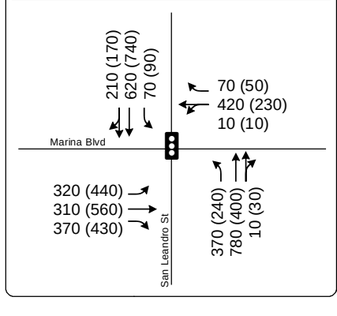
67. Davis ST & San Leandro St



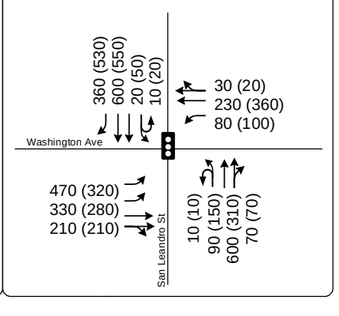
68. Williams St & San Leandro St



69. Marina Blvd & San Leandro St



70. Washington Ave & San Leandro St



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C3.e

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 No Project Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\NP_2035_Conditions_E.mxd

Date: January, 2014

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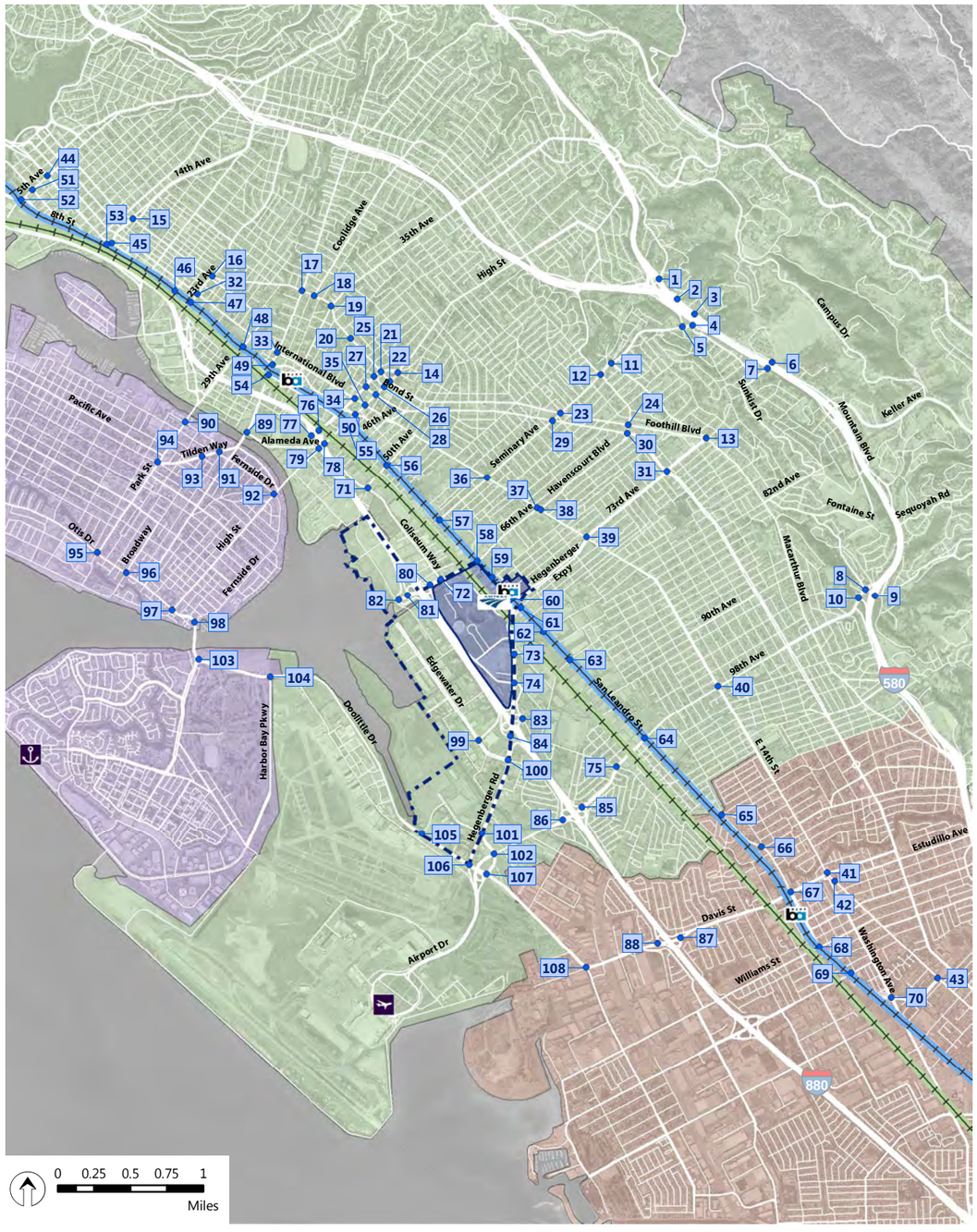
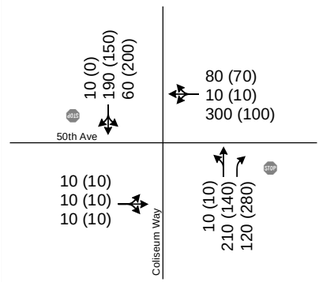
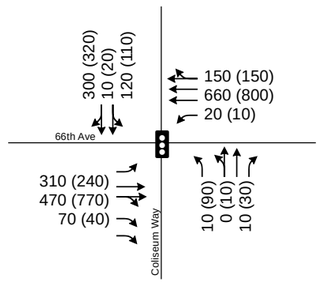


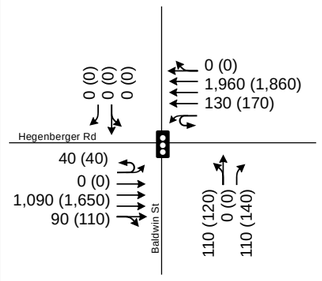
71. 50th Ave & Coliseum Way



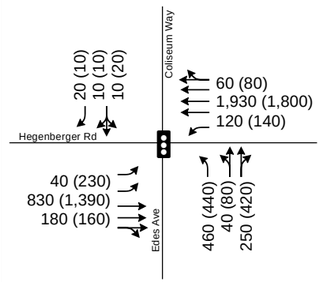
72. 66th Ave & Coliseum Way



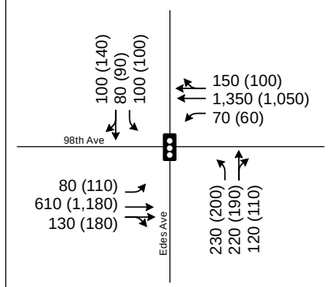
73. Hegenberger Rd & Coliseum Parking



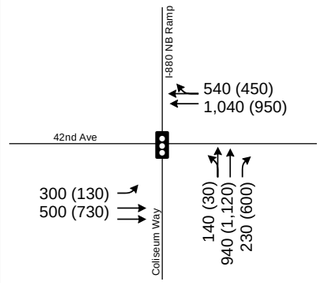
74. Hegenberger Rd & Coliseum Way



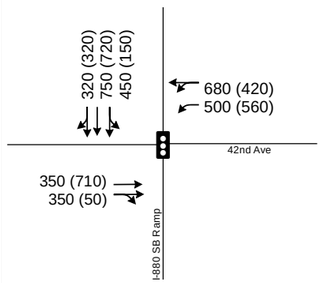
75. 98th Ave & Edes Ave



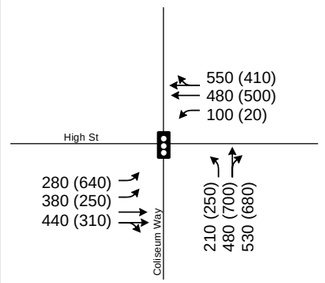
76. 42nd Ave & I-880 NB Ramps



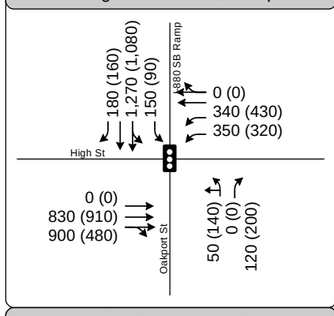
77. 42nd Ave & I-880 SB Ramps



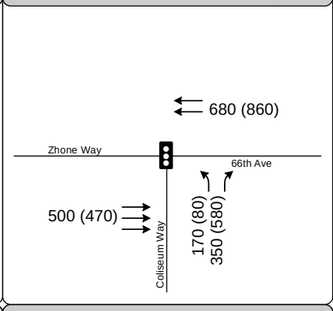
78. High St & Coliseum Way



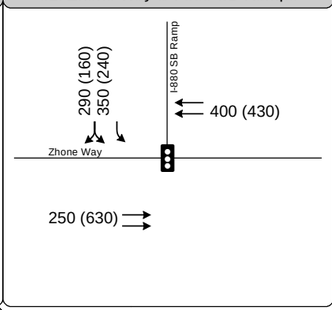
79. High St & I-880 SB Ramps



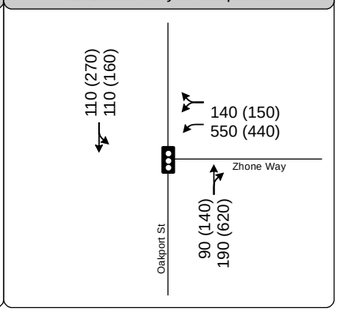
80. 66th Ave & Coliseum Way



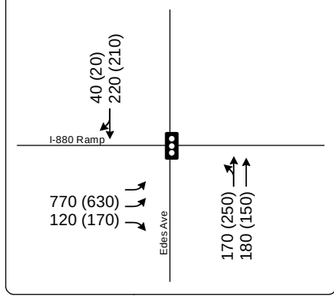
81. Zhone Way & I-880 SB Ramps



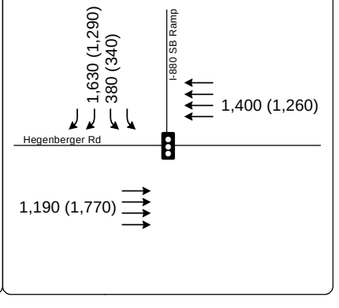
82. Zhone Way & Oakport St



83. I-880 Off-Ramps & Edes Ave



84. Hegenberger Rd & I-880 SB Ramps



Legend

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- Oakland
- San Leandro
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- Amtrak
- Amtrak Station
- BART Station
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- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C3.f

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 No Project Conditions

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Date: January, 2014

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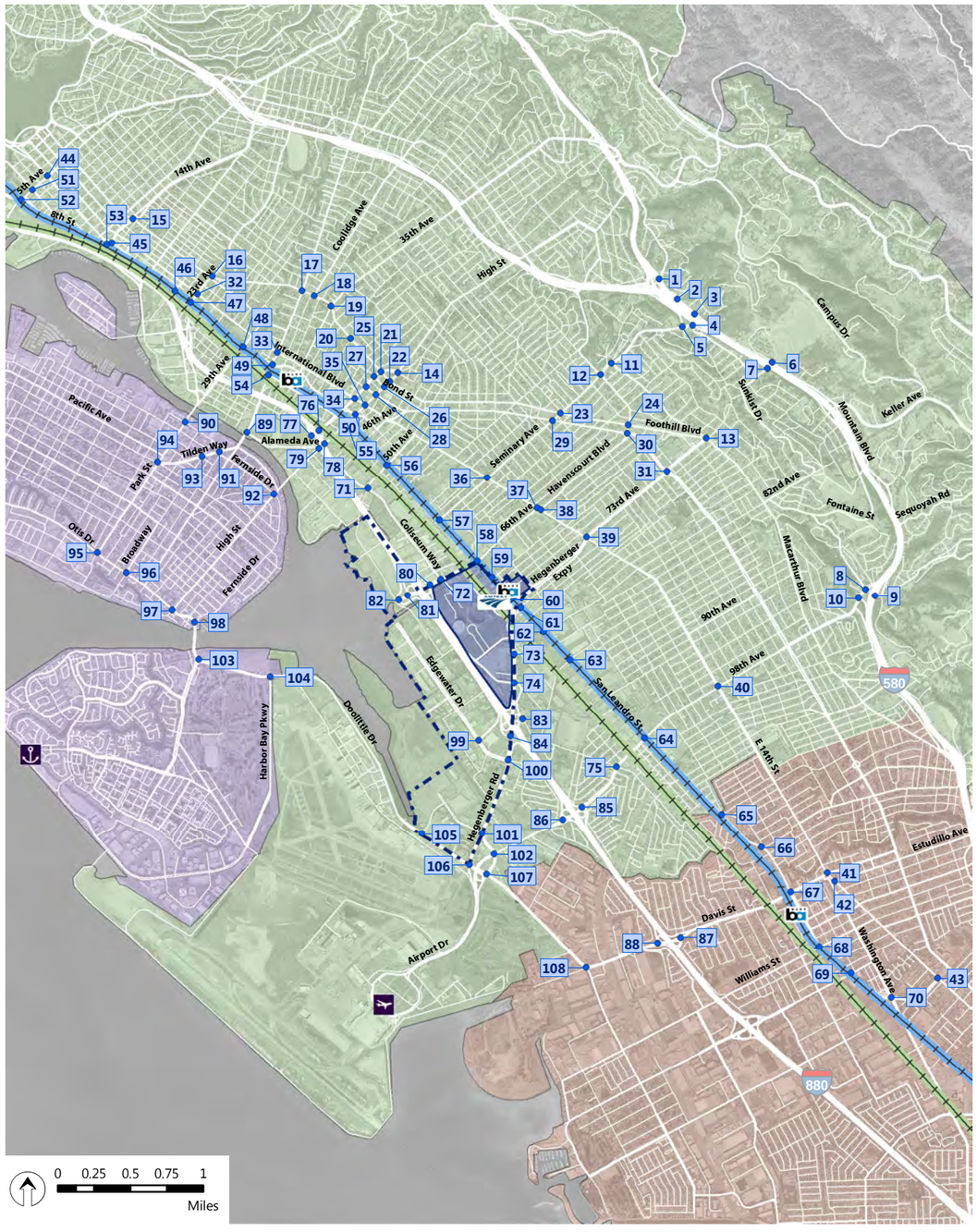
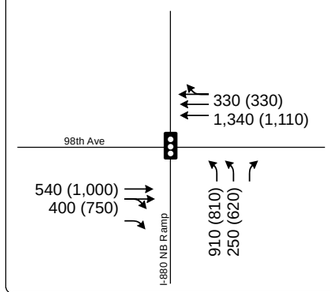
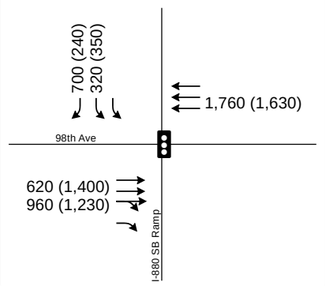


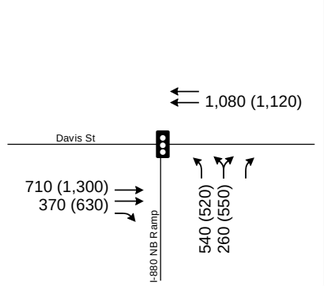
85. 98th Ave & I-880 NB Ramps



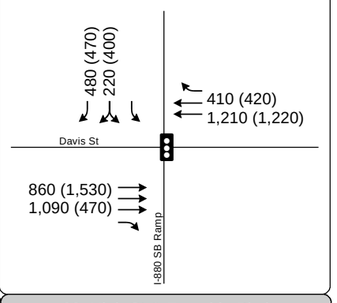
86. 98th AVe & I-880 SB Ramps



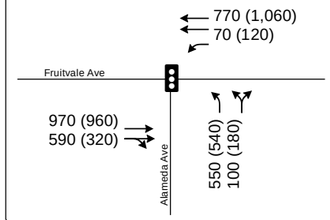
87. Davis St & I-880 NB Ramps



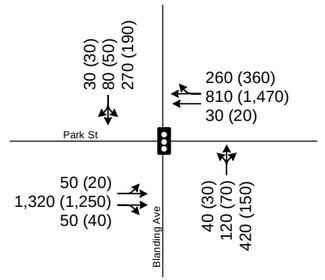
88. Davis St & I-880 SB Ramps



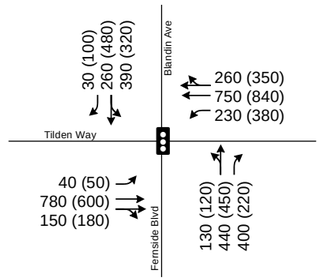
89. Fruitvale Ave & Alameda Ave



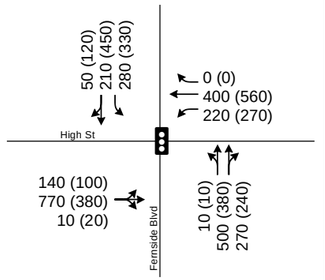
90. Park St & Blanding Ave



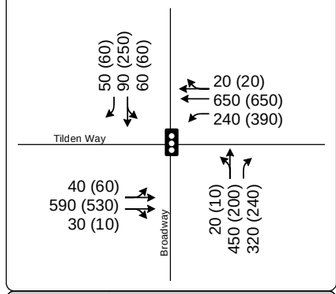
91. Tilden Way & Fernside/Blanding



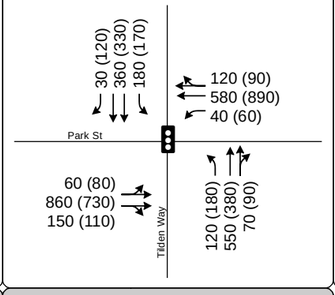
92. High St & Fernside Blvd



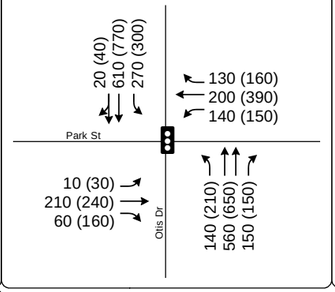
93. Tilden Way & Broadway



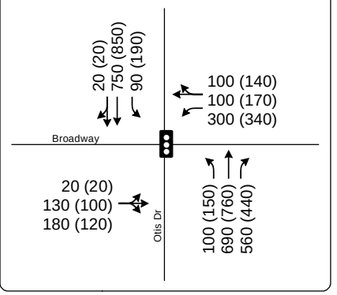
94. Park St & Tilden Way



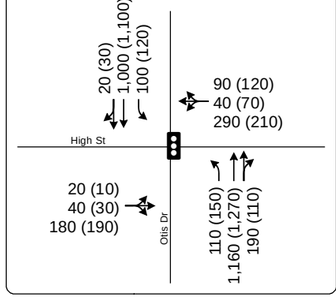
95. Park St & Otis Dr



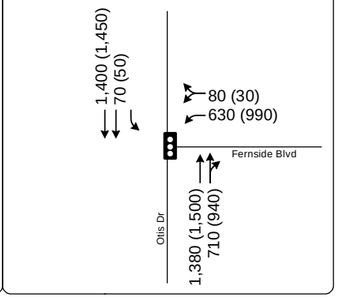
96. Broadway & Otis Dr



97. High St & Otis Dr



98.Fernside Blvd & Otis Dr



Legend

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- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
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- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C3.g

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 No Project Conditions

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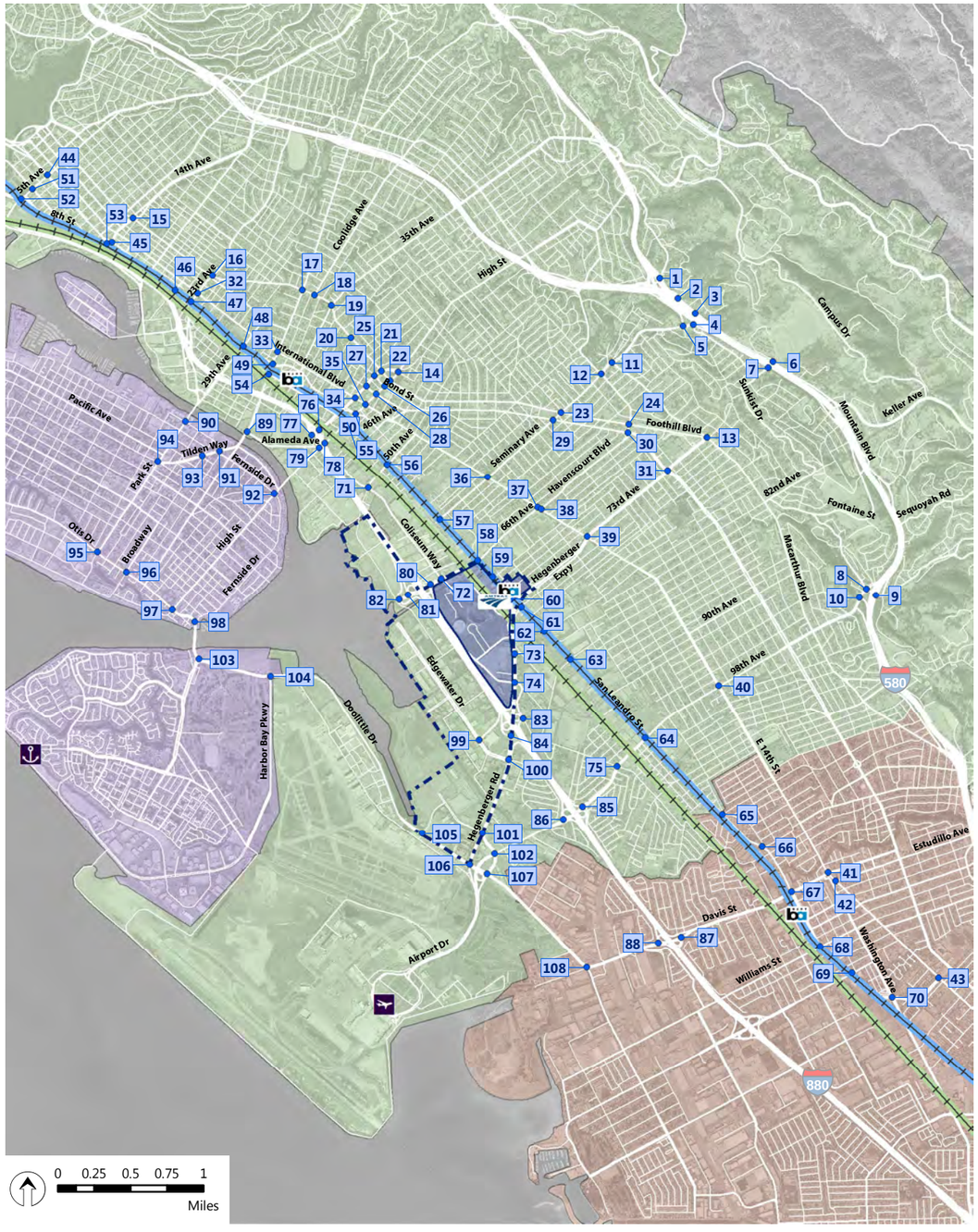
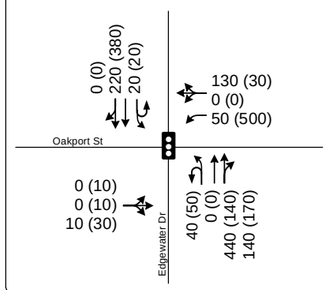
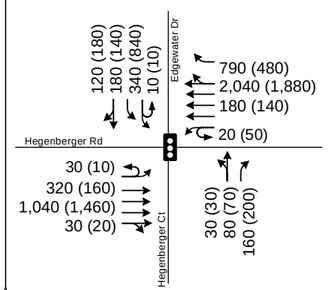


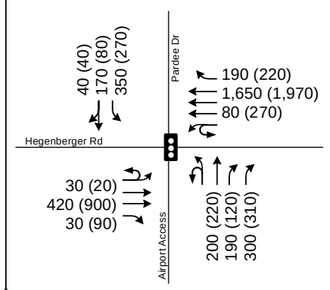
99. Oakport St & Edgewater Dr



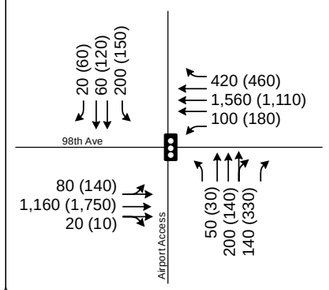
100. Hegenberger Rd & Edgewater Dr



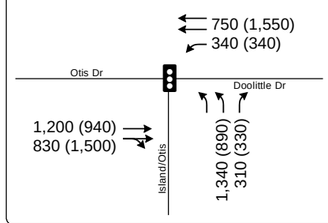
101. Hegenberger Rd & Parade Dr



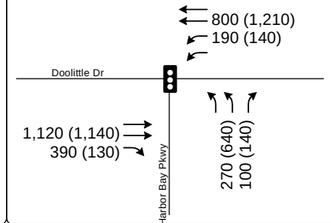
102. 98th Ave & Airport Acess Rd



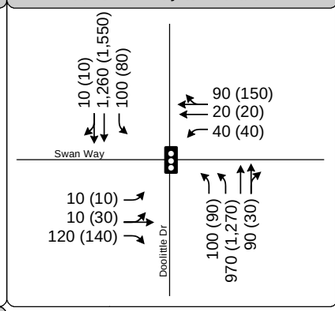
103. Doolittle/Otis & Island Dr



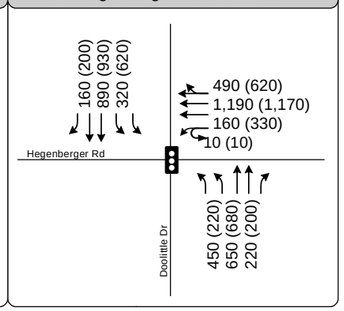
104. Doolittle Dr & Harbor Bay Pkwy



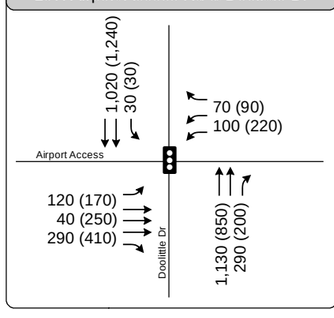
105. Swan Way & Doolittle Dr



106. Hegenberger Rd & Doolittle Dr



107. Airport Access Rd & Doolittle Dr



108. Davis St & Doolittle Dr

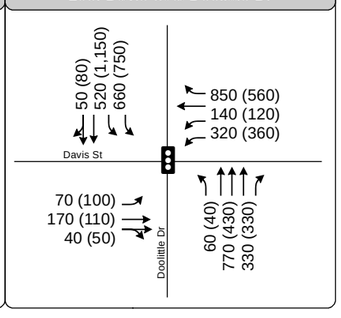


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Figure C3.h

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 No Project Conditions

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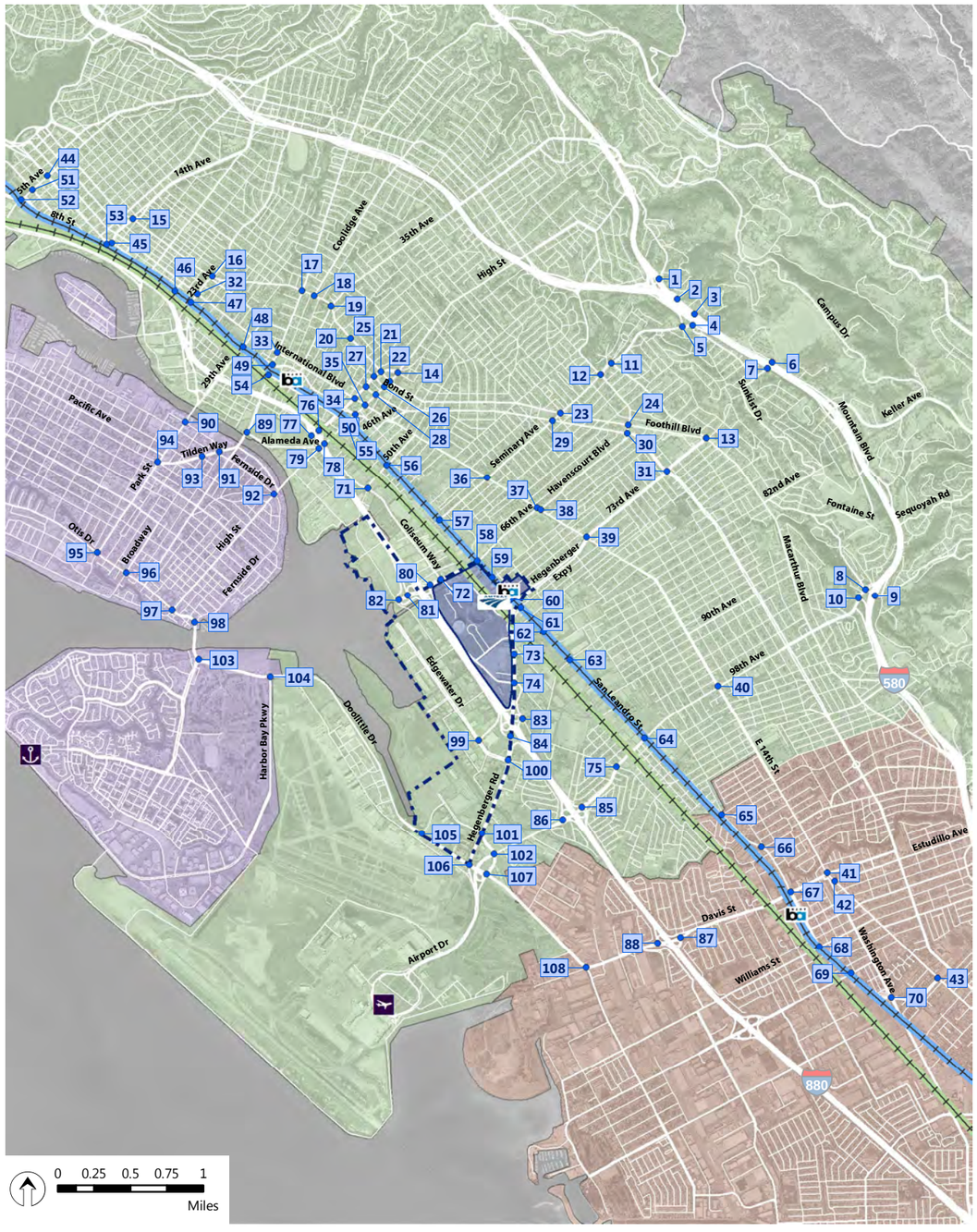
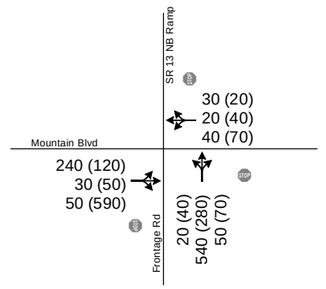
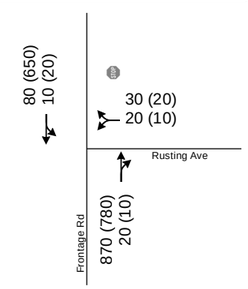


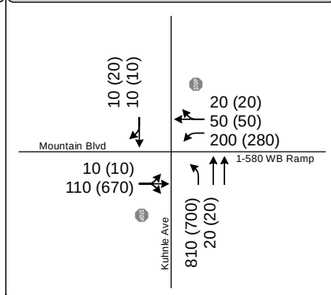
1. Mountain Blvd & SR 13 NB Off-Ramp



2. Rusting Ave & Frontage Rd



3. I-580 WB Off-Ramp & Kuhnle Ave



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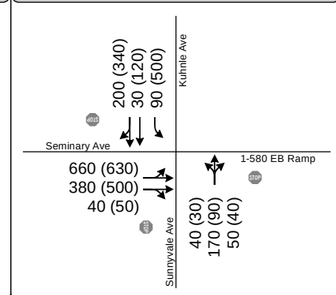
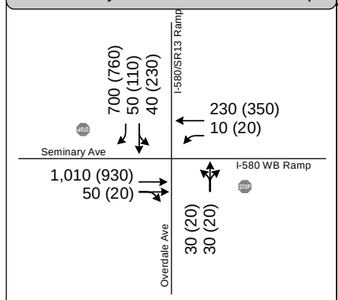
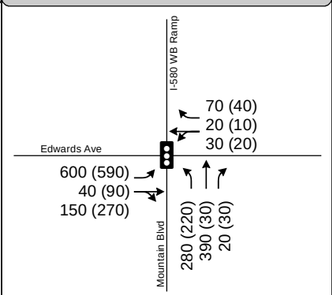


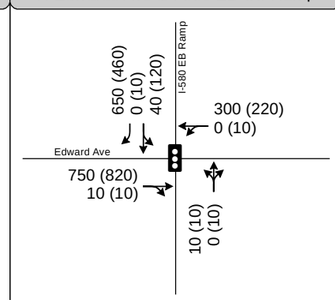
5. Seminary Ave & I-580 WB On-Ramp



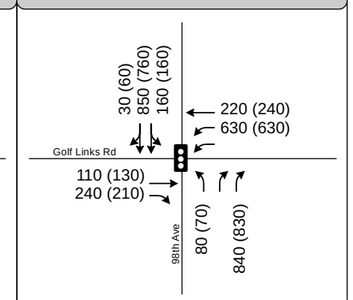
6. Edwards Ave & I-580 WB On-Ramp



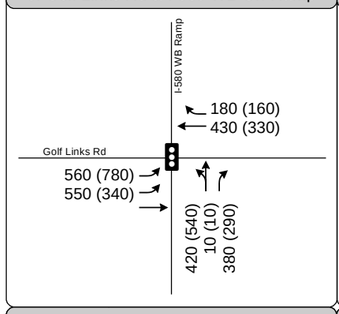
7. Edwards Ave & I-580 EB Off-Ramp



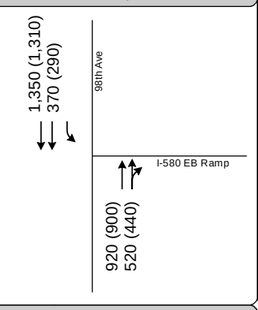
8. Golf Links Rd & 98th Ave



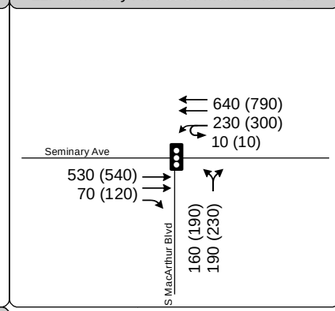
9. Golf Links Rd & I-580 WB On-Ramp



10. I-580 EB On-Ramp & 98th Ave



11. Seminary Ave & S. MacArthur Blvd



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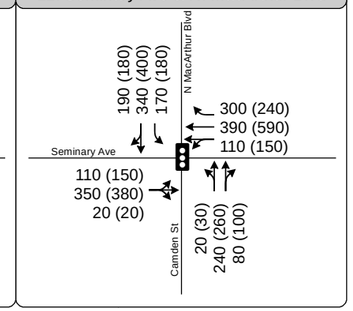
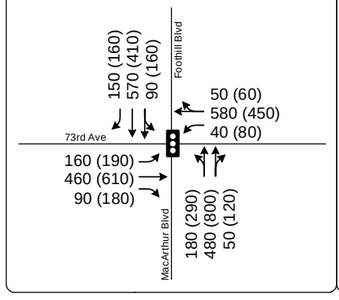
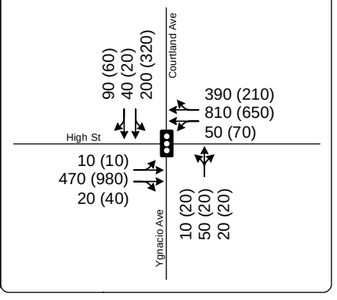


13. 73rd Ave & Foothill Blvd



14. High St & Courtland Ave



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C4.a

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus Coliseum Site

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\PlusColSite_2035_Conditions_A.mxd

Date: January, 2014

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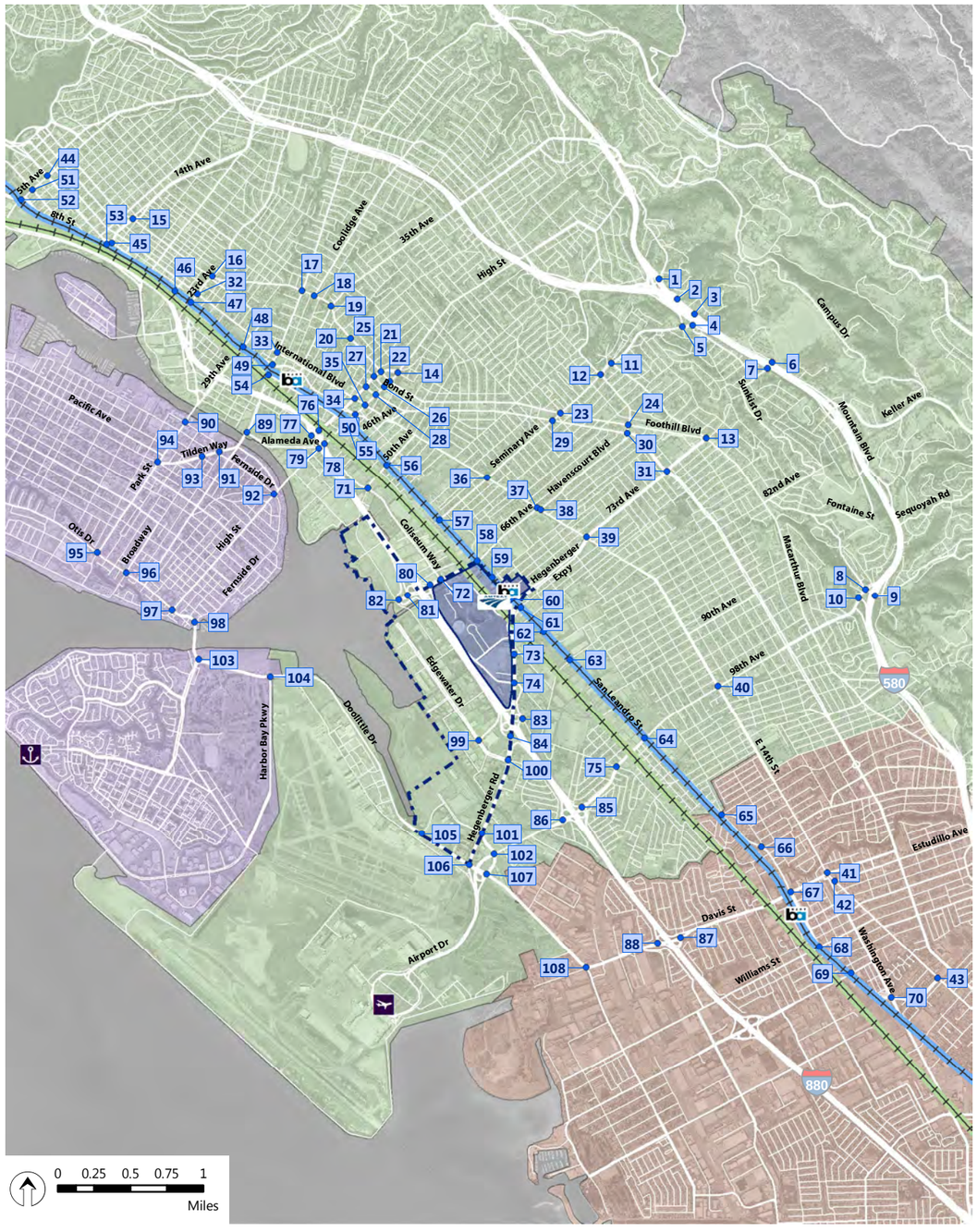
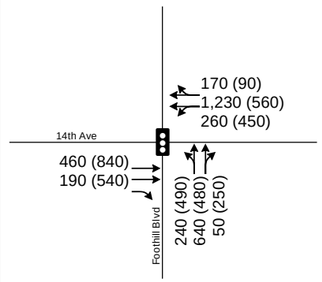
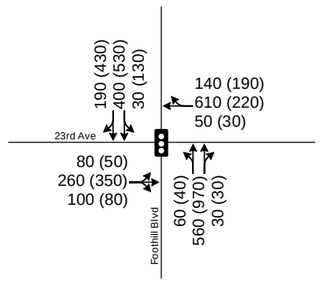


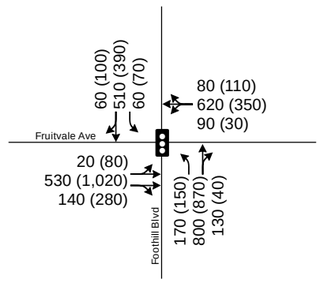
15. 14th Ave & Foothill Blvd



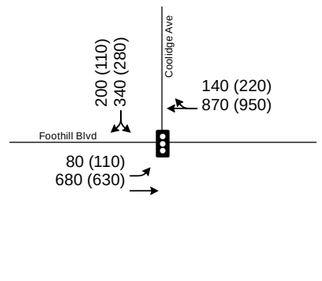
16. 23rd Ave & Foothill Blvd



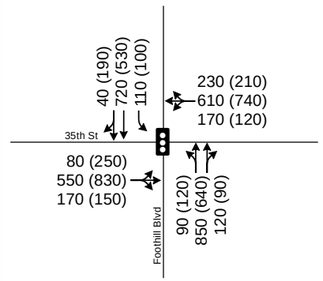
17. Fruitvale Ave & Foothill Blvd



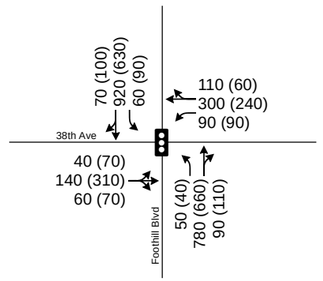
18. Foothill Blvd & Coolidge Ave



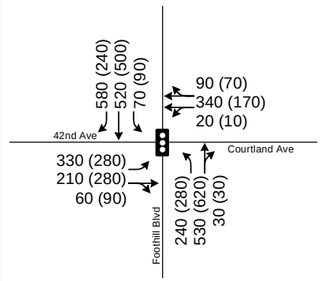
19. 35th St & Foothill Blvd



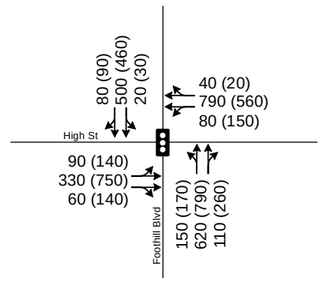
20. 38th Ave & Foothill Blvd



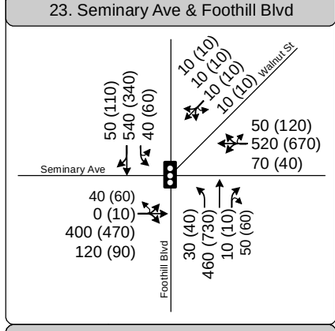
21. Courtland Ave & Foothill Blvd



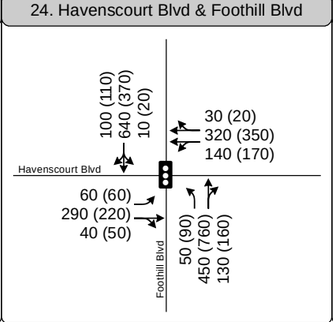
22. High St & Foothill Blvd



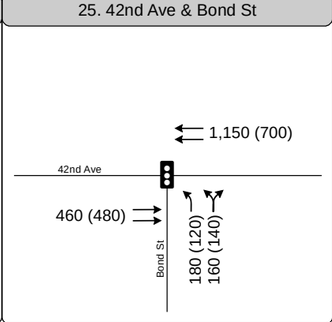
23. Seminary Ave & Foothill Blvd



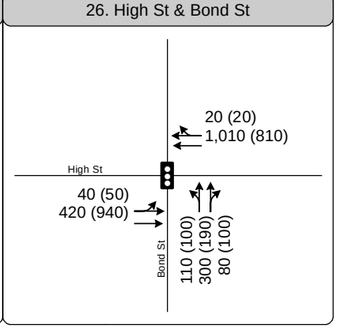
24. Havenscourt Blvd & Foothill Blvd



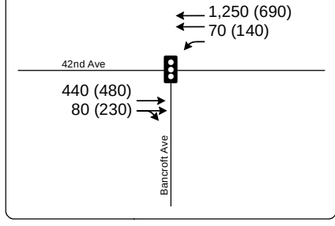
25. 42nd Ave & Bond St



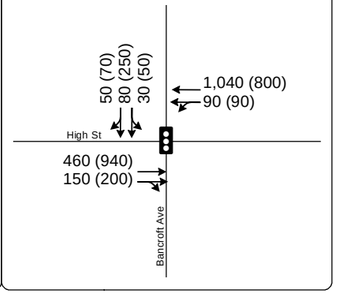
26. High St & Bond St



27. 42nd Ave & Bancroft Ave



28. High St & Bancroft Ave



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C4.b

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus Coliseum Site

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\PlusColSite_2035_Conditions_B.mxd

Date: January, 2014

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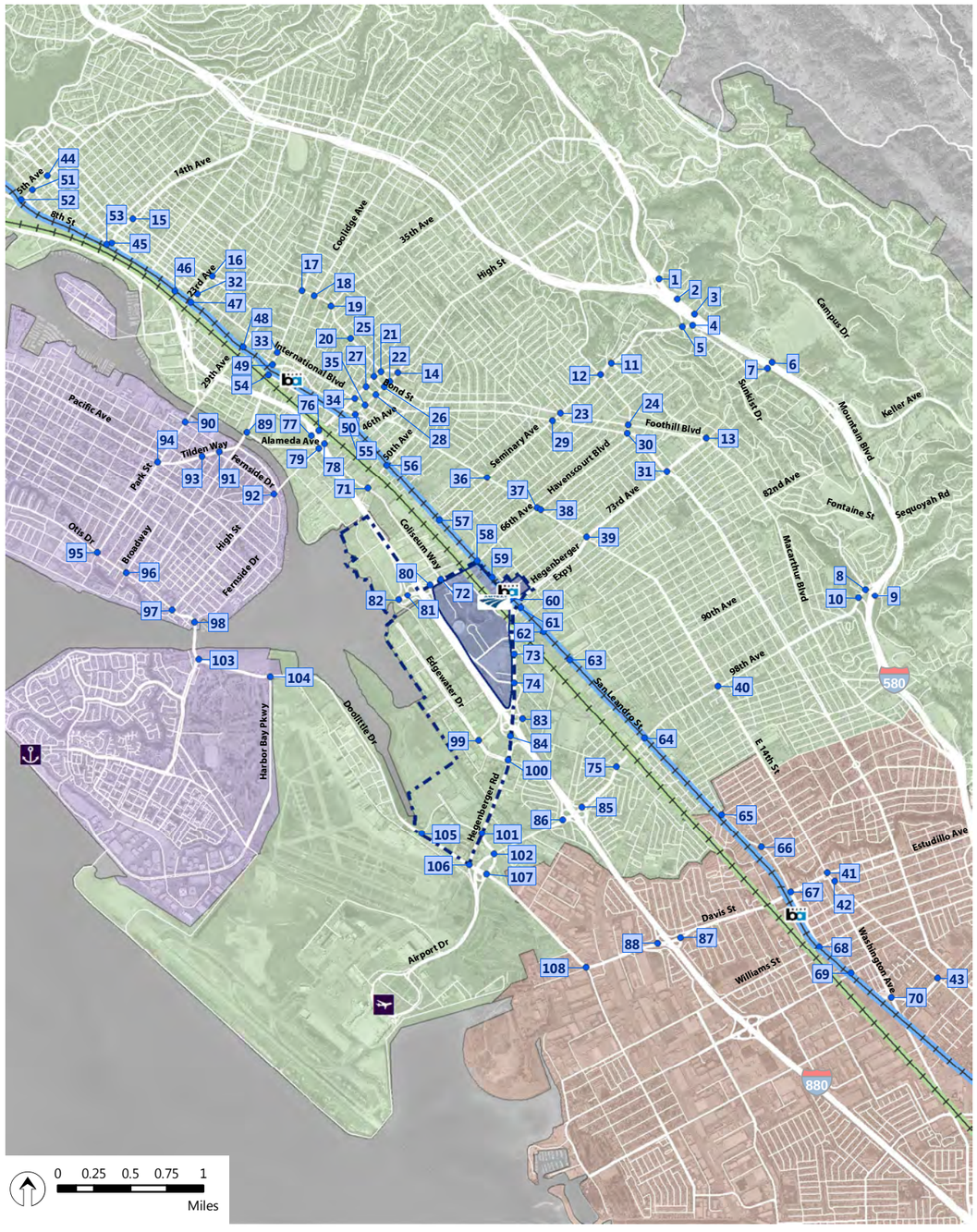
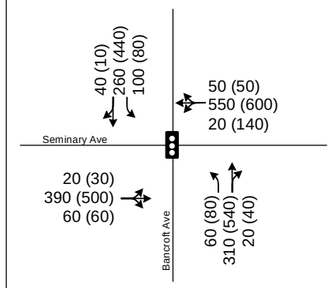
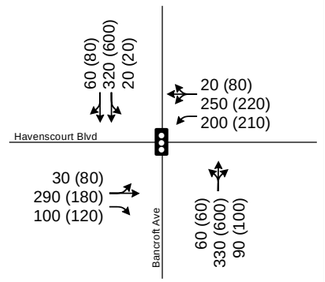


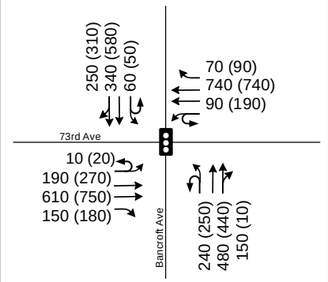
29. Seminary Ave & Bancroft Ave



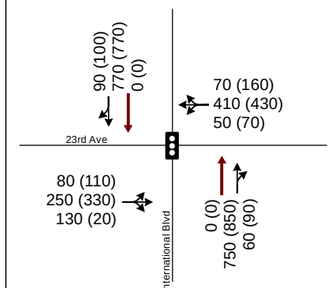
30. Havenscourt Blvd & International Blvd



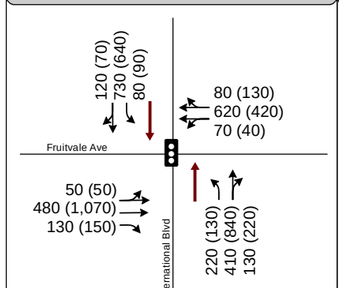
31. 73rd Ave & Bancroft Ave



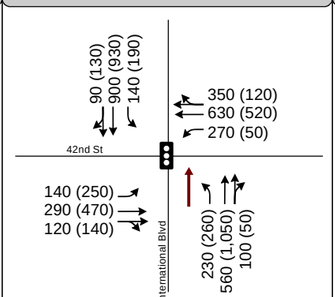
32. 23rd Ave & International Blvd



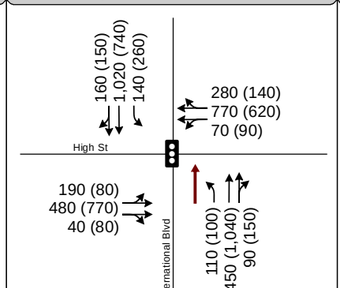
33. Fruitvale Ave & International Blvd



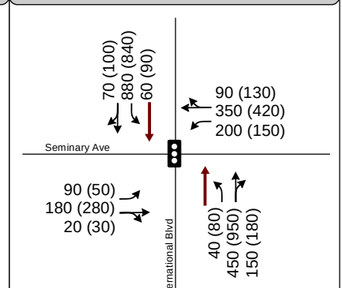
34. 42nd St & International Blvd



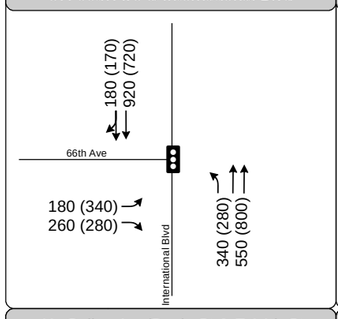
35. High St & International Blvd



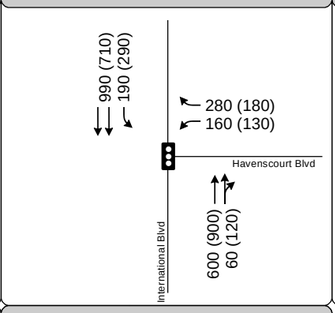
36. Seminary Ave & International Blvd



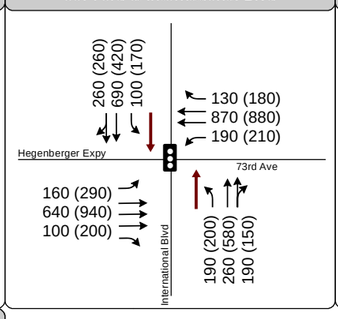
37. 66th Ave & International Blvd



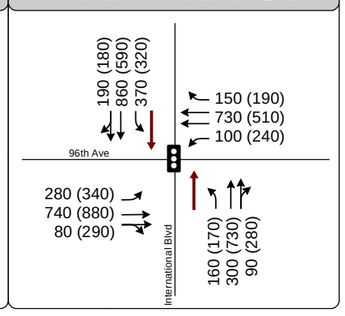
38. Havenscourt Blvd & International Blvd



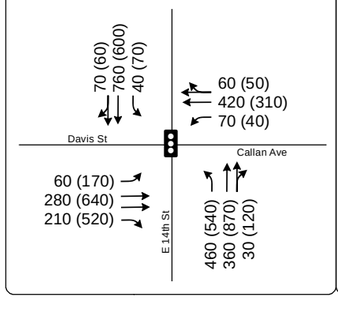
39. 73rd & International Blvd



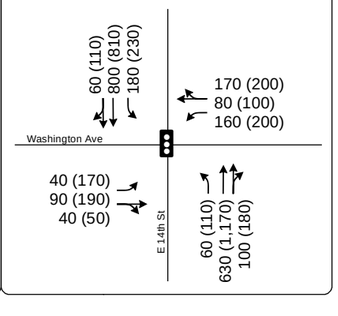
40. 98th Ave & International Blvd



41. Callan Ave/Davis St & E 14th St



42. Washington/Estudilo Ave & E 14th St



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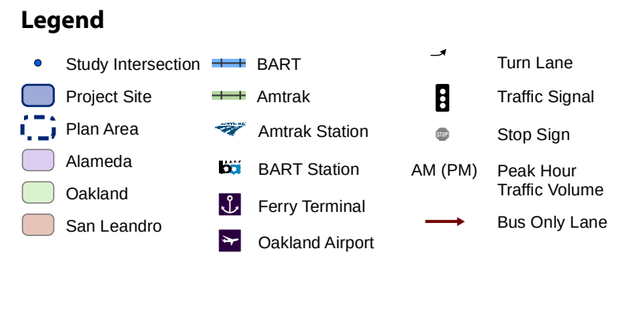

Figure C4.c

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus Coliseum Site

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Date: January, 2014

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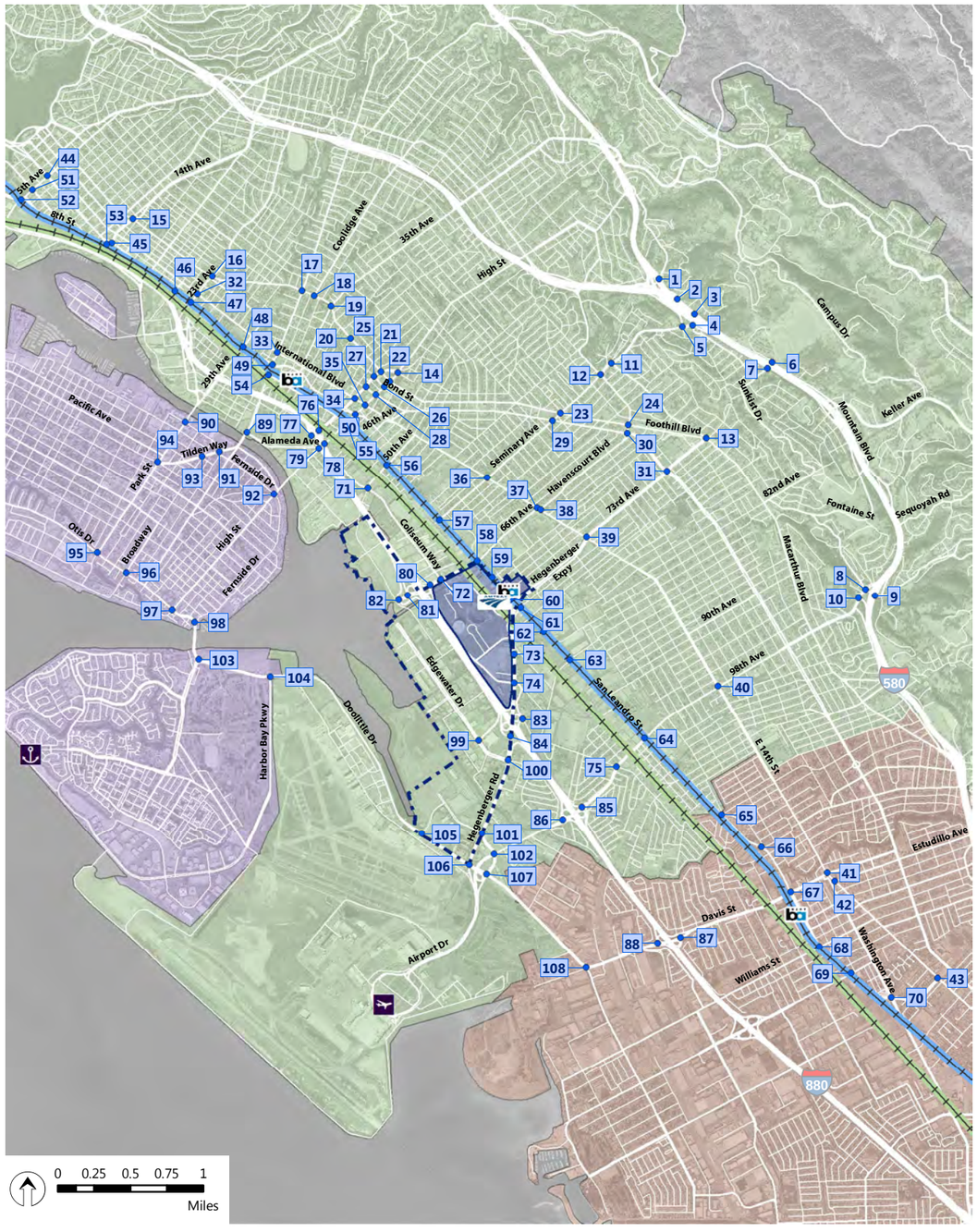
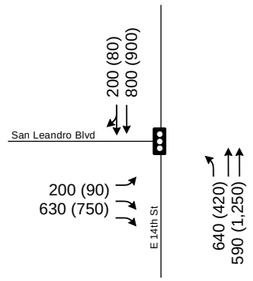
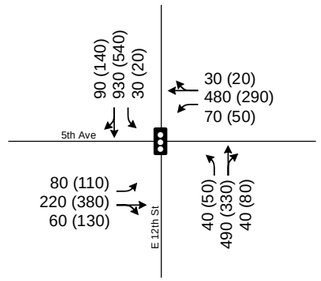


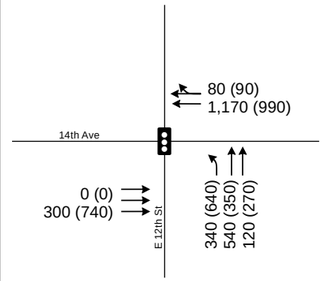
43.San Leandro Blvd & E 14th St



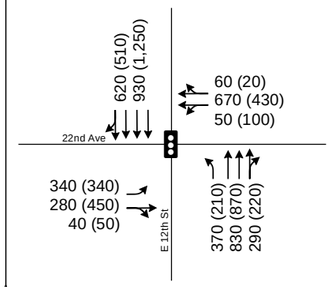
44. 5th Ave & E 12th St



45. 14th Ave & E 12th St



46. 22nd Ave & E 12th St



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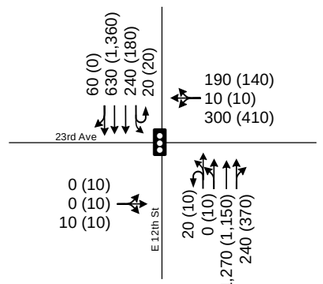
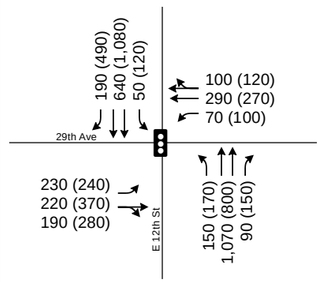
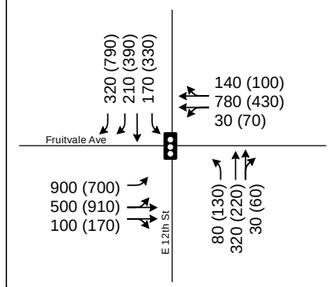


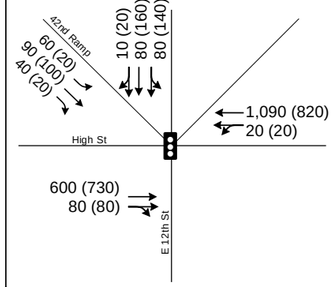
48. 29th Ave & E 12th St



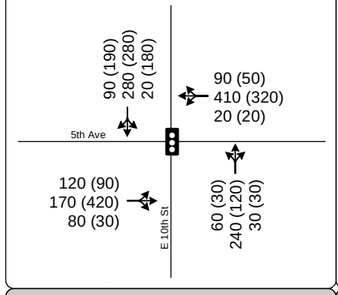
49. Fruitvale Ave & E 12th St



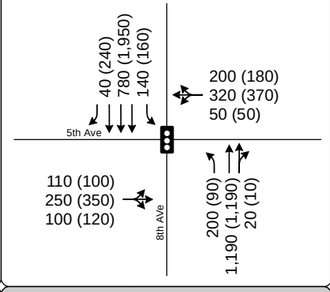
50. High St & E 12th St



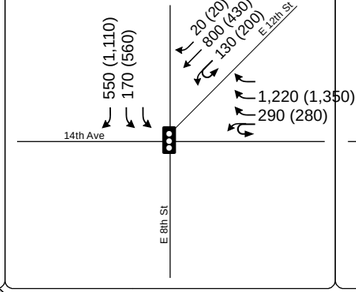
51. 5th Ave & E 10th St



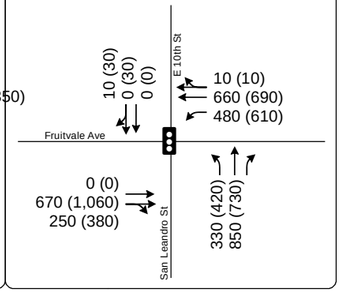
52. 5th Ave & 8th Ave



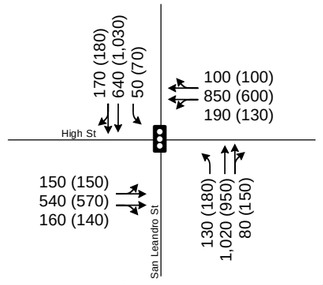
53. 14th Ave & E 8th St



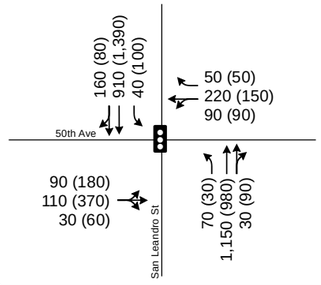
54. Fruitvale & E 10th St



55. High St & San Leandro St



56. 50th Ave & San Leandro St



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C4.d

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus Coliseum Site

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\PlusColSite_2035_Conditions_D.mxd

Date: January, 2014

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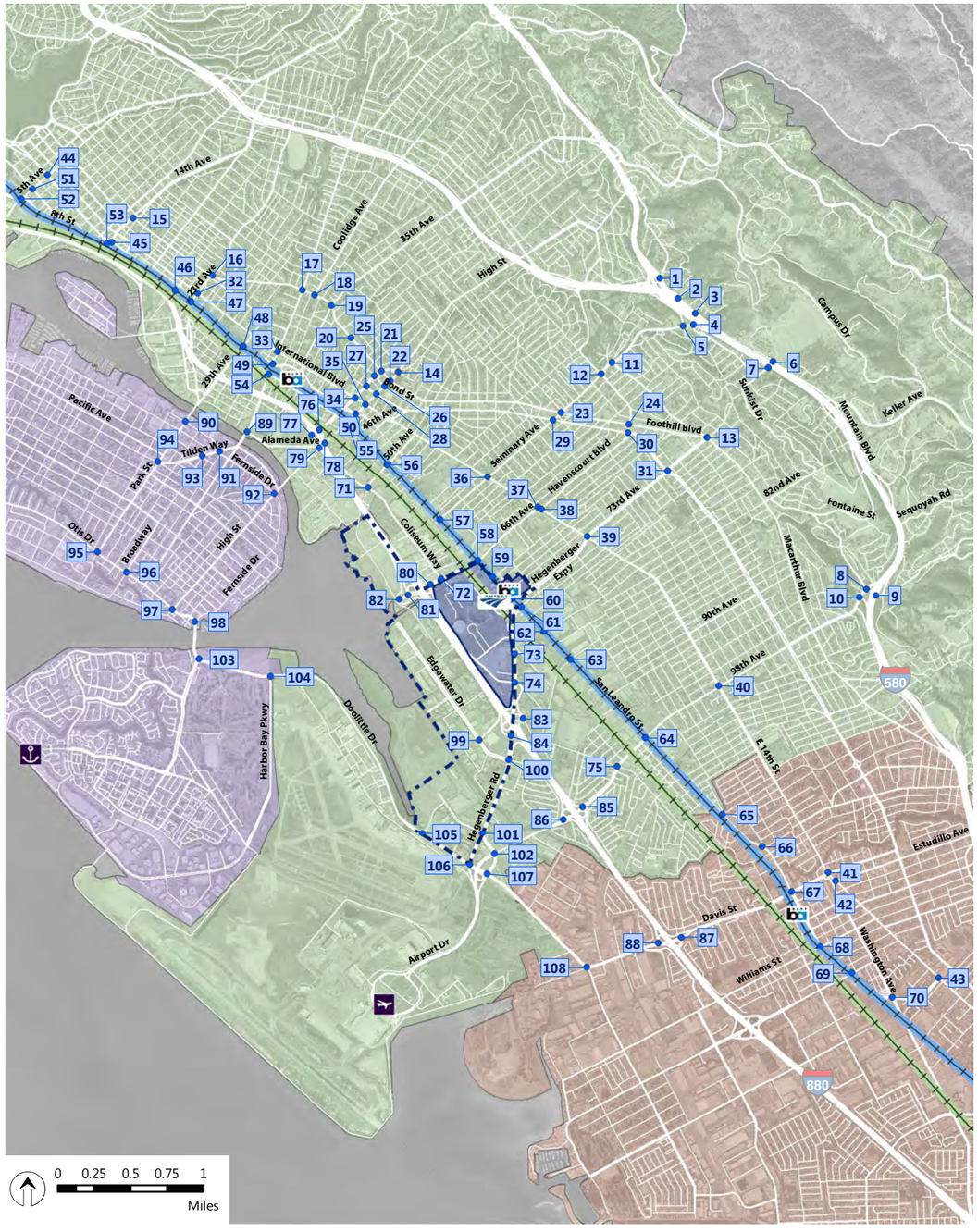
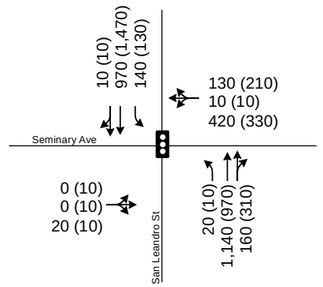
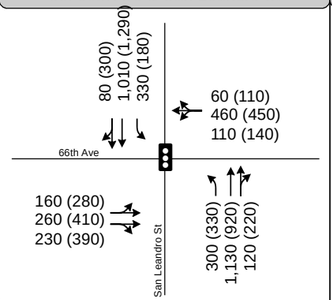


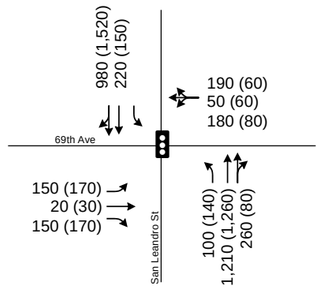
57. Seminary Ave & San Leandro St



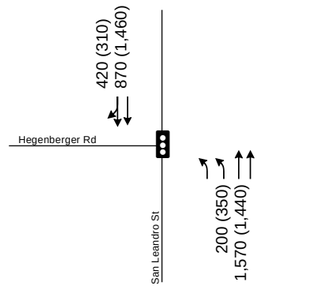
58. 66th Ave & San Leandro St



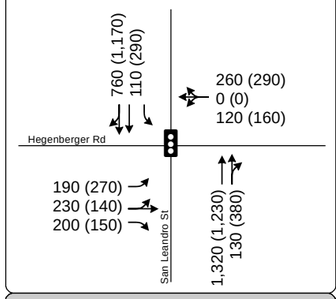
59. 69th Ave & San Leandro St



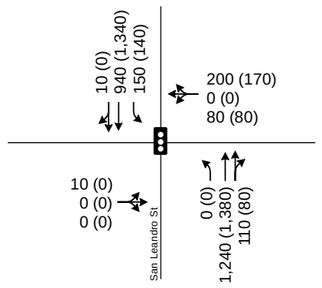
60. Hegenberger Ramp & San Leandro St



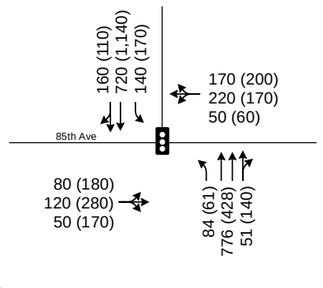
61. Hegenberger Ramp & San Leandro St



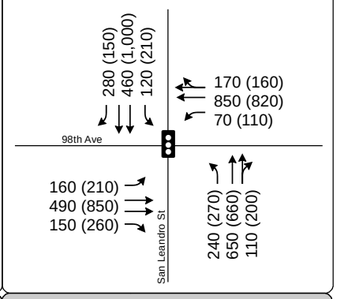
62. 81st Ave & San Leandro St



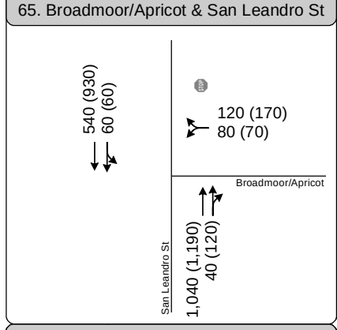
63. 85th Ave & San Leandro St



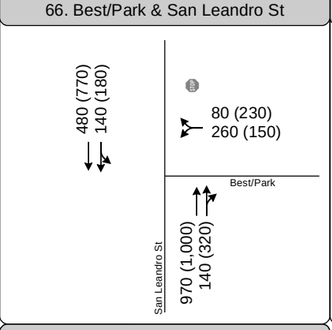
64. 98th Ave & San Leandro St



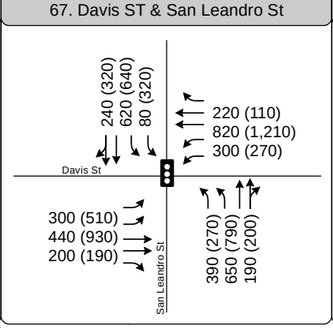
65. Broadmoor/Apricot & San Leandro St



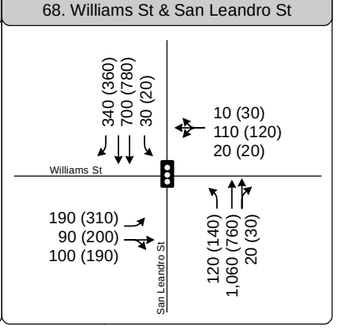
66. Best/Park & San Leandro St



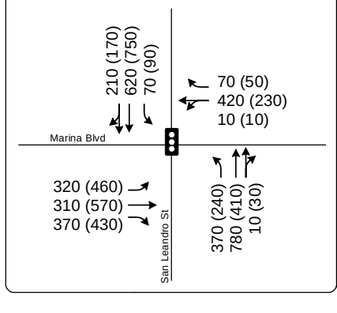
67. Davis ST & San Leandro St



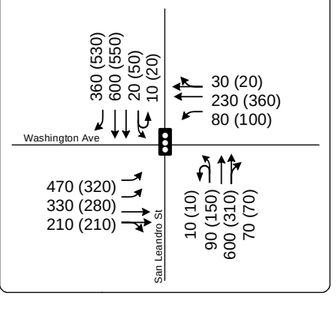
68. Williams St & San Leandro St



69. Marina Blvd & San Leandro St



70. Washington Ave & San Leandro St



Legend

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- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
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- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C4.e

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus Coliseum Site

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\PlusColSite_2035_Conditions_E.mxd

Date: January, 2014

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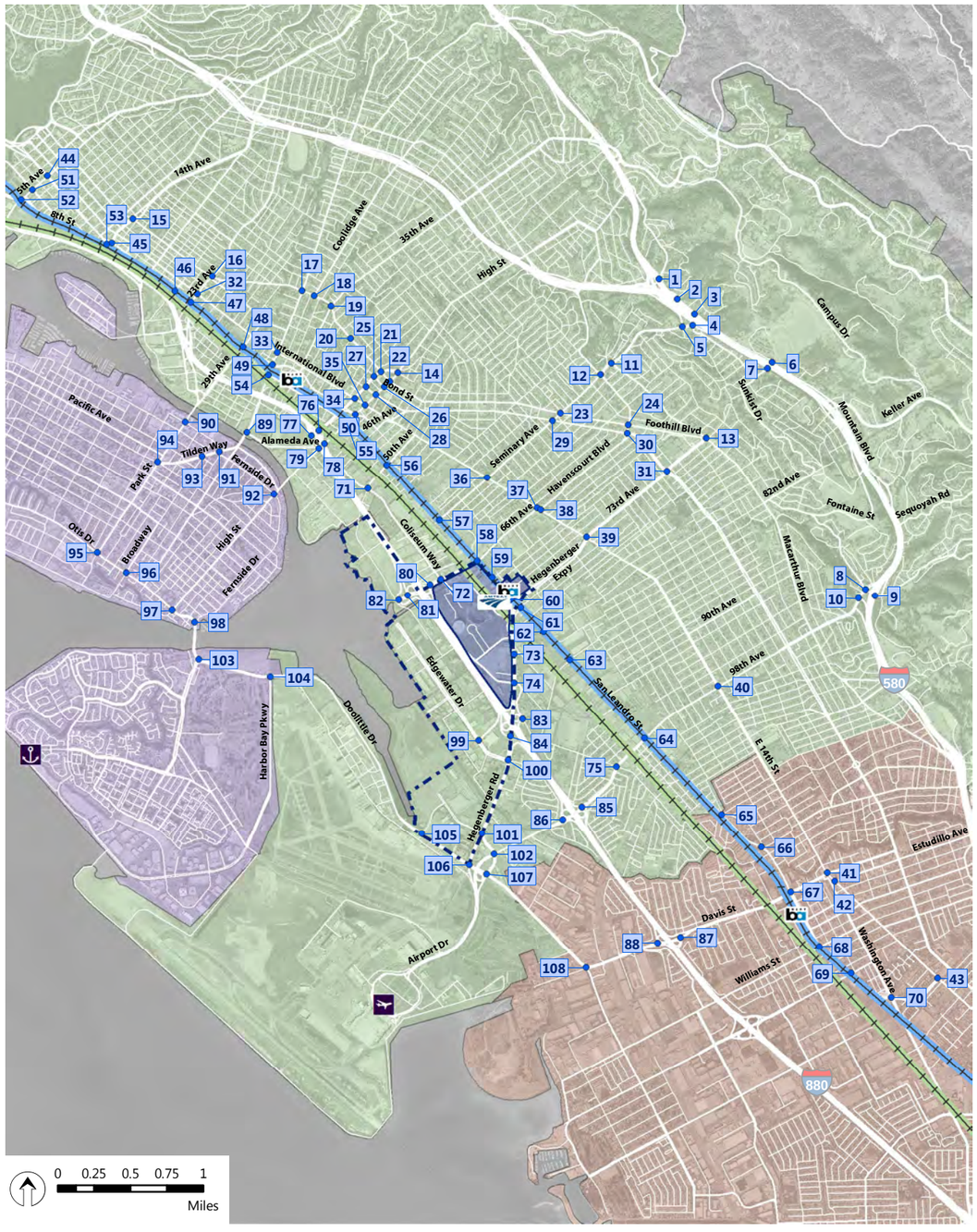
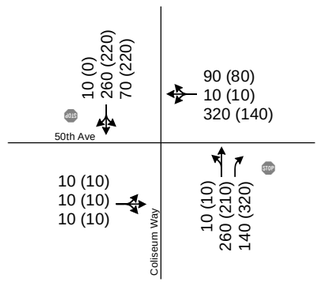
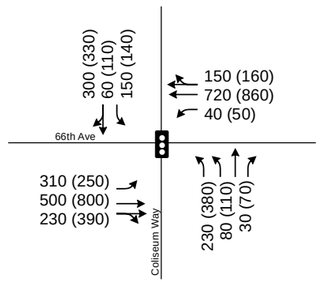


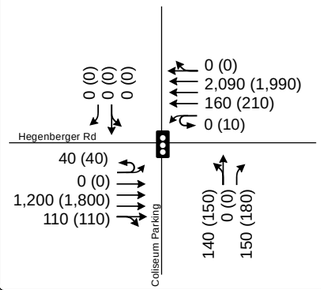
71. 50th Ave & Coliseum Way



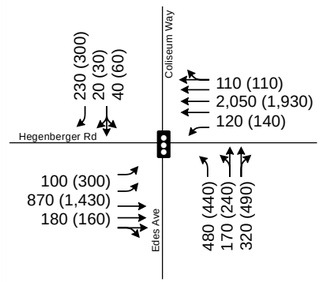
72. 66th Ave & Coliseum Way



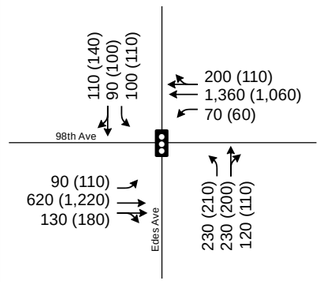
73. Hegenberger Rd & Coliseum Parking



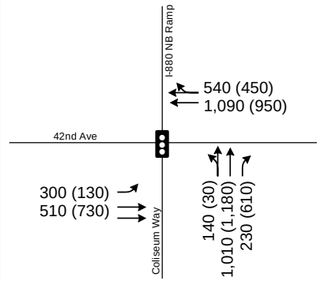
74. Hegenberger Rd & Coliseum Way



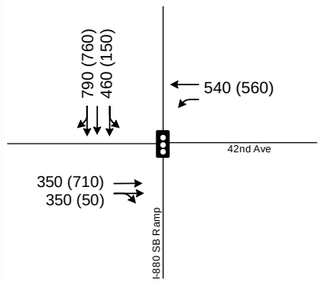
75. 98th Ave & Edes Ave



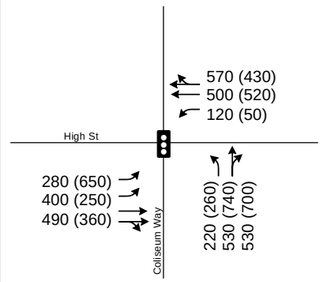
76. 42nd Ave & I-880 NB Ramps



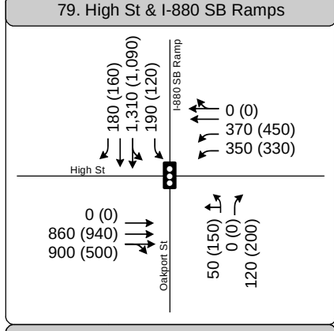
77. 42nd Ave & I-880 SB Ramps



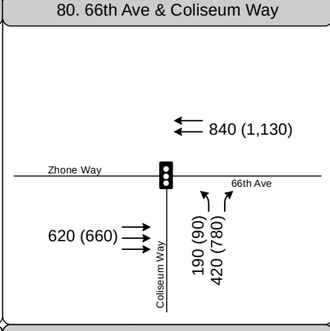
78. High St & Coliseum Way



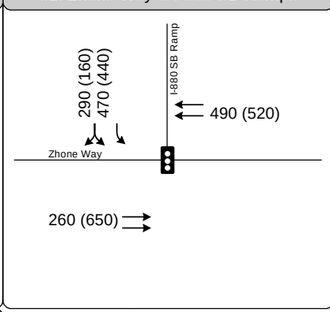
79. High St & I-880 SB Ramps



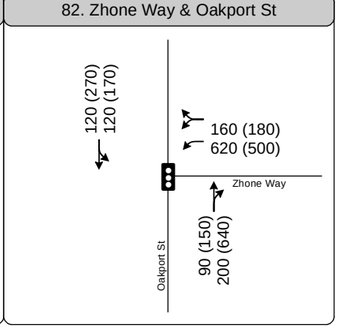
80. 66th Ave & Coliseum Way



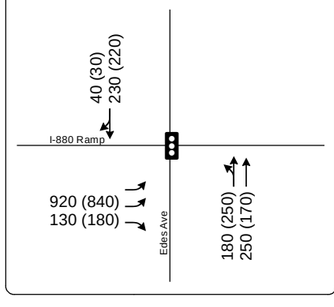
81. Zhone Way & I-880 SB Ramps



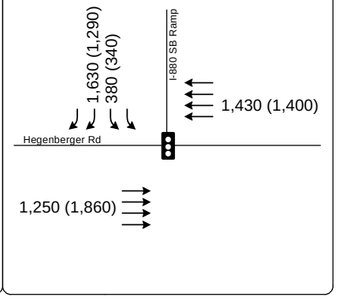
82. Zhone Way & Oakport St



83. I-880 Off-Ramps & Edes Ave



84. Hegenberger Rd & I-880 SB Ramps



Legend

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- Plan Area
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- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
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- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C4.f

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus Coliseum Site

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\PlusColSite_2035_Conditions_F.mxd

Date: January, 2014

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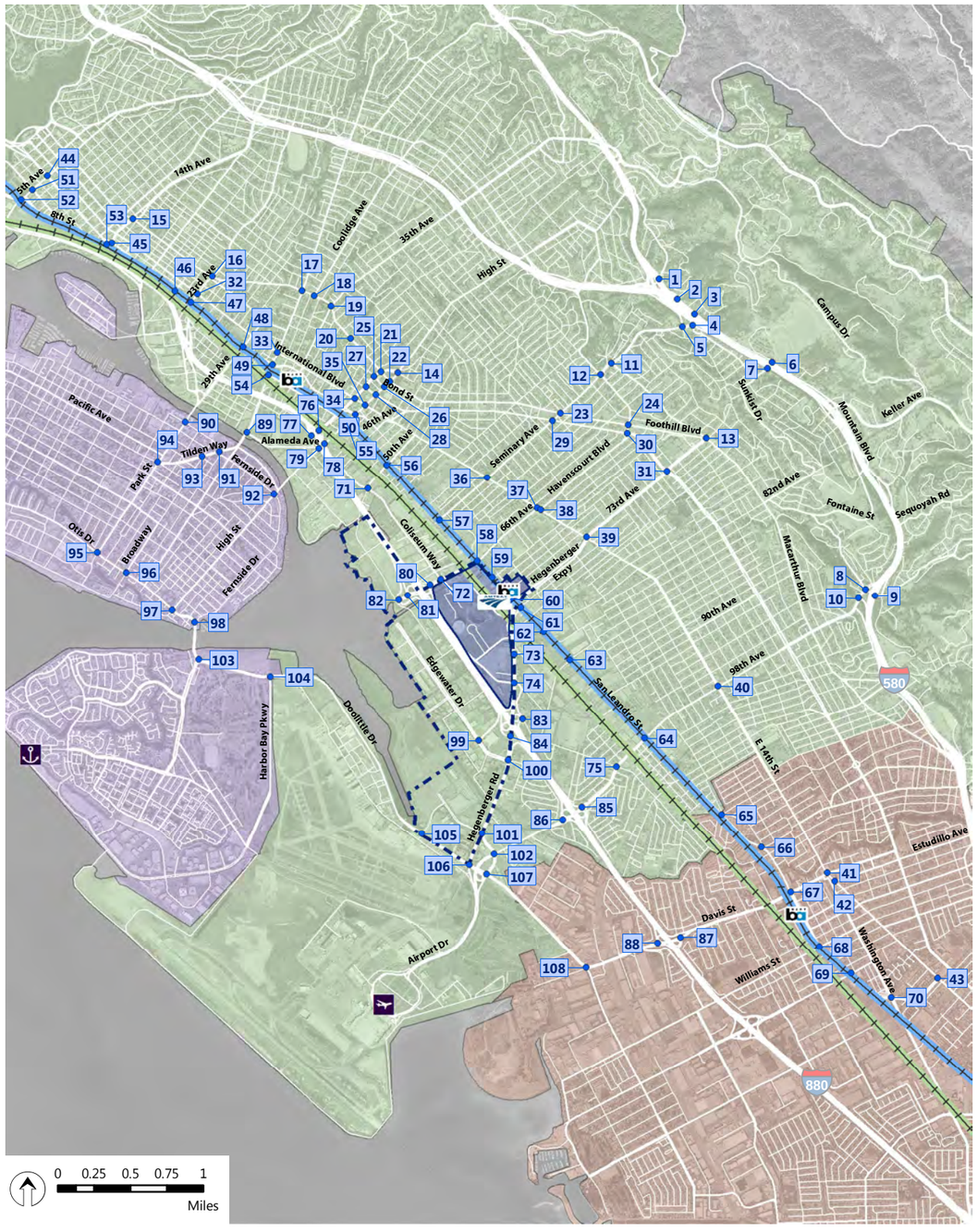
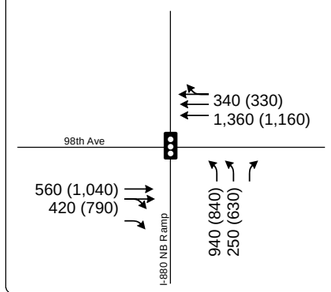
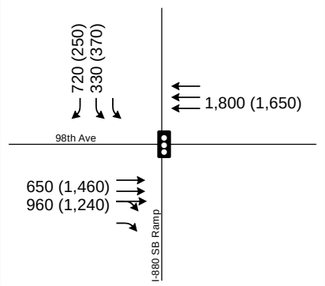


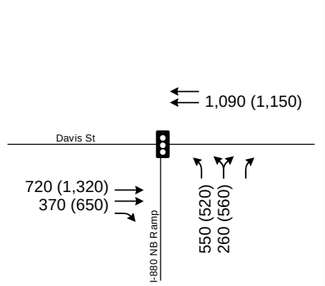
85. 98th Ave & I-880 NB Ramps



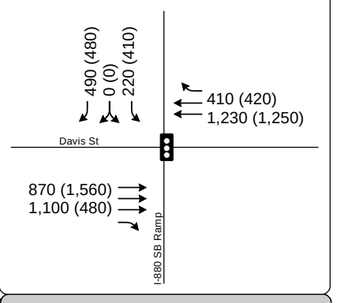
86. 98th AVe & I-880 SB Ramps



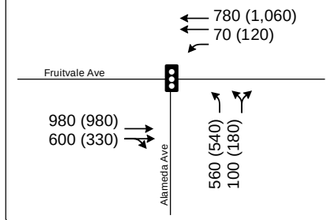
87. Davis St & I-880 NB Ramps



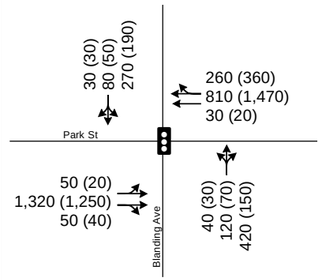
88. Davis St & I-880 SB Ramps



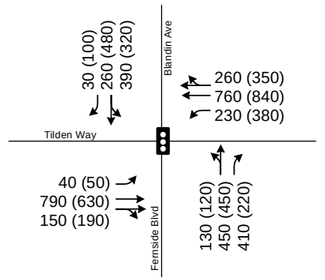
89. Fruitvale Ave & Alameda Ave



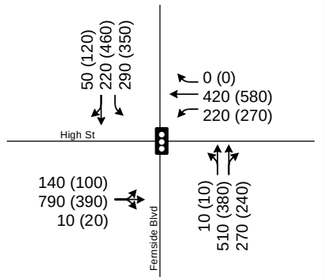
90. Park St & Blanding Ave



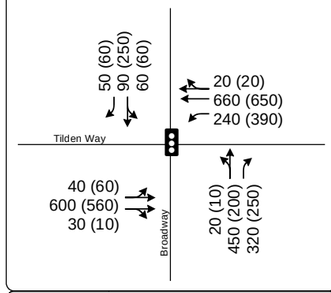
91. Tilden Way & Fernside/Blanding



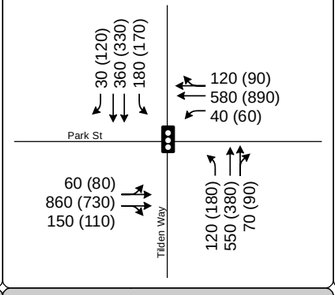
92. High St & Fernside Blvd



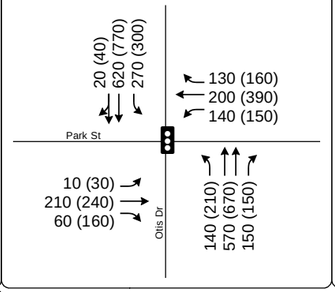
93. Tilden Way & Broadway



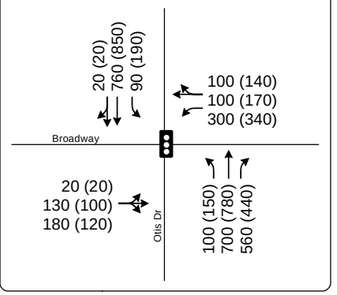
94. Park St & Tilden Way



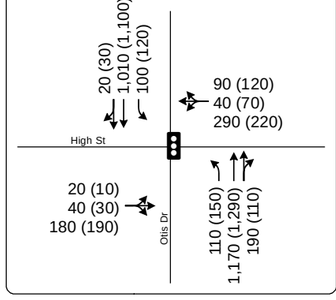
95. Park St & Otis Dr



96. Broadway & Otis Dr



97. High St & Otis Dr



98.Fernside Blvd & Otis Dr

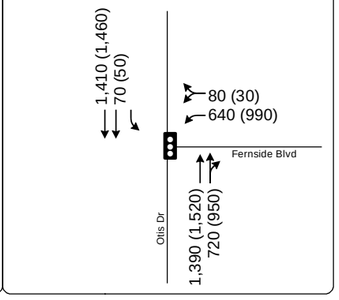


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Figure C4.g

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus Coliseum Site

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\PlusColSite_2035_Conditions_G.mxd

Date: January, 2014

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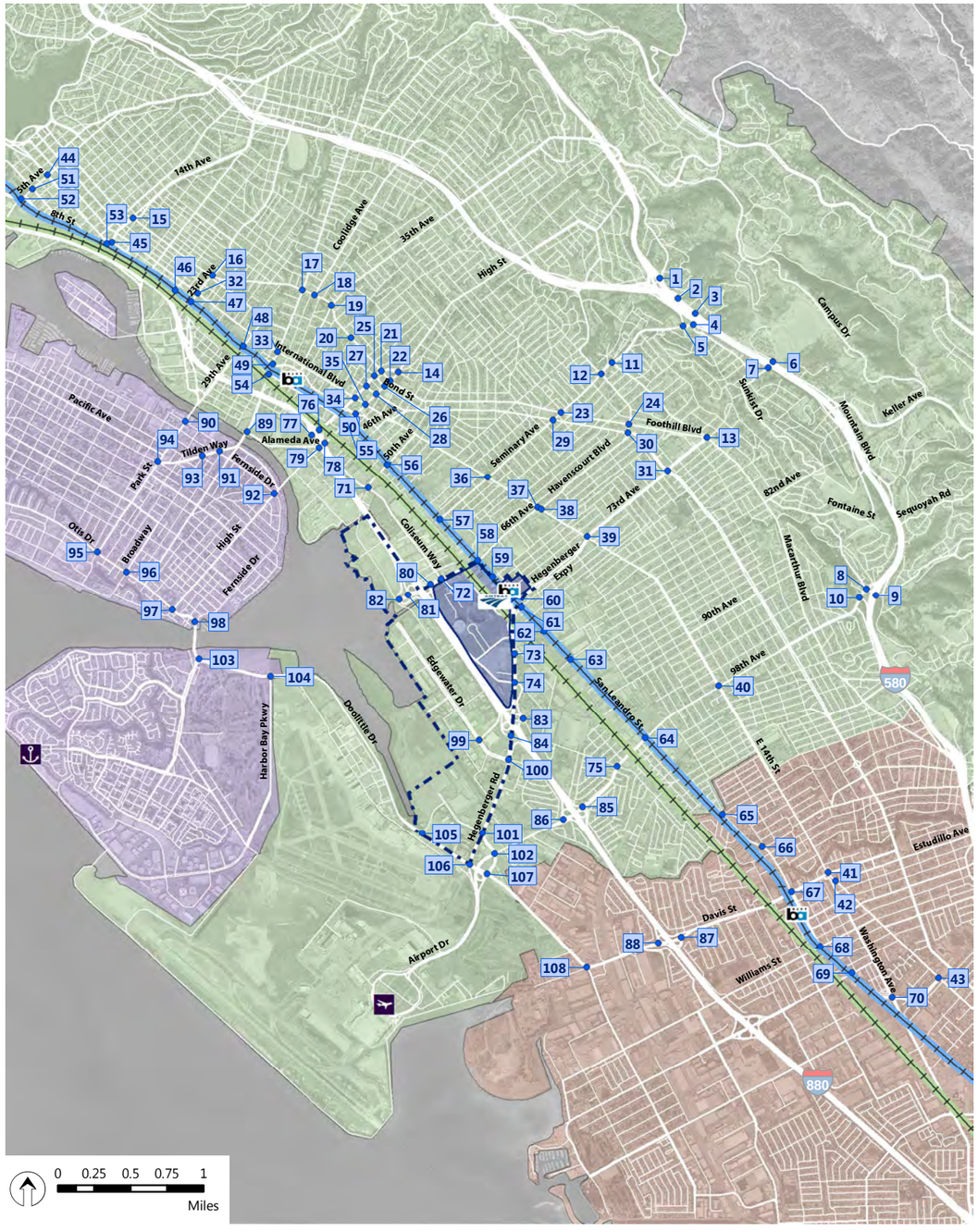
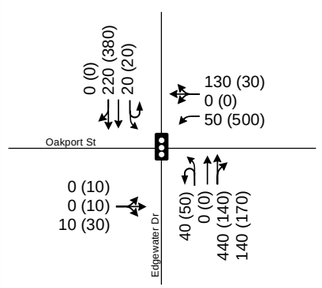
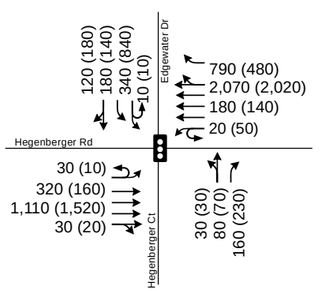


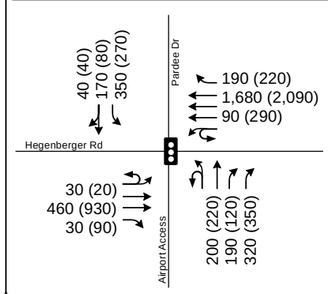
99. Oakport St & Edgewater Dr



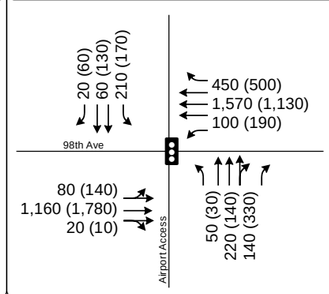
100. Hegenberger Rd & Edgewater Dr



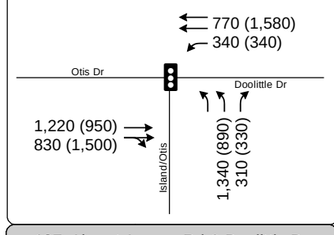
101. Hegenberger Rd & Parade Dr



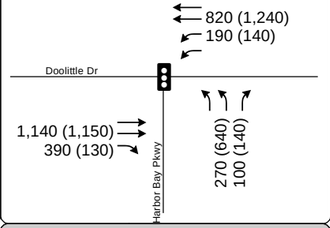
102. 98th Ave & Airport Acess Rd



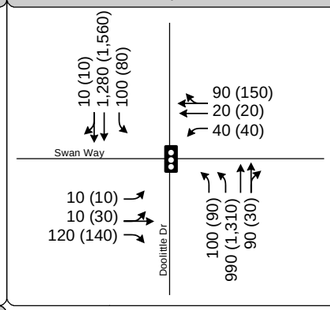
103. Doolittle/Otis & Island Dr



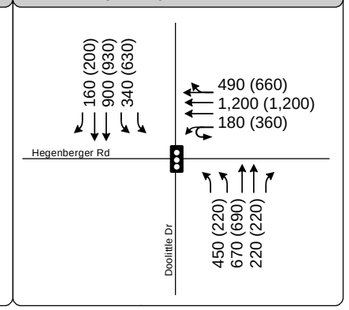
104. Doolittle Dr & Harbor Bay Pkwy



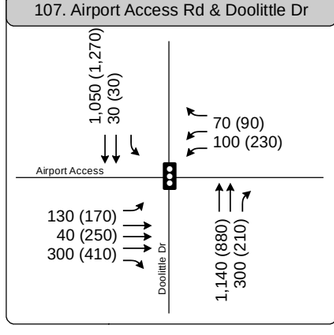
105. Swan Way & Doolittle Dr



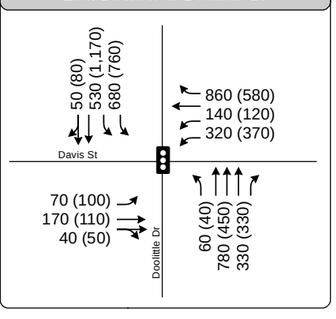
106. Hegenberger Rd & Doolittle Dr



107. Airport Access Rd & Doolittle Dr



108. Davis St & Doolittle Dr



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C4.h

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus Coliseum Site

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Date: January, 2014

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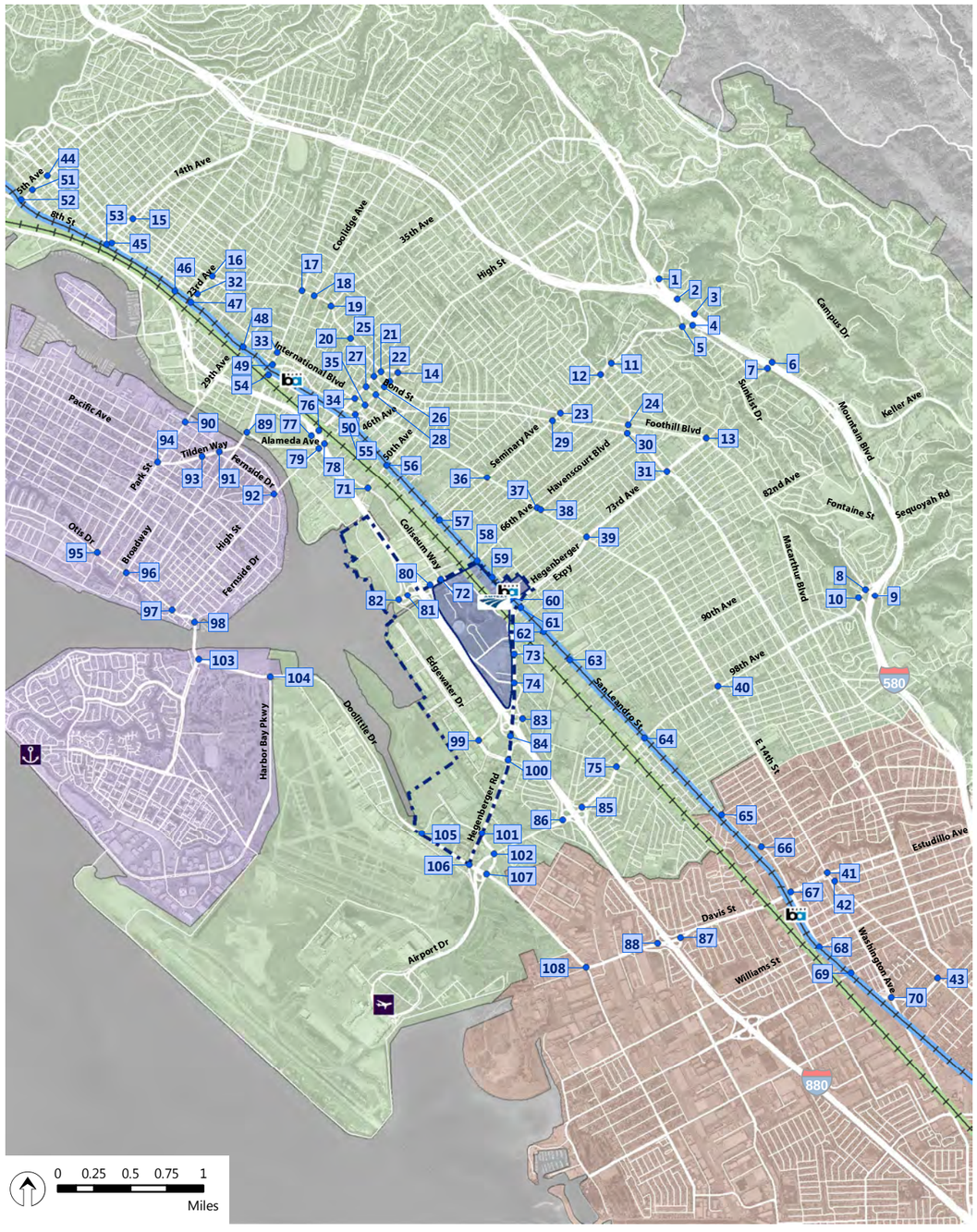

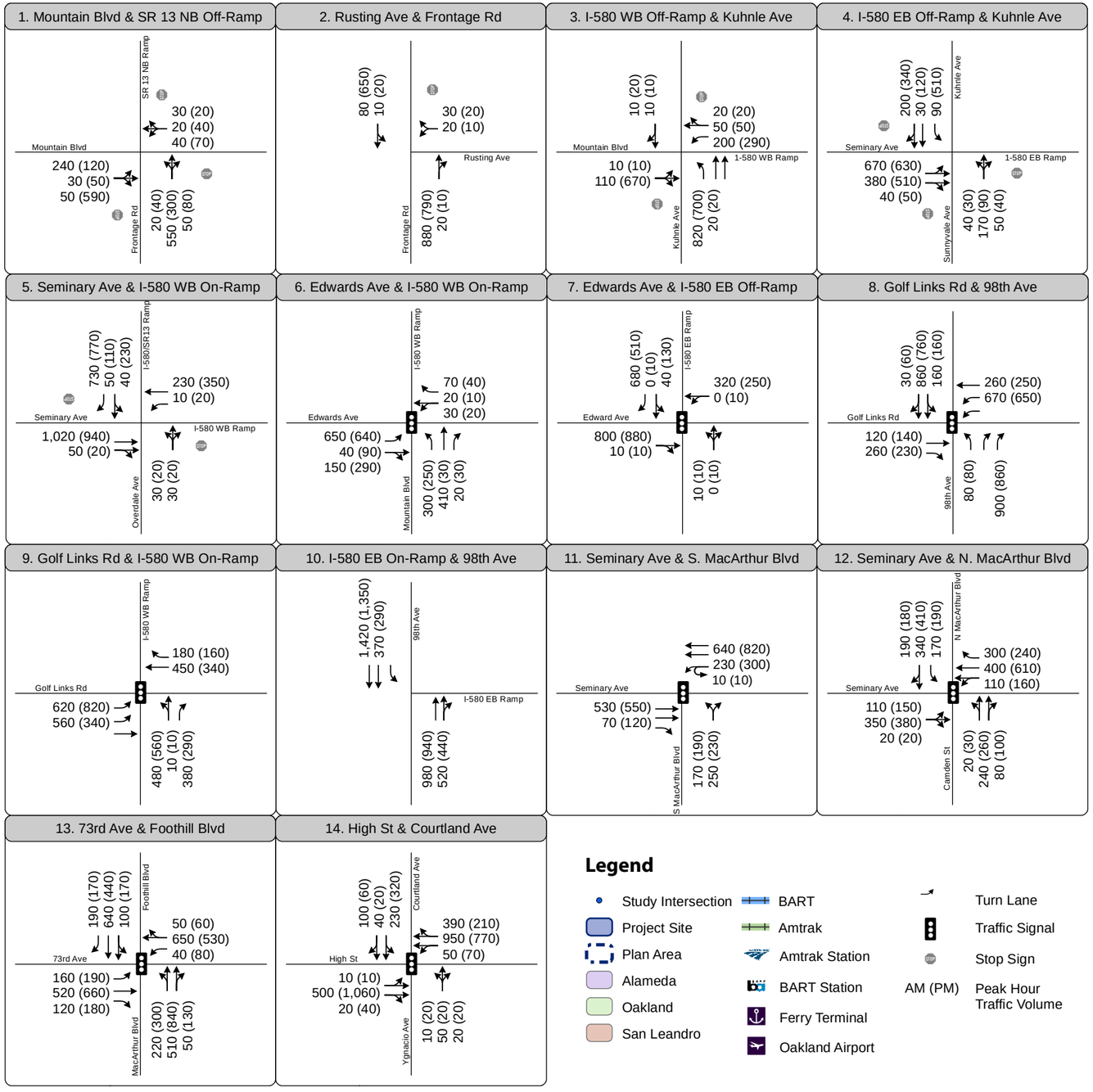

Figure C5.a

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus BO Conditions

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Date: January, 2014

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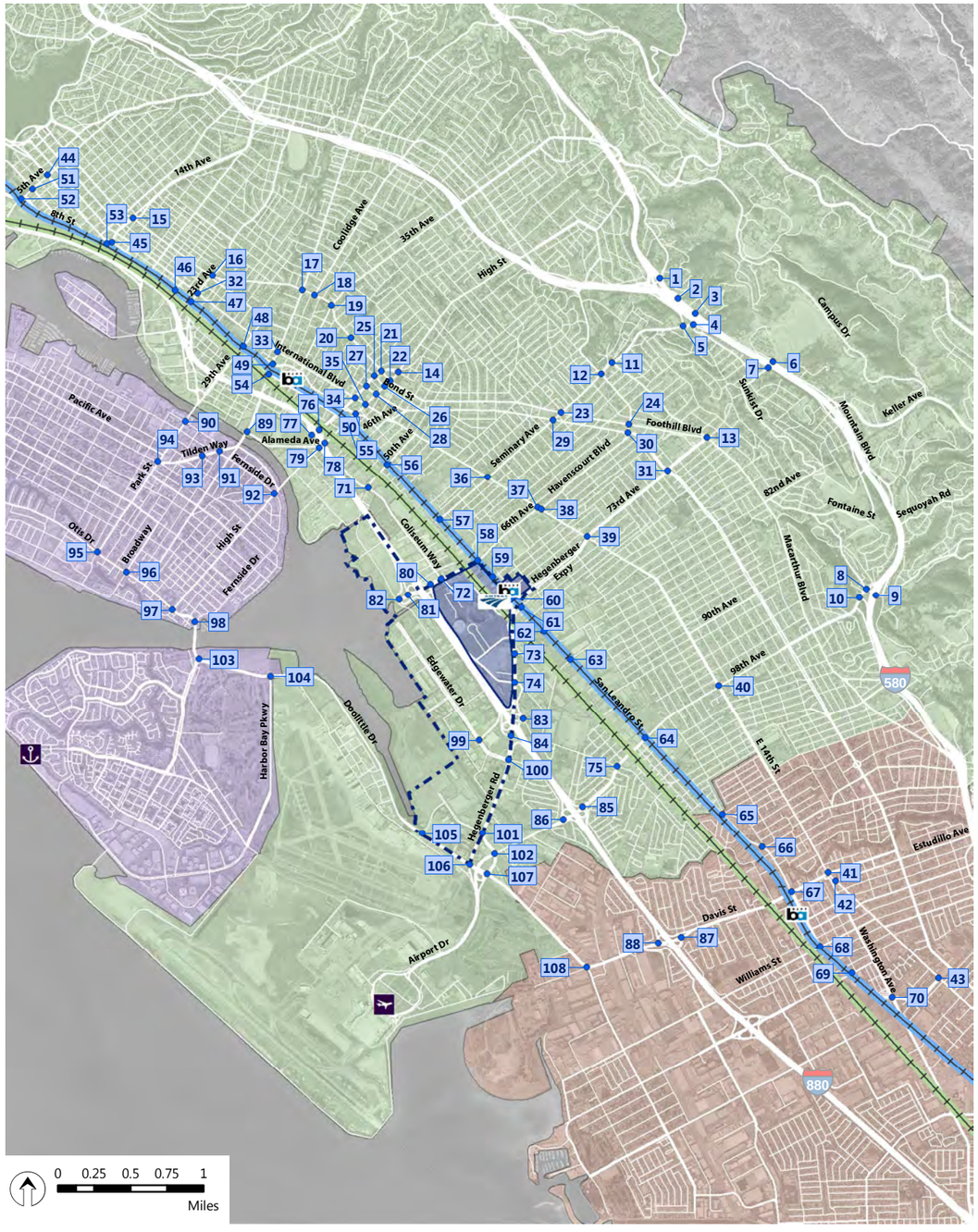
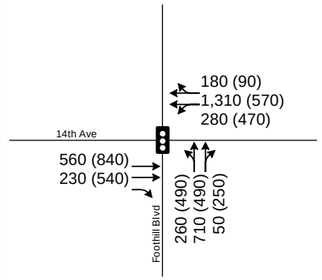
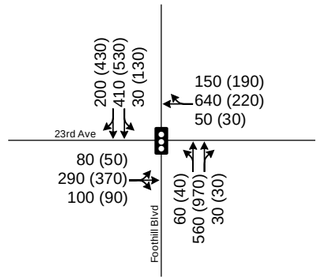


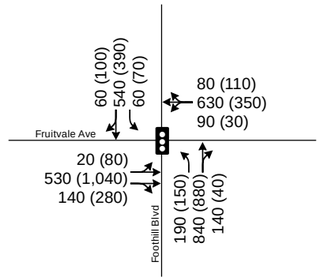
15. 14th Ave & Foothill Blvd



16. 23rd Ave & Foothill Blvd



17. Fruitvale Ave & Foothill Blvd



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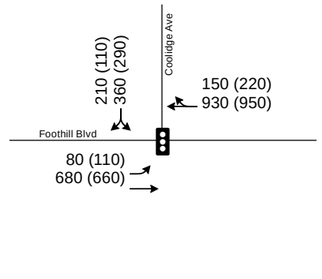

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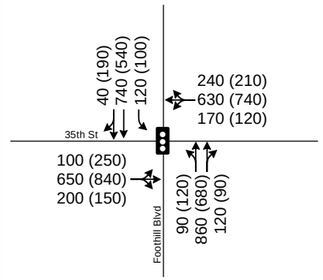

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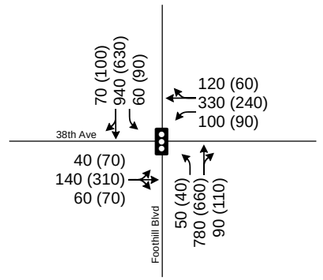

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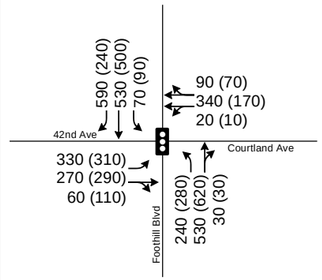
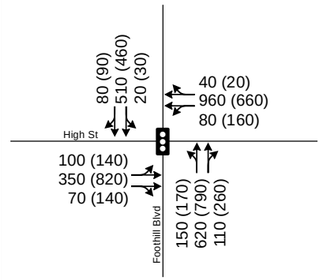
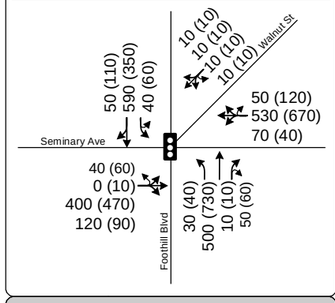


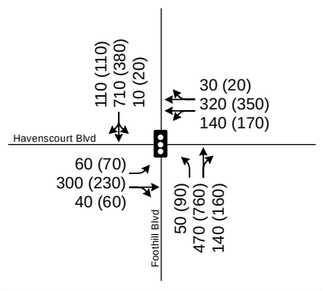
22. High St & Foothill Blvd



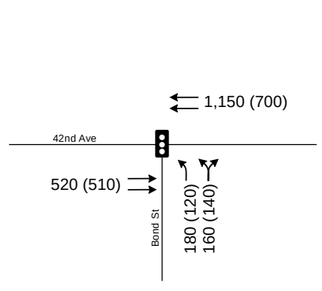
23. Seminary Ave & Foothill Blvd



24. Havenscourt Blvd & Foothill Blvd



25. 42nd Ave & Bond St



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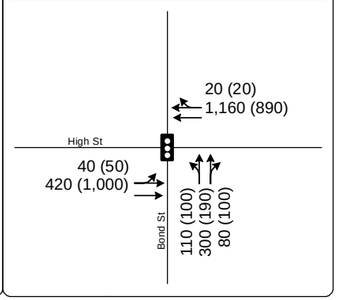
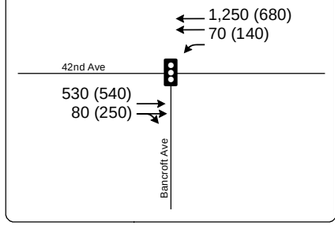


27. 42nd Ave & Bancroft Ave



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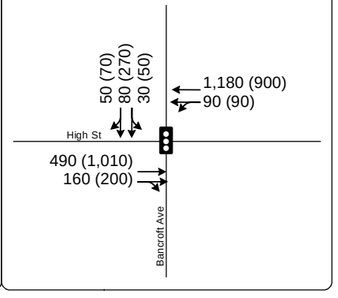

Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume

Figure C5.b

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus BO Conditions

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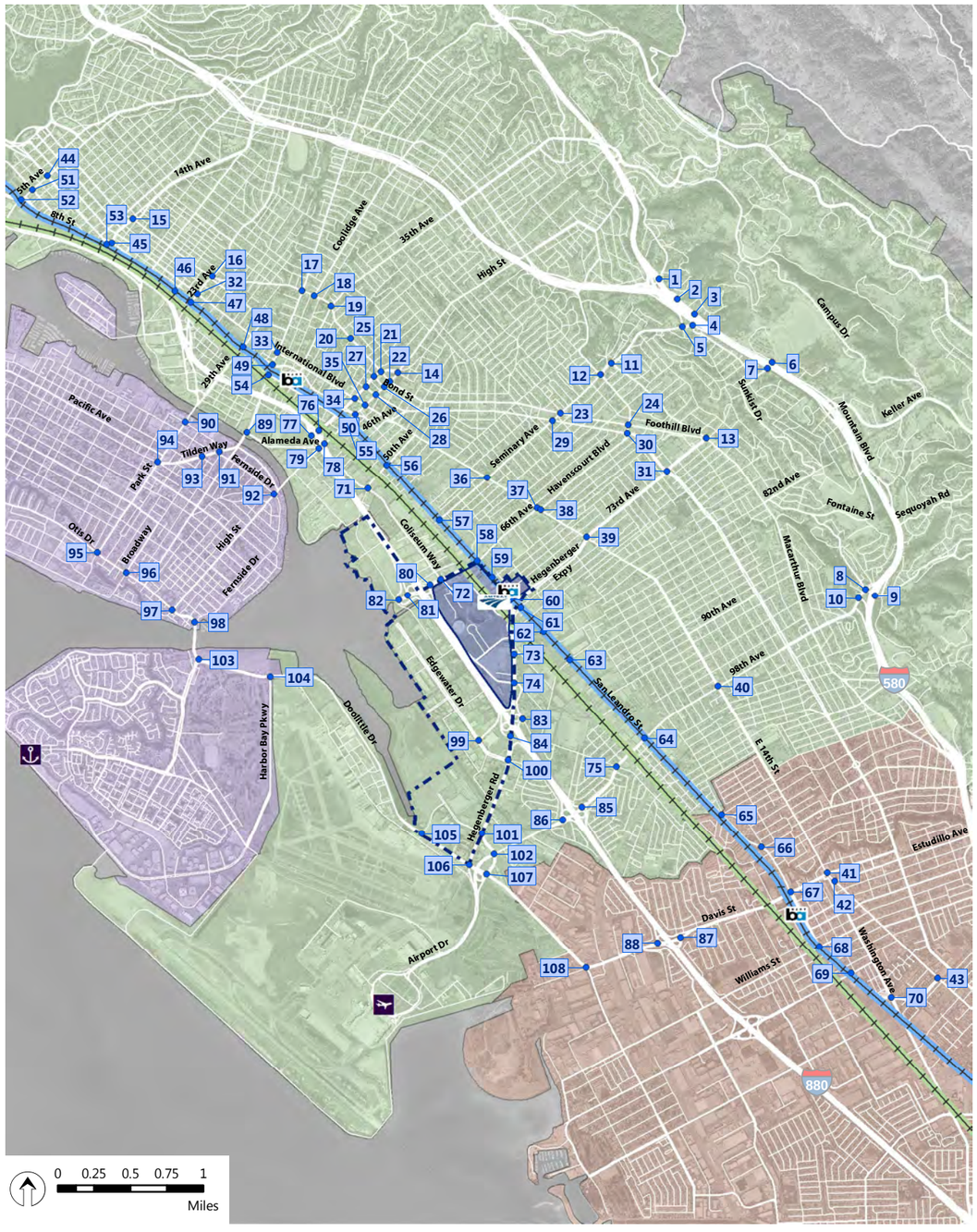
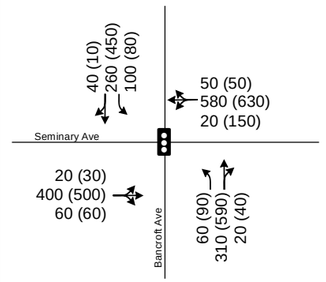
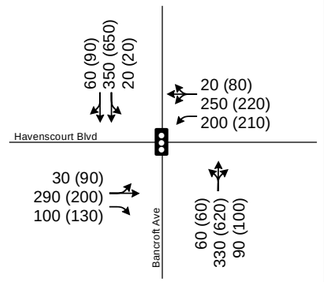


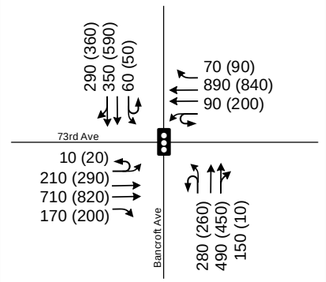
29. Seminary Ave & Bancroft Ave



30. Havenscourt Blvd & International Blvd



31. 73rd Ave & Bancroft Ave



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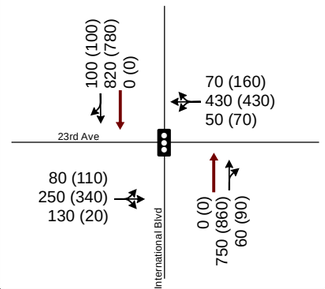
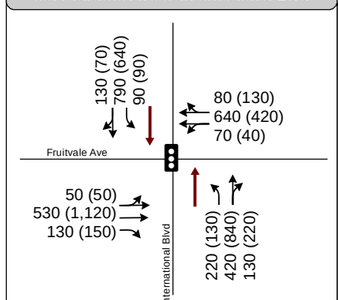


33. Fruitvale Ave & International Blvd



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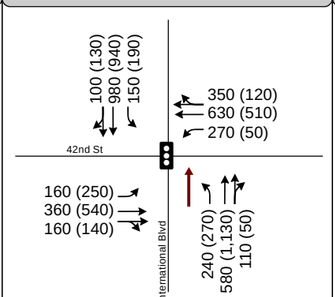
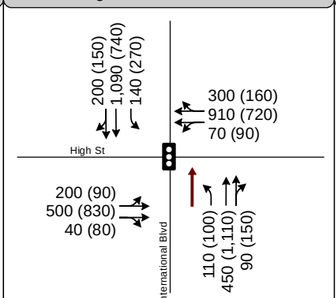
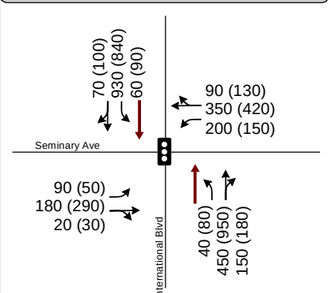


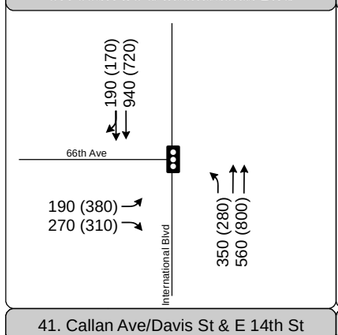
35. High St & International Blvd



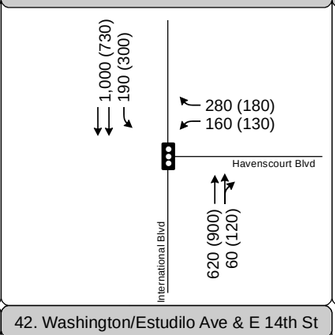
36. Seminary Ave & International Blvd



37. 66th Ave & International Blvd



38. Havenscourt Blvd & International Blvd



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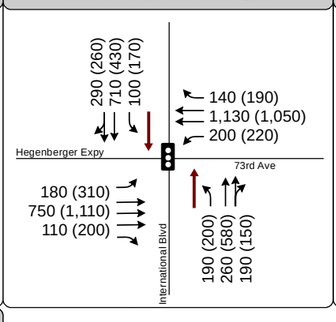
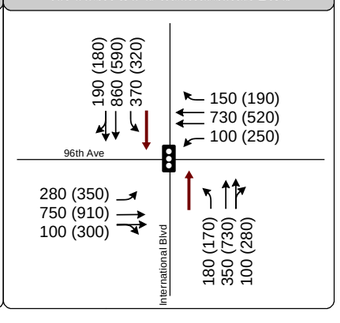
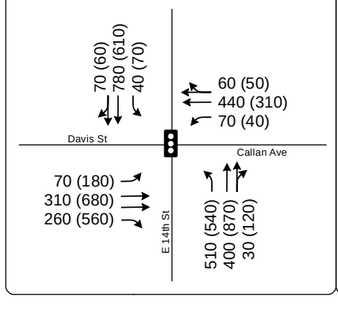


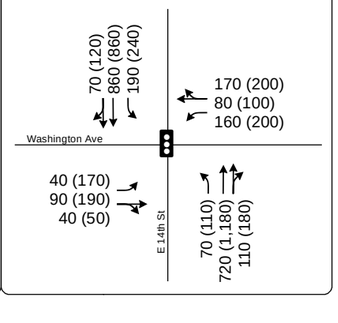
40. 98th Ave & International Blvd



41. Callan Ave/Davis St & E 14th St



42. Washington/Estudilo Ave & E 14th St



Legend

- Study Intersection
- Project Site
- Plan Area
- Alameda
- Oakland
- San Leandro
- BART
- Amtrak
- Amtrak Station
- BART Station
- Ferry Terminal
- Oakland Airport
- Turn Lane
- Traffic Signal
- Stop Sign
- AM (PM) Peak Hour Traffic Volume
- Bus Only Lane

Figure C5.c

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus BO Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\PlusBO_2035_Conditions_C.mxd

Date: January, 2014

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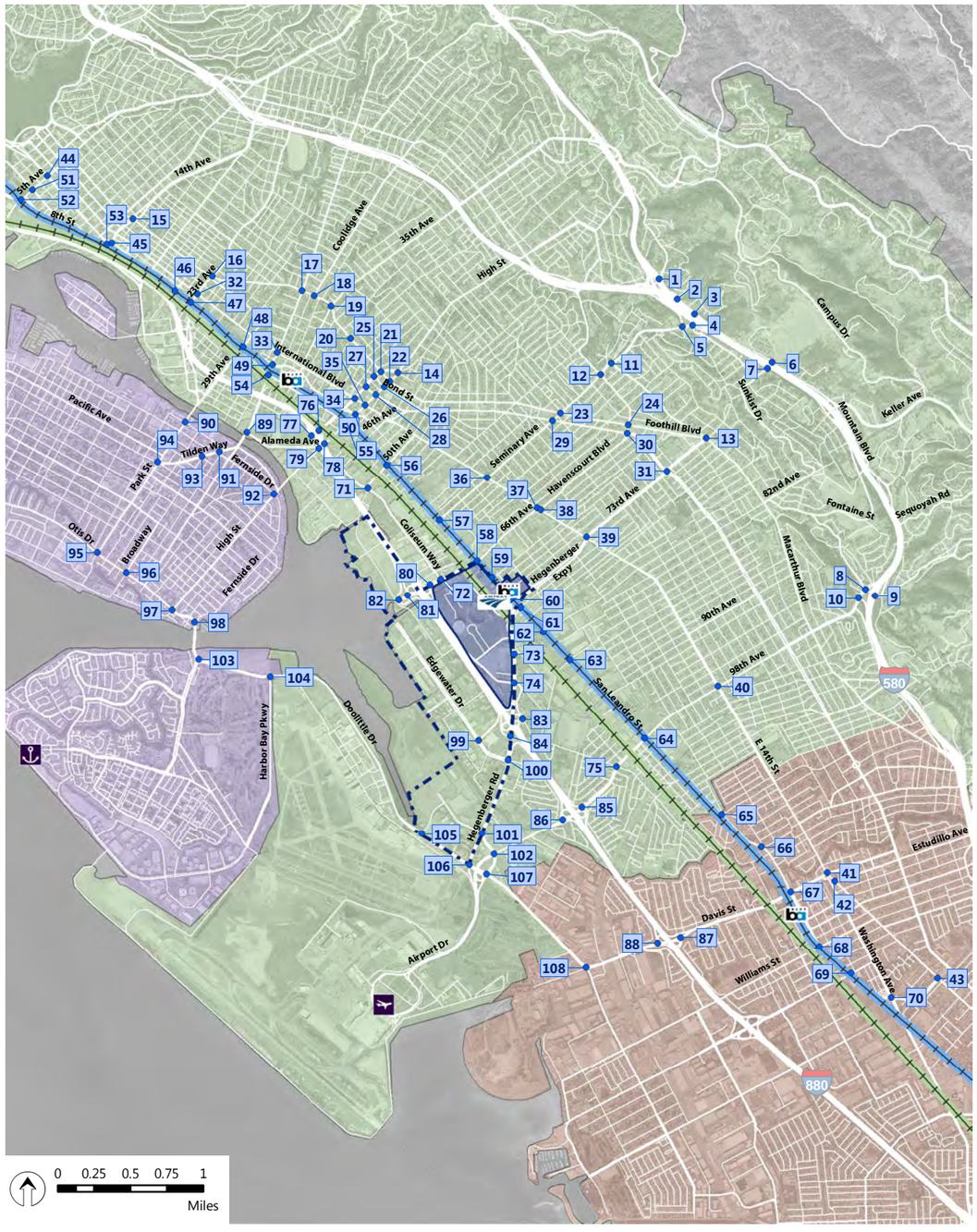
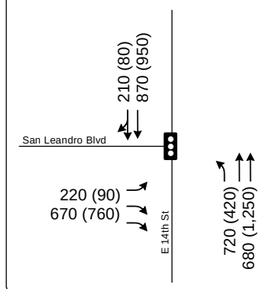
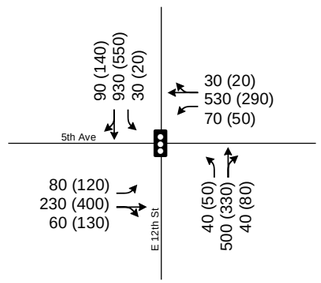


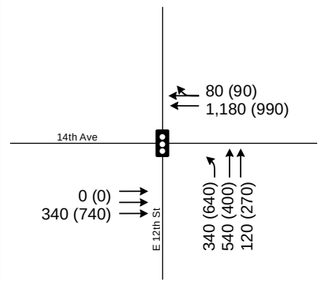
43.San Leandro Blvd & E 14th St



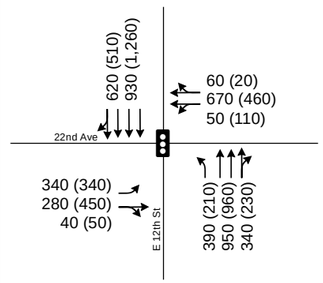
44. 5th Ave & E 12th St



45. 14th Ave & E 12th St



46. 22nd Ave & E 12th St



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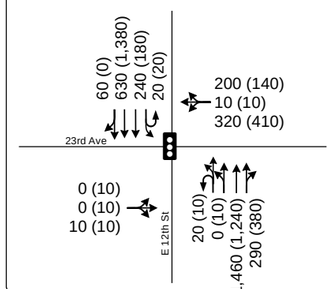
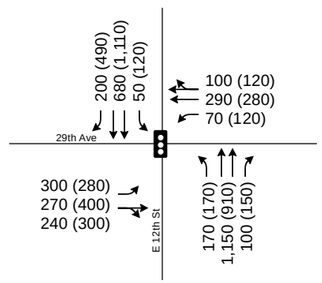
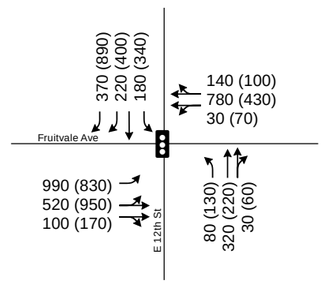


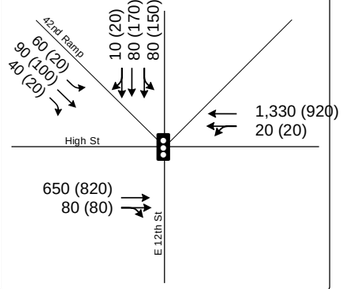
48. 29th Ave & E 12th St



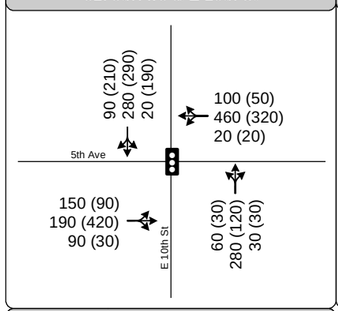
49. Fruitvale Ave & E 12th St



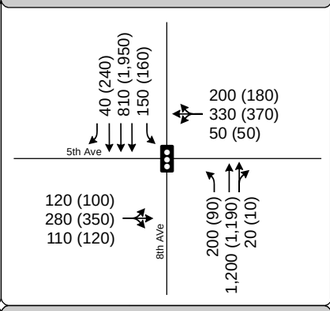
50. High St & E 12th St



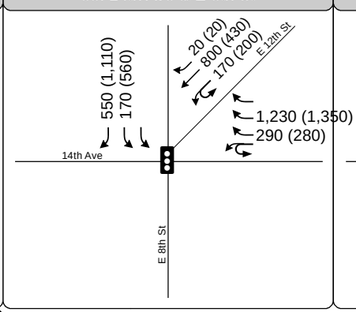
51. 5th Ave & E 10th St



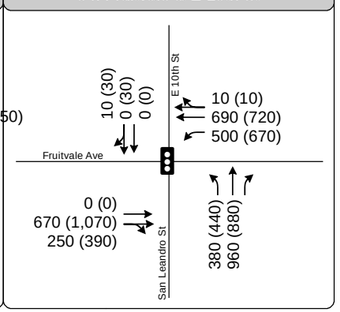
52. 5th Ave & 8th Ave



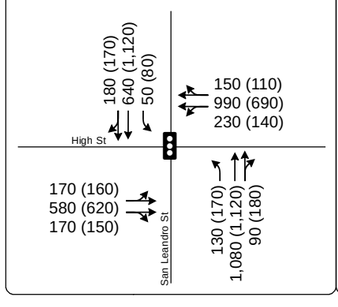
53. 14th Ave & E 8th St



54. Fruitvale & E 10th St



55. High St & San Leandro St



56. 50th Ave & San Leandro St

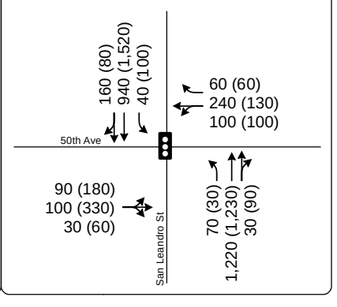


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Figure C5.d

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus BO Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\PlusBO_2035_Conditions_D.mxd

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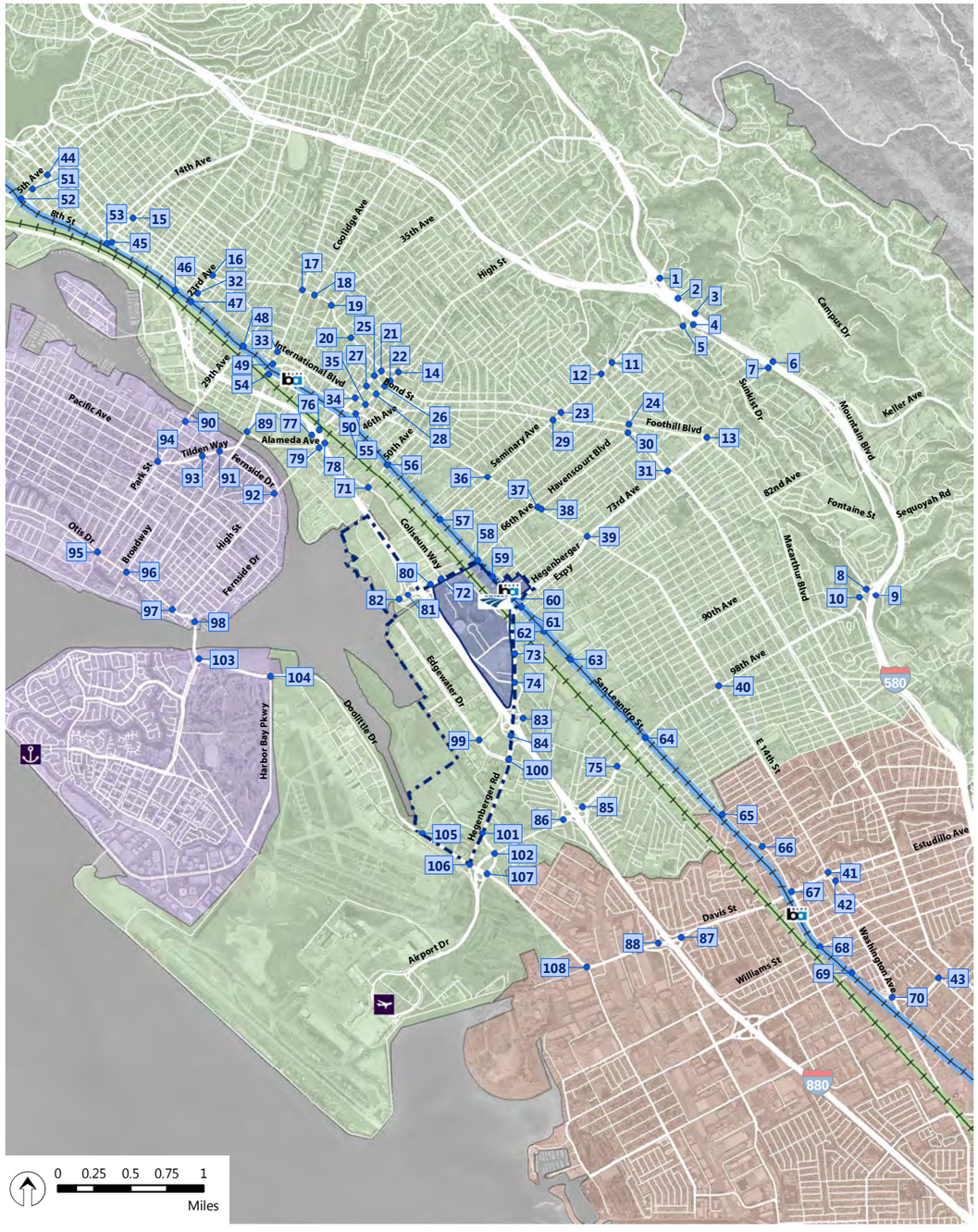
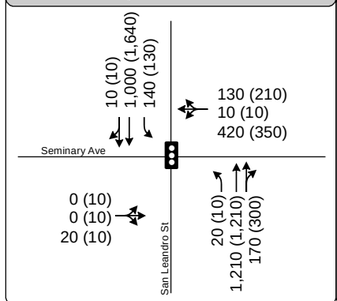
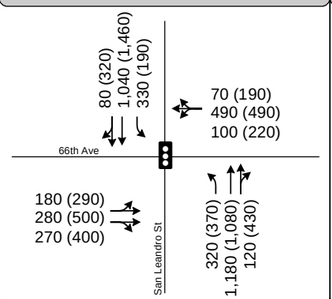


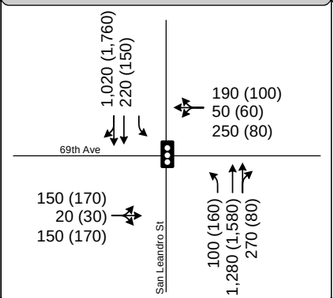
57. Seminary Ave & San Leandro St



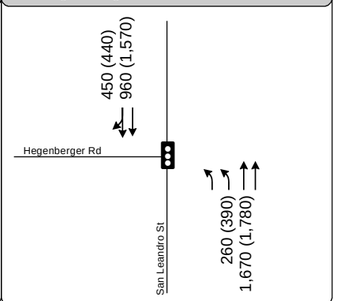
58. 66th Ave & San Leandro St



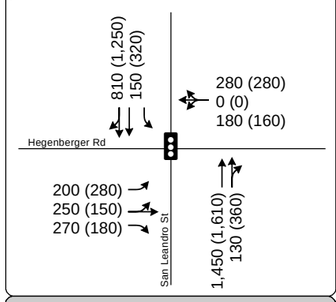
59. 69th Ave & San Leandro St



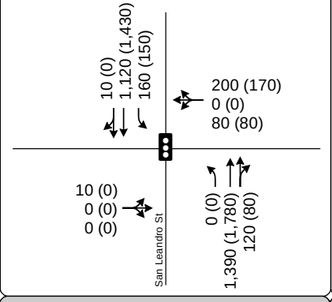
60. Hegenberger Ramp & San Leandro St



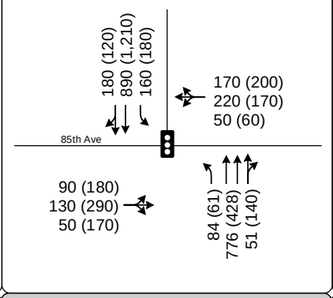
61. Hegenberger Ramp & San Leandro St



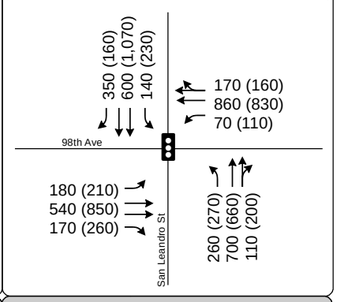
62. 81st Ave & San Leandro St



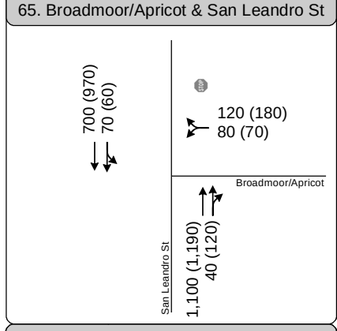
63. 85th Ave & San Leandro St



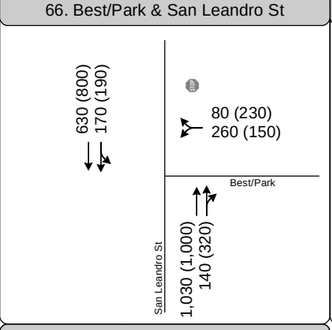
64. 98th Ave & San Leandro St



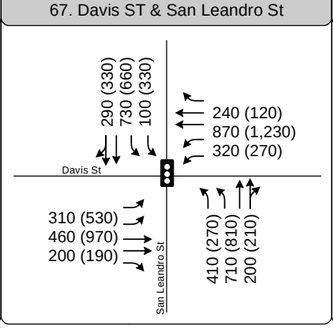
65. Broadmoor/Apricot & San Leandro St



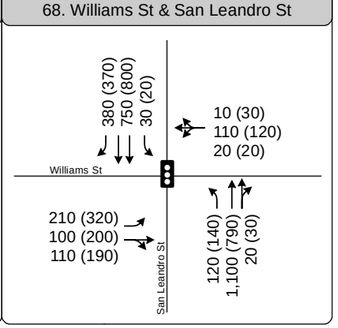
66. Best/Park & San Leandro St



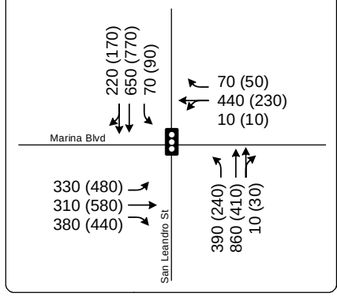
67. Davis ST & San Leandro St



68. Williams St & San Leandro St



69. Marina Blvd & San Leandro St



70. Washington Ave & San Leandro St

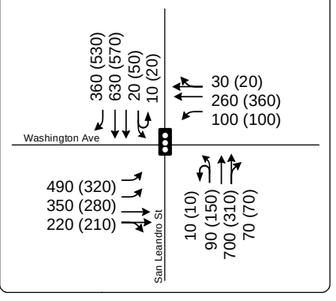


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Figure C5.e

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus BO Conditions

Document Path: N:\Projects\Non_SanJose_Projects\WC Projects_WC12_Projects\WC12_2923_Coliseum_City\Graphics\GIS\Volume_Figures\PlusBO_2035_Conditions_E.mxd

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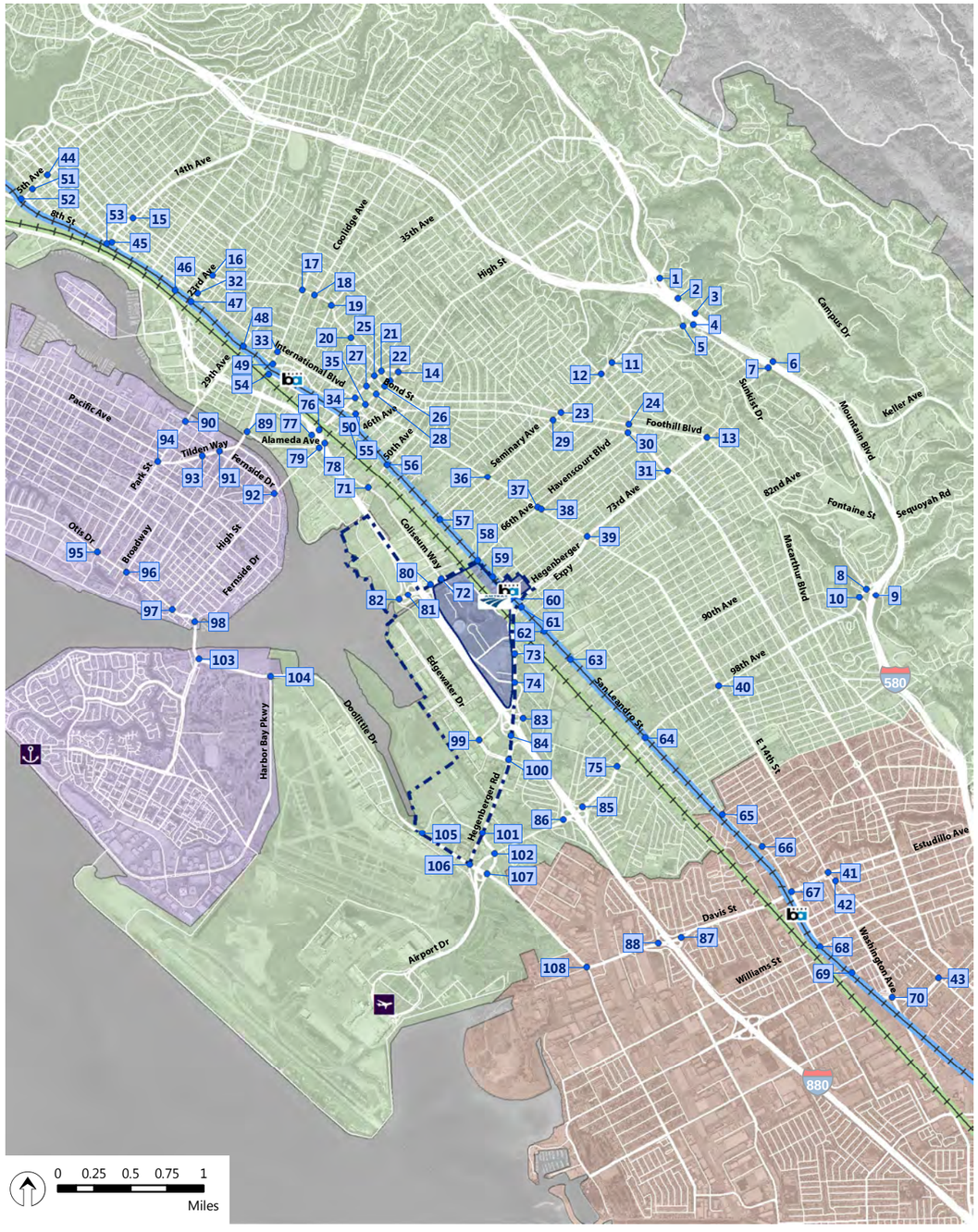
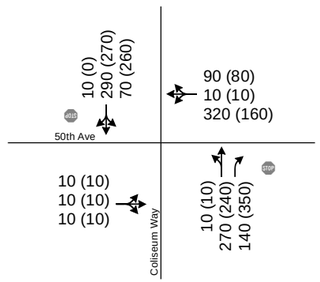
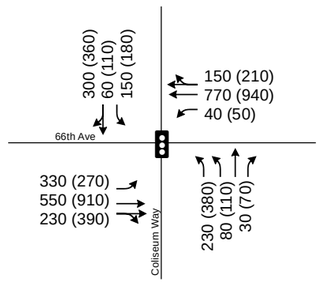


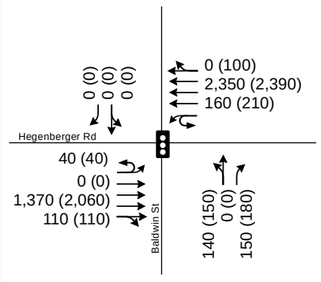
71. 50th Ave & Coliseum Way



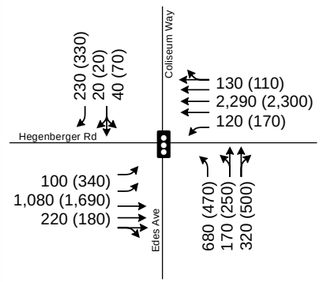
72. 66th Ave & Coliseum Way



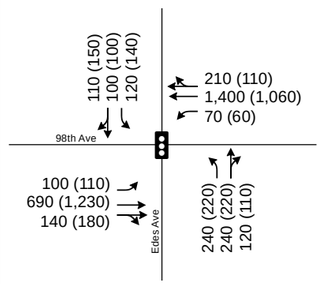
73. Hegenberger Rd & Coliseum Parking



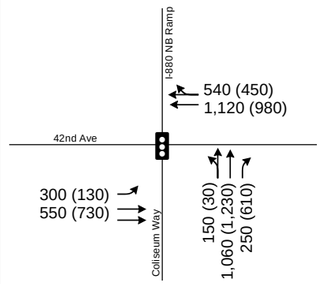
74. Hegenberger Rd & Coliseum Way



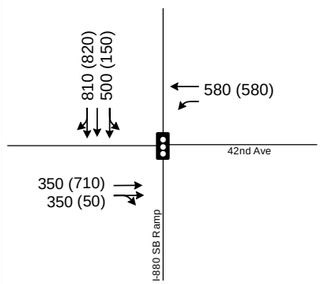
75. 98th Ave & Edes Ave



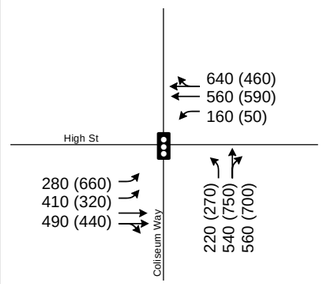
76. 42nd Ave & I-880 NB Ramps



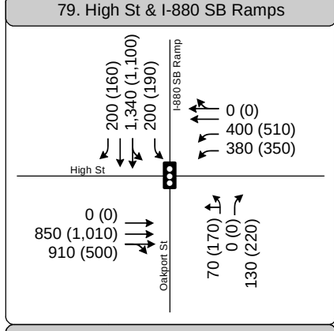
77. 42nd Ave & I-880 SB Ramps



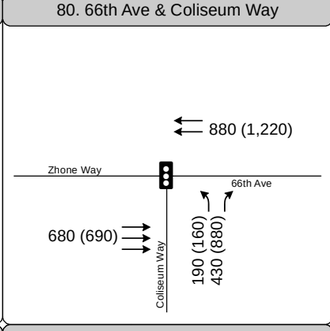
78. High St & Coliseum Way



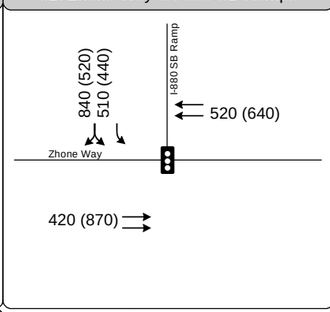
79. High St & I-880 SB Ramps



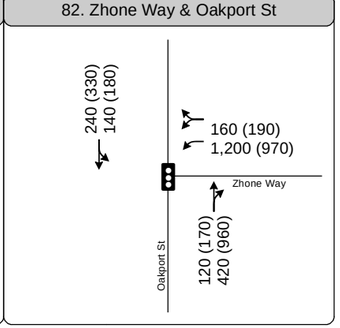
80. 66th Ave & Coliseum Way



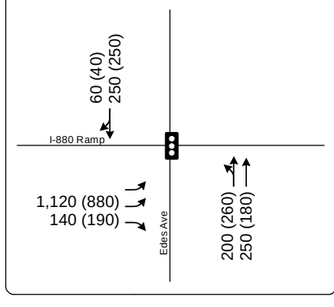
81. Zhone Way & I-880 SB Ramps



82. Zhone Way & Oakport St



83. I-880 Off-Ramps & Edes Ave



84. Hegenberger Rd & I-880 SB Ramps

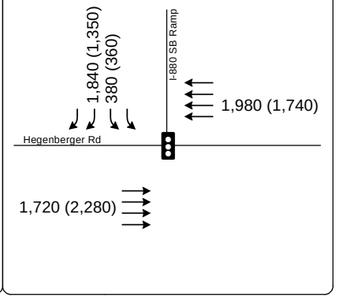


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Figure C5.f

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus BO Conditions

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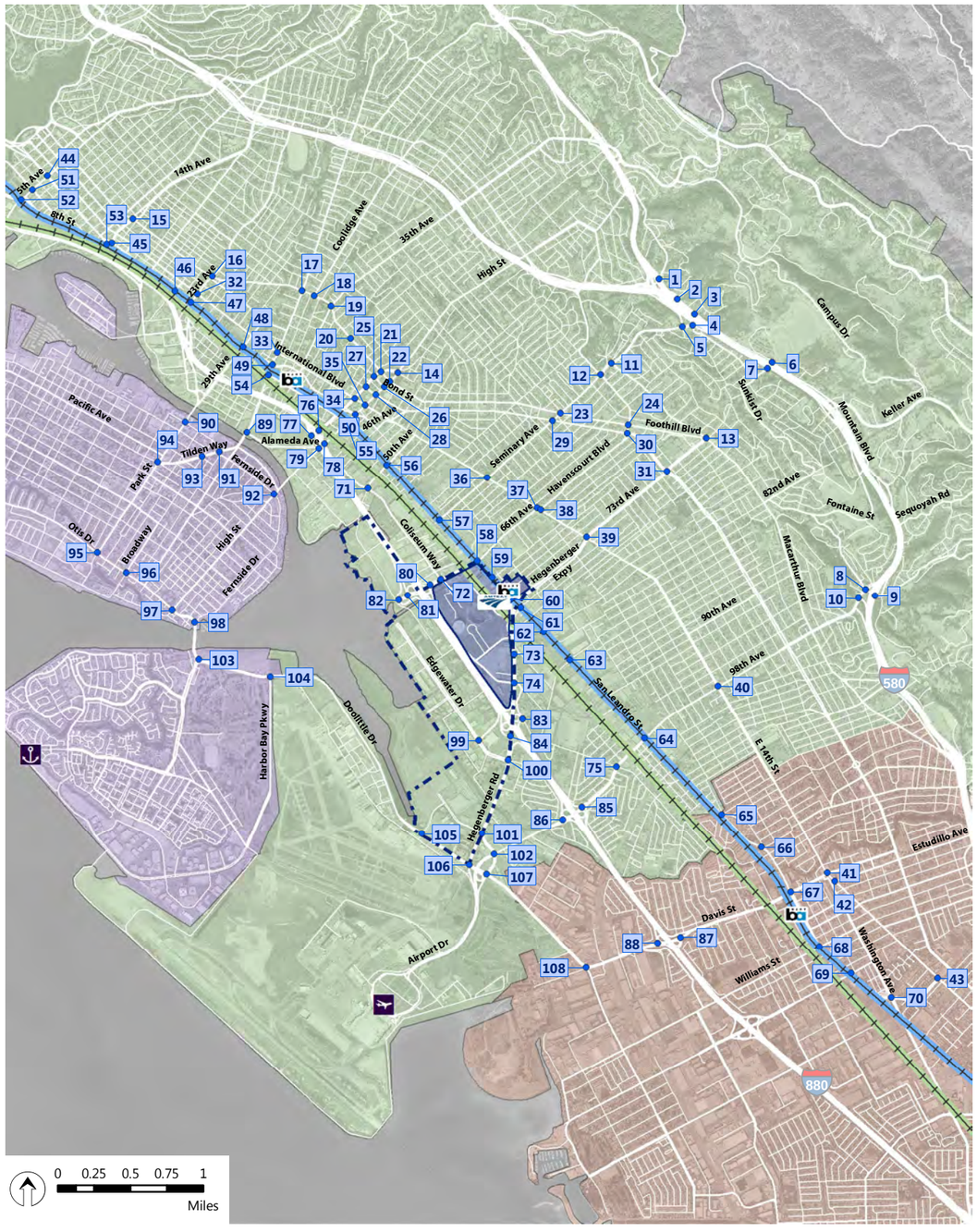

85. 98th Ave & I-880 NB Ramps	86. 98th AVe & I-880 SB Ramps	87. Davis St & I-880 NB Ramps	88. Davis St & I-880 SB Ramps
360 (330) 1,400 (1,190) 98th Ave 640 (1,060) 430 (800) I-880 NB Ramp 950 (860) 250 (630)	810 (250) 370 (370) 1,830 (1,700) 98th Ave 700 (1,490) 990 (1,300) I-880 SB Ramp	1,200 (1,210) Davis St 760 (1,360) 380 (680) I-880 NB Ramp 550 (540) 260 (570)	490 (500) 0 (0) 220 (430) 420 (440) 1,330 (1,310) Davis St 920 (1,610) 1,130 (490) I-880 SB Ramp

89. Fruitvale Ave & Alameda Ave	90. Park St & Blanding Ave	91. Tilden Way & Fernside/Blanding	92. High St & Fernside Blvd
810 (1,070) 70 (120) Fruitvale Ave 990 (990) 610 (340) Alameda Ave 560 (540) 100 (180)	30 (30) 80 (50) 270 (190) 260 (360) 810 (1,470) 30 (20) Park St 50 (20) 1,320 (1,250) 50 (40) Blanding Ave 40 (30) 120 (70) 420 (150)	30 (100) 280 (490) 400 (330) Blandin Ave 270 (350) 780 (850) 230 (380) Tilden Way 50 (50) 810 (650) 170 (200) Fernside Blvd 130 (120) 450 (450) 410 (220)	50 (130) 220 (470) 290 (380) 0 (0) 430 (620) 220 (270) High St 140 (110) 790 (430) 10 (20) Fernside Blvd 10 (10) 510 (380) 270 (240)

93. Tilden Way & Broadway	94. Park St & Tilden Way	95. Park St & Otis Dr	96. Broadway & Otis Dr
50 (60) 90 (250) 60 (60) 20 (20) 680 (660) 240 (390) Tilden Way 40 (60) 640 (590) 30 (10) Broadway 20 (10) 460 (210) 330 (250)	30 (120) 390 (340) 190 (170) 130 (90) 630 (890) 40 (60) Park St 60 (80) 880 (740) 160 (110) Tilden Way 120 (180) 560 (390) 70 (90)	20 (40) 640 (790) 270 (300) 130 (160) 200 (390) 140 (150) Park St 10 (30) 210 (240) 60 (160) Otis Dr 140 (210) 580 (690) 150 (150)	20 (20) 770 (860) 90 (190) 110 (140) 110 (170) 320 (340) Broadway 20 (20) 130 (100) 180 (120) Otis Dr 100 (150) 710 (810) 570 (440)

97. High St & Otis Dr	98.Fernside Blvd & Otis Dr
20 (30) 1,040 (1,120) 100 (120) 90 (120) 40 (70) 300 (220) High St 20 (10) 40 (30) 180 (190) Otis Dr 110 (150) 1,190 (1,310) 190 (110)	1,450 (1,480) 70 (50) 80 (30) 640 (1,000) Fernside Blvd Otis Dr 1,410 (1,540) 720 (960)

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Figure C5.g

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus BO Conditions

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Date: January, 2014

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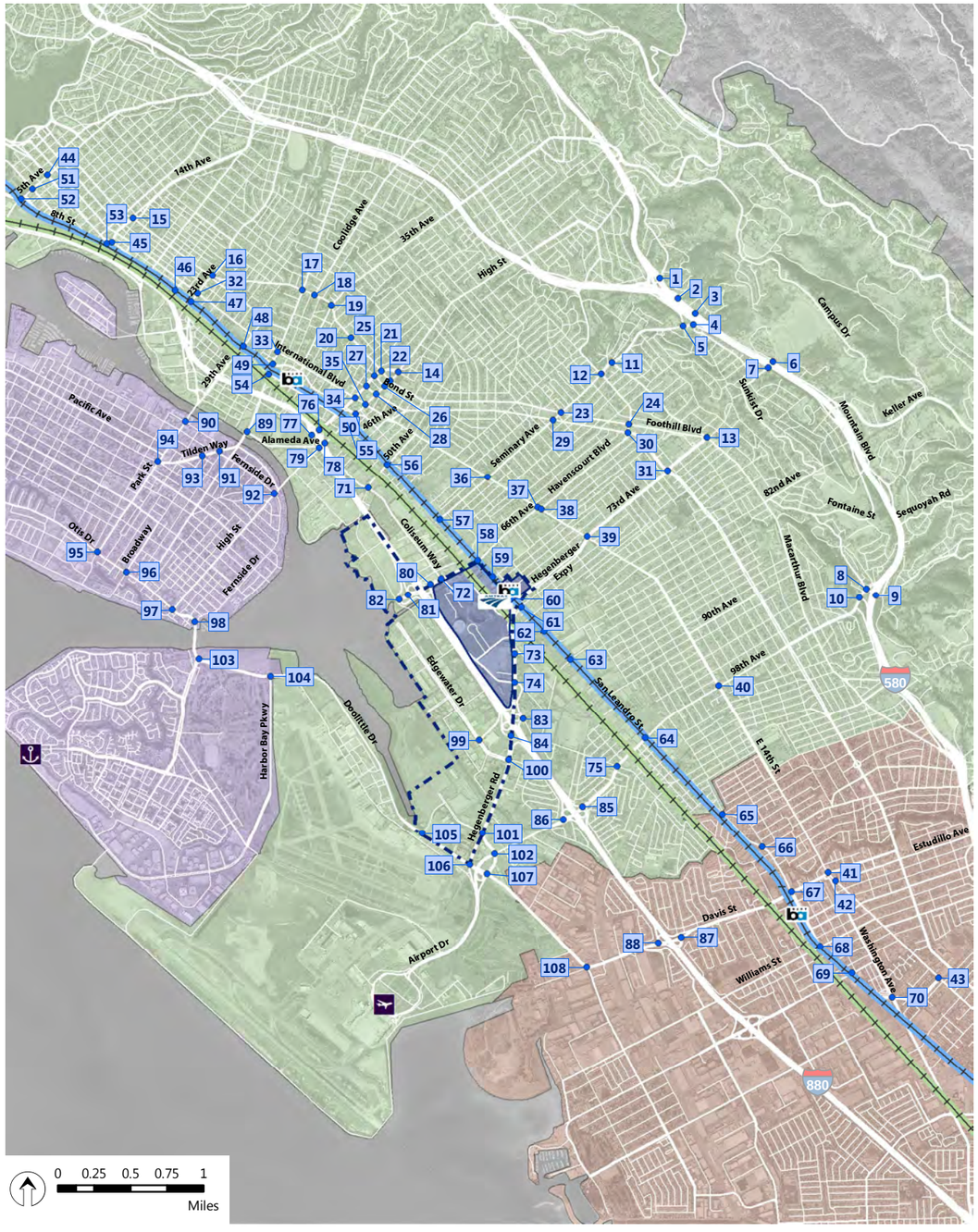

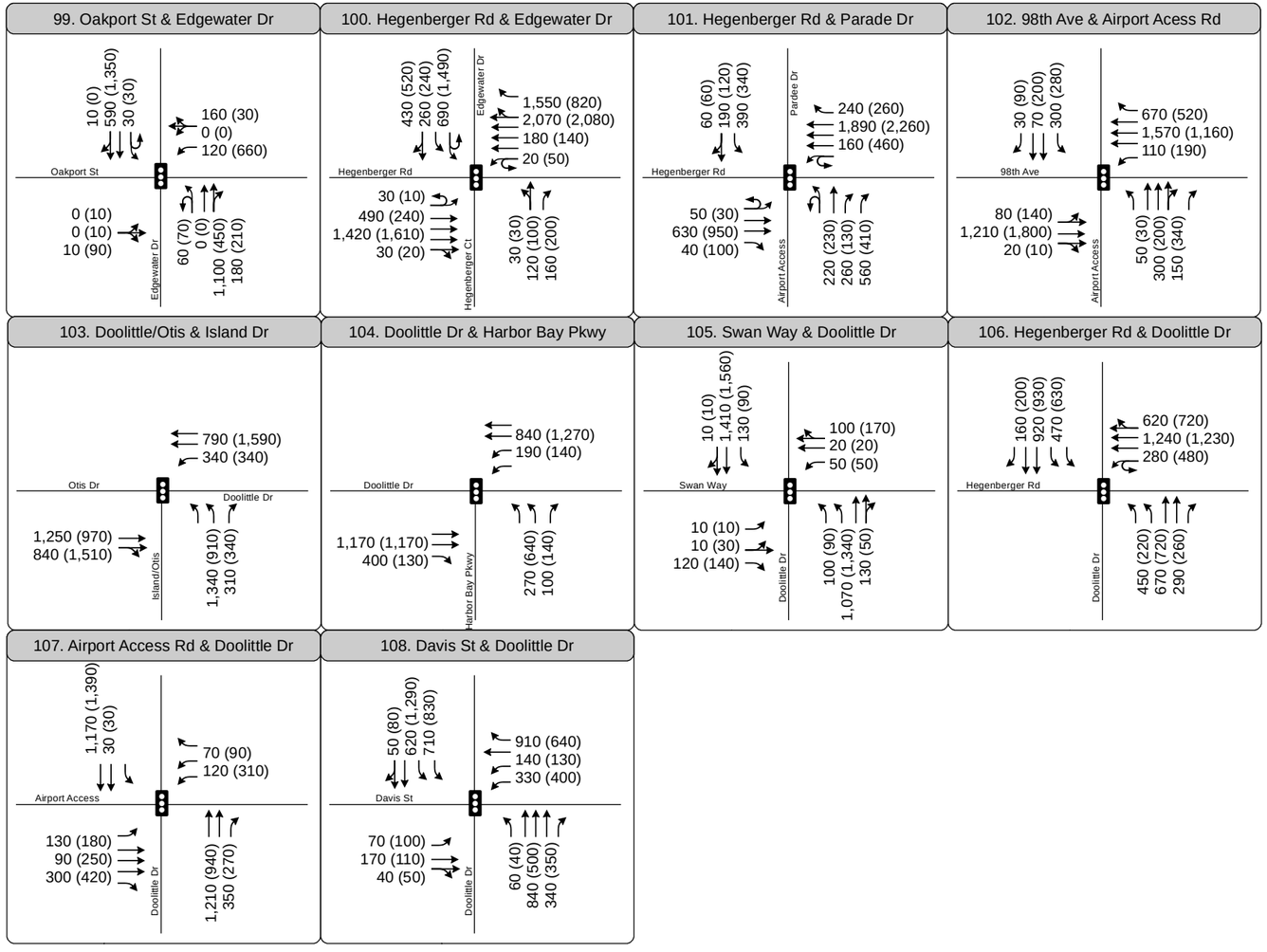

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Figure C5.h

Coliseum City Lane Configurations, Traffic Control, and Peak Hour Traffic Volumes - 2035 Plus BO Conditions

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Date: January, 2014

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Appendix D

Intersection Count Data Sheets

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ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-040 Frontage Road-SR-13 NB On-Ramp-Mountair
Date : 6/5/2013

Unshifted Count = All Vehicles

	SR-13 NB On-Ramp Southbound					Mountain Boulevard Westbound					Frontage Road Northbound					Mountain Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	0	0	0	0	2	8	3	0	13	1	46	2	0	49	14	4	5	0	23	85	0
07:15	0	0	0	0	0	6	5	4	0	15	1	52	4	0	57	20	3	8	0	31	103	0
07:30	0	0	0	0	0	6	4	1	0	11	3	73	9	0	85	31	9	8	0	48	144	0
07:45	0	0	0	0	0	10	8	5	0	23	3	99	14	0	116	56	5	9	0	70	209	0
Total	0	0	0	0	0	24	25	13	0	62	8	270	29	0	307	121	21	30	0	172	541	0
08:00	0	0	0	0	0	8	2	8	0	18	4	114	12	0	130	68	10	15	0	93	241	0
08:15	0	0	0	0	0	13	5	1	0	19	5	128	10	0	143	55	7	10	0	72	234	0
08:30	0	0	0	0	0	4	4	4	0	12	5	78	9	0	92	46	5	8	0	59	163	0
08:45	0	0	0	0	0	6	4	4	0	14	1	61	6	0	68	24	12	7	0	43	125	0
Total	0	0	0	0	0	31	15	17	0	63	15	381	37	0	433	193	34	40	0	267	763	0
16:00	0	0	0	0	0	7	6	2	0	15	6	38	1	0	45	22	1	29	0	52	112	0
16:15	0	0	0	0	0	5	3	1	0	9	6	42	3	0	51	26	8	36	0	70	130	0
16:30	0	0	0	0	0	3	4	2	0	9	5	41	4	0	50	19	5	41	0	65	124	0
16:45	0	0	0	0	0	12	2	2	0	16	2	32	9	0	43	26	10	62	0	98	157	0
Total	0	0	0	0	0	27	15	7	0	49	19	153	17	0	189	93	24	168	0	285	523	0
17:00	0	0	0	0	0	8	3	1	0	12	6	30	6	0	42	25	3	113	0	141	195	0
17:15	0	0	0	0	0	8	9	5	0	22	5	57	8	0	70	25	11	158	0	194	286	0
17:30	0	0	0	0	0	13	9	4	0	26	5	36	9	0	50	29	13	149	0	191	267	0
17:45	0	0	0	0	0	19	8	4	0	31	4	32	6	0	42	26	9	123	0	158	231	0
Total	0	0	0	0	0	48	29	14	0	91	20	155	29	0	204	105	36	543	0	684	979	0
Grand Total	0	0	0	0	0	130	84	51	0	265	62	959	112	0	1133	512	115	781	0	1408	2806	0
Apprch %	0.0%	0.0%	0.0%	0.0%		49.1%	31.7%	19.2%	0.0%		5.5%	84.6%	9.9%	0.0%		36.4%	8.2%	55.5%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	3.0%	1.8%	0.0%	9.4%	2.2%	34.2%	4.0%	0.0%	40.4%	18.2%	4.1%	27.8%	0.0%	50.2%	100.0%	

AM PEAK HOUR	SR-13 NB On-Ramp Southbound					Mountain Boulevard Westbound					Frontage Road Northbound					Mountain Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0	0	0	10	8	5	0	23	3	99	14	0	116	56	5	9	0	70	209
08:00	0	0	0	0	0	8	2	8	0	18	4	114	12	0	130	68	10	15	0	93	241
08:15	0	0	0	0	0	13	5	1	0	19	5	128	10	0	143	55	7	10	0	72	234
08:30	0	0	0	0	0	4	4	4	0	12	5	78	9	0	92	46	5	8	0	59	163
Total Volume	0	0	0	0	0	35	19	18	0	72	17	419	45	0	481	225	27	42	0	294	847
% App Total	0.0%	0.0%	0.0%	0.0%		48.6%	26.4%	25.0%	0.0%		3.5%	87.1%	9.4%	0.0%		76.5%	9.2%	14.3%	0.0%		
PHF	.000	.000	.000	.000	.000	.673	.594	.563	.000	.783	.850	.818	.804	.000	.841	.827	.675	.700	.000	.790	.879

PM PEAK HOUR	SR-13 NB On-Ramp Southbound					Mountain Boulevard Westbound					Frontage Road Northbound					Mountain Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	8	3	1	0	12	6	30	6	0	42	25	3	113	0	141	195
17:15	0	0	0	0	0	8	9	5	0	22	5	57	8	0	70	25	11	158	0	194	286
17:30	0	0	0	0	0	13	9	4	0	26	5	36	9	0	50	29	13	149	0	191	267
17:45	0	0	0	0	0	19	8	4	0	31	4	32	6	0	42	26	9	123	0	158	231
Total Volume	0	0	0	0	0	48	29	14	0	91	20	155	29	0	204	105	36	543	0	684	979
% App Total	0.0%	0.0%	0.0%	0.0%		52.7%	31.9%	15.4%	0.0%		9.8%	76.0%	14.2%	0.0%		15.4%	5.3%	79.4%	0.0%		
PHF	.000	.000	.000	.000	.000	.632	.806	.700	.000	.734	.833	.680	.806	.000	.729	.905	.692	.859	.000	.881	.856

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-040 Frontage Road-SR-13 NB On-Ramp-Mountair
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	SR-13 NB On-Ramp Southbound					Mountain Boulevard Westbound					Frontage Road Northbound					Mountain Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
08:45	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1
Total	0	0	0	0	0	1	0	0	0	1	0	0	1	5	1	0	0	0	0	0	2	5
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	3	1	0	0	0	0	0	1	3
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	2
Grand Total	0	0	0	0	0	1	0	0	0	1	1	0	1	9	2	0	0	1	1	1	4	10
Apprch %	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			50.0%	0.0%	50.0%			0.0%	0.0%	100.0%				
Total %	0.0%	0.0%	0.0%		0.0%	25.0%	0.0%	0.0%		25.0%	25.0%	0.0%	25.0%		50.0%	0.0%	0.0%	25.0%		25.0%	100.0%	

AM PEAK HOUR	SR-13 NB On-Ramp Southbound					Mountain Boulevard Westbound					Frontage Road Northbound					Mountain Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:00	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
% App Total	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.250	.000	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.250

PM PEAK HOUR	SR-13 NB On-Ramp Southbound					Mountain Boulevard Westbound					Frontage Road Northbound					Mountain Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	1		1	1
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	0	1		1	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	100.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.250		.250	.250

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-040 Frontage Road-SR-13 NB On-Ramp-Mountair
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	SR-13 NB On-Ramp Southbound					Mountain Boulevard Westbound					Frontage Road Northbound					Mountain Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
08:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2	4	0
Apprch %	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	100.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	50.0%	0.0%		50.0%	0.0%	0.0%	50.0%		50.0%	100.0%	

AM PEAK HOUR	SR-13 NB On-Ramp Southbound					Mountain Boulevard Westbound					Frontage Road Northbound					Mountain Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:30	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
Total Volume	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.250

PM PEAK HOUR	SR-13 NB On-Ramp Southbound					Mountain Boulevard Westbound					Frontage Road Northbound					Mountain Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	2		2	2
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	0	2		2	2
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	100.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.250		.250	.250

All Traffic Data

(916) 771-8700
orders@atdtraffic.com

City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-053 Frontage Road-Rusting Avenue-I-580 WB On-Ramp
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- Unshifted

	Frontage Road Southbound					I-580 WB On-Ramp Southwestbound					Rusting Avenue Westbound					Frontage Road Northbound					Eastbound					
Start Time	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Int. Total
07:00	0	1	8	0	9	0	0	0	0	0	0	0	2	1	3	0	53	50	0	103	0	0	0	0	0	115
07:15	0	1	12	0	13	0	0	0	0	0	0	0	2	2	4	0	51	30	0	81	0	0	0	0	0	98
07:30	0	0	13	0	13	0	0	0	0	0	2	0	2	3	7	0	81	63	0	144	0	0	0	0	0	164
07:45	0	0	21	0	21	0	0	0	0	0	2	0	0	5	7	0	118	69	1	188	0	0	0	0	0	216
Total	0	2	54	0	56	0	0	0	0	0	4	0	6	11	21	0	303	212	1	516	0	0	0	0	0	593
08:00	0	0	22	0	22	0	0	0	0	0	3	0	2	5	10	0	131	55	3	189	0	0	0	0	0	221
08:15	0	2	22	0	24	0	0	0	0	0	2	0	7	0	9	0	131	55	0	186	0	0	0	0	0	219
08:30	0	1	9	0	10	0	0	0	0	0	2	0	1	0	3	0	94	49	2	145	0	0	0	0	0	158
08:45	0	2	13	0	15	0	0	0	0	0	2	0	0	2	4	0	66	46	1	113	0	0	0	0	0	132
Total	0	5	66	0	71	0	0	0	0	0	9	0	10	7	26	0	422	205	6	633	0	0	0	0	0	730
16:00	0	2	30	0	32	0	0	0	0	0	2	0	2	2	6	0	46	61	5	112	0	0	0	0	0	150
16:15	0	1	48	0	49	0	0	0	0	0	1	0	0	2	3	0	48	55	2	105	0	0	0	0	0	157
16:30	0	5	41	0	46	0	0	0	0	0	0	0	0	1	1	0	55	56	0	111	0	0	0	0	0	158
16:45	0	7	62	0	69	0	0	0	0	0	0	0	0	0	0	0	40	56	3	99	0	0	0	0	0	168
Total	0	15	181	0	196	0	0	0	0	0	3	0	2	5	10	0	189	228	10	427	0	0	0	0	0	633
17:00	0	1	118	0	119	0	0	0	0	0	2	0	2	1	5	0	53	62	3	118	0	0	0	0	0	242
17:15	0	3	161	0	164	0	0	0	0	0	0	0	2	1	3	0	58	70	1	129	0	0	0	0	0	296
17:30	0	5	167	0	172	0	0	0	0	0	0	0	1	2	3	0	46	55	2	103	0	0	0	0	0	278
17:45	0	5	141	0	146	0	0	0	0	0	2	0	1	1	4	0	43	60	2	105	0	0	0	0	0	255
Total	0	14	587	0	601	0	0	0	0	0	4	0	6	5	15	0	200	247	8	455	0	0	0	0	0	1071
Grand Total	0	36	888	0	924	0	0	0	0	0	20	0	24	28	72	0	1114	892	25	2031	0	0	0	0	0	3027
Apprch %	0	3.9	96.1	0		0	0	0	0		27.8	0	33.3	38.9		0	54.8	43.9	1.2		0	0	0	0		
Total %	0	1.2	29.3	0	30.5	0	0	0	0	0	0.7	0	0.8	0.9	2.4	0	36.8	29.5	0.8	67.1	0	0	0	0	0	

All Traffic Data

(916) 771-8700
orders@atdtraffic.com

City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-053 Frontage Road-Rusting Avenue-I-580 WB On-Ramp
Site Code : 00000000
Start Date : 6/5/2012
Page No : 2

	Frontage Road Southbound					I-580 WB On-Ramp Southwestbound					Rusting Avenue Westbound					Frontage Road Northbound					Eastbound					
Start Time	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:30																										
07:30	0	0	13	0	13	0	0	0	0	0	2	0	2	3	7	0	81	63	0	144	0	0	0	0	0	164
07:45	0	0	21	0	21	0	0	0	0	0	2	0	0	**5**	7	0	118	**69**	1	188	0	0	0	0	0	216
08:00	0	0	**22**	0	22	0	0	0	0	0	**3**	0	2	5	**10**	0	**131**	55	**3**	**189**	0	0	0	0	0	**221**
08:15	0	**2**	22	0	**24**	0	0	0	0	0	2	0	**7**	0	9	0	131	55	0	186	0	0	0	0	0	219
Total Volume	0	2	78	0	80	0	0	0	0	0	9	0	11	13	33	0	461	242	4	707	0	0	0	0	0	820
% App. Total	0	2.5	97.5	0		0	0	0	0		27.3	0	33.3	39.4		0	65.2	34.2	0.6		0	0	0	0		
PHF	.000	.250	.886	.000	.833	.000	.000	.000	.000	.000	.750	.000	.393	.650	.825	.000	.880	.877	.333	.935	.000	.000	.000	.000	.000	.928

All Traffic Data

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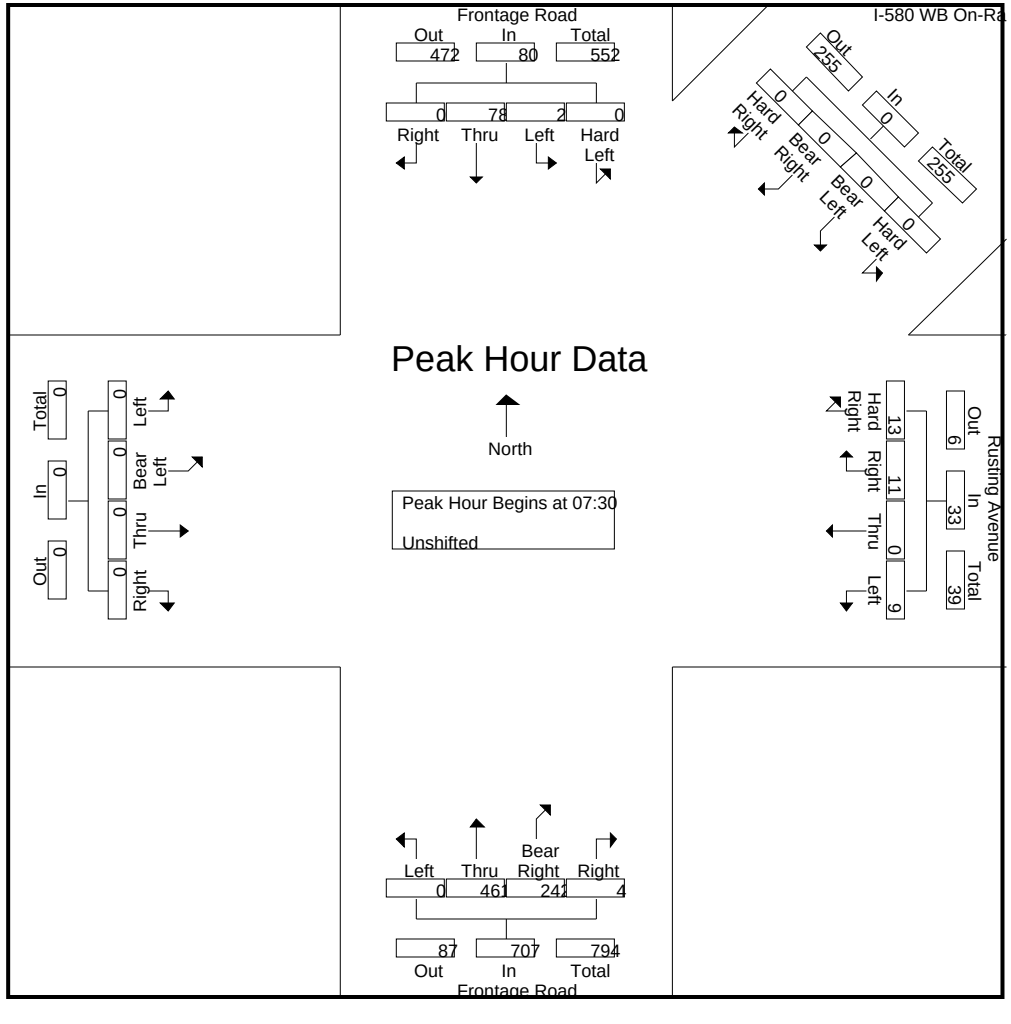
City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-053 Frontage Road-Rusting Avenue-I-580 WB On-Ramp
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3



All Traffic Data

(916) 771-8700
orders@atdtraffic.com

City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-053 Frontage Road-Rusting Avenue-I-580 WB On-Ramp
Site Code : 00000000
Start Date : 6/5/2012
Page No : 4

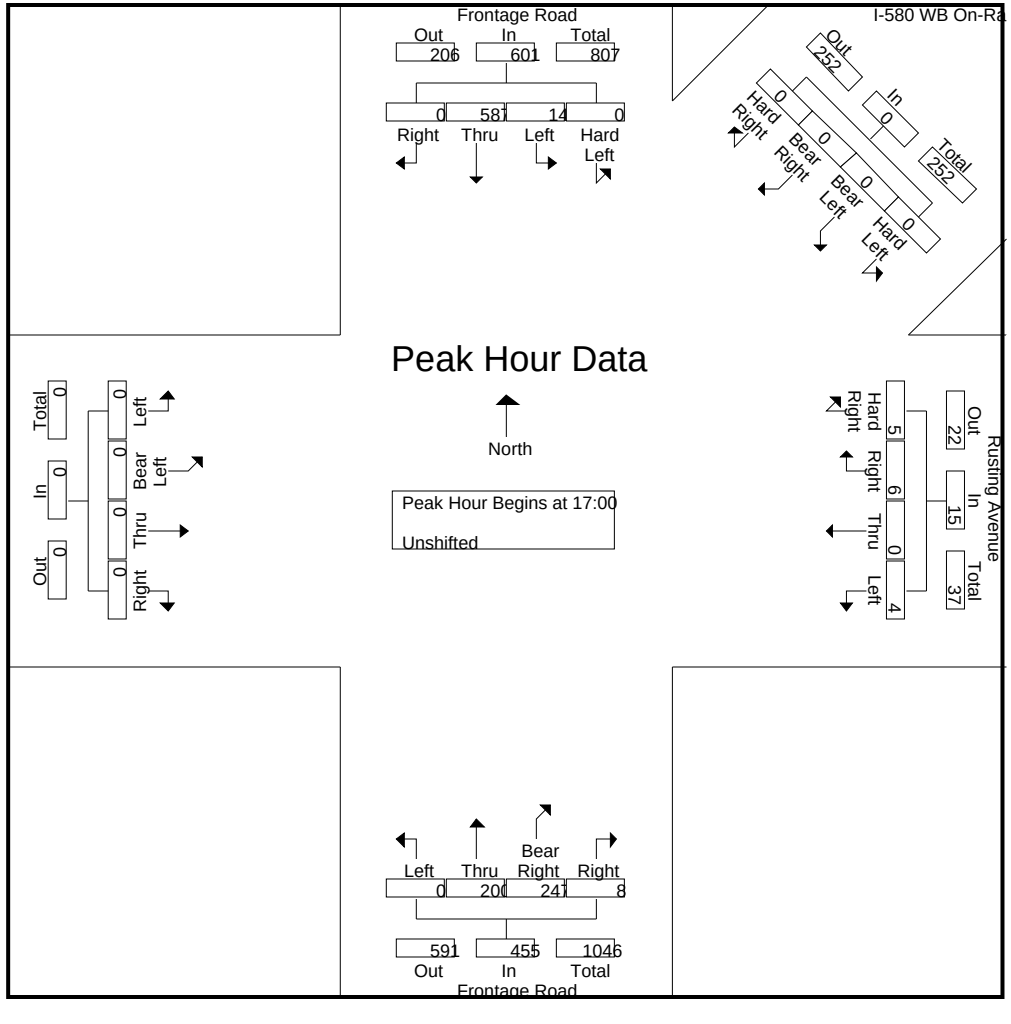
	Frontage Road Southbound					I-580 WB On-Ramp Southwestbound					Rusting Avenue Westbound					Frontage Road Northbound					Eastbound					
Start Time	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 17:00																										
17:00	0	1	118	0	119	0	0	0	0	0	**2**	0	**2**	1	**5**	0	53	62	**3**	118	0	0	0	0	0	242
17:15	0	3	161	0	164	0	0	0	0	0	0	0	2	1	3	0	**58**	**70**	1	**129**	0	0	0	0	0	**296**
17:30	0	**5**	**167**	0	**172**	0	0	0	0	0	0	0	1	**2**	3	0	46	55	2	103	0	0	0	0	0	278
17:45	0	5	141	0	146	0	0	0	0	0	2	0	1	1	4	0	43	60	2	105	0	0	0	0	0	255
Total Volume	0	14	587	0	601	0	0	0	0	0	4	0	6	5	15	0	200	247	8	455	0	0	0	0	0	1071
% App. Total	0	2.3	97.7	0		0	0	0	0		26.7	0	40	33.3		0	44	54.3	1.8		0	0	0	0		
PHF	.000	.700	.879	.000	.874	.000	.000	.000	.000	.000	.500	.000	.750	.625	.750	.000	.862	.882	.667	.882	.000	.000	.000	.000	.000	.905

All Traffic Data

(916) 771-8700
orders@atdtraffic.com

City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-053 Frontage Road-Rusting Avenue-I-580 WB On-Ramp
Site Code : 00000000
Start Date : 6/5/2012
Page No : 5



ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-043 Seminary Avenue-S MacArthur Boulevard.ppc
Date : 6/5/2013

Unshifted Count = All Vehicles

	Seminary Avenue Southbound					S MacArthur Boulevard Westbound					Seminary Avenue Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	17	49	0	1	67	15	0	21	0	36	0	63	4	0	67	0	0	0	0	0	170	1
07:15	9	39	0	0	48	23	0	24	0	47	0	86	7	0	93	0	0	0	0	0	188	0
07:30	19	67	0	3	89	37	0	31	0	68	0	88	9	0	97	0	0	0	0	0	254	3
07:45	30	67	0	1	98	40	0	45	0	85	0	101	10	0	111	0	0	0	0	0	294	1
Total	75	222	0	5	302	115	0	121	0	236	0	338	30	0	368	0	0	0	0	0	906	5
08:00	49	80	0	0	129	35	0	46	0	81	0	104	18	0	122	0	0	0	0	0	332	0
08:15	65	91	0	3	159	53	0	42	0	95	0	91	19	0	110	0	0	0	0	0	364	3
08:30	35	91	0	2	128	28	0	11	0	39	0	80	14	0	94	0	0	0	0	0	261	2
08:45	40	77	0	0	117	30	0	22	0	52	0	80	18	0	98	0	0	0	0	0	267	0
Total	189	339	0	5	533	146	0	121	0	267	0	355	69	0	424	0	0	0	0	0	1224	5
16:00	36	81	0	3	120	32	0	29	0	61	0	84	21	0	105	0	0	0	0	0	286	3
16:15	52	107	0	3	162	33	0	45	0	78	0	80	21	0	101	0	0	0	0	0	341	3
16:30	61	100	0	1	162	39	0	41	0	80	0	82	26	0	108	0	0	0	0	0	350	1
16:45	60	103	0	1	164	39	0	30	0	69	0	76	19	0	95	0	0	0	0	0	328	1
Total	209	391	0	8	608	143	0	145	0	288	0	322	87	0	409	0	0	0	0	0	1305	8
17:00	54	103	0	2	159	30	0	52	0	82	0	83	22	0	105	0	0	0	0	0	346	2
17:15	59	91	0	2	152	55	0	33	0	88	0	95	30	0	125	0	0	0	0	0	365	2
17:30	47	91	0	1	139	43	0	34	0	77	0	97	29	0	126	0	0	0	0	0	342	1
17:45	55	95	0	2	152	30	0	24	0	54	0	80	23	0	103	0	0	0	0	0	309	2
Total	215	380	0	7	602	158	0	143	0	301	0	355	104	0	459	0	0	0	0	0	1362	7
Grand Total	688	1332	0	25	2045	562	0	530	0	1092	0	1370	290	0	1660	0	0	0	0	0	4797	25
Apprch %	33.6%	65.1%	0.0%	1.2%		51.5%	0.0%	48.5%	0.0%		0.0%	82.5%	17.5%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	14.3%	27.8%	0.0%	0.5%	42.6%	11.7%	0.0%	11.0%	0.0%	22.8%	0.0%	28.6%	6.0%	0.0%	34.6%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					S MacArthur Boulevard Westbound					Seminary Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	30	67	0	1	98	40	0	45	0	85	0	101	10	0	111	0	0	0	0	0	294
08:00	49	80	0	0	129	35	0	46	0	81	0	104	18	0	122	0	0	0	0	0	332
08:15	65	91	0	3	159	53	0	42	0	95	0	91	19	0	110	0	0	0	0	0	364
08:30	35	91	0	2	128	28	0	11	0	39	0	80	14	0	94	0	0	0	0	0	261
Total Volume	179	329	0	6	514	156	0	144	0	300	0	376	61	0	437	0	0	0	0	0	1251
% App Total	34.8%	64.0%	0.0%	1.2%		52.0%	0.0%	48.0%	0.0%		0.0%	86.0%	14.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.688	.904	.000	.500	.808	.736	.000	.783	.000	.789	.000	.904	.803	.000	.895	.000	.000	.000	.000	.000	.859

PM PEAK HOUR	Seminary Avenue Southbound					S MacArthur Boulevard Westbound					Seminary Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	61	100	0	1	162	39	0	41	0	80	0	82	26	0	108	0	0	0	0	0	350
16:45	60	103	0	1	164	39	0	30	0	69	0	76	19	0	95	0	0	0	0	0	328
17:00	54	103	0	2	159	30	0	52	0	82	0	83	22	0	105	0	0	0	0	0	346
17:15	59	91	0	2	152	55	0	33	0	88	0	95	30	0	125	0	0	0	0	0	365
Total Volume	234	397	0	6	637	163	0	156	0	319	0	336	97	0	433	0	0	0	0	0	1389
% App Total	36.7%	62.3%	0.0%	0.9%		51.1%	0.0%	48.9%	0.0%		0.0%	77.6%	22.4%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.959	.964	.000	.750	.971	.741	.000	.750	.000	.906	.000	.884	.808	.000	.866	.000	.000	.000	.000	.000	.951

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-043 Seminary Avenue-S MacArthur Boulevard.ppc
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	Seminary Avenue Southbound					S MacArthur Boulevard Westbound					Seminary Avenue Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	8	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	10
07:45	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	2	0	12	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	15
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
08:30	0	0	0	5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6
08:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	6	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	11
16:00	0	0	0	7	0	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	1	9
16:15	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
16:30	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	14	0	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	1	16
17:00	0	0	0	5	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	9
17:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:30	0	0	0	5	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	7
17:45	0	0	0	5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	0	0	0	15	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	23
Grand Total	0	2	0	47	2	0	0	0	18	0	0	1	0	0	1	0	0	0	0	0	3	65
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	66.7%	0.0%		66.7%	0.0%	0.0%	0.0%		0.0%	0.0%	33.3%	0.0%		33.3%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					S MacArthur Boulevard Westbound					Seminary Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

PM PEAK HOUR	Seminary Avenue Southbound					S MacArthur Boulevard Westbound					Seminary Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-043 Seminary Avenue-S MacArthur Boulevard.ppc
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	Seminary Avenue Southbound					S MacArthur Boulevard Westbound					Seminary Avenue Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
07:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0
07:30	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	0
07:45	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	1	0	0	1	1	0	0	0	1	0	5	1	0	6	0	0	0	0	0	8	0
08:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
08:15	0	0	0	0	0	2	0	0	0	2	0	1	1	0	2	0	0	0	0	0	4	0
08:30	1	1	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	4	0
08:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	1	1	0	0	2	2	0	1	0	3	0	4	1	0	5	0	0	0	0	0	10	0
16:00	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	1	1	1	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	2	3	1	0	6	4	0	1	0	5	0	9	2	0	11	0	0	0	0	0	22	0
Apprch %	33.3%	50.0%	16.7%			80.0%	0.0%	20.0%			0.0%	81.8%	18.2%			0.0%	0.0%	0.0%				
Total %	9.1%	13.6%	4.5%		27.3%	18.2%	0.0%	4.5%		22.7%	0.0%	40.9%	9.1%		50.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					S MacArthur Boulevard Westbound					Seminary Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	1	0	0		1	0	1	0		1	0	0	0		0	2
08:00	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:15	0	0	0		0	2	0	0		2	0	1	1		2	0	0	0		0	4
08:30	1	1	0		2	0	0	1		1	0	1	0		1	0	0	0		0	4
Total Volume	1	1	0		2	3	0	1		4	0	4	1		5	0	0	0		0	11
% App Total	50.0%	50.0%	0.0%			75.0%	0.0%	25.0%			0.0%	80.0%	20.0%			0.0%	0.0%	0.0%			
PHF	.250	.250	.000		.250	.375	.000	.250		.500	.000	1.000	.250		.625	.000	.000	.000		.000	.688

PM PEAK HOUR	Seminary Avenue Southbound					S MacArthur Boulevard Westbound					Seminary Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	1		1	0	0	0		0	0	0	0		0	0	0	0		0	1
16:45	1	0	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	1	0	1		2	0	0	0		0	0	0	0		0	0	0	0		0	2
% App Total	50.0%	0.0%	50.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.250	.000	.250		.500	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.500

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-044 Seminary Avenue-N MacArthur Boulevard-Ca
Date : 6/5/2013

Unshifted Count = All Vehicles

	Seminary Avenue Southbound					Camden Street Westbound					Seminary Avenue Northbound					N MacArthur Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	7	25	27	0	59	0	26	10	0	36	20	44	0	0	64	17	22	9	0	48	207	0
07:15	9	22	32	0	63	0	39	11	0	50	24	51	1	0	76	30	26	10	0	66	255	0
07:30	14	50	48	0	112	3	48	12	0	63	28	56	1	0	85	25	44	17	0	86	346	0
07:45	11	38	51	0	100	0	53	19	0	72	27	69	0	0	96	27	67	15	0	109	377	0
Total	41	135	158	0	334	3	166	52	0	221	99	220	2	0	321	99	159	51	0	309	1185	0
08:00	18	51	54	0	123	0	61	17	0	78	19	65	1	0	85	47	73	17	0	137	423	0
08:15	14	52	80	0	146	0	57	12	0	69	20	42	1	0	63	47	76	12	0	135	413	0
08:30	21	46	50	0	117	1	47	8	0	56	28	51	2	0	81	37	69	16	0	122	376	0
08:45	16	45	39	0	100	0	51	9	0	60	13	47	3	0	63	36	63	11	0	110	333	0
Total	69	194	223	0	486	1	216	46	0	263	80	205	7	0	292	167	281	56	0	504	1545	0
16:00	17	60	41	0	118	3	46	20	0	69	23	52	5	0	80	32	75	20	0	127	394	0
16:15	19	70	46	0	135	2	57	14	0	73	19	54	1	0	74	42	71	23	0	136	418	0
16:30	24	72	50	0	146	0	56	8	0	64	24	70	1	0	95	29	65	22	0	116	421	0
16:45	26	60	54	0	140	2	65	12	0	79	20	45	4	0	69	38	96	25	0	159	447	0
Total	86	262	191	0	539	7	224	54	0	285	86	221	11	0	318	141	307	90	0	538	1680	0
17:00	24	71	42	0	137	3	64	14	0	81	24	47	3	0	74	39	87	26	0	152	444	0
17:15	24	50	68	0	142	1	53	15	0	69	22	63	2	0	87	42	102	31	0	175	473	0
17:30	21	54	58	0	133	2	39	17	0	58	32	64	1	0	97	45	87	19	0	151	439	0
17:45	26	52	50	0	128	1	44	11	0	56	13	60	0	0	73	38	100	20	0	158	415	0
Total	95	227	218	0	540	7	200	57	0	264	91	234	6	0	331	164	376	96	0	636	1771	0
Grand Total	291	818	790	0	1899	18	806	209	0	1033	356	880	26	0	1262	571	1123	293	0	1987	6181	0
Apprch %	15.3%	43.1%	41.6%	0.0%		1.7%	78.0%	20.2%	0.0%		28.2%	69.7%	2.1%	0.0%		28.7%	56.5%	14.7%	0.0%			
Total %	4.7%	13.2%	12.8%	0.0%	30.7%	0.3%	13.0%	3.4%	0.0%	16.7%	5.8%	14.2%	0.4%	0.0%	20.4%	9.2%	18.2%	4.7%	0.0%	32.1%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					Camden Street Westbound					Seminary Avenue Northbound					N MacArthur Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	11	38	51	0	100	0	53	19	0	72	27	69	0	0	96	27	67	15	0	109	377
08:00	18	51	54	0	123	0	61	17	0	78	19	65	1	0	85	47	73	17	0	137	423
08:15	14	52	80	0	146	0	57	12	0	69	20	42	1	0	63	47	76	12	0	135	413
08:30	21	46	50	0	117	1	47	8	0	56	28	51	2	0	81	37	69	16	0	122	376
Total Volume	64	187	235	0	486	1	218	56	0	275	94	227	4	0	325	158	285	60	0	503	1589
% App Total	13.2%	38.5%	48.4%	0.0%		0.4%	79.3%	20.4%	0.0%		28.9%	69.8%	1.2%	0.0%		31.4%	56.7%	11.9%	0.0%		
PHF	.762	.899	.734	.000	.832	.250	.893	.737	.000	.881	.839	.822	.500	.000	.846	.840	.938	.882	.000	.918	.939

PM PEAK HOUR	Seminary Avenue Southbound					Camden Street Westbound					Seminary Avenue Northbound					N MacArthur Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	26	60	54	0	140	2	65	12	0	79	20	45	4	0	69	38	96	25	0	159	447
17:00	24	71	42	0	137	3	64	14	0	81	24	47	3	0	74	39	87	26	0	152	444
17:15	24	50	68	0	142	1	53	15	0	69	22	63	2	0	87	42	102	31	0	175	473
17:30	21	54	58	0	133	2	39	17	0	58	32	64	1	0	97	45	87	19	0	151	439
Total Volume	95	235	222	0	552	8	221	58	0	287	98	219	10	0	327	164	372	101	0	637	1803
% App Total	17.2%	42.6%	40.2%	0.0%		2.8%	77.0%	20.2%	0.0%		30.0%	67.0%	3.1%	0.0%		25.7%	58.4%	15.9%	0.0%		
PHF	.913	.827	.816	.000	.972	.667	.850	.853	.000	.886	.766	.855	.625	.000	.843	.911	.912	.815	.000	.910	.953

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-044 Seminary Avenue-N MacArthur Boulevard-Ca
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	Seminary Avenue Southbound					Camden Street Westbound					Seminary Avenue Northbound					N MacArthur Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	2	0	0	2	0	0	0	5	0	0	0	0	2	0	0	0	0	4	0	2	11
07:15	0	0	0	1	0	0	0	0	4	0	0	0	0	2	0	0	0	1	3	1	1	10
07:30	0	0	0	1	0	0	0	0	7	0	0	0	0	5	0	0	0	0	6	0	0	19
07:45	0	0	0	7	0	0	1	0	12	1	0	0	0	4	0	0	1	0	4	1	2	27
Total	0	2	0	9	2	0	1	0	28	1	0	0	0	13	0	0	1	1	17	2	5	67
08:00	0	0	0	5	0	0	0	0	4	0	0	0	0	3	0	0	0	0	1	0	0	13
08:15	0	0	0	1	0	0	0	0	6	0	0	0	0	7	0	0	0	0	1	0	0	15
08:30	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	2	0	0	7
08:45	0	0	0	1	0	0	0	0	2	0	0	0	0	2	0	0	0	0	2	0	0	7
Total	0	0	0	7	0	0	0	0	17	0	0	0	0	12	0	0	0	0	6	0	0	42
16:00	0	0	0	2	0	0	0	0	0	0	0	1	0	4	1	0	0	0	2	0	1	8
16:15	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	0	2	0	0	8
16:30	0	0	0	0	0	0	1	0	5	1	0	0	0	5	0	0	0	0	0	0	1	10
16:45	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	0	1	0	0	6
Total	0	0	0	2	0	0	1	0	9	1	0	1	0	16	1	0	0	0	5	0	2	32
17:00	0	0	0	1	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	5
17:15	0	0	0	0	0	0	0	0	3	0	0	0	0	6	0	0	0	0	1	0	0	10
17:30	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	0	1	0	0	6
17:45	0	1	0	2	1	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	1	6
Total	0	1	0	3	1	0	0	0	11	0	0	0	0	9	0	0	0	0	4	0	1	27
Grand Total	0	3	0	21	3	0	2	0	65	2	0	1	0	50	1	0	1	1	32	2	8	168
Apprch %	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	50.0%	50.0%				
Total %	0.0%	37.5%	0.0%		37.5%	0.0%	25.0%	0.0%		25.0%	0.0%	12.5%	0.0%		12.5%	0.0%	12.5%	12.5%		25.0%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					Camden Street Westbound					Seminary Avenue Northbound					N MacArthur Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	1	0		1	0	0	0		0	0	1	0		1	2
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	1	0		1	0	0	0		0	0	1	0		1	2
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.000	.250	.000		.250	.250

PM PEAK HOUR	Seminary Avenue Southbound					Camden Street Westbound					Seminary Avenue Northbound					N MacArthur Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-044 Seminary Avenue-N MacArthur Boulevard-Ca
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	Seminary Avenue Southbound					Camden Street Westbound					Seminary Avenue Northbound					N MacArthur Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	3	0
07:15	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2	0
07:30	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	1	0	0	0	1	5	0
07:45	0	0	1	0	1	0	0	0	0	0	1	1	0	0	2	0	4	0	0	4	7	0
Total	0	1	1	0	2	0	2	1	0	3	2	5	0	0	7	1	4	0	0	5	17	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3	0
08:15	0	0	1	0	1	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4	0
08:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	0
08:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	3	0
Total	0	2	1	0	3	0	1	1	0	2	0	2	0	0	2	2	2	2	0	6	13	0
16:00	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	4	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	5	2	0	7	0	3	3	0	6	2	7	0	0	9	3	6	3	0	12	34	0
Apprch %	0.0%	71.4%	28.6%			0.0%	50.0%	50.0%			22.2%	77.8%	0.0%			25.0%	50.0%	25.0%				
Total %	0.0%	14.7%	5.9%		20.6%	0.0%	8.8%	8.8%		17.6%	5.9%	20.6%	0.0%		26.5%	8.8%	17.6%	8.8%		35.3%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					Camden Street Westbound					Seminary Avenue Northbound					N MacArthur Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	1		1	0	0	0		0	1	1	0		2	0	4	0		4	7
08:00	0	0	0		0	0	0	0		0	0	0	0		0	2	1	0		3	3
08:15	0	0	1		1	0	1	0		1	0	2	0		2	0	0	0		0	4
08:30	0	2	0		2	0	0	0		0	0	0	0		0	0	1	0		1	3
Total Volume	0	2	2		4	0	1	0		1	1	3	0		4	2	6	0		8	17
% App Total	0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			25.0%	75.0%	0.0%			25.0%	75.0%	0.0%			
PHF	.000	.250	.500		.500	.000	.250	.000		.250	.250	.375	.000		.500	.250	.375	.000		.500	.607

PM PEAK HOUR	Seminary Avenue Southbound					Camden Street Westbound					Seminary Avenue Northbound					N MacArthur Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

All Traffic Data

(916) 771-8700
orders@atdtraffic.com

City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-074 High Street-Ygnacio Avenue-Courtland Avenue
Site Code : 00000000
Start Date : 6/4/2012

Groups Printed- Unshifted

	High Street Southbound					Courtland Avenue Southwestbound					Ygnacio Avenue Westbound					High Street Northbound					Courtland Avenue Eastbound					
Start Time	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Int. Total
07:00	1	2	80	43	126	0	3	4	1	8	1	4	0	0	5	2	58	0	1	61	15	1	0	1	17	217
07:15	2	4	82	35	123	0	0	7	2	9	5	3	2	0	10	1	71	2	4	78	11	0	0	5	16	236
07:30	4	4	113	58	179	0	3	2	4	9	0	4	1	0	5	0	94	2	1	97	21	0	3	10	34	324
07:45	2	12	104	76	194	0	0	4	2	6	1	8	4	0	13	2	99	1	6	108	30	1	5	35	71	392
Total	9	22	379	212	622	0	6	17	9	32	7	19	7	0	33	5	322	5	12	344	77	2	8	51	138	1169
08:00	13	10	99	68	190	0	1	5	13	19	1	17	6	0	24	0	92	1	8	101	39	1	14	27	81	415
08:15	8	8	106	71	193	0	1	3	8	12	1	7	2	0	10	1	93	5	1	100	24	3	7	2	36	351
08:30	7	2	137	71	217	0	2	5	7	14	2	3	0	1	6	0	102	3	3	108	19	5	2	2	28	373
08:45	2	2	109	51	164	0	1	3	2	6	1	0	0	0	1	2	97	8	3	110	24	3	1	0	28	309
Total	30	22	451	261	764	0	5	16	30	51	5	27	8	1	41	3	384	17	15	419	106	12	24	31	173	1448
16:00	5	0	97	35	137	0	4	3	5	12	2	4	5	0	11	1	149	1	5	156	38	6	2	4	50	366
16:15	4	1	103	40	148	0	1	2	4	7	0	4	3	0	7	1	131	5	3	140	42	7	4	2	55	357
16:30	3	3	90	48	144	0	3	0	3	6	0	2	5	0	7	0	133	7	3	143	34	4	4	4	46	346
16:45	4	0	95	43	142	0	5	3	4	12	3	3	0	0	6	0	137	3	6	146	52	9	1	4	66	372
Total	16	4	385	166	571	0	13	8	16	37	5	13	13	0	31	2	550	16	17	585	166	26	11	14	217	1441
17:00	4	3	100	40	147	0	1	3	4	8	1	2	10	0	13	1	124	8	4	137	43	4	3	10	60	365
17:15	3	0	104	38	145	0	0	2	3	5	4	4	2	0	10	1	153	5	3	162	59	5	4	23	91	413
17:30	7	5	115	44	171	0	1	2	7	10	2	3	6	0	11	1	130	1	4	136	52	8	4	6	70	398
17:45	2	1	81	38	122	0	3	1	2	6	3	4	1	0	8	3	135	4	3	145	48	6	2	0	56	337
Total	16	9	400	160	585	0	5	8	16	29	10	13	19	0	42	6	542	18	14	580	202	23	13	39	277	1513
Grand Total	71	57	1615	799	2542	0	29	49	71	149	27	72	47	1	147	16	1798	56	58	1928	551	63	56	135	805	5571
Apprch %	2.8	2.2	63.5	31.4		0	19.5	32.9	47.7		18.4	49	32	0.7		0.8	93.3	2.9	3		68.4	7.8	7	16.8		
Total %	1.3	1	29	14.3	45.6	0	0.5	0.9	1.3	2.7	0.5	1.3	0.8	0	2.6	0.3	32.3	1	1	34.6	9.9	1.1	1	2.4	14.4	

All Traffic Data

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City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-074 High Street-Ygnacio Avenue-Courtland Avenue
Site Code : 00000000
Start Date : 6/4/2012

	High Street Southbound					Courtland Avenue Southwestbound					Ygnacio Avenue Westbound					High Street Northbound					Courtland Avenue Eastbound					
Start Time	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:45																									
07:45	2	**12**	104	**76**	194	0	0	4	2	6	1	8	4	0	13	**2**	99	1	6	**108**	30	1	5	**35**	71	392
08:00	**13**	10	99	68	190	0	1	**5**	**13**	**19**	1	**17**	**6**	0	**24**	0	92	1	**8**	101	**39**	1	**14**	27	**81**	**415**
08:15	8	8	106	71	193	0	1	3	8	12	1	7	2	0	10	1	93	**5**	1	100	24	3	7	2	36	351
08:30	7	2	**137**	71	**217**	0	**2**	5	7	14	**2**	3	0	**1**	6	0	**102**	3	3	108	19	**5**	2	2	28	373
Total Volume	30	32	446	286	794	0	4	17	30	51	5	35	12	1	53	3	386	10	18	417	112	10	28	66	216	1531
% App. Total	3.8	4	56.2	36		0	7.8	33.3	58.8		9.4	66	22.6	1.9		0.7	92.6	2.4	4.3		51.9	4.6	13	30.6		
PHF	.577	.667	.814	.941	.915	.000	.500	.850	.577	.671	.625	.515	.500	.250	.552	.375	.946	.500	.563	.965	.718	.500	.500	.471	.667	.922

All Traffic Data

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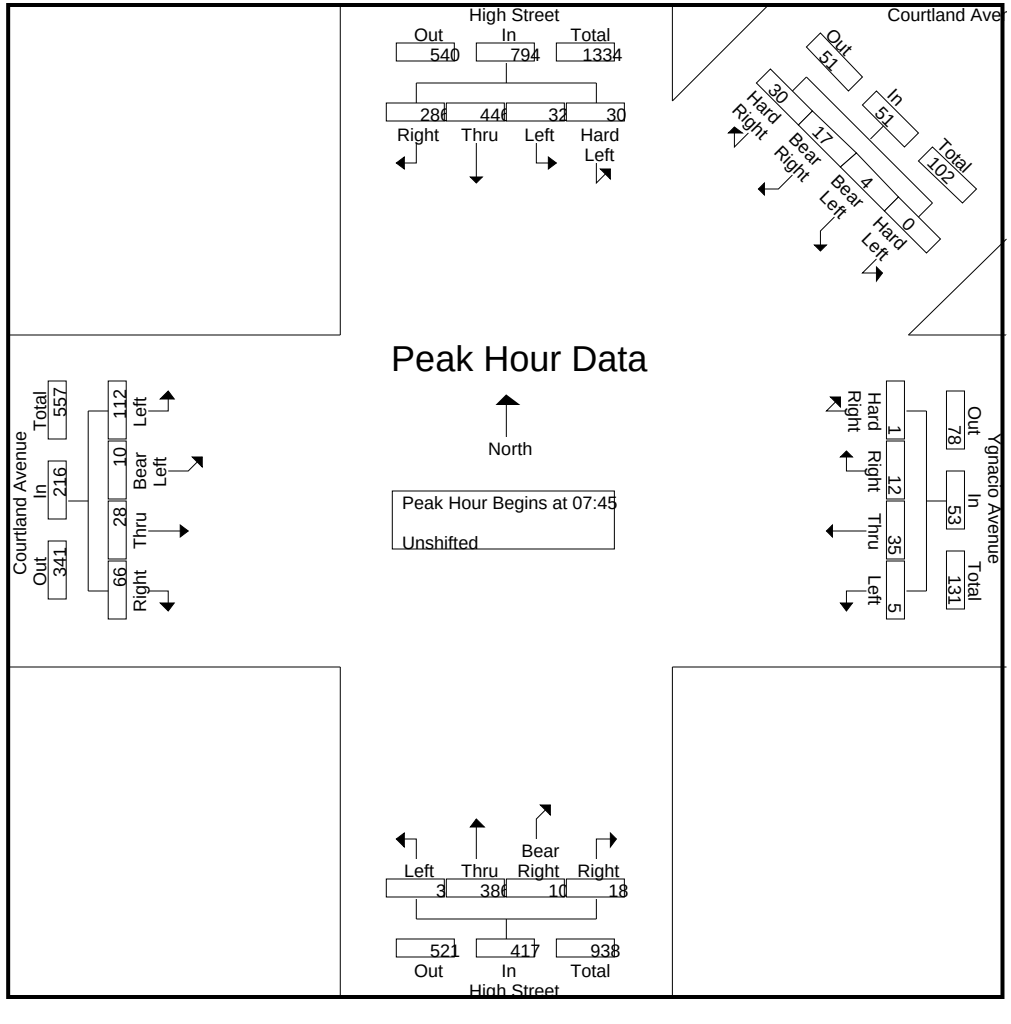
City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-074 High Street-Ygnacio Avenue-Courtland Avenue
Site Code : 00000000
Start Date : 6/4/2012
Page No : 3



All Traffic Data

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City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-074 High Street-Ygnacio Avenue-Courtland Avenue
Site Code : 00000000
Start Date : 6/4/2012

	High Street Southbound					Courtland Avenue Southwestbound					Ygnacio Avenue Westbound					High Street Northbound					Courtland Avenue Eastbound					
Start Time	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 16:45																									
16:45	4	0	95	43	142	0	**5**	**3**	4	**12**	3	3	0	0	6	0	137	3	**6**	146	52	**9**	1	4	66	372
17:00	4	3	100	40	147	0	1	3	4	8	1	2	**10**	0	**13**	**1**	124	**8**	4	137	43	4	3	10	60	365
17:15	3	0	104	38	145	0	0	2	3	5	**4**	**4**	2	0	10	1	**153**	5	3	**162**	**59**	5	**4**	**23**	**91**	**413**
17:30	**7**	**5**	**115**	**44**	**171**	0	1	2	**7**	10	2	3	6	0	11	1	130	1	4	136	52	8	4	6	70	398
Total Volume	18	8	414	165	605	0	7	10	18	35	10	12	18	0	40	3	544	17	17	581	206	26	12	43	287	1548
% App. Total	3	1.3	68.4	27.3		0	20	28.6	51.4		25	30	45	0		0.5	93.6	2.9	2.9		71.8	9.1	4.2	15		
PHF	.643	.400	.900	.938	.885	.000	.350	.833	.643	.729	.625	.750	.450	.000	.769	.750	.889	.531	.708	.897	.873	.722	.750	.467	.788	.937

All Traffic Data

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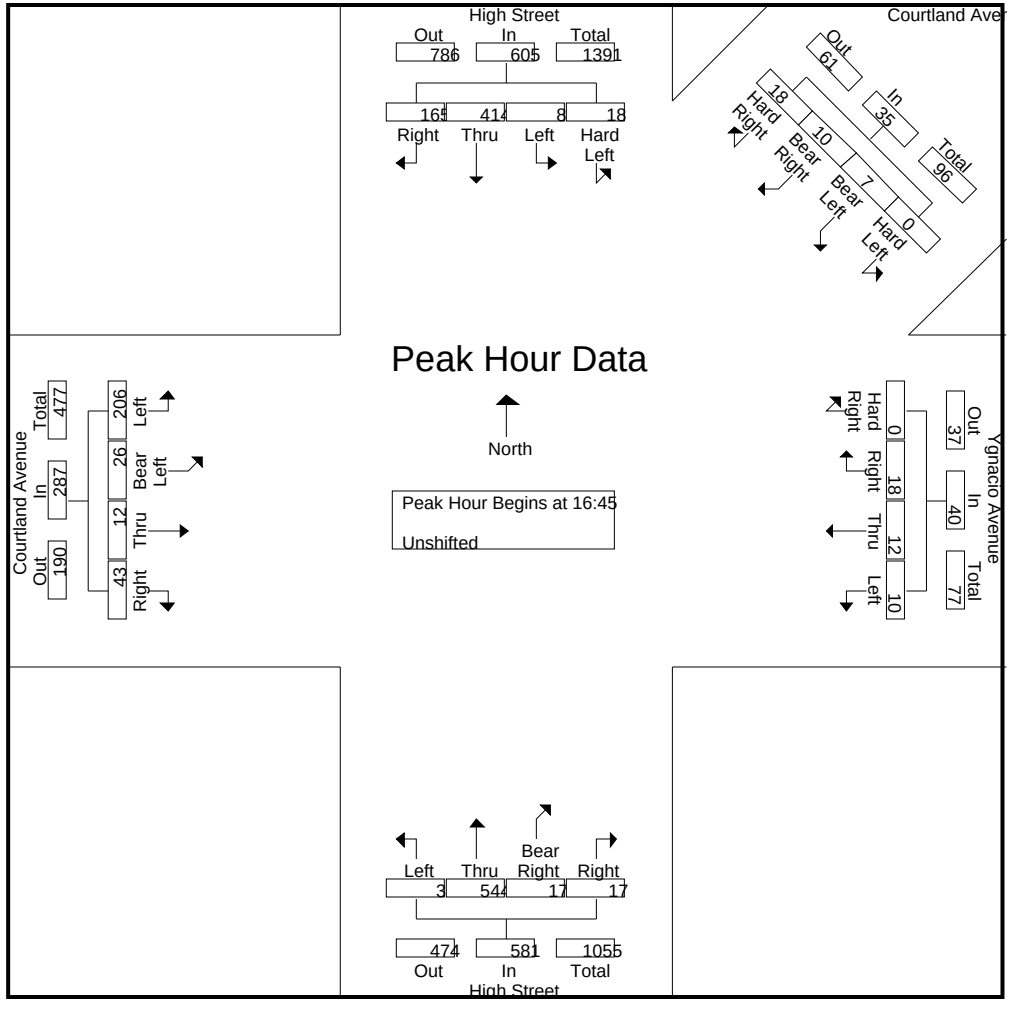
City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-074 High Street-Ygnacio Avenue-Courtland Avenue
Site Code : 00000000
Start Date : 6/4/2012
Page No : 5



ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-050 14th Avenue-Foothill Boulevard.ppd
Date : 6/5/2013

Unshifted Count = All Vehicles

	14th Avenue Southbound					Foothill Boulevard Westbound					14th Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	2	83	8	0	93	4	12	0	0	16	0	44	8	0	52	0	0	0	0	0	161	0
07:15	9	129	14	0	152	5	21	1	0	27	0	61	8	0	69	0	0	0	0	0	248	0
07:30	7	163	20	0	190	9	31	0	0	40	0	61	12	0	73	0	0	0	0	0	303	0
07:45	11	217	32	0	260	9	41	0	0	50	0	92	21	0	113	0	0	0	0	0	423	0
Total	29	592	74	0	695	27	105	1	0	133	0	258	49	0	307	0	0	0	0	0	1135	0
08:00	17	210	39	0	266	10	55	0	0	65	0	92	36	0	128	0	0	0	0	0	459	0
08:15	19	212	44	0	275	11	79	0	0	90	0	91	40	0	131	0	0	0	0	0	496	0
08:30	21	162	46	0	229	17	56	1	0	74	0	97	34	0	131	0	0	0	0	0	434	0
08:45	5	167	25	0	197	14	65	0	0	79	0	82	24	0	106	0	0	0	0	0	382	0
Total	62	751	154	0	967	52	255	1	0	308	0	362	134	0	496	0	0	0	0	0	1771	0
16:00	18	132	23	0	173	6	38	0	0	44	0	128	34	0	162	0	0	0	0	0	379	0
16:15	15	126	25	0	166	10	26	3	0	39	0	145	37	0	182	0	0	0	0	0	387	0
16:30	19	138	23	0	180	7	24	1	0	32	0	157	33	0	190	0	0	0	0	0	402	0
16:45	28	123	26	0	177	7	33	1	0	41	0	174	39	0	213	0	0	0	0	0	431	0
Total	80	519	97	0	696	30	121	5	0	156	0	604	143	0	747	0	0	0	0	0	1599	0
17:00	30	128	22	0	180	6	37	2	0	45	0	189	45	0	234	0	0	0	0	0	459	0
17:15	21	132	17	0	170	3	29	0	0	32	0	213	44	0	257	0	0	0	0	0	459	0
17:30	24	126	13	0	163	11	32	1	0	44	0	224	54	0	278	0	0	0	0	0	485	0
17:45	31	111	24	0	166	6	22	4	0	32	0	197	52	0	249	0	0	0	0	0	447	0
Total	106	497	76	0	679	26	120	7	0	153	0	823	195	0	1018	0	0	0	0	0	1850	0
Grand Total	277	2359	401	0	3037	135	601	14	0	750	0	2047	521	0	2568	0	0	0	0	0	6355	0
Apprch %	9.1%	77.7%	13.2%	0.0%		18.0%	80.1%	1.9%	0.0%		0.0%	79.7%	20.3%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	4.4%	37.1%	6.3%	0.0%	47.8%	2.1%	9.5%	0.2%	0.0%	11.8%	0.0%	32.2%	8.2%	0.0%	40.4%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	14th Avenue Southbound					Foothill Boulevard Westbound					14th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	11	217	32	0	260	9	41	0	0	50	0	92	21	0	113	0	0	0	0	0	423
08:00	17	210	39	0	266	10	55	0	0	65	0	92	36	0	128	0	0	0	0	0	459
08:15	19	212	44	0	275	11	79	0	0	90	0	91	40	0	131	0	0	0	0	0	496
08:30	21	162	46	0	229	17	56	1	0	74	0	97	34	0	131	0	0	0	0	0	434
Total Volume	68	801	161	0	1030	47	231	1	0	279	0	372	131	0	503	0	0	0	0	0	1812
% App Total	6.6%	77.8%	15.6%	0.0%		16.8%	82.8%	0.4%	0.0%		0.0%	74.0%	26.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.810	.923	.875	.000	.936	.691	.731	.250	.000	.775	.000	.959	.819	.000	.960	.000	.000	.000	.000	.000	.913

PM PEAK HOUR	14th Avenue Southbound					Foothill Boulevard Westbound					14th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	30	128	22	0	180	6	37	2	0	45	0	189	45	0	234	0	0	0	0	0	459
17:15	21	132	17	0	170	3	29	0	0	32	0	213	44	0	257	0	0	0	0	0	459
17:30	24	126	13	0	163	11	32	1	0	44	0	224	54	0	278	0	0	0	0	0	485
17:45	31	111	24	0	166	6	22	4	0	32	0	197	52	0	249	0	0	0	0	0	447
Total Volume	106	497	76	0	679	26	120	7	0	153	0	823	195	0	1018	0	0	0	0	0	1850
% App Total	15.6%	73.2%	11.2%	0.0%		17.0%	78.4%	4.6%	0.0%		0.0%	80.8%	19.2%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.855	.941	.792	.000	.943	.591	.811	.438	.000	.850	.000	.919	.903	.000	.915	.000	.000	.000	.000	.000	.954

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-050 14th Avenue-Foothill Boulevard.ppd
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	14th Avenue Southbound					Foothill Boulevard Westbound					14th Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15	0	0	0	4	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3	4
07:30	0	0	0	3	0	0	3	1	0	4	0	0	1	0	1	0	1	0	0	1	6	3
07:45	0	1	0	7	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3	7
Total	0	1	0	16	1	0	8	1	0	9	0	0	1	0	1	0	1	0	0	1	12	16
08:00	0	0	0	6	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	6
08:15	0	2	0	5	2	0	5	0	0	5	0	0	1	0	1	0	1	0	0	1	9	5
08:30	0	0	0	4	0	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	5	4
08:45	0	2	0	2	2	0	7	0	0	7	0	0	2	0	2	0	0	0	0	0	11	2
Total	0	4	0	17	4	0	17	0	0	17	0	1	3	0	4	0	1	0	0	1	26	17
16:00	0	1	0	10	1	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	5	10
16:15	0	0	0	4	0	0	2	0	0	2	0	1	1	0	2	0	0	0	0	0	4	4
16:30	0	0	0	7	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2	7
16:45	0	0	0	8	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	5	8
Total	0	1	0	29	1	0	9	0	0	9	1	1	3	0	5	0	1	0	0	1	16	29
17:00	0	2	0	6	2	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	6	6
17:15	0	0	0	6	0	0	3	0	0	3	0	0	4	0	4	0	2	0	0	2	9	6
17:30	0	0	0	2	0	0	8	0	0	8	0	0	2	0	2	0	2	0	0	2	12	2
17:45	0	1	0	3	1	0	5	0	0	5	0	2	4	0	6	0	2	0	0	2	14	3
Total	0	3	0	17	3	0	17	0	0	17	0	3	10	0	13	0	8	0	0	8	41	17
Grand Total	0	9	0	79	9	0	51	1	0	52	1	5	17	0	23	0	11	0	0	11	95	79
Apprch %	0.0%	100.0%	0.0%			0.0%	98.1%	1.9%			4.3%	21.7%	73.9%			0.0%	100.0%	0.0%				
Total %	0.0%	9.5%	0.0%		9.5%	0.0%	53.7%	1.1%		54.7%	1.1%	5.3%	17.9%		24.2%	0.0%	11.6%	0.0%		11.6%	100.0%	

AM PEAK HOUR	14th Avenue Southbound					Foothill Boulevard Westbound					14th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	1	0		1	0	2	0		2	0	0	0		0	0	0	0		0	3
08:00	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
08:15	0	2	0		2	0	5	0		5	0	0	1		1	0	1	0		1	9
08:30	0	0	0		0	0	4	0		4	0	1	0		1	0	0	0		0	5
Total Volume	0	3	0		3	0	12	0		12	0	1	1		2	0	1	0		1	18
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			
PHF	.000	.375	.000		.375	.000	.600	.000		.600	.000	.250	.250		.500	.000	.250	.000		.250	.500

PM PEAK HOUR	14th Avenue Southbound					Foothill Boulevard Westbound					14th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	2	0		2	0	1	0		1	0	1	0		1	0	2	0		2	6
17:15	0	0	0		0	0	3	0		3	0	0	4		4	0	2	0		2	9
17:30	0	0	0		0	0	8	0		8	0	0	2		2	0	2	0		2	12
17:45	0	1	0		1	0	5	0		5	0	2	4		6	0	2	0		2	14
Total Volume	0	3	0		3	0	17	0		17	0	3	10		13	0	8	0		8	41
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	23.1%	76.9%			0.0%	100.0%	0.0%			
PHF	.000	.375	.000		.375	.000	.531	.000		.531	.000	.375	.625		.542	.000	1.000	.000		1.000	.732

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-050 14th Avenue-Foothill Boulevard.ppd
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	14th Avenue Southbound					Foothill Boulevard Westbound					14th Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6	0
07:15	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
07:30	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4	0
07:45	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	0
Total	0	8	0	0	8	0	1	0	0	1	0	7	0	0	7	0	0	0	0	0	16	0
08:00	0	5	0	0	5	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	6	0
08:15	0	3	0	0	3	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	5	0
08:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
08:45	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5	0
Total	0	11	0	0	11	0	2	0	0	2	0	4	0	0	4	0	0	0	0	0	17	0
16:00	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
16:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:30	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	23	0	0	23	0	3	0	0	3	0	13	0	0	13	0	0	0	0	0	39	0
Apprch %	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	59.0%	0.0%		59.0%	0.0%	7.7%	0.0%		7.7%	0.0%	33.3%	0.0%		33.3%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	14th Avenue Southbound					Foothill Boulevard Westbound					14th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	1	0		1	0	0	0		0	0	2	0		2	0	0	0		0	3
08:00	0	5	0		5	0	1	0		1	0	0	0		0	0	0	0		0	6
08:15	0	3	0		3	0	1	0		1	0	1	0		1	0	0	0		0	5
08:30	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
Total Volume	0	9	0		9	0	2	0		2	0	4	0		4	0	0	0		0	15
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.450	.000		.450	.000	.500	.000		.500	.000	.500	.000		.500	.000	.000	.000		.000	.625

PM PEAK HOUR	14th Avenue Southbound					Foothill Boulevard Westbound					14th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-051 23rd Avenue-Foothill Boulevard.ppd
Date : 6/5/2013

Unshifted Count = All Vehicles

	23rd Avenue Southbound					Foothill Boulevard Westbound					23rd Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	1	38	3	0	42	2	41	2	0	45	1	10	0	0	11	0	16	2	0	18	116	0
07:15	3	45	6	0	54	3	60	3	0	66	5	19	1	0	25	0	18	2	0	20	165	0
07:30	1	32	9	0	42	7	73	1	0	81	4	14	3	0	21	2	26	3	0	31	175	0
07:45	6	53	17	0	76	10	108	1	0	119	9	32	0	0	41	4	46	3	0	53	289	0
Total	11	168	35	0	214	22	282	7	0	311	19	75	4	0	98	6	106	10	0	122	745	0
08:00	4	60	17	0	81	9	104	7	0	120	17	32	8	0	57	5	48	14	0	67	325	0
08:15	11	65	22	0	98	13	117	4	0	134	9	49	2	0	60	5	69	13	0	87	379	0
08:30	4	51	15	0	70	7	120	5	0	132	18	36	4	0	58	4	56	17	0	77	337	0
08:45	3	66	17	0	86	4	105	2	0	111	5	40	4	0	49	10	41	3	0	54	300	0
Total	22	242	71	0	335	33	446	18	0	497	49	157	18	0	224	24	214	47	0	285	1341	0
16:00	4	47	10	0	61	7	61	2	0	70	7	68	4	0	79	15	53	8	0	76	286	0
16:15	5	28	11	0	44	6	55	4	0	65	7	56	9	0	72	8	63	11	0	82	263	0
16:30	5	44	5	0	54	4	69	4	0	77	8	49	4	0	61	6	64	7	0	77	269	0
16:45	5	41	5	0	51	7	56	4	0	67	9	58	6	0	73	10	89	15	0	114	305	0
Total	19	160	31	0	210	24	241	14	0	279	31	231	23	0	285	39	269	41	0	349	1123	0
17:00	3	52	5	0	60	5	53	6	0	64	5	54	9	0	68	9	83	12	0	104	296	0
17:15	4	44	9	0	57	8	54	4	0	66	8	75	8	0	91	12	61	6	0	79	293	0
17:30	6	48	7	0	61	4	77	9	0	90	9	61	7	0	77	6	78	15	0	99	327	0
17:45	6	38	12	0	56	10	60	5	0	75	9	75	9	0	93	12	105	18	0	135	359	0
Total	19	182	33	0	234	27	244	24	0	295	31	265	33	0	329	39	327	51	0	417	1275	0
Grand Total	71	752	170	0	993	106	1213	63	0	1382	130	728	78	0	936	108	916	149	0	1173	4484	0
Apprch %	7.2%	75.7%	17.1%	0.0%		7.7%	87.8%	4.6%	0.0%		13.9%	77.8%	8.3%	0.0%		9.2%	78.1%	12.7%	0.0%			
Total %	1.6%	16.8%	3.8%	0.0%	22.1%	2.4%	27.1%	1.4%	0.0%	30.8%	2.9%	16.2%	1.7%	0.0%	20.9%	2.4%	20.4%	3.3%	0.0%	26.2%	100.0%	

AM PEAK HOUR	23rd Avenue Southbound					Foothill Boulevard Westbound					23rd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	4	60	17	0	81	9	104	7	0	120	17	32	8	0	57	5	48	14	0	67	325
08:15	11	65	22	0	98	13	117	4	0	134	9	49	2	0	60	5	69	13	0	87	379
08:30	4	51	15	0	70	7	120	5	0	132	18	36	4	0	58	4	56	17	0	77	337
08:45	3	66	17	0	86	4	105	2	0	111	5	40	4	0	49	10	41	3	0	54	300
Total Volume	22	242	71	0	335	33	446	18	0	497	49	157	18	0	224	24	214	47	0	285	1341
% App Total	6.6%	72.2%	21.2%	0.0%		6.6%	89.7%	3.6%	0.0%		21.9%	70.1%	8.0%	0.0%		8.4%	75.1%	16.5%	0.0%		
PHF	.500	.917	.807	.000	.855	.635	.929	.643	.000	.927	.681	.801	.563	.000	.933	.600	.775	.691	.000	.819	.885

PM PEAK HOUR	23rd Avenue Southbound					Foothill Boulevard Westbound					23rd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	3	52	5	0	60	5	53	6	0	64	5	54	9	0	68	9	83	12	0	104	296
17:15	4	44	9	0	57	8	54	4	0	66	8	75	8	0	91	12	61	6	0	79	293
17:30	6	48	7	0	61	4	77	9	0	90	9	61	7	0	77	6	78	15	0	99	327
17:45	6	38	12	0	56	10	60	5	0	75	9	75	9	0	93	12	105	18	0	135	359
Total Volume	19	182	33	0	234	27	244	24	0	295	31	265	33	0	329	39	327	51	0	417	1275
% App Total	8.1%	77.8%	14.1%	0.0%		9.2%	82.7%	8.1%	0.0%		9.4%	80.5%	10.0%	0.0%		9.4%	78.4%	12.2%	0.0%		
PHF	.792	.875	.688	.000	.959	.675	.792	.667	.000	.819	.861	.883	.917	.000	.884	.813	.779	.708	.000	.772	.888

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-051 23rd Avenue-Foothill Boulevard.ppd
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	23rd Avenue Southbound					Foothill Boulevard Westbound					23rd Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	2	0	3	2	0	1	0	0	1	0	0	0	2	0	0	1	0	5	1	4	10
07:15	0	0	0	2	0	0	3	0	1	3	1	0	0	2	1	0	1	0	2	1	5	7
07:30	0	0	0	1	0	0	2	0	1	2	0	0	0	4	0	0	1	0	5	1	3	11
07:45	0	2	0	5	2	0	0	0	1	0	0	0	0	6	0	0	3	0	2	3	5	14
Total	0	4	0	11	4	0	6	0	3	6	1	0	0	14	1	0	6	0	14	6	17	42
08:00	1	0	0	7	1	0	3	0	2	3	0	0	0	19	0	0	0	0	13	0	4	41
08:15	1	1	0	13	2	0	2	0	16	2	1	1	1	6	3	0	1	0	10	1	8	45
08:30	0	2	0	29	2	1	6	0	24	7	0	0	0	14	0	0	0	0	22	0	9	89
08:45	1	1	0	14	2	1	4	0	13	5	1	0	0	1	1	0	1	1	9	2	10	37
Total	3	4	0	63	7	2	15	0	55	17	2	1	1	40	4	0	2	1	54	3	31	212
16:00	0	0	0	11	0	0	3	0	16	3	0	1	0	11	1	0	1	0	6	1	5	44
16:15	0	0	0	4	0	0	0	0	10	0	1	0	0	16	1	0	2	0	9	2	3	39
16:30	0	0	0	1	0	0	0	0	11	0	1	0	0	29	1	0	2	0	27	2	3	68
16:45	0	1	0	1	1	0	1	0	9	1	0	0	0	6	0	0	1	0	5	1	3	21
Total	0	1	0	17	1	0	4	0	46	4	2	1	0	62	3	0	6	0	47	6	14	172
17:00	0	2	0	3	2	0	2	0	5	2	0	1	0	18	1	0	0	0	5	0	5	31
17:15	0	0	0	2	0	0	5	0	6	5	1	1	0	2	2	0	6	1	2	7	14	12
17:30	0	1	0	11	1	0	2	0	13	2	2	2	0	11	4	0	4	0	15	4	11	50
17:45	0	0	0	10	0	0	0	0	18	0	1	3	0	8	4	0	5	0	7	5	9	43
Total	0	3	0	26	3	0	9	0	42	9	4	7	0	39	11	0	15	1	29	16	39	136
Grand Total	3	12	0	117	15	2	34	0	146	36	9	9	1	155	19	0	29	2	144	31	101	562
Apprch %	20.0%	80.0%	0.0%			5.6%	94.4%	0.0%			47.4%	47.4%	5.3%			0.0%	93.5%	6.5%				
Total %	3.0%	11.9%	0.0%		14.9%	2.0%	33.7%	0.0%		35.6%	8.9%	8.9%	1.0%		18.8%	0.0%	28.7%	2.0%		30.7%	100.0%	

AM PEAK HOUR	23rd Avenue Southbound					Foothill Boulevard Westbound					23rd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	1	0	0		1	0	3	0		3	0	0	0		0	0	0	0		0	4
08:15	1	1	0		2	0	2	0		2	1	1	1		3	0	1	0		1	8
08:30	0	2	0		2	1	6	0		7	0	0	0		0	0	0	0		0	9
08:45	1	1	0		2	1	4	0		5	1	0	0		1	0	1	1		2	10
Total Volume	3	4	0		7	2	15	0		17	2	1	1		4	0	2	1		3	31
% App Total	42.9%	57.1%	0.0%			11.8%	88.2%	0.0%			50.0%	25.0%	25.0%			0.0%	66.7%	33.3%			
PHF	.750	.500	.000		.875	.500	.625	.000		.607	.500	.250	.250		.333	.000	.500	.250		.375	.775

PM PEAK HOUR	23rd Avenue Southbound					Foothill Boulevard Westbound					23rd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	2	0		2	0	2	0		2	0	1	0		1	0	0	0		0	5
17:15	0	0	0		0	0	5	0		5	1	1	0		2	0	6	1		7	14
17:30	0	1	0		1	0	2	0		2	2	2	0		4	0	4	0		4	11
17:45	0	0	0		0	0	0	0		0	1	3	0		4	0	5	0		5	9
Total Volume	0	3	0		3	0	9	0		9	4	7	0		11	0	15	1		16	39
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			36.4%	63.6%	0.0%			0.0%	93.8%	6.3%			
PHF	.000	.375	.000		.375	.000	.450	.000		.450	.500	.583	.000		.688	.000	.625	.250		.571	.696

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-051 23rd Avenue-Foothill Boulevard.ppd
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	23rd Avenue Southbound					Foothill Boulevard Westbound					23rd Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
07:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0
08:00	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2	0
08:15	0	0	0	0	0	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	3	0
08:30	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	2	0	0	2	1	3	0	0	4	0	0	0	0	0	7	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Grand Total	0	2	0	0	2	1	4	0	0	5	1	3	0	0	4	0	0	0	0	0	11	0
Apprch %	0.0%	100.0%	0.0%			20.0%	80.0%	0.0%			25.0%	75.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	18.2%	0.0%		18.2%	9.1%	36.4%	0.0%		45.5%	9.1%	27.3%	0.0%		36.4%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	23rd Avenue Southbound					Foothill Boulevard Westbound					23rd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	1	0		1	0	1	0		1	0	0	0		0	2
08:15	0	0	0		0	0	1	0		1	1	1	0		2	0	0	0		0	3
08:30	0	1	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
08:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	1	0		1	0	2	0		2	1	3	0		4	0	0	0		0	7
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			25.0%	75.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.500	.000		.500	.250	.750	.000		.500	.000	.000	.000		.000	.583

PM PEAK HOUR	23rd Avenue Southbound					Foothill Boulevard Westbound					23rd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:30	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
17:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
% App Total	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.250	.000	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.250

ALL TRAFFIC DATA

City of Oakland
(916) 771-8700
orders@atdtraffic.com

All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

File Name : 13-7347-053 Coolidge Avenue-Foothill Boulevard.ppd
Date : 6/4/2013

Unshifted Count = All Vehicles

	Coolidge Avenue Southbound					Foothill Boulevard Westbound					Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	35	0	17	0	52	0	44	10	0	54	0	0	0	0	0	6	45	0	0	51	157	0
07:15	35	0	17	0	52	0	59	25	0	84	0	0	0	0	0	7	61	0	0	68	204	0
07:30	36	0	37	0	73	0	76	20	0	96	0	0	0	0	0	15	64	0	0	79	248	0
07:45	50	0	31	0	81	0	97	29	0	126	0	0	0	0	0	12	88	0	0	100	307	0
Total	156	0	102	0	258	0	276	84	0	360	0	0	0	0	0	40	258	0	0	298	916	0
08:00	48	0	22	0	70	0	105	29	0	134	0	0	0	0	0	17	97	0	0	114	318	0
08:15	43	0	24	0	67	0	95	22	0	117	0	0	0	0	0	16	77	0	0	93	277	0
08:30	42	0	25	0	67	0	66	17	0	83	0	0	0	0	0	19	80	0	0	99	249	0
08:45	50	0	20	0	70	0	72	10	0	82	0	0	0	0	0	11	72	0	0	83	235	0
Total	183	0	91	0	274	0	338	78	0	416	0	0	0	0	0	63	326	0	0	389	1079	0
16:00	46	0	18	0	64	0	84	28	0	112	0	0	0	0	0	20	101	0	0	121	297	0
16:15	49	0	16	0	65	0	78	28	0	106	0	0	0	0	0	22	98	0	0	120	291	0
16:30	56	0	14	0	70	0	69	35	0	104	0	0	0	0	0	22	90	0	0	112	286	0
16:45	46	0	23	0	69	0	73	36	0	109	0	0	0	0	0	17	91	0	0	108	286	0
Total	197	0	71	0	268	0	304	127	0	431	0	0	0	0	0	81	380	0	0	461	1160	0
17:00	48	0	18	0	66	0	92	27	0	119	0	0	0	0	0	18	119	0	0	137	322	0
17:15	52	0	17	0	69	0	86	26	0	112	0	0	0	0	0	26	106	0	0	132	313	0
17:30	60	0	25	0	85	0	100	30	0	130	0	0	0	0	0	33	100	0	0	133	348	0
17:45	53	0	10	0	63	0	78	38	0	116	0	0	0	0	0	21	111	0	0	132	311	0
Total	213	0	70	0	283	0	356	121	0	477	0	0	0	0	0	98	436	0	0	534	1294	0
Grand Total	749	0	334	0	1083	0	1274	410	0	1684	0	0	0	0	0	282	1400	0	0	1682	4449	0
Apprch %	69.2%	0.0%	30.8%	0.0%		0.0%	75.7%	24.3%	0.0%		0.0%	0.0%	0.0%	0.0%		16.8%	83.2%	0.0%	0.0%			
Total %	16.8%	0.0%	7.5%	0.0%	24.3%	0.0%	28.6%	9.2%	0.0%	37.9%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	31.5%	0.0%	0.0%	37.8%	100.0%	

AM PEAK HOUR	Coolidge Avenue Southbound					Foothill Boulevard Westbound					Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	50	0	31	0	81	0	97	29	0	126	0	0	0	0	0	12	88	0	0	100	307
08:00	48	0	22	0	70	0	105	29	0	134	0	0	0	0	0	17	97	0	0	114	318
08:15	43	0	24	0	67	0	95	22	0	117	0	0	0	0	0	16	77	0	0	93	277
08:30	42	0	25	0	67	0	66	17	0	83	0	0	0	0	0	19	80	0	0	99	249
Total Volume	183	0	102	0	285	0	363	97	0	460	0	0	0	0	0	64	342	0	0	406	1151
% App Total	64.2%	0.0%	35.8%	0.0%		0.0%	78.9%	21.1%	0.0%		0.0%	0.0%	0.0%	0.0%		15.8%	84.2%	0.0%	0.0%		
PHF	.915	.000	.823	.000	.880	.000	.864	.836	.000	.858	.000	.000	.000	.000	.000	.842	.881	.000	.000	.890	.905

PM PEAK HOUR	Coolidge Avenue Southbound					Foothill Boulevard Westbound					Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	48	0	18	0	66	0	92	27	0	119	0	0	0	0	0	18	119	0	0	137	322
17:15	52	0	17	0	69	0	86	26	0	112	0	0	0	0	0	26	106	0	0	132	313
17:30	60	0	25	0	85	0	100	30	0	130	0	0	0	0	0	33	100	0	0	133	348
17:45	53	0	10	0	63	0	78	38	0	116	0	0	0	0	0	21	111	0	0	132	311
Total Volume	213	0	70	0	283	0	356	121	0	477	0	0	0	0	0	98	436	0	0	534	1294
% App Total	75.3%	0.0%	24.7%	0.0%		0.0%	74.6%	25.4%	0.0%		0.0%	0.0%	0.0%	0.0%		18.4%	81.6%	0.0%	0.0%		
PHF	.888	.000	.700	.000	.832	.000	.890	.796	.000	.917	.000	.000	.000	.000	.000	.742	.916	.000	.000	.974	.930

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-053 Coolidge Avenue-Foothill Boulevard.ppd
Date : 6/4/2013

Bank 1 Count = Peds & Bikes

	Coolidge Avenue Southbound					Foothill Boulevard Westbound					Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	5	0	0	1	0	5	1	0	0	0	0	0	0	0	0	0	0	1	10
07:15	1	0	0	10	1	0	2	0	4	2	0	0	0	0	0	0	2	0	0	2	5	14
07:30	0	0	1	10	1	0	1	1	1	2	0	0	0	0	0	0	0	0	0	0	3	11
07:45	0	0	0	8	0	0	2	1	6	3	0	0	0	0	0	0	2	0	0	2	5	14
Total	1	0	1	33	2	0	6	2	16	8	0	0	0	0	0	0	4	0	0	4	14	49
08:00	0	0	1	20	1	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	5	20
08:15	2	0	2	27	4	0	6	0	7	6	0	0	0	0	0	0	3	0	0	3	13	34
08:30	4	0	0	12	4	0	2	0	4	2	0	0	0	0	0	0	2	0	0	2	8	16
08:45	1	0	0	13	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	16
Total	7	0	3	72	10	0	11	0	14	11	0	0	0	0	0	0	6	0	0	6	27	86
16:00	2	0	0	16	2	0	1	2	9	3	0	0	0	0	0	1	4	0	0	5	10	25
16:15	1	0	0	18	1	0	0	1	5	1	0	0	0	0	0	0	2	0	0	2	4	23
16:30	0	0	0	33	0	0	1	1	8	2	0	0	0	0	0	1	2	0	0	3	5	41
16:45	0	0	0	25	0	0	1	0	9	1	0	0	0	0	0	0	3	0	0	3	4	34
Total	3	0	0	92	3	0	3	4	31	7	0	0	0	0	0	2	11	0	0	13	23	123
17:00	0	0	2	32	2	0	1	0	16	1	0	0	0	0	0	0	1	0	0	1	4	48
17:15	1	0	0	23	1	0	3	0	9	3	0	0	0	0	0	0	0	0	0	0	4	32
17:30	1	0	0	17	1	0	0	1	12	1	0	0	0	0	0	0	3	0	0	3	5	29
17:45	0	0	0	27	0	0	0	1	22	1	0	0	0	0	0	2	4	0	0	6	7	49
Total	2	0	2	99	4	0	4	2	59	6	0	0	0	0	0	2	8	0	0	10	20	158
Grand Total	13	0	6	296	19	0	24	8	120	32	0	0	0	0	0	4	29	0	0	33	84	416
Apprch %	68.4%	0.0%	31.6%			0.0%	75.0%	25.0%			0.0%	0.0%	0.0%			12.1%	87.9%	0.0%				
Total %	15.5%	0.0%	7.1%		22.6%	0.0%	28.6%	9.5%		38.1%	0.0%	0.0%	0.0%		0.0%	4.8%	34.5%	0.0%		39.3%	100.0%	

AM PEAK HOUR	Coolidge Avenue Southbound					Foothill Boulevard Westbound					Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	2	1		3	0	0	0		0	0	2	0		2	5
08:00	0	0	1		1	0	3	0		3	0	0	0		0	0	1	0		1	5
08:15	2	0	2		4	0	6	0		6	0	0	0		0	0	3	0		3	13
08:30	4	0	0		4	0	2	0		2	0	0	0		0	0	2	0		2	8
Total Volume	6	0	3		9	0	13	1		14	0	0	0		0	0	8	0		8	31
% App Total	66.7%	0.0%	33.3%			0.0%	92.9%	7.1%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.375	.000	.375		.563	.000	.542	.250		.583	.000	.000	.000		.000	.000	.667	.000		.667	.596

PM PEAK HOUR	Coolidge Avenue Southbound					Foothill Boulevard Westbound					Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	2		2	0	1	0		1	0	0	0		0	0	1	0		1	4
17:15	1	0	0		1	0	3	0		3	0	0	0		0	0	0	0		0	4
17:30	1	0	0		1	0	0	1		1	0	0	0		0	0	3	0		3	5
17:45	0	0	0		0	0	0	1		1	0	0	0		0	2	4	0		6	7
Total Volume	2	0	2		4	0	4	2		6	0	0	0		0	2	8	0		10	20
% App Total	50.0%	0.0%	50.0%			0.0%	66.7%	33.3%			0.0%	0.0%	0.0%			20.0%	80.0%	0.0%			
PHF	.500	.000	.250		.500	.000	.333	.500		.500	.000	.000	.000		.000	.250	.500	.000		.417	.714

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-053 Coolidge Avenue-Foothill Boulevard.ppd
Date : 6/4/2013

Bank 2 Count = Heavy Trucks

	Coolidge Avenue Southbound					Foothill Boulevard Westbound					Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
07:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3	0	0	3	4	0
07:30	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
07:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6	0
Total	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	0	8	0	0	8	14	0
08:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	4	0	0	6	7	0
08:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
08:30	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	6	0
08:45	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4	0
Total	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	2	7	0	0	9	19	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
16:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
16:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	0
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	7	0
17:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	0
Grand Total	0	0	0	0	0	0	18	2	0	20	0	0	0	0	0	2	21	0	0	23	43	0
Apprch %	0.0%	0.0%	0.0%			0.0%	90.0%	10.0%			0.0%	0.0%	0.0%			8.7%	91.3%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	41.9%	4.7%		46.5%	0.0%	0.0%	0.0%		0.0%	4.7%	48.8%	0.0%		53.5%	100.0%	

AM PEAK HOUR	Coolidge Avenue Southbound					Foothill Boulevard Westbound					Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	2	0		2	0	0	0		0	0	4	0		4	6
08:00	0	0	0		0	0	1	0		1	0	0	0		0	2	4	0		6	7
08:15	0	0	0		0	0	2	0		2	0	0	0		0	0	0	0		0	2
08:30	0	0	0		0	0	3	1		4	0	0	0		0	0	2	0		2	6
Total Volume	0	0	0		0	0	8	1		9	0	0	0		0	2	10	0		12	21
% App Total	0.0%	0.0%	0.0%			0.0%	88.9%	11.1%			0.0%	0.0%	0.0%			16.7%	83.3%	0.0%			
PHF	.000	.000	.000		.000	.000	.667	.250		.563	.000	.000	.000		.000	.250	.625	.000		.500	.750

PM PEAK HOUR	Coolidge Avenue Southbound					Foothill Boulevard Westbound					Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	1	0		1	0	0	0		0	0	1	0		1	2
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
17:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	1	0		1	0	0	0		0	0	2	0		2	3
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.000	.500	.000		.500	.375

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-054 38th Avenue-Foothill Boulevard.ppd
Date : 6/4/2013

Unshifted Count = All Vehicles

	38th Avenue Southbound					Foothill Boulevard Westbound					38th Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	6	28	7	0	41	3	59	2	0	64	3	10	3	0	16	4	59	7	0	70	191	0
07:15	4	37	5	0	46	5	69	4	0	78	9	10	4	0	23	6	50	9	0	65	212	0
07:30	6	51	12	0	69	5	94	8	0	107	8	15	4	0	27	9	73	12	0	94	297	0
07:45	10	71	20	0	101	2	127	17	0	146	10	28	9	0	47	10	93	7	0	110	404	0
Total	26	187	44	0	257	15	349	31	0	395	30	63	20	0	113	29	275	35	0	339	1104	0
08:00	17	72	26	0	115	8	113	12	0	133	6	30	9	0	45	11	122	17	0	150	443	0
08:15	6	68	21	0	95	5	85	15	0	105	4	23	2	0	29	9	82	15	0	106	335	0
08:30	11	75	23	0	109	8	111	8	0	127	4	30	5	0	39	9	78	13	0	100	375	0
08:45	16	47	16	0	79	8	94	3	0	105	9	17	6	0	32	7	91	8	0	106	322	0
Total	50	262	86	0	398	29	403	38	0	470	23	100	22	0	145	36	373	53	0	462	1475	0
16:00	8	27	19	0	54	3	96	16	0	115	9	37	13	0	59	11	121	8	0	140	368	0
16:15	9	34	11	0	54	4	103	14	0	121	9	44	13	0	66	8	128	6	0	142	383	0
16:30	12	27	13	0	52	6	90	17	0	113	8	41	13	0	62	12	144	17	0	173	400	0
16:45	13	35	15	0	63	4	127	12	0	143	8	45	9	0	62	7	121	10	0	138	406	0
Total	42	123	58	0	223	17	416	59	0	492	34	167	48	0	249	38	514	41	0	593	1557	0
17:00	18	34	17	0	69	7	114	22	0	143	13	40	8	0	61	12	165	12	0	189	462	0
17:15	12	32	9	0	53	7	124	14	0	145	11	44	14	0	69	10	147	22	0	179	446	0
17:30	11	36	11	0	58	9	110	16	0	135	9	40	12	0	61	15	141	15	0	171	425	0
17:45	16	43	5	0	64	8	120	19	0	147	9	63	7	0	79	11	142	14	0	167	457	0
Total	57	145	42	0	244	31	468	71	0	570	42	187	41	0	270	48	595	63	0	706	1790	0
Grand Total	175	717	230	0	1122	92	1636	199	0	1927	129	517	131	0	777	151	1757	192	0	2100	5926	0
Apprch %	15.6%	63.9%	20.5%	0.0%		4.8%	84.9%	10.3%	0.0%		16.6%	66.5%	16.9%	0.0%		7.2%	83.7%	9.1%	0.0%			
Total %	3.0%	12.1%	3.9%	0.0%	18.9%	1.6%	27.6%	3.4%	0.0%	32.5%	2.2%	8.7%	2.2%	0.0%	13.1%	2.5%	29.6%	3.2%	0.0%	35.4%	100.0%	

AM PEAK HOUR	38th Avenue Southbound					Foothill Boulevard Westbound					38th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	10	71	20	0	101	2	127	17	0	146	10	28	9	0	47	10	93	7	0	110	404
08:00	17	72	26	0	115	8	113	12	0	133	6	30	9	0	45	11	122	17	0	150	443
08:15	6	68	21	0	95	5	85	15	0	105	4	23	2	0	29	9	82	15	0	106	335
08:30	11	75	23	0	109	8	111	8	0	127	4	30	5	0	39	9	78	13	0	100	375
Total Volume	44	286	90	0	420	23	436	52	0	511	24	111	25	0	160	39	375	52	0	466	1557
% App Total	10.5%	68.1%	21.4%	0.0%		4.5%	85.3%	10.2%	0.0%		15.0%	69.4%	15.6%	0.0%		8.4%	80.5%	11.2%	0.0%		
PHF	.647	.953	.865	.000	.913	.719	.858	.765	.000	.875	.600	.925	.694	.000	.851	.886	.768	.765	.000	.777	.879

PM PEAK HOUR	38th Avenue Southbound					Foothill Boulevard Westbound					38th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	18	34	17	0	69	7	114	22	0	143	13	40	8	0	61	12	165	12	0	189	462
17:15	12	32	9	0	53	7	124	14	0	145	11	44	14	0	69	10	147	22	0	179	446
17:30	11	36	11	0	58	9	110	16	0	135	9	40	12	0	61	15	141	15	0	171	425
17:45	16	43	5	0	64	8	120	19	0	147	9	63	7	0	79	11	142	14	0	167	457
Total Volume	57	145	42	0	244	31	468	71	0	570	42	187	41	0	270	48	595	63	0	706	1790
% App Total	23.4%	59.4%	17.2%	0.0%		5.4%	82.1%	12.5%	0.0%		15.6%	69.3%	15.2%	0.0%		6.8%	84.3%	8.9%	0.0%		
PHF	.792	.843	.618	.000	.884	.861	.944	.807	.000	.969	.808	.742	.732	.000	.854	.800	.902	.716	.000	.934	.969

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-054 38th Avenue-Foothill Boulevard.ppd
Date : 6/4/2013

Bank 1 Count = Peds & Bikes

	38th Avenue Southbound					Foothill Boulevard Westbound					38th Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	6	1	0	0	0	6	0	0	0	1	5	1	0	1	0	3	1	3	20
07:15	1	1	0	0	2	0	2	0	5	2	0	0	0	6	0	0	2	1	5	3	7	16
07:30	0	0	0	10	0	0	1	0	9	1	0	1	0	19	1	0	2	0	15	2	4	53
07:45	0	0	1	15	1	0	0	0	16	0	1	0	1	10	2	0	1	0	9	1	4	50
Total	1	2	1	31	4	0	3	0	36	3	1	1	2	40	4	0	6	1	32	7	18	139
08:00	1	3	0	7	4	2	3	0	28	5	0	1	1	17	2	0	0	0	5	0	11	57
08:15	0	1	2	28	3	1	2	0	9	3	0	0	0	23	0	0	4	0	14	4	10	74
08:30	0	2	0	11	2	0	1	0	15	1	0	0	0	15	0	0	1	0	10	1	4	51
08:45	0	1	0	14	1	0	2	0	9	2	0	0	0	5	0	0	1	0	7	1	4	35
Total	1	7	2	60	10	3	8	0	61	11	0	1	1	60	2	0	6	0	36	6	29	217
16:00	0	0	0	4	0	0	5	1	6	6	0	2	0	12	2	0	3	0	4	3	11	26
16:15	0	1	0	13	1	0	1	0	12	1	0	1	1	13	2	0	0	0	11	0	4	49
16:30	0	0	0	8	0	0	4	0	6	4	0	2	0	10	2	0	3	0	8	3	9	32
16:45	0	0	0	12	0	0	1	0	10	1	0	1	0	13	1	0	4	0	4	4	6	39
Total	0	1	0	37	1	0	11	1	34	12	0	6	1	48	7	0	10	0	27	10	30	146
17:00	1	1	0	12	2	0	1	0	5	1	0	1	0	11	1	0	2	1	8	3	7	36
17:15	0	0	0	12	0	0	3	0	20	3	0	3	0	28	3	0	1	0	10	1	7	70
17:30	0	1	0	4	1	0	0	0	10	0	0	6	0	7	6	1	1	0	5	2	9	26
17:45	0	1	0	8	1	0	3	0	17	3	0	1	0	10	1	1	3	0	6	4	9	41
Total	1	3	0	36	4	0	7	0	52	7	0	11	0	56	11	2	7	1	29	10	32	173
Grand Total	3	13	3	164	19	3	29	1	183	33	1	19	4	204	24	2	29	2	124	33	109	675
Apprch %	15.8%	68.4%	15.8%			9.1%	87.9%	3.0%			4.2%	79.2%	16.7%			6.1%	87.9%	6.1%				
Total %	2.8%	11.9%	2.8%		17.4%	2.8%	26.6%	0.9%		30.3%	0.9%	17.4%	3.7%		22.0%	1.8%	26.6%	1.8%		30.3%	100.0%	

AM PEAK HOUR	38th Avenue Southbound					Foothill Boulevard Westbound					38th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	1		1	0	0	0		0	1	0	1		2	0	1	0		1	4
08:00	1	3	0		4	2	3	0		5	0	1	1		2	0	0	0		0	11
08:15	0	1	2		3	1	2	0		3	0	0	0		0	0	4	0		4	10
08:30	0	2	0		2	0	1	0		1	0	0	0		0	0	1	0		1	4
Total Volume	1	6	3		10	3	6	0		9	1	1	2		4	0	6	0		6	29
% App Total	10.0%	60.0%	30.0%			33.3%	66.7%	0.0%			25.0%	25.0%	50.0%			0.0%	100.0%	0.0%			
PHF	.250	.500	.375		.625	.375	.500	.000		.450	.250	.250	.500		.500	.000	.375	.000		.375	.659

PM PEAK HOUR	38th Avenue Southbound					Foothill Boulevard Westbound					38th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	1	1	0		2	0	1	0		1	0	1	0		1	0	2	1		3	7
17:15	0	0	0		0	0	3	0		3	0	3	0		3	0	1	0		1	7
17:30	0	1	0		1	0	0	0		0	0	6	0		6	1	1	0		2	9
17:45	0	1	0		1	0	3	0		3	0	1	0		1	1	3	0		4	9
Total Volume	1	3	0		4	0	7	0		7	0	11	0		11	2	7	1		10	32
% App Total	25.0%	75.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			20.0%	70.0%	10.0%			
PHF	.250	.750	.000		.500	.000	.583	.000		.583	.000	.458	.000		.458	.500	.583	.250		.625	.889

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-054 38th Avenue-Foothill Boulevard.ppd
Date : 6/4/2013

Bank 2 Count = Heavy Trucks

	38th Avenue Southbound					Foothill Boulevard Westbound					38th Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
07:15	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	0	1	0	0	1	4	0
07:30	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	6	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
Total	0	0	0	0	0	0	6	1	0	7	0	0	2	0	2	0	2	1	0	3	12	0
08:00	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4	0
08:15	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	5	0
08:30	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2	0
08:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	2	1	0	0	3	0	5	0	0	5	0	1	0	0	1	0	3	0	0	3	12	0
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	0
Total	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4	0
17:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	2	3	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
17:30	1	0	0	0	1	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	4	0
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
Total	1	0	0	0	1	0	1	0	0	1	1	1	1	0	3	0	2	3	0	5	10	0
Grand Total	3	4	0	0	7	0	12	1	0	13	1	2	3	0	6	0	8	4	0	12	38	0
Apprch %	42.9%	57.1%	0.0%			0.0%	92.3%	7.7%			16.7%	33.3%	50.0%			0.0%	66.7%	33.3%				
Total %	7.9%	10.5%	0.0%		18.4%	0.0%	31.6%	2.6%		34.2%	2.6%	5.3%	7.9%		15.8%	0.0%	21.1%	10.5%		31.6%	100.0%	

AM PEAK HOUR	38th Avenue Southbound					Foothill Boulevard Westbound					38th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	1		1	1
08:00	1	0	0		1	0	2	0		2	0	0	0		0	0	1	0		1	4
08:15	0	1	0		1	0	2	0		2	0	0	0		0	0	2	0		2	5
08:30	0	0	0		0	0	1	0		1	0	1	0		1	0	0	0		0	2
Total Volume	1	1	0		2	0	5	0		5	0	1	0		1	0	3	1		4	12
% App Total	50.0%	50.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	75.0%	25.0%			
PHF	.250	.250	.000		.500	.000	.625	.000		.625	.000	.250	.000		.250	.000	.375	.250		.500	.600

PM PEAK HOUR	38th Avenue Southbound					Foothill Boulevard Westbound					38th Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	0	0		0	1	0	0		1	0	0	2		2	3
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	1		1	1
17:30	1	0	0		1	0	0	0		0	0	1	1		2	0	1	0		1	4
17:45	0	0	0		0	0	1	0		1	0	0	0		0	0	1	0		1	2
Total Volume	1	0	0		1	0	1	0		1	1	1	1		3	0	2	3		5	10
% App Total	100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			33.3%	33.3%	33.3%			0.0%	40.0%	60.0%			
PHF	.250	.000	.000		.250	.000	.250	.000		.250	.250	.250	.250		.375	.000	.500	.375		.625	.625

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-055 42nd Avenue-Foothill Boulevard.ppd
Date : 6/4/2013

Unshifted Count = All Vehicles

	42nd Avenue Southbound					Foothill Boulevard Westbound					42nd Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	42	10	0	52	10	39	0	0	49	9	14	4	0	27	6	35	26	0	67	195	0
07:15	0	30	12	0	42	8	50	1	0	59	24	12	3	0	39	7	35	47	0	89	229	0
07:30	0	47	10	0	57	17	83	2	0	102	36	22	2	0	60	14	53	41	0	108	327	0
07:45	0	69	18	0	87	23	73	8	0	104	40	48	2	0	90	21	70	41	0	132	413	0
Total	0	188	50	0	238	58	245	11	0	314	109	96	11	0	216	48	193	155	0	396	1164	0
08:00	2	64	25	0	91	22	74	4	0	100	44	37	5	0	86	22	107	54	0	183	460	0
08:15	1	72	14	0	87	15	96	3	0	114	37	17	5	0	59	12	61	28	0	101	361	0
08:30	0	60	19	0	79	17	73	2	0	92	39	20	7	0	66	6	68	45	0	119	356	0
08:45	0	45	16	0	61	16	62	2	0	80	24	14	4	0	42	8	72	47	0	127	310	0
Total	3	241	74	0	318	70	305	11	0	386	144	88	21	0	253	48	308	174	0	530	1487	0
16:00	0	30	12	0	42	14	71	3	0	88	57	36	4	0	97	8	94	39	0	141	368	0
16:15	0	27	14	0	41	14	86	3	0	103	52	33	9	0	94	13	96	40	0	149	387	0
16:30	0	41	13	0	54	13	69	2	0	84	44	28	5	0	77	12	103	45	0	160	375	0
16:45	0	40	14	0	54	11	103	5	0	119	49	47	8	0	104	17	94	52	0	163	440	0
Total	0	138	53	0	191	52	329	13	0	394	202	144	26	0	372	50	387	176	0	613	1570	0
17:00	2	39	6	0	47	17	93	5	0	115	56	49	6	0	111	16	116	43	0	175	448	0
17:15	0	32	16	0	48	12	90	4	0	106	64	50	11	0	125	17	107	54	0	178	457	0
17:30	1	33	19	0	53	14	76	0	0	90	54	52	9	0	115	19	102	56	0	177	435	0
17:45	0	32	21	0	53	15	85	0	0	100	51	46	15	0	112	8	111	50	0	169	434	0
Total	3	136	62	0	201	58	344	9	0	411	225	197	41	0	463	60	436	203	0	699	1774	0
Grand Total	6	703	239	0	948	238	1223	44	0	1505	680	525	99	0	1304	206	1324	708	0	2238	5995	0
Apprch %	0.6%	74.2%	25.2%	0.0%		15.8%	81.3%	2.9%	0.0%		52.1%	40.3%	7.6%	0.0%		9.2%	59.2%	31.6%	0.0%			
Total %	0.1%	11.7%	4.0%	0.0%	15.8%	4.0%	20.4%	0.7%	0.0%	25.1%	11.3%	8.8%	1.7%	0.0%	21.8%	3.4%	22.1%	11.8%	0.0%	37.3%	100.0%	

AM PEAK HOUR	42nd Avenue Southbound					Foothill Boulevard Westbound					42nd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	69	18	0	87	23	73	8	0	104	40	48	2	0	90	21	70	41	0	132	413
08:00	2	64	25	0	91	22	74	4	0	100	44	37	5	0	86	22	107	54	0	183	460
08:15	1	72	14	0	87	15	96	3	0	114	37	17	5	0	59	12	61	28	0	101	361
08:30	0	60	19	0	79	17	73	2	0	92	39	20	7	0	66	6	68	45	0	119	356
Total Volume	3	265	76	0	344	77	316	17	0	410	160	122	19	0	301	61	306	168	0	535	1590
% App Total	0.9%	77.0%	22.1%	0.0%		18.8%	77.1%	4.1%	0.0%		53.2%	40.5%	6.3%	0.0%		11.4%	57.2%	31.4%	0.0%		
PHF	.375	.920	.760	.000	.945	.837	.823	.531	.000	.899	.909	.635	.679	.000	.836	.693	.715	.778	.000	.731	.864

PM PEAK HOUR	42nd Avenue Southbound					Foothill Boulevard Westbound					42nd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	40	14	0	54	11	103	5	0	119	49	47	8	0	104	17	94	52	0	163	440
17:00	2	39	6	0	47	17	93	5	0	115	56	49	6	0	111	16	116	43	0	175	448
17:15	0	32	16	0	48	12	90	4	0	106	64	50	11	0	125	17	107	54	0	178	457
17:30	1	33	19	0	53	14	76	0	0	90	54	52	9	0	115	19	102	56	0	177	435
Total Volume	3	144	55	0	202	54	362	14	0	430	223	198	34	0	455	69	419	205	0	693	1780
% App Total	1.5%	71.3%	27.2%	0.0%		12.6%	84.2%	3.3%	0.0%		49.0%	43.5%	7.5%	0.0%		10.0%	60.5%	29.6%	0.0%		
PHF	.375	.900	.724	.000	.935	.794	.879	.700	.000	.903	.871	.952	.773	.000	.910	.908	.903	.915	.000	.973	.974

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-055 42nd Avenue-Foothill Boulevard.ppd
Date : 6/4/2013

Bank 1 Count = Peds & Bikes

	42nd Avenue Southbound					Foothill Boulevard Westbound					42nd Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	2	0	0	0	0	3	0	0	0	0	8	0	1	0	0	0	1	1	13
07:15	0	0	1	0	1	1	1	0	0	2	0	0	0	1	0	0	4	0	0	4	7	1
07:30	0	0	1	8	1	0	1	0	0	1	0	0	0	6	0	0	0	1	0	1	3	14
07:45	0	0	2	19	2	0	1	0	0	1	0	1	0	6	1	1	1	0	4	2	6	29
Total	0	0	4	29	4	1	3	0	3	4	0	1	0	21	1	2	5	1	4	8	17	57
08:00	0	0	0	12	0	0	2	0	7	2	0	0	0	15	0	1	3	0	0	4	6	34
08:15	0	1	1	25	2	0	1	0	1	1	0	0	0	14	0	1	2	0	4	3	6	44
08:30	0	0	0	11	0	1	3	0	0	4	0	0	0	7	0	0	1	0	1	1	5	19
08:45	0	0	0	5	0	0	2	0	1	2	0	0	0	11	0	0	2	0	0	2	4	17
Total	0	1	1	53	2	1	8	0	9	9	0	0	0	47	0	2	8	0	5	10	21	114
16:00	0	0	0	3	0	0	3	0	0	3	0	0	0	13	0	0	3	1	0	4	7	16
16:15	0	0	0	2	0	0	2	0	0	2	0	0	0	4	0	0	1	0	3	1	3	9
16:30	0	0	1	4	1	0	1	0	2	1	0	0	0	2	0	1	2	0	1	3	5	9
16:45	0	0	0	9	0	0	0	0	1	0	0	0	0	7	0	1	0	0	2	1	1	19
Total	0	0	1	18	1	0	6	0	3	6	0	0	0	26	0	2	6	1	6	9	16	53
17:00	0	0	0	1	0	0	0	0	2	0	1	1	0	11	2	0	2	0	1	2	4	15
17:15	0	0	0	8	0	0	2	0	2	2	0	1	1	12	2	0	1	0	1	1	5	23
17:30	0	0	0	1	0	1	1	0	1	2	0	0	0	9	0	2	2	0	0	4	6	11
17:45	0	0	1	2	1	0	0	0	0	0	0	0	0	3	0	0	1	0	0	1	2	5
Total	0	0	1	12	1	1	3	0	5	4	1	2	1	35	4	2	6	0	2	8	17	54
Grand Total	0	1	7	112	8	3	20	0	20	23	1	3	1	129	5	8	25	2	17	35	71	278
Apprch %	0.0%	12.5%	87.5%			13.0%	87.0%	0.0%			20.0%	60.0%	20.0%			22.9%	71.4%	5.7%				
Total %	0.0%	1.4%	9.9%		11.3%	4.2%	28.2%	0.0%		32.4%	1.4%	4.2%	1.4%		7.0%	11.3%	35.2%	2.8%		49.3%	100.0%	

AM PEAK HOUR	42nd Avenue Southbound					Foothill Boulevard Westbound					42nd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	2		2	0	1	0		1	0	1	0		1	1	1	0		2	6
08:00	0	0	0		0	0	2	0		2	0	0	0		0	1	3	0		4	6
08:15	0	1	1		2	0	1	0		1	0	0	0		0	1	2	0		3	6
08:30	0	0	0		0	1	3	0		4	0	0	0		0	0	1	0		1	5
Total Volume	0	1	3		4	1	7	0		8	0	1	0		1	3	7	0		10	23
% App Total	0.0%	25.0%	75.0%			12.5%	87.5%	0.0%			0.0%	100.0%	0.0%			30.0%	70.0%	0.0%			
PHF	.000	.250	.375		.500	.250	.583	.000		.500	.000	.250	.000		.250	.750	.583	.000		.625	.958

PM PEAK HOUR	42nd Avenue Southbound					Foothill Boulevard Westbound					42nd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	0	0	0		0	0	0	0		0	1	0	0		1	1
17:00	0	0	0		0	0	0	0		0	1	1	0		2	0	2	0		2	4
17:15	0	0	0		0	0	2	0		2	0	1	1		2	0	1	0		1	5
17:30	0	0	0		0	1	1	0		2	0	0	0		0	2	2	0		4	6
Total Volume	0	0	0		0	1	3	0		4	1	2	1		4	3	5	0		8	16
% App Total	0.0%	0.0%	0.0%			25.0%	75.0%	0.0%			25.0%	50.0%	25.0%			37.5%	62.5%	0.0%			
PHF	.000	.000	.000		.000	.250	.375	.000		.500	.250	.500	.250		.500	.375	.625	.000		.500	.667

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-055 42nd Avenue-Foothill Boulevard.ppd
Date : 6/4/2013

Bank 2 Count = Heavy Trucks

	42nd Avenue Southbound					Foothill Boulevard Westbound					42nd Avenue Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2	0
07:15	0	0	1	0	1	0	0	0	0	0	1	1	0	0	2	0	2	2	0	4	7	0
07:30	0	0	1	0	1	0	3	0	0	3	3	0	0	0	3	0	0	0	0	0	7	0
07:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	2	0	2	0	4	0	0	4	4	2	1	0	7	0	2	2	0	4	17	0
08:00	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	2	0	2	5	0
08:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	1	0	0	0	1	3	0
08:30	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	3	0
08:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0
Total	0	1	0	0	1	0	0	1	0	1	2	3	1	0	6	1	0	4	0	5	13	0
16:00	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	2	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	2	0
16:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	3	0
Total	0	1	0	0	1	1	0	0	0	1	1	2	0	0	3	0	2	0	0	2	7	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	1	0	3	4	0
Grand Total	0	2	2	0	4	2	4	1	0	7	7	7	2	0	16	1	6	7	0	14	41	0
Apprch %	0.0%	50.0%	50.0%			28.6%	57.1%	14.3%			43.8%	43.8%	12.5%			7.1%	42.9%	50.0%				
Total %	0.0%	4.9%	4.9%		9.8%	4.9%	9.8%	2.4%		17.1%	17.1%	17.1%	4.9%		39.0%	2.4%	14.6%	17.1%		34.1%	100.0%	

AM PEAK HOUR	42nd Avenue Southbound					Foothill Boulevard Westbound					42nd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
08:00	0	0	0		0	0	0	0		0	0	2	1		3	0	0	2		2	5
08:15	0	0	0		0	0	0	0		0	2	0	0		2	1	0	0		1	3
08:30	0	0	0		0	0	0	1		1	0	1	0		1	0	0	1		1	3
Total Volume	0	0	0		0	0	1	1		2	2	3	1		6	1	0	3		4	12
% App Total	0.0%	0.0%	0.0%			0.0%	50.0%	50.0%			33.3%	50.0%	16.7%			25.0%	0.0%	75.0%			
PHF	.000	.000	.000		.000	.000	.250	.250		.500	.250	.375	.250		.500	.250	.000	.375		.500	.600

PM PEAK HOUR	42nd Avenue Southbound					Foothill Boulevard Westbound					42nd Avenue Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	1	0		1	0	0	0		0	0	1	0		1	0	1	0		1	3
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	1		1	1
Total Volume	0	1	0		1	1	0	0		1	0	1	0		1	0	1	1		2	5
% App Total	0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	50.0%	50.0%			
PHF	.000	.250	.000		.250	.250	.000	.000		.250	.000	.250	.000		.250	.000	.250	.250		.500	.417

All Traffic Data

(916) 771-8700
orders@atdtraffic.com

City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-087 Seminary Avenue-Walnut Street-Foothill Boulevard
Site Code : 00000000
Start Date : 6/4/2012
Page No : 1

Groups Printed- Unshifted

	Seminary Avenue Southbound					Foothill Boulevard Westbound					Seminary Avenue Northbound					Foothill Boulevard Eastbound					Walnut Street Southeastbound					
Start Time	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Int. Total
07:00	0	39	2	0	41	1	16	0	4	21	1	0	62	1	64	0	6	14	3	23	0	1	0	1	2	151
07:15	0	41	6	0	47	1	15	0	2	18	4	1	81	3	89	0	5	20	3	28	0	0	0	0	0	182
07:30	0	48	6	1	55	2	21	0	2	25	5	0	91	5	101	0	3	19	2	24	2	0	1	2	5	210
07:45	4	64	8	1	77	3	46	0	3	52	3	0	78	3	84	0	12	30	5	47	1	0	1	1	3	263
Total	4	192	22	2	220	7	98	0	11	116	13	1	312	12	338	0	26	83	13	122	3	1	2	4	10	806
08:00	5	69	4	0	78	5	48	1	5	59	8	1	86	5	100	0	6	41	7	54	1	1	0	0	2	293
08:15	6	82	7	3	98	3	48	3	7	61	4	0	66	4	74	0	5	48	3	56	1	0	1	0	2	291
08:30	8	67	6	0	81	3	36	3	10	52	6	0	61	8	75	0	8	42	6	56	2	0	2	0	4	268
08:45	2	68	3	0	73	7	33	0	6	46	8	2	69	3	82	0	7	37	7	51	0	1	2	0	3	255
Total	21	286	20	3	330	18	165	7	28	218	26	3	282	20	331	0	26	168	23	217	4	2	5	0	11	1107
16:00	6	72	12	0	90	3	43	1	7	54	5	4	84	9	102	1	10	45	3	59	1	2	0	1	4	309
16:15	1	84	6	3	94	1	32	3	8	44	9	2	74	2	87	0	11	54	8	73	1	2	0	0	3	301
16:30	3	90	17	2	112	1	51	1	9	62	14	2	89	6	111	0	8	57	9	74	2	0	0	3	5	364
16:45	6	68	11	2	87	5	43	0	8	56	5	2	74	10	91	0	10	52	10	72	1	1	2	0	4	310
Total	16	314	46	7	383	10	169	5	32	216	33	10	321	27	391	1	39	208	30	278	5	5	2	4	16	1284
17:00	2	73	4	0	79	5	41	1	15	62	9	0	67	12	88	0	12	53	6	71	5	0	1	1	7	307
17:15	7	84	6	1	98	2	39	0	1	42	11	5	81	9	106	0	10	51	7	68	0	2	0	0	2	316
17:30	5	73	12	3	93	0	28	2	6	36	9	1	68	2	80	0	13	56	12	81	4	3	2	1	10	300
17:45	9	72	13	3	97	2	45	4	3	54	4	3	66	5	78	0	8	62	8	78	2	1	0	1	4	311
Total	23	302	35	7	367	9	153	7	25	194	33	9	282	28	352	0	43	222	33	298	11	6	3	3	23	1234
Grand Total	64	1094	123	19	1300	44	585	19	96	744	105	23	1197	87	1412	1	134	681	99	915	23	14	12	11	60	4431
Apprch %	4.9	84.2	9.5	1.5		5.9	78.6	2.6	12.9		7.4	1.6	84.8	6.2		0.1	14.6	74.4	10.8		38.3	23.3	20	18.3		
Total %	1.4	24.7	2.8	0.4	29.3	1	13.2	0.4	2.2	16.8	2.4	0.5	27	2	31.9	0	3	15.4	2.2	20.6	0.5	0.3	0.3	0.2	1.4	

All Traffic Data

(916) 771-8700
orders@atdtraffic.com

City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-087 Seminary Avenue-Walnut Street-Foothill Boulevard
Site Code : 00000000
Start Date : 6/4/2012

	Seminary Avenue Southbound					Foothill Boulevard Westbound					Seminary Avenue Northbound					Foothill Boulevard Eastbound					Walnut Street Southeastbound					
Start Time	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:45																										
07:45	4	64	**8**	1	77	3	46	0	3	52	3	0	78	3	84	0	**12**	30	5	47	1	0	1	**1**	3	263
08:00	5	69	4	0	78	**5**	**48**	1	5	59	**8**	**1**	**86**	5	**100**	0	6	41	**7**	54	1	**1**	0	0	2	**293**
08:15	6	**82**	7	**3**	**98**	3	48	**3**	7	**61**	4	0	66	4	74	0	5	**48**	3	**56**	1	0	1	0	2	291
08:30	**8**	67	6	0	81	3	36	3	**10**	52	6	0	61	**8**	75	0	8	42	6	56	**2**	0	**2**	0	**4**	268
Total Volume	23	282	25	4	334	14	178	7	25	224	21	1	291	20	333	0	31	161	21	213	5	1	4	1	11	1115
% App. Total	6.9	84.4	7.5	1.2		6.2	79.5	3.1	11.2		6.3	0.3	87.4	6		0	14.6	75.6	9.9		45.5	9.1	36.4	9.1		
PHF	.719	.860	.781	.333	.852	.700	.927	.583	.625	.918	.656	.250	.846	.625	.833	.000	.646	.839	.750	.951	.625	.250	.500	.250	.688	.951

All Traffic Data

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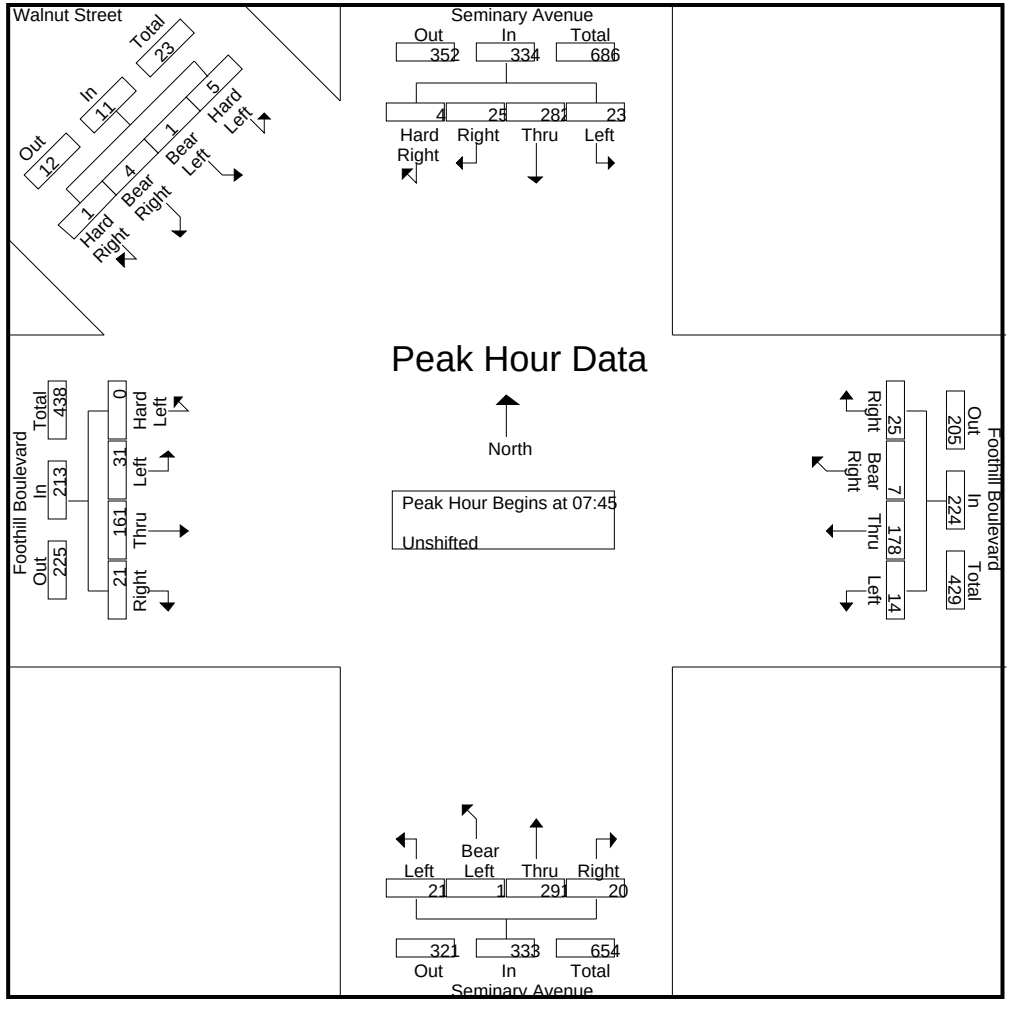
City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-087 Seminary Avenue-Walnut Street-Foothill Boulevard
Site Code : 00000000
Start Date : 6/4/2012
Page No : 3



All Traffic Data

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City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-087 Seminary Avenue-Walnut Street-Foothill Boulevard
Site Code : 00000000
Start Date : 6/4/2012

	Seminary Avenue Southbound					Foothill Boulevard Westbound					Seminary Avenue Northbound					Foothill Boulevard Eastbound					Walnut Street Southeastbound					
Start Time	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 16:30																										
16:30	3	**90**	**17**	**2**	**112**	1	**51**	**1**	9	**62**	**14**	2	**89**	6	**111**	0	8	**57**	9	**74**	2	0	0	**3**	5	**364**
16:45	6	68	11	2	87	**5**	43	0	8	56	5	2	74	10	91	0	10	52	**10**	72	1	1	**2**	0	4	310
17:00	2	73	4	0	79	5	41	1	**15**	62	9	0	67	**12**	88	0	**12**	53	6	71	**5**	0	1	1	**7**	307
17:15	**7**	84	6	1	98	2	39	0	1	42	11	**5**	81	9	106	0	10	51	7	68	0	**2**	0	0	2	316
Total Volume	18	315	38	5	376	13	174	2	33	222	39	9	311	37	396	0	40	213	32	285	8	3	3	4	18	1297
% App. Total	4.8	83.8	10.1	1.3		5.9	78.4	0.9	14.9		9.8	2.3	78.5	9.3		0	14	74.7	11.2		44.4	16.7	16.7	22.2		
PHF	.643	.875	.559	.625	.839	.650	.853	.500	.550	.895	.696	.450	.874	.771	.892	.000	.833	.934	.800	.963	.400	.375	.375	.333	.643	.891

All Traffic Data

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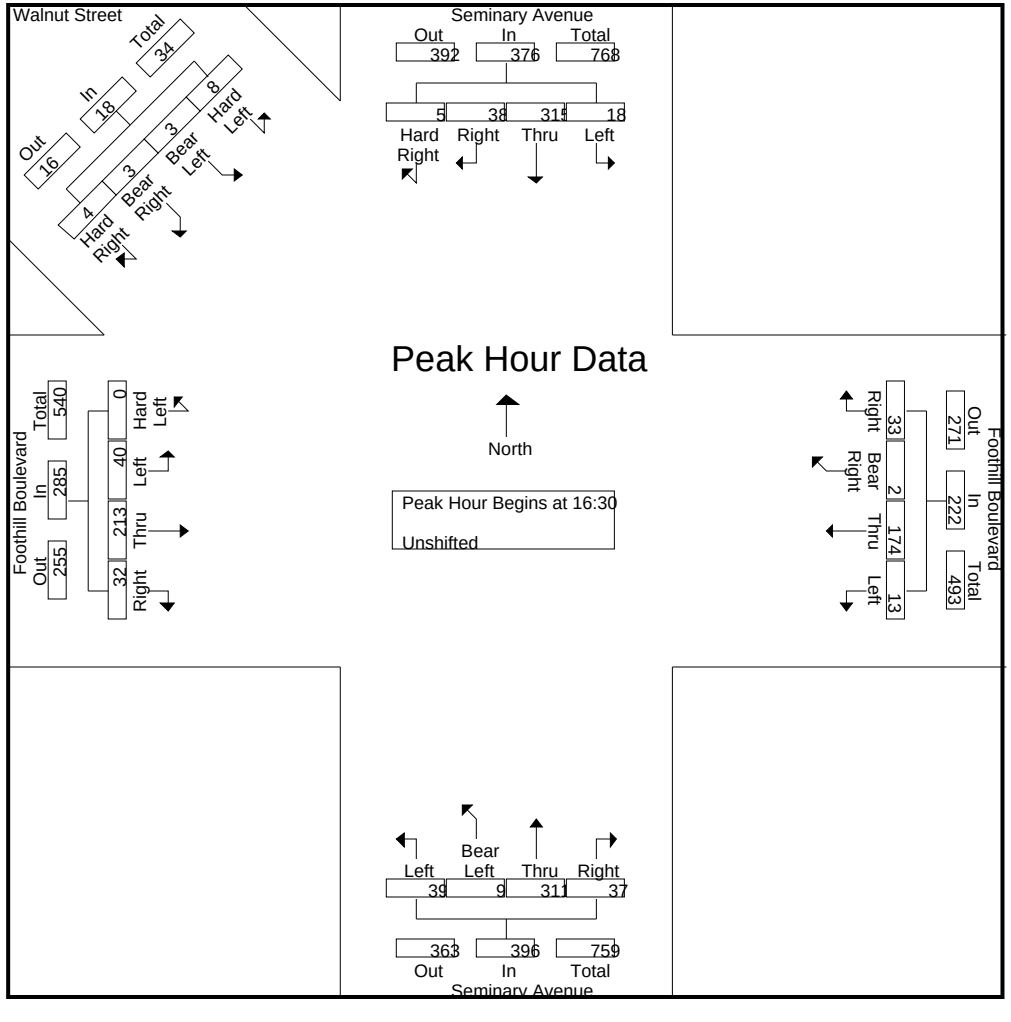
City of Oakland
All Vehicles On Unshifted Tab
Peds & Bikes On Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-087 Seminary Avenue-Walnut Street-Foothill Boulevard
Site Code : 00000000
Start Date : 6/4/2012
Page No : 5



ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-058 Havenscourt Boulevard-Foothill Boulevard.ppt
Date : 6/4/2013

Unshifted Count = All Vehicles

	Havenscourt Boulevard Southbound					Foothill Boulevard Westbound					Havenscourt Boulevard Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	6	11	3	0	20	1	16	3	0	20	3	29	3	0	35	2	16	2	0	20	95	0
07:15	2	26	1	0	29	5	16	7	0	28	1	31	2	0	34	0	22	4	0	26	117	0
07:30	13	42	1	0	56	5	35	22	0	62	8	62	3	0	73	1	36	8	0	45	236	0
07:45	22	56	6	0	84	9	29	33	0	71	8	69	1	0	78	0	32	6	0	38	271	0
Total	43	135	11	0	189	20	96	65	0	181	20	191	9	0	220	3	106	20	0	129	719	0
08:00	20	73	3	0	96	7	61	34	0	102	9	88	1	0	98	3	39	13	0	55	351	0
08:15	31	61	3	0	95	8	51	27	0	86	5	72	4	0	81	2	51	16	0	69	331	0
08:30	23	66	5	0	94	7	54	20	0	81	4	44	4	0	52	2	44	8	0	54	281	0
08:45	29	61	3	0	93	7	44	19	0	70	7	39	4	0	50	5	32	8	0	45	258	0
Total	103	261	14	0	378	29	210	100	0	339	25	243	13	0	281	12	166	45	0	223	1221	0
16:00	17	70	2	0	89	7	43	18	0	68	7	42	5	0	54	2	70	13	0	85	296	0
16:15	25	68	3	0	96	5	55	23	0	83	7	52	5	0	64	4	59	16	0	79	322	0
16:30	25	73	3	0	101	6	43	30	0	79	7	51	6	0	64	2	42	23	0	67	311	0
16:45	37	83	2	0	122	12	52	29	0	93	13	50	2	0	65	5	54	23	0	82	362	0
Total	104	294	10	0	408	30	193	100	0	323	34	195	18	0	247	13	225	75	0	313	1291	0
17:00	25	86	0	0	111	11	56	33	0	100	7	57	7	0	71	3	53	22	0	78	360	0
17:15	27	67	5	0	99	5	50	30	0	85	7	38	6	0	51	3	67	12	0	82	317	0
17:30	32	87	3	0	122	7	38	27	0	72	6	42	10	0	58	4	61	12	0	77	329	0
17:45	27	79	0	0	106	8	42	26	0	76	12	46	4	0	62	8	52	18	0	78	322	0
Total	111	319	8	0	438	31	186	116	0	333	32	183	27	0	242	18	233	64	0	315	1328	0
Grand Total	361	1009	43	0	1413	110	685	381	0	1176	111	812	67	0	990	46	730	204	0	980	4559	0
Apprch %	25.5%	71.4%	3.0%	0.0%		9.4%	58.2%	32.4%	0.0%		11.2%	82.0%	6.8%	0.0%		4.7%	74.5%	20.8%	0.0%			
Total %	7.9%	22.1%	0.9%	0.0%	31.0%	2.4%	15.0%	8.4%	0.0%	25.8%	2.4%	17.8%	1.5%	0.0%	21.7%	1.0%	16.0%	4.5%	0.0%	21.5%	100.0%	

AM PEAK HOUR	Havenscourt Boulevard Southbound					Foothill Boulevard Westbound					Havenscourt Boulevard Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	22	56	6	0	84	9	29	33	0	71	8	69	1	0	78	0	32	6	0	38	271
08:00	20	73	3	0	96	7	61	34	0	102	9	88	1	0	98	3	39	13	0	55	351
08:15	31	61	3	0	95	8	51	27	0	86	5	72	4	0	81	2	51	16	0	69	331
08:30	23	66	5	0	94	7	54	20	0	81	4	44	4	0	52	2	44	8	0	54	281
Total Volume	96	256	17	0	369	31	195	114	0	340	26	273	10	0	309	7	166	43	0	216	1234
% App Total	26.0%	69.4%	4.6%	0.0%		9.1%	57.4%	33.5%	0.0%		8.4%	88.3%	3.2%	0.0%		3.2%	76.9%	19.9%	0.0%		
PHF	.774	.877	.708	.000	.961	.861	.799	.838	.000	.833	.722	.776	.625	.000	.788	.583	.814	.672	.000	.783	.879

PM PEAK HOUR	Havenscourt Boulevard Southbound					Foothill Boulevard Westbound					Havenscourt Boulevard Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	37	83	2	0	122	12	52	29	0	93	13	50	2	0	65	5	54	23	0	82	362
17:00	25	86	0	0	111	11	56	33	0	100	7	57	7	0	71	3	53	22	0	78	360
17:15	27	67	5	0	99	5	50	30	0	85	7	38	6	0	51	3	67	12	0	82	317
17:30	32	87	3	0	122	7	38	27	0	72	6	42	10	0	58	4	61	12	0	77	329
Total Volume	121	323	10	0	454	35	196	119	0	350	33	187	25	0	245	15	235	69	0	319	1368
% App Total	26.7%	71.1%	2.2%	0.0%		10.0%	56.0%	34.0%	0.0%		13.5%	76.3%	10.2%	0.0%		4.7%	73.7%	21.6%	0.0%		
PHF	.818	.928	.500	.000	.930	.729	.875	.902	.000	.875	.635	.820	.625	.000	.863	.750	.877	.750	.000	.973	.945

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-058 Havenscourt Boulevard-Foothill Boulevard.ppt
Date : 6/4/2013

Bank 1 Count = Peds & Bikes

	Havenscourt Boulevard Southbound					Foothill Boulevard Westbound					Havenscourt Boulevard Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	1	0	0	0	0	5	0	0	0	0	3	0	0	0	0	3	0	0	12
07:15	0	1	0	4	1	0	0	0	1	0	0	0	0	2	0	0	0	0	2	0	1	9
07:30	0	1	0	2	1	0	0	0	3	0	0	0	0	6	0	0	0	0	2	0	1	13
07:45	0	0	0	14	0	0	0	0	4	0	0	1	0	3	1	0	0	0	4	0	1	25
Total	0	2	0	21	2	0	0	0	13	0	0	1	0	14	1	0	0	0	11	0	3	59
08:00	0	0	0	19	0	0	1	0	10	1	0	0	0	4	0	0	1	0	8	1	2	41
08:15	1	0	0	2	1	0	1	0	1	1	0	0	0	16	0	0	0	0	8	0	2	27
08:30	0	0	0	2	0	0	0	0	3	0	0	0	0	5	0	0	0	0	6	0	0	16
08:45	0	0	0	5	0	0	0	0	4	0	0	0	0	2	0	0	0	1	1	1	1	12
Total	1	0	0	28	1	0	2	0	18	2	0	0	0	27	0	0	1	1	23	2	5	96
16:00	0	0	0	0	0	0	0	0	5	0	0	1	0	7	1	0	0	0	2	0	1	14
16:15	0	1	0	1	1	0	0	0	3	0	0	0	0	13	0	0	0	0	5	0	1	22
16:30	0	0	0	0	0	0	0	0	1	0	1	0	0	7	1	0	0	0	2	0	1	10
16:45	0	0	0	4	0	0	0	0	1	0	0	0	0	4	0	0	0	0	7	0	0	16
Total	0	1	0	5	1	0	0	0	10	0	1	1	0	31	2	0	0	0	16	0	3	62
17:00	2	0	0	1	2	0	0	0	5	0	2	0	0	2	2	0	1	0	11	1	5	19
17:15	0	0	0	1	0	0	0	0	0	0	0	0	0	5	0	0	1	1	1	2	2	7
17:30	0	0	0	1	0	0	0	0	4	0	0	0	0	7	0	0	0	0	1	0	0	13
17:45	0	0	0	0	0	0	0	0	4	0	1	0	0	2	1	0	0	0	2	0	1	8
Total	2	0	0	3	2	0	0	0	13	0	3	0	0	16	3	0	2	1	15	3	8	47
Grand Total	3	3	0	57	6	0	2	0	54	2	4	2	0	88	6	0	3	2	65	5	19	264
Apprch %	50.0%	50.0%	0.0%			0.0%	100.0%	0.0%			66.7%	33.3%	0.0%			0.0%	60.0%	40.0%				
Total %	15.8%	15.8%	0.0%		31.6%	0.0%	10.5%	0.0%		10.5%	21.1%	10.5%	0.0%		31.6%	0.0%	15.8%	10.5%		26.3%	100.0%	

AM PEAK HOUR	Havenscourt Boulevard Southbound					Foothill Boulevard Westbound					Havenscourt Boulevard Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:00	0	0	0		0	0	1	0		1	0	0	0		0	0	1	0		1	2
08:15	1	0	0		1	0	1	0		1	0	0	0		0	0	0	0		0	2
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	1	0	0		1	0	2	0		2	0	1	0		1	0	1	0		1	5
% App Total	100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.000	.000		.250	.000	.500	.000		.500	.000	.250	.000		.250	.000	.250	.000		.250	.625

PM PEAK HOUR	Havenscourt Boulevard Southbound					Foothill Boulevard Westbound					Havenscourt Boulevard Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:00	2	0	0		2	0	0	0		0	2	0	0		2	0	1	0		1	5
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	1	1		2	2
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	2	0	0		2	0	0	0		0	2	0	0		2	0	2	1		3	7
% App Total	100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	66.7%	33.3%			
PHF	.250	.000	.000		.250	.000	.000	.000		.000	.250	.000	.000		.250	.000	.500	.250		.375	.350

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-058 Havenscourt Boulevard-Foothill Boulevard.ppt
Date : 6/4/2013

Bank 2 Count = Heavy Trucks

	Havenscourt Boulevard Southbound					Foothill Boulevard Westbound					Havenscourt Boulevard Northbound					Foothill Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	2	0	2	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	4	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
07:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	0	2	0	2	0	0	0	0	0	0	1	2	0	3	0	1	2	0	3	8	0
08:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	3	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	6	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
16:30	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0
16:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	2	0	0	2	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	4	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Grand Total	0	5	2	0	7	1	0	1	0	2	0	1	2	0	3	2	4	2	0	8	20	0
Apprch %	0.0%	71.4%	28.6%			50.0%	0.0%	50.0%			0.0%	33.3%	66.7%			25.0%	50.0%	25.0%				
Total %	0.0%	25.0%	10.0%		35.0%	5.0%	0.0%	5.0%		10.0%	0.0%	5.0%	10.0%		15.0%	10.0%	20.0%	10.0%		40.0%	100.0%	

AM PEAK HOUR	Havenscourt Boulevard Southbound					Foothill Boulevard Westbound					Havenscourt Boulevard Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:00	0	1	0		1	0	0	0		0	0	0	0		0	1	1	0		2	3
08:15	0	0	0		0	0	0	0		0	0	0	0		0	1	1	0		2	2
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	1	0		1	0	0	0		0	0	1	0		1	2	2	0		4	6
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			50.0%	50.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.250	.000		.250	.500	.500	.000		.500	.500

PM PEAK HOUR	Havenscourt Boulevard Southbound					Foothill Boulevard Westbound					Havenscourt Boulevard Northbound					Foothill Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	2	0		2	0	0	0		0	0	0	0		0	0	0	0		0	2
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	3	0		3	0	0	0		0	0	0	0		0	0	0	0		0	3
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.375	.000		.375	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.375

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-059 42nd Avenue-Bond Street.ppd
Date : 6/4/2013

Unshifted Count = All Vehicles

	42nd Avenue Southbound					Bond Street Westbound					42nd Avenue Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	78	0	0	78	11	0	3	0	14	0	23	0	0	23	0	0	0	0	0	115	0
07:15	0	89	0	0	89	11	0	13	0	24	0	26	0	0	26	0	0	0	0	0	139	0
07:30	0	103	0	0	103	18	0	21	0	39	0	43	0	0	43	0	0	0	0	0	185	0
07:45	0	135	0	0	135	20	0	57	0	77	0	39	0	0	39	0	0	0	0	0	251	0
Total	0	405	0	0	405	60	0	94	0	154	0	131	0	0	131	0	0	0	0	0	690	0
08:00	0	146	0	0	146	45	0	30	0	75	0	49	0	0	49	0	0	0	0	0	270	0
08:15	0	116	0	0	116	61	0	23	0	84	0	37	0	0	37	0	0	0	0	0	237	0
08:30	0	121	0	0	121	26	0	24	0	50	0	42	0	0	42	0	0	0	0	0	213	0
08:45	0	113	0	0	113	16	0	14	0	30	0	26	0	0	26	0	0	0	0	0	169	0
Total	0	496	0	0	496	148	0	91	0	239	0	154	0	0	154	0	0	0	0	0	889	0
16:00	0	84	0	0	84	29	0	23	0	52	0	82	0	0	82	0	0	0	0	0	218	0
16:15	0	81	0	0	81	20	0	13	0	33	0	78	0	0	78	0	0	0	0	0	192	0
16:30	0	100	0	0	100	18	0	17	0	35	0	63	0	0	63	0	0	0	0	0	198	0
16:45	0	108	0	0	108	21	0	28	0	49	0	86	0	0	86	0	0	0	0	0	243	0
Total	0	373	0	0	373	88	0	81	0	169	0	309	0	0	309	0	0	0	0	0	851	0
17:00	0	101	0	0	101	24	0	29	0	53	0	81	0	0	81	0	0	0	0	0	235	0
17:15	0	100	0	0	100	28	0	35	0	63	0	96	0	0	96	0	0	0	0	0	259	0
17:30	0	98	0	0	98	22	0	18	0	40	0	84	0	0	84	0	0	0	0	0	222	0
17:45	0	101	0	0	101	15	0	28	0	43	0	86	0	0	86	0	0	0	0	0	230	0
Total	0	400	0	0	400	89	0	110	0	199	0	347	0	0	347	0	0	0	0	0	946	0
Grand Total	0	1674	0	0	1674	385	0	376	0	761	0	941	0	0	941	0	0	0	0	0	3376	0
Apprch %	0.0%	100.0%	0.0%	0.0%		50.6%	0.0%	49.4%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	49.6%	0.0%	0.0%	49.6%	11.4%	0.0%	11.1%	0.0%	22.5%	0.0%	27.9%	0.0%	0.0%	27.9%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	42nd Avenue Southbound					Bond Street Westbound					42nd Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	135	0	0	135	20	0	57	0	77	0	39	0	0	39	0	0	0	0	0	251
08:00	0	146	0	0	146	45	0	30	0	75	0	49	0	0	49	0	0	0	0	0	270
08:15	0	116	0	0	116	61	0	23	0	84	0	37	0	0	37	0	0	0	0	0	237
08:30	0	121	0	0	121	26	0	24	0	50	0	42	0	0	42	0	0	0	0	0	213
Total Volume	0	518	0	0	518	152	0	134	0	286	0	167	0	0	167	0	0	0	0	0	971
% App Total	0.0%	100.0%	0.0%	0.0%		53.1%	0.0%	46.9%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.887	.000	.000	.887	.623	.000	.588	.000	.851	.000	.852	.000	.000	.852	.000	.000	.000	.000	.000	.899

PM PEAK HOUR	42nd Avenue Southbound					Bond Street Westbound					42nd Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	108	0	0	108	21	0	28	0	49	0	86	0	0	86	0	0	0	0	0	243
17:00	0	101	0	0	101	24	0	29	0	53	0	81	0	0	81	0	0	0	0	0	235
17:15	0	100	0	0	100	28	0	35	0	63	0	96	0	0	96	0	0	0	0	0	259
17:30	0	98	0	0	98	22	0	18	0	40	0	84	0	0	84	0	0	0	0	0	222
Total Volume	0	407	0	0	407	95	0	110	0	205	0	347	0	0	347	0	0	0	0	0	959
% App Total	0.0%	100.0%	0.0%	0.0%		46.3%	0.0%	53.7%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.942	.000	.000	.942	.848	.000	.786	.000	.813	.000	.904	.000	.000	.904	.000	.000	.000	.000	.000	.926

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-059 42nd Avenue-Bond Street.ppd
Date : 6/4/2013

Bank 1 Count = Peds & Bikes

	42nd Avenue Southbound					Bond Street Westbound					42nd Avenue Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	2	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3	1
16:00	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	2	1
16:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	1	0	0	1	1	0	0	1	1	0	2	0	0	2	0	0	0	0	0	4	1
17:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0
17:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	0
Grand Total	0	4	0	0	4	3	0	0	2	3	0	5	0	0	5	0	0	0	0	0	12	2
Apprch %	0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	33.3%	0.0%		33.3%	25.0%	0.0%	0.0%		25.0%	0.0%	41.7%	0.0%		41.7%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	42nd Avenue Southbound					Bond Street Westbound					42nd Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:30	0	1	0		1	2	0	0		2	0	0	0		0	0	0	0		0	3
Total Volume	0	1	0		1	2	0	0		2	0	1	0		1	0	0	0		0	4
% App Total	0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.250	.000	.000		.250	.000	.250	.000		.250	.000	.000	.000		.000	.333

PM PEAK HOUR	42nd Avenue Southbound					Bond Street Westbound					42nd Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
17:00	0	0	0		0	0	0	0		0	0	2	0		2	0	0	0		0	2
17:15	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	1	0		1	1	0	0		1	0	2	0		2	0	0	0		0	4
% App Total	0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.250	.000	.000		.250	.000	.250	.000		.250	.000	.000	.000		.000	.500

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-059 42nd Avenue-Bond Street.ppd
Date : 6/4/2013

Bank 2 Count = Heavy Trucks

	42nd Avenue Southbound					Bond Street Westbound					42nd Avenue Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	3	0
07:15	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	4	0
07:30	0	0	0	0	0	2	0	1	0	3	0	2	0	0	2	0	0	0	0	0	5	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	2	0	3	0	5	0	5	0	0	5	0	0	0	0	0	12	0
08:00	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
08:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	9	0
16:00	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4	0
17:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
17:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	4	0
Grand Total	0	11	0	0	11	3	0	3	0	6	0	12	0	0	12	0	0	0	0	0	29	0
Apprch %	0.0%	100.0%	0.0%			50.0%	0.0%	50.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	37.9%	0.0%		37.9%	10.3%	0.0%	10.3%		20.7%	0.0%	41.4%	0.0%		41.4%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	42nd Avenue Southbound				Bond Street Westbound				42nd Avenue Northbound				Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																	
Peak Hour For Entire Intersection Begins at 07:45																	
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
% App Total	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.333	.000	.333	.000	.000	.000	.000	.350

PM PEAK HOUR	42nd Avenue Southbound				Bond Street Westbound				42nd Avenue Northbound				Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																	
Peak Hour For Entire Intersection Begins at 16:45																	
16:45	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
17:00	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
17:15	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:30	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	3	0	3	1	0	0	1	0	1	0	1	0	0	0	0	5
% App Total	0.0%	100.0%	0.0%		100.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.750	.000	.750	.250	.000	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.625

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-060 High Street-Bond Street.ppd
Date : 6/4/2013

Unshifted Count = All Vehicles

	High Street Southbound					Bond Street Westbound					High Street Northbound					Bond Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	106	1	0	107	16	10	6	0	32	3	52	0	0	55	0	0	0	0	0	194	0
07:15	0	102	0	0	102	11	20	15	0	46	2	70	0	0	72	0	0	0	0	0	220	0
07:30	0	120	2	0	122	25	32	10	0	67	4	86	0	0	90	0	0	0	0	0	279	0
07:45	0	118	3	0	121	19	65	20	0	104	15	85	0	0	100	0	0	0	0	0	325	0
Total	0	446	6	0	452	71	127	51	0	249	24	293	0	0	317	0	0	0	0	0	1018	0
08:00	0	139	3	0	142	22	66	12	0	100	5	77	0	0	82	0	0	0	0	0	324	0
08:15	0	121	2	0	123	21	74	14	0	109	4	81	0	0	85	0	0	0	0	0	317	0
08:30	0	156	0	0	156	20	53	7	0	80	1	114	0	0	115	0	0	0	0	0	351	0
08:45	0	135	0	0	135	16	24	13	0	53	1	102	0	0	103	0	0	0	0	0	291	0
Total	0	551	5	0	556	79	217	46	0	342	11	374	0	0	385	0	0	0	0	0	1283	0
16:00	0	121	3	0	124	20	37	21	0	78	7	153	0	0	160	0	0	0	0	0	362	0
16:15	0	100	2	0	102	20	27	20	0	67	5	148	0	0	153	0	0	0	0	0	322	0
16:30	0	111	1	0	112	8	30	20	0	58	3	127	0	0	130	0	0	0	0	0	300	0
16:45	0	103	3	0	106	21	40	26	0	87	7	150	0	0	157	0	0	0	0	0	350	0
Total	0	435	9	0	444	69	134	87	0	290	22	578	0	0	600	0	0	0	0	0	1334	0
17:00	0	110	3	0	113	23	39	21	0	83	12	131	0	0	143	0	0	0	0	0	339	0
17:15	0	130	5	0	135	14	47	11	0	72	9	161	0	0	170	0	0	0	0	0	377	0
17:30	0	125	2	0	127	15	28	18	0	61	10	158	0	0	168	0	0	0	0	0	356	0
17:45	0	103	1	0	104	25	38	18	0	81	9	148	0	0	157	0	0	0	0	0	342	0
Total	0	468	11	0	479	77	152	68	0	297	40	598	0	0	638	0	0	0	0	0	1414	0
Grand Total	0	1900	31	0	1931	296	630	252	0	1178	97	1843	0	0	1940	0	0	0	0	0	5049	0
Apprch %	0.0%	98.4%	1.6%	0.0%		25.1%	53.5%	21.4%	0.0%		5.0%	95.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	37.6%	0.6%	0.0%	38.2%	5.9%	12.5%	5.0%	0.0%	23.3%	1.9%	36.5%	0.0%	0.0%	38.4%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	High Street Southbound					Bond Street Westbound					High Street Northbound					Bond Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	118	3	0	121	19	65	20	0	104	15	85	0	0	100	0	0	0	0	0	325
08:00	0	139	3	0	142	22	66	12	0	100	5	77	0	0	82	0	0	0	0	0	324
08:15	0	121	2	0	123	21	74	14	0	109	4	81	0	0	85	0	0	0	0	0	317
08:30	0	156	0	0	156	20	53	7	0	80	1	114	0	0	115	0	0	0	0	0	351
Total Volume	0	534	8	0	542	82	258	53	0	393	25	357	0	0	382	0	0	0	0	0	1317
% App Total	0.0%	98.5%	1.5%	0.0%		20.9%	65.6%	13.5%	0.0%		6.5%	93.5%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.856	.667	.000	.869	.932	.872	.663	.000	.901	.417	.783	.000	.000	.830	.000	.000	.000	.000	.000	.938

PM PEAK HOUR	High Street Southbound					Bond Street Westbound					High Street Northbound					Bond Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	103	3	0	106	21	40	26	0	87	7	150	0	0	157	0	0	0	0	0	350
17:00	0	110	3	0	113	23	39	21	0	83	12	131	0	0	143	0	0	0	0	0	339
17:15	0	130	5	0	135	14	47	11	0	72	9	161	0	0	170	0	0	0	0	0	377
17:30	0	125	2	0	127	15	28	18	0	61	10	158	0	0	168	0	0	0	0	0	356
Total Volume	0	468	13	0	481	73	154	76	0	303	38	600	0	0	638	0	0	0	0	0	1422
% App Total	0.0%	97.3%	2.7%	0.0%		24.1%	50.8%	25.1%	0.0%		6.0%	94.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.900	.650	.000	.891	.793	.819	.731	.000	.871	.792	.932	.000	.000	.938	.000	.000	.000	.000	.000	.943

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-060 High Street-Bond Street.ppd
Date : 6/4/2013

Bank 1 Count = Peds & Bikes

	High Street Southbound					Bond Street Westbound					High Street Northbound					Bond Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	2	0	1	2	0	0	0	10	0	0	1	0	1	1	0	0	0	6	0	3	18
07:15	0	1	0	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	4	0	1	9
07:30	0	1	0	5	1	0	0	0	10	0	0	1	0	0	1	0	0	0	7	0	2	22
07:45	0	1	0	0	1	0	0	0	12	0	0	0	0	0	0	0	0	0	11	0	1	23
Total	0	5	0	6	5	0	0	0	37	0	0	2	0	1	2	0	0	0	28	0	7	72
08:00	0	1	0	8	1	0	0	0	16	0	0	0	0	2	0	0	0	0	11	0	1	37
08:15	0	2	0	4	2	0	2	0	6	2	0	1	0	1	1	0	0	0	9	0	5	20
08:30	0	3	0	3	3	0	0	0	10	0	0	1	0	4	1	0	0	0	5	0	4	22
08:45	0	2	0	0	2	0	0	0	6	0	0	1	0	6	1	0	0	0	16	0	3	28
Total	0	8	0	15	8	0	2	0	38	2	0	3	0	13	3	0	0	0	41	0	13	107
16:00	2	3	0	5	5	0	0	2	22	2	0	0	0	5	0	0	0	0	8	0	7	40
16:15	1	0	0	6	1	0	0	0	16	0	0	2	0	2	2	0	0	0	7	0	3	31
16:30	0	0	0	0	0	0	0	1	21	1	0	1	0	2	1	0	0	0	9	0	2	32
16:45	0	2	0	4	2	0	1	0	8	1	0	1	0	4	1	0	0	0	8	0	4	24
Total	3	5	0	15	8	0	1	3	67	4	0	4	0	13	4	0	0	0	32	0	16	127
17:00	0	1	0	11	1	0	0	0	17	0	0	0	0	4	0	0	0	0	10	0	1	42
17:15	0	0	0	4	0	0	0	1	21	1	0	1	1	5	2	0	0	0	8	0	3	38
17:30	1	3	0	3	4	0	0	0	15	0	0	1	0	2	1	0	0	0	5	0	5	25
17:45	0	1	0	1	1	0	0	0	16	0	0	0	0	0	0	0	0	0	7	0	1	24
Total	1	5	0	19	6	0	0	1	69	1	0	2	1	11	3	0	0	0	30	0	10	129
Grand Total	4	23	0	55	27	0	3	4	211	7	0	11	1	38	12	0	0	0	131	0	46	435
Apprch %	14.8%	85.2%	0.0%			0.0%	42.9%	57.1%			0.0%	91.7%	8.3%			0.0%	0.0%	0.0%				
Total %	8.7%	50.0%	0.0%		58.7%	0.0%	6.5%	8.7%		15.2%	0.0%	23.9%	2.2%		26.1%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	High Street Southbound					Bond Street Westbound					High Street Northbound					Bond Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
08:00	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
08:15	0	2	0		2	0	2	0		2	0	1	0		1	0	0	0		0	5
08:30	0	3	0		3	0	0	0		0	0	1	0		1	0	0	0		0	4
Total Volume	0	7	0		7	0	2	0		2	0	2	0		2	0	0	0		0	11
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.583	.000		.583	.000	.250	.000		.250	.000	.500	.000		.500	.000	.000	.000		.000	.550

PM PEAK HOUR	High Street Southbound					Bond Street Westbound					High Street Northbound					Bond Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	2	0		2	0	1	0		1	0	1	0		1	0	0	0		0	4
17:00	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:15	0	0	0		0	0	0	1		1	0	1	1		2	0	0	0		0	3
17:30	1	3	0		4	0	0	0		0	0	1	0		1	0	0	0		0	5
Total Volume	1	6	0		7	0	1	1		2	0	3	1		4	0	0	0		0	13
% App Total	14.3%	85.7%	0.0%			0.0%	50.0%	50.0%			0.0%	75.0%	25.0%			0.0%	0.0%	0.0%			
PHF	.250	.500	.000		.438	.000	.250	.250		.500	.000	.750	.250		.500	.000	.000	.000		.000	.650

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-060 High Street-Bond Street.ppd
Date : 6/4/2013

Bank 2 Count = Heavy Trucks

	High Street Southbound					Bond Street Westbound					High Street Northbound					Bond Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:15	0	0	0	0	0	0	1	0	0	1	0	6	0	0	6	0	0	0	0	0	7	0
07:30	0	1	1	0	2	0	2	0	0	2	0	5	0	0	5	0	0	0	0	0	9	0
07:45	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	2	1	0	3	1	3	0	0	4	0	12	0	0	12	0	0	0	0	0	19	0
08:00	0	0	0	0	0	1	0	1	0	2	0	2	0	0	2	0	0	0	0	0	4	0
08:15	0	1	0	0	1	0	1	0	0	1	1	2	0	0	3	0	0	0	0	0	5	0
08:30	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5	0
08:45	0	2	0	0	2	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	6	0
Total	0	5	0	0	5	2	1	1	0	4	1	10	0	0	11	0	0	0	0	0	20	0
16:00	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2	0
16:15	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	3	0
16:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
16:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	4	0	0	4	0	1	1	0	2	0	3	0	0	3	0	0	0	0	0	9	0
17:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
17:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
17:30	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3	0
17:45	0	3	0	0	3	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	6	0
Total	0	6	0	0	6	1	1	1	0	3	0	3	0	0	3	0	0	0	0	0	12	0
Grand Total	0	17	1	0	18	4	6	3	0	13	1	28	0	0	29	0	0	0	0	0	60	0
Apprch %	0.0%	94.4%	5.6%			30.8%	46.2%	23.1%			3.4%	96.6%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	28.3%	1.7%		30.0%	6.7%	10.0%	5.0%		21.7%	1.7%	46.7%	0.0%		48.3%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	High Street Southbound					Bond Street Westbound					High Street Northbound					Bond Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	1	0	0		1	0	1	0		1	0	0	0		0	2
08:00	0	0	0		0	1	0	1		2	0	2	0		2	0	0	0		0	4
08:15	0	1	0		1	0	1	0		1	1	2	0		3	0	0	0		0	5
08:30	0	2	0		2	0	0	0		0	0	3	0		3	0	0	0		0	5
Total Volume	0	3	0		3	2	1	1		4	1	8	0		9	0	0	0		0	16
% App Total	0.0%	100.0%	0.0%			50.0%	25.0%	25.0%			11.1%	88.9%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.375	.000		.375	.500	.250	.250		.500	.250	.667	.000		.750	.000	.000	.000		.000	.800

PM PEAK HOUR	High Street Southbound					Bond Street Westbound					High Street Northbound					Bond Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	1	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
17:00	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
17:15	0	1	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
17:30	0	2	0		2	0	0	1		1	0	0	0		0	0	0	0		0	3
Total Volume	0	4	0		4	0	1	1		2	0	2	0		2	0	0	0		0	8
% App Total	0.0%	100.0%	0.0%			0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.500	.000		.500	.000	.250	.250		.500	.000	.500	.000		.500	.000	.000	.000		.000	.667

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-061 42nd Avenue-Bancroft Avenue.ppd
Date : 6/4/2013

Unshifted Count = All Vehicles

	42nd Avenue Southbound					Westbound					42nd Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	4	85	0	0	89	0	0	0	0	0	0	23	4	0	27	0	0	0	0	0	116	0
07:15	7	91	0	0	98	0	0	0	0	0	0	27	7	0	34	0	0	0	0	0	132	0
07:30	3	118	0	0	121	0	0	0	0	0	0	43	9	0	52	0	0	0	0	0	173	0
07:45	12	140	0	0	152	0	0	0	0	0	0	39	10	0	49	0	0	0	0	0	201	0
Total	26	434	0	0	460	0	0	0	0	0	0	132	30	0	162	0	0	0	0	0	622	0
08:00	22	168	0	0	190	0	0	0	0	0	0	48	12	0	60	0	0	0	0	0	250	0
08:15	4	169	0	0	173	0	0	0	0	0	0	37	12	0	49	0	0	0	0	0	222	0
08:30	10	137	0	0	147	0	0	0	0	0	0	42	26	0	68	0	0	0	0	0	215	0
08:45	21	106	0	0	127	0	0	0	0	0	0	28	20	0	48	0	0	0	0	0	175	0
Total	57	580	0	0	637	0	0	0	0	0	0	155	70	0	225	0	0	0	0	0	862	0
16:00	11	96	0	0	107	0	0	0	0	0	0	85	28	0	113	0	0	0	0	0	220	0
16:15	20	81	0	0	101	0	0	0	0	0	0	73	26	0	99	0	0	0	0	0	200	0
16:30	20	97	0	0	117	0	0	0	0	0	0	61	33	0	94	0	0	0	0	0	211	0
16:45	22	101	0	0	123	0	0	0	0	0	0	84	36	0	120	0	0	0	0	0	243	0
Total	73	375	0	0	448	0	0	0	0	0	0	303	123	0	426	0	0	0	0	0	874	0
17:00	18	105	0	0	123	0	0	0	0	0	0	80	40	0	120	0	0	0	0	0	243	0
17:15	23	104	0	0	127	0	0	0	0	0	0	101	39	0	140	0	0	0	0	0	267	0
17:30	22	101	0	0	123	0	0	0	0	0	0	85	44	0	129	0	0	0	0	0	252	0
17:45	23	96	0	0	119	0	0	0	0	0	0	88	32	0	120	0	0	0	0	0	239	0
Total	86	406	0	0	492	0	0	0	0	0	0	354	155	0	509	0	0	0	0	0	1001	0
Grand Total	242	1795	0	0	2037	0	0	0	0	0	0	944	378	0	1322	0	0	0	0	0	3359	0
Apprch %	11.9%	88.1%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	71.4%	28.6%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	7.2%	53.4%	0.0%	0.0%	60.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.1%	11.3%	0.0%	39.4%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	42nd Avenue Southbound					Westbound					42nd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	12	140	0	0	152	0	0	0	0	0	0	39	10	0	49	0	0	0	0	0	201
08:00	22	168	0	0	190	0	0	0	0	0	0	48	12	0	60	0	0	0	0	0	250
08:15	4	169	0	0	173	0	0	0	0	0	0	37	12	0	49	0	0	0	0	0	222
08:30	10	137	0	0	147	0	0	0	0	0	0	42	26	0	68	0	0	0	0	0	215
Total Volume	48	614	0	0	662	0	0	0	0	0	0	166	60	0	226	0	0	0	0	0	888
% App Total	7.3%	92.7%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	73.5%	26.5%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.545	.908	.000	.000	.871	.000	.000	.000	.000	.000	.000	.865	.577	.000	.831	.000	.000	.000	.000	.000	.888

PM PEAK HOUR	42nd Avenue Southbound					Westbound					42nd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	22	101	0	0	123	0	0	0	0	0	0	84	36	0	120	0	0	0	0	0	243
17:00	18	105	0	0	123	0	0	0	0	0	0	80	40	0	120	0	0	0	0	0	243
17:15	23	104	0	0	127	0	0	0	0	0	0	101	39	0	140	0	0	0	0	0	267
17:30	22	101	0	0	123	0	0	0	0	0	0	85	44	0	129	0	0	0	0	0	252
Total Volume	85	411	0	0	496	0	0	0	0	0	0	350	159	0	509	0	0	0	0	0	1005
% App Total	17.1%	82.9%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	68.8%	31.2%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.924	.979	.000	.000	.976	.000	.000	.000	.000	.000	.000	.866	.903	.000	.909	.000	.000	.000	.000	.000	.941

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-061 42nd Avenue-Bancroft Avenue.ppd
Date : 6/4/2013

Bank 1 Count = Peds & Bikes

	42nd Avenue Southbound					Westbound					42nd Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0
07:30	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	1	1	0	0	2	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	4	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
08:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	1
16:00	1	0	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3	0
16:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1	1
16:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	1	1	0	0	2	1	0	0	1	1	0	2	1	0	3	0	0	0	0	0	6	1
17:00	0	0	0	0	0	0	0	0	1	0	0	2	2	0	4	0	0	0	0	0	4	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
17:30	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	2	0	0	2	3	0	5	0	0	0	0	0	6	2
Grand Total	2	6	0	0	8	1	0	0	4	1	0	5	5	0	10	0	0	0	0	0	19	4
Apprch %	25.0%	75.0%	0.0%			100.0%	0.0%	0.0%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%				
Total %	10.5%	31.6%	0.0%		42.1%	5.3%	0.0%	0.0%		5.3%	0.0%	26.3%	26.3%		52.6%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	42nd Avenue Southbound					Westbound					42nd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
08:30	0	2	0		2	0	0	0		0	0	0	0		0	0	0	0		0	2
Total Volume	0	3	0		3	0	0	0		0	0	1	0		1	0	0	0		0	4
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.375	.000		.375	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.500

PM PEAK HOUR	42nd Avenue Southbound					Westbound					42nd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:00	0	0	0		0	0	0	0		0	0	2	2		4	0	0	0		0	4
17:15	0	0	0		0	0	0	0		0	0	0	1		1	0	0	0		0	1
17:30	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
Total Volume	0	2	0		2	0	0	0		0	0	2	3		5	0	0	0		0	7
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	40.0%	60.0%			0.0%	0.0%	0.0%			
PHF	.000	.500	.000		.500	.000	.000	.000		.000	.000	.250	.375		.313	.000	.000	.000		.000	.438

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-061 42nd Avenue-Bancroft Avenue.ppd
Date : 6/4/2013

Bank 2 Count = Heavy Trucks

	42nd Avenue Southbound					Westbound					42nd Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0
07:15	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3	0
07:30	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	0	3	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	9	0
08:00	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5	0
08:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
08:30	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
08:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	1	5	0	0	6	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	11	0
16:00	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5	0
17:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:15	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0
17:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	3	0	0	3	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	5	0
Grand Total	1	14	0	0	15	0	0	0	0	0	0	13	2	0	15	0	0	0	0	0	30	0
Apprch %	6.7%	93.3%	0.0%			0.0%	0.0%	0.0%			0.0%	86.7%	13.3%			0.0%	0.0%	0.0%				
Total %	3.3%	46.7%	0.0%		50.0%	0.0%	0.0%	0.0%		0.0%	0.0%	43.3%	6.7%		50.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	42nd Avenue Southbound					Westbound					42nd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:00	0	2	0		2	0	0	0		0	0	3	0		3	0	0	0		0	5
08:15	0	1	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
08:30	1	0	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
Total Volume	1	3	0		4	0	0	0		0	0	5	0		5	0	0	0		0	9
% App Total	25.0%	75.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.250	.375	.000		.500	.000	.000	.000		.000	.000	.417	.000		.417	.000	.000	.000		.000	.450

PM PEAK HOUR	42nd Avenue Southbound					Westbound					42nd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	1	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
17:00	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:15	0	1	0		1	0	0	0		0	0	0	1		1	0	0	0		0	2
17:30	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
Total Volume	0	4	0		4	0	0	0		0	0	1	1		2	0	0	0		0	6
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			
PHF	.000	1.000	.000		1.000	.000	.000	.000		.000	.000	.250	.250		.500	.000	.000	.000		.000	.750

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-062 High Street-Bancroft Avenue.ppd
Date : 6/4/2013

Unshifted Count = All Vehicles

	High Street Southbound					Bancroft Avenue Westbound					High Street Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	6	116	0	0	122	0	0	0	0	0	0	50	12	0	62	0	4	4	0	8	192	0
07:15	7	109	0	0	116	0	0	0	0	0	0	74	10	0	84	3	10	5	0	18	218	0
07:30	8	144	0	0	152	0	0	0	0	0	0	95	7	0	102	2	10	1	0	13	267	0
07:45	11	142	0	0	153	0	0	0	0	0	0	99	6	0	105	1	17	1	0	19	277	0
Total	32	511	0	0	543	0	0	0	0	0	0	318	35	0	353	6	41	11	0	58	954	0
08:00	21	141	0	0	162	0	0	0	0	0	0	89	14	0	103	5	24	7	0	36	301	0
08:15	15	130	0	0	145	0	0	0	0	0	0	88	13	0	101	1	12	3	0	16	262	0
08:30	14	157	0	0	171	0	0	0	0	0	0	118	8	0	126	6	25	3	0	34	331	0
08:45	13	139	0	0	152	0	0	0	0	0	0	105	10	0	115	9	26	4	0	39	306	0
Total	63	567	0	0	630	0	0	0	0	0	0	400	45	0	445	21	87	17	0	125	1200	0
16:00	11	107	0	0	118	0	0	0	0	0	0	157	19	0	176	12	28	5	0	45	339	0
16:15	22	99	0	0	121	0	0	0	0	0	0	147	15	0	162	6	37	1	0	44	327	0
16:30	12	115	0	0	127	0	0	0	0	0	0	137	25	0	162	10	39	8	0	57	346	0
16:45	9	115	0	0	124	0	0	0	0	0	0	161	17	0	178	12	43	7	0	62	364	0
Total	54	436	0	0	490	0	0	0	0	0	0	602	76	0	678	40	147	21	0	208	1376	0
17:00	25	112	0	0	137	0	0	0	0	0	0	145	18	0	163	12	42	7	0	61	361	0
17:15	19	122	0	0	141	0	0	0	0	0	0	163	20	0	183	10	46	7	0	63	387	0
17:30	15	134	0	0	149	0	0	0	0	0	0	183	27	0	210	6	47	10	0	63	422	0
17:45	10	111	0	0	121	0	0	0	0	0	0	150	22	0	172	6	46	7	0	59	352	0
Total	69	479	0	0	548	0	0	0	0	0	0	641	87	0	728	34	181	31	0	246	1522	0
Grand Total	218	1993	0	0	2211	0	0	0	0	0	0	1961	243	0	2204	101	456	80	0	637	5052	0
Apprch %	9.9%	90.1%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	89.0%	11.0%	0.0%		15.9%	71.6%	12.6%	0.0%			
Total %	4.3%	39.4%	0.0%	0.0%	43.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.8%	4.8%	0.0%	43.6%	2.0%	9.0%	1.6%	0.0%	12.6%	100.0%	

AM PEAK HOUR	High Street Southbound					Bancroft Avenue Westbound					High Street Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	21	141	0	0	162	0	0	0	0	0	0	89	14	0	103	5	24	7	0	36	301
08:15	15	130	0	0	145	0	0	0	0	0	0	88	13	0	101	1	12	3	0	16	262
08:30	14	157	0	0	171	0	0	0	0	0	0	118	8	0	126	6	25	3	0	34	331
08:45	13	139	0	0	152	0	0	0	0	0	0	105	10	0	115	9	26	4	0	39	306
Total Volume	63	567	0	0	630	0	0	0	0	0	0	400	45	0	445	21	87	17	0	125	1200
% App Total	10.0%	90.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	89.9%	10.1%	0.0%		16.8%	69.6%	13.6%	0.0%		
PHF	.750	.903	.000	.000	.921	.000	.000	.000	.000	.000	.000	.847	.804	.000	.883	.583	.837	.607	.000	.801	.906

PM PEAK HOUR	High Street Southbound					Bancroft Avenue Westbound					High Street Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	9	115	0	0	124	0	0	0	0	0	0	161	17	0	178	12	43	7	0	62	364
17:00	25	112	0	0	137	0	0	0	0	0	0	145	18	0	163	12	42	7	0	61	361
17:15	19	122	0	0	141	0	0	0	0	0	0	163	20	0	183	10	46	7	0	63	387
17:30	15	134	0	0	149	0	0	0	0	0	0	183	27	0	210	6	47	10	0	63	422
Total Volume	68	483	0	0	551	0	0	0	0	0	0	652	82	0	734	40	178	31	0	249	1534
% App Total	12.3%	87.7%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	88.8%	11.2%	0.0%		16.1%	71.5%	12.4%	0.0%		
PHF	.680	.901	.000	.000	.924	.000	.000	.000	.000	.000	.000	.891	.759	.000	.874	.833	.947	.775	.000	.988	.909

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-062 High Street-Bancroft Avenue.ppd
Date : 6/4/2013

Bank 1 Count = Peds & Bikes

	High Street Southbound					Bancroft Avenue Westbound					High Street Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	1	2	2	0	0	0	9	0	0	0	1	1	1	0	0	0	2	0	3	14
07:15	1	1	0	4	2	0	0	0	7	0	0	3	0	3	3	0	1	0	4	1	6	18
07:30	0	2	0	1	2	1	0	0	5	1	0	1	0	2	1	0	0	0	7	0	4	15
07:45	0	1	1	2	2	0	0	0	10	0	0	1	0	4	1	0	0	1	6	1	4	22
Total	1	5	2	9	8	1	0	0	31	1	0	5	1	10	6	0	1	1	19	2	17	69
08:00	0	1	0	0	1	1	0	0	9	1	0	0	0	2	0	0	0	0	10	0	2	21
08:15	0	1	0	1	1	0	0	0	13	0	0	1	0	5	1	0	0	0	9	0	2	28
08:30	0	1	0	3	1	1	1	0	7	2	0	1	0	2	1	0	0	0	8	0	4	20
08:45	1	0	0	1	1	0	0	1	15	1	0	0	0	7	0	0	0	0	9	0	2	32
Total	1	3	0	5	4	2	1	1	44	4	0	2	0	16	2	0	0	0	36	0	10	101
16:00	0	3	0	7	3	0	0	0	26	0	0	0	0	4	0	0	1	0	9	1	4	46
16:15	0	0	0	2	0	0	1	1	15	2	0	1	1	16	2	0	0	0	6	0	4	39
16:30	0	0	0	5	0	0	0	0	12	0	0	2	2	4	4	1	1	0	7	2	6	28
16:45	0	2	0	6	2	1	0	0	11	1	1	2	0	2	3	0	0	0	14	0	6	33
Total	0	5	0	20	5	1	1	1	64	3	1	5	3	26	9	1	2	0	36	3	20	146
17:00	0	0	0	10	0	0	0	0	14	0	0	1	0	4	1	0	2	0	6	2	3	34
17:15	0	0	0	7	0	0	0	0	23	0	0	1	1	6	2	1	0	0	5	1	3	41
17:30	0	0	0	2	0	0	0	0	23	0	0	1	2	6	3	0	1	0	11	1	4	42
17:45	0	0	0	2	0	0	0	0	28	0	0	1	0	3	1	0	1	0	7	1	2	40
Total	0	0	0	21	0	0	0	0	88	0	0	4	3	19	7	1	4	0	29	5	12	157
Grand Total	2	13	2	55	17	4	2	2	227	8	1	16	7	71	24	2	7	1	120	10	59	473
Apprch %	11.8%	76.5%	11.8%			50.0%	25.0%	25.0%			4.2%	66.7%	29.2%			20.0%	70.0%	10.0%				
Total %	3.4%	22.0%	3.4%		28.8%	6.8%	3.4%	3.4%		13.6%	1.7%	27.1%	11.9%		40.7%	3.4%	11.9%	1.7%		16.9%	100.0%	

AM PEAK HOUR	High Street Southbound					Bancroft Avenue Westbound					High Street Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	1	0		1	1	0	0		1	0	0	0		0	0	0	0		0	2
08:15	0	1	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
08:30	0	1	0		1	1	1	0		2	0	1	0		1	0	0	0		0	4
08:45	1	0	0		1	0	0	1		1	0	0	0		0	0	0	0		0	2
Total Volume	1	3	0		4	2	1	1		4	0	2	0		2	0	0	0		0	10
% App Total	25.0%	75.0%	0.0%			50.0%	25.0%	25.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.250	.750	.000		1.000	.500	.250	.250		.500	.000	.500	.000		.500	.000	.000	.000		.000	.625

PM PEAK HOUR	High Street Southbound					Bancroft Avenue Westbound					High Street Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	2	0		2	1	0	0		1	1	2	0		3	0	0	0		0	6
17:00	0	0	0		0	0	0	0		0	0	1	0		1	0	2	0		2	3
17:15	0	0	0		0	0	0	0		0	0	1	1		2	1	0	0		1	3
17:30	0	0	0		0	0	0	0		0	0	1	2		3	0	1	0		1	4
Total Volume	0	2	0		2	1	0	0		1	1	5	3		9	1	3	0		4	16
% App Total	0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			11.1%	55.6%	33.3%			25.0%	75.0%	0.0%			
PHF	.000	.250	.000		.250	.250	.000	.000		.250	.250	.625	.375		.750	.250	.375	.000		.500	.667

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-062 High Street-Bancroft Avenue.ppd
Date : 6/4/2013

Bank 2 Count = Heavy Trucks

	High Street Southbound					Bancroft Avenue Westbound					High Street Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0
07:15	0	1	0	0	1	0	0	0	0	0	0	5	2	0	7	0	2	0	0	2	10	0
07:30	0	1	0	0	1	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	7	0
07:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	3	0	0	3	0	0	0	0	0	0	11	7	0	18	0	2	0	0	2	23	0
08:00	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3	0
08:15	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	0
08:30	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	7	0
08:45	0	2	0	0	2	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	6	0
Total	0	7	0	0	7	0	0	0	0	0	0	10	2	0	12	0	0	1	0	1	20	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
16:30	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
16:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	3	0
17:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:45	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	5	0
Total	0	4	0	0	4	0	0	0	0	0	0	4	1	0	5	0	0	1	0	1	10	0
Grand Total	0	18	0	0	18	0	0	0	0	0	0	28	10	0	38	0	2	2	0	4	60	0
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	73.7%	26.3%			0.0%	50.0%	50.0%				
Total %	0.0%	30.0%	0.0%		30.0%	0.0%	0.0%	0.0%		0.0%	0.0%	46.7%	16.7%		63.3%	0.0%	3.3%	3.3%		6.7%	100.0%	

AM PEAK HOUR	High Street Southbound					Bancroft Avenue Westbound					High Street Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	1	0		1	0	0	0		0	0	1	1		2	0	0	0		0	3
08:15	0	1	0		1	0	0	0		0	0	3	0		3	0	0	0		0	4
08:30	0	3	0		3	0	0	0		0	0	3	0		3	0	0	1		1	7
08:45	0	2	0		2	0	0	0		0	0	3	1		4	0	0	0		0	6
Total Volume	0	7	0		7	0	0	0		0	0	10	2		12	0	0	1		1	20
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	83.3%	16.7%			0.0%	0.0%	100.0%			
PHF	.000	.583	.000		.583	.000	.000	.000		.000	.000	.833	.500		.750	.000	.000	.250		.250	.714

PM PEAK HOUR	High Street Southbound					Bancroft Avenue Westbound					High Street Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	1	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	2	0		2	0	0	1		1	3
17:30	0	2	0		2	0	0	0		0	0	0	0		0	0	0	0		0	2
Total Volume	0	3	0		3	0	0	0		0	0	3	0		3	0	0	1		1	7
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			
PHF	.000	.375	.000		.375	.000	.000	.000		.000	.000	.375	.000		.375	.000	.000	.250		.250	.583

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-064 Seminary Avenue-Bancroft Avenue.ppd
Date : 6/4/2013

Unshifted Count = All Vehicles

	Seminary Avenue Southbound					Bancroft Avenue Westbound					Seminary Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	2	38	3	0	43	1	29	0	0	30	0	59	5	0	64	4	17	2	0	23	160	0
07:15	3	37	5	0	45	6	37	1	0	44	0	72	2	0	74	7	34	1	0	42	205	0
07:30	1	45	7	0	53	11	45	1	0	57	2	84	5	0	91	11	19	1	0	31	232	0
07:45	4	56	7	0	67	2	61	0	0	63	2	71	6	0	79	7	35	0	0	42	251	0
Total	10	176	22	0	208	20	172	2	0	194	4	286	18	0	308	29	105	4	0	138	848	0
08:00	1	57	11	0	69	11	90	2	0	103	3	70	15	0	88	15	47	2	0	64	324	0
08:15	3	76	8	0	87	5	76	0	0	81	1	59	12	0	72	3	50	4	0	57	297	0
08:30	4	69	7	0	80	13	72	2	0	87	1	48	6	0	55	11	55	1	0	67	289	0
08:45	6	64	8	0	78	2	46	2	0	50	1	65	6	0	72	6	45	3	0	54	254	0
Total	14	266	34	0	314	31	284	6	0	321	6	242	39	0	287	35	197	10	0	242	1164	0
16:00	5	67	7	0	79	13	65	5	0	83	2	72	10	0	84	14	88	2	0	104	350	0
16:15	11	64	7	0	82	10	58	3	0	71	3	71	6	0	80	7	71	4	0	82	315	0
16:30	7	81	4	0	92	3	61	3	0	67	5	81	13	0	99	9	87	0	0	96	354	0
16:45	5	73	5	0	83	12	65	1	0	78	1	63	13	0	77	14	51	3	0	68	306	0
Total	28	285	23	0	336	38	249	12	0	299	11	287	42	0	340	44	297	9	0	350	1325	0
17:00	10	65	9	0	84	10	71	1	0	82	3	70	10	0	83	11	76	2	0	89	338	0
17:15	7	72	8	0	87	8	78	1	0	87	6	78	11	0	95	14	73	5	0	92	361	0
17:30	2	68	8	0	78	14	75	4	0	93	5	62	14	0	81	7	87	2	0	96	348	0
17:45	7	60	7	0	74	11	51	2	0	64	0	55	11	0	66	12	71	2	0	85	289	0
Total	26	265	32	0	323	43	275	8	0	326	14	265	46	0	325	44	307	11	0	362	1336	0
Grand Total	78	992	111	0	1181	132	980	28	0	1140	35	1080	145	0	1260	152	906	34	0	1092	4673	0
Apprch %	6.6%	84.0%	9.4%	0.0%		11.6%	86.0%	2.5%	0.0%		2.8%	85.7%	11.5%	0.0%		13.9%	83.0%	3.1%	0.0%			
Total %	1.7%	21.2%	2.4%	0.0%	25.3%	2.8%	21.0%	0.6%	0.0%	24.4%	0.7%	23.1%	3.1%	0.0%	27.0%	3.3%	19.4%	0.7%	0.0%	23.4%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					Bancroft Avenue Westbound					Seminary Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	1	57	11	0	69	11	90	2	0	103	3	70	15	0	88	15	47	2	0	64	324
08:15	3	76	8	0	87	5	76	0	0	81	1	59	12	0	72	3	50	4	0	57	297
08:30	4	69	7	0	80	13	72	2	0	87	1	48	6	0	55	11	55	1	0	67	289
08:45	6	64	8	0	78	2	46	2	0	50	1	65	6	0	72	6	45	3	0	54	254
Total Volume	14	266	34	0	314	31	284	6	0	321	6	242	39	0	287	35	197	10	0	242	1164
% App Total	4.5%	84.7%	10.8%	0.0%		9.7%	88.5%	1.9%	0.0%		2.1%	84.3%	13.6%	0.0%		14.5%	81.4%	4.1%	0.0%		
PHF	.583	.875	.773	.000	.902	.596	.789	.750	.000	.779	.500	.864	.650	.000	.815	.583	.895	.625	.000	.903	.898

PM PEAK HOUR	Seminary Avenue Southbound					Bancroft Avenue Westbound					Seminary Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	7	81	4	0	92	3	61	3	0	67	5	81	13	0	99	9	87	0	0	96	354
16:45	5	73	5	0	83	12	65	1	0	78	1	63	13	0	77	14	51	3	0	68	306
17:00	10	65	9	0	84	10	71	1	0	82	3	70	10	0	83	11	76	2	0	89	338
17:15	7	72	8	0	87	8	78	1	0	87	6	78	11	0	95	14	73	5	0	92	361
Total Volume	29	291	26	0	346	33	275	6	0	314	15	292	47	0	354	48	287	10	0	345	1359
% App Total	8.4%	84.1%	7.5%	0.0%		10.5%	87.6%	1.9%	0.0%		4.2%	82.5%	13.3%	0.0%		13.9%	83.2%	2.9%	0.0%		
PHF	.725	.898	.722	.000	.940	.688	.881	.500	.000	.902	.625	.901	.904	.000	.894	.857	.825	.500	.000	.898	.941

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-064 Seminary Avenue-Bancroft Avenue.ppd
Date : 6/4/2013

Bank 1 Count = Peds & Bikes

	Seminary Avenue Southbound					Bancroft Avenue Westbound					Seminary Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	1	0	0	0	0	5	0	0	0	0	1	0	0	1	0	1	1	1	8
07:15	0	0	0	4	0	0	0	0	2	0	0	0	0	1	0	0	1	0	4	1	1	11
07:30	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	1	0	3	1	1	6
07:45	0	0	0	1	0	0	0	0	7	0	1	0	0	5	1	0	1	0	1	1	2	14
Total	0	0	0	7	0	0	0	0	16	0	1	0	0	7	1	0	4	0	9	4	5	39
08:00	0	1	0	0	1	0	1	0	2	1	1	0	0	2	1	0	0	0	3	0	3	7
08:15	0	0	0	0	0	0	1	0	1	1	0	0	0	3	0	0	1	0	6	1	2	10
08:30	0	1	0	2	1	0	0	0	4	0	0	0	0	4	0	0	0	0	1	0	1	11
08:45	0	0	0	5	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0	10
Total	0	2	0	7	2	0	2	0	9	2	1	0	0	9	1	0	1	0	13	1	6	38
16:00	0	0	0	1	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	1	3
16:15	0	0	0	1	0	0	1	1	3	2	0	0	1	3	1	0	0	0	4	0	3	11
16:30	0	0	0	4	0	0	0	0	2	0	0	0	0	0	0	0	1	0	3	1	1	9
16:45	0	1	0	3	1	0	1	0	5	1	0	0	0	5	0	0	0	0	3	0	2	16
Total	0	1	0	9	1	0	3	1	10	4	0	0	1	10	1	0	1	0	10	1	7	39
17:00	0	0	0	1	0	0	0	0	7	0	0	0	0	4	0	0	0	0	1	0	0	13
17:15	0	0	0	2	0	0	1	0	14	1	0	0	0	1	0	0	2	0	1	2	3	18
17:30	0	0	0	1	0	0	0	0	2	0	0	0	0	2	0	0	1	0	1	1	1	6
17:45	0	0	0	6	0	0	0	0	3	0	0	0	0	2	0	0	0	0	5	0	0	16
Total	0	0	0	10	0	0	1	0	26	1	0	0	0	9	0	0	3	0	8	3	4	53
Grand Total	0	3	0	33	3	0	6	1	61	7	2	0	1	35	3	0	9	0	40	9	22	169
Apprch %	0.0%	100.0%	0.0%			0.0%	85.7%	14.3%			66.7%	0.0%	33.3%			0.0%	100.0%	0.0%				
Total %	0.0%	13.6%	0.0%		13.6%	0.0%	27.3%	4.5%		31.8%	9.1%	0.0%	4.5%		13.6%	0.0%	40.9%	0.0%		40.9%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					Bancroft Avenue Westbound					Seminary Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	1	0		1	0	1	0		1	1	0	0		1	0	0	0		0	3
08:15	0	0	0		0	0	1	0		1	0	0	0		0	0	1	0		1	2
08:30	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
08:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	2	0		2	0	2	0		2	1	0	0		1	0	1	0		1	6
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.500	.000		.500	.000	.500	.000		.500	.250	.000	.000		.250	.000	.250	.000		.250	.500

PM PEAK HOUR	Seminary Avenue Southbound					Bancroft Avenue Westbound					Seminary Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
16:45	0	1	0		1	0	1	0		1	0	0	0		0	0	0	0		0	2
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	1	0		1	0	0	0		0	0	2	0		2	3
Total Volume	0	1	0		1	0	2	0		2	0	0	0		0	0	3	0		3	6
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.500	.000		.500	.000	.000	.000		.000	.000	.375	.000		.375	.500

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-064 Seminary Avenue-Bancroft Avenue.ppd
Date : 6/4/2013

Bank 2 Count = Heavy Trucks

	Seminary Avenue Southbound					Bancroft Avenue Westbound					Seminary Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	1	0	1	3	0
07:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3	0
07:30	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:45	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	0
Total	2	0	1	0	3	0	1	0	0	1	0	4	0	0	4	0	2	1	0	3	11	0
08:00	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3	0
08:15	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	4	0
08:30	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
08:45	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	5	0
Total	0	6	0	0	6	1	1	0	0	2	1	3	0	0	4	0	2	0	0	2	14	0
16:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	2	0
16:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	6	0
17:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:30	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4	0
Grand Total	2	12	1	0	15	1	2	0	0	3	1	10	0	0	11	0	5	1	0	6	35	0
Apprch %	13.3%	80.0%	6.7%			33.3%	66.7%	0.0%			9.1%	90.9%	0.0%			0.0%	83.3%	16.7%				
Total %	5.7%	34.3%	2.9%		42.9%	2.9%	5.7%	0.0%		8.6%	2.9%	28.6%	0.0%		31.4%	0.0%	14.3%	2.9%		17.1%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					Bancroft Avenue Westbound					Seminary Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	1	0		1	0	1	0		1	0	0	0		0	0	1	0		1	3
08:15	0	2	0		2	0	0	0		0	1	1	0		2	0	0	0		0	4
08:30	0	1	0		1	1	0	0		1	0	0	0		0	0	0	0		0	2
08:45	0	2	0		2	0	0	0		0	0	2	0		2	0	1	0		1	5
Total Volume	0	6	0		6	1	1	0		2	1	3	0		4	0	2	0		2	14
% App Total	0.0%	100.0%	0.0%			50.0%	50.0%	0.0%			25.0%	75.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.750	.000		.750	.250	.250	.000		.500	.250	.375	.000		.500	.000	.500	.000		.500	.700

PM PEAK HOUR	Seminary Avenue Southbound					Bancroft Avenue Westbound					Seminary Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:45	0	2	0		2	0	0	0		0	0	0	0		0	0	0	0		0	2
17:00	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:15	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
Total Volume	0	4	0		4	0	0	0		0	0	0	0		0	0	0	0		0	4
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.500	.000		.500	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.500

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-065 Havenscourt Boulevard-Bancroft Avenue.ppd
Date : 6/4/2013

Unshifted Count = All Vehicles

	Havenscourt Boulevard Southbound					Bancroft Avenue Westbound					Havenscourt Boulevard Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	10	16	2	0	28	5	29	9	0	43	1	24	11	0	36	4	25	2	0	31	138	0
07:15	12	18	2	0	32	10	47	8	0	65	1	26	13	0	40	2	37	4	0	43	180	0
07:30	25	30	3	0	58	12	45	14	0	71	6	51	13	0	70	1	35	7	0	43	242	0
07:45	31	43	2	0	76	19	56	20	0	95	9	60	16	0	85	1	46	10	0	57	313	0
Total	78	107	9	0	194	46	177	51	0	274	17	161	53	0	231	8	143	23	0	174	873	0
08:00	43	36	3	0	82	13	78	23	0	114	5	76	17	0	98	2	71	11	0	84	378	0
08:15	44	39	6	0	89	10	82	26	0	118	3	48	23	0	74	3	65	7	0	75	356	0
08:30	36	48	1	0	85	14	81	14	0	109	6	39	20	0	65	3	64	7	0	74	333	0
08:45	27	33	6	0	66	11	53	17	0	81	3	33	14	0	50	3	52	9	0	64	261	0
Total	150	156	16	0	322	48	294	80	0	422	17	196	74	0	287	11	252	34	0	297	1328	0
16:00	40	34	8	0	82	21	83	22	0	126	5	29	29	0	63	3	97	7	0	107	378	0
16:15	46	40	11	0	97	10	67	24	0	101	2	34	24	0	60	1	78	5	0	84	342	0
16:30	39	51	9	0	99	16	80	28	0	124	3	37	25	0	65	1	95	11	0	107	395	0
16:45	45	58	5	0	108	13	78	23	0	114	6	40	23	0	69	5	65	6	0	76	367	0
Total	170	183	33	0	386	60	308	97	0	465	16	140	101	0	257	10	335	29	0	374	1482	0
17:00	42	53	12	0	107	14	79	27	0	120	9	40	32	0	81	1	82	12	0	95	403	0
17:15	37	49	12	0	98	12	100	18	0	130	7	39	25	0	71	1	95	9	0	105	404	0
17:30	57	43	5	0	105	10	82	20	0	112	6	45	28	0	79	2	103	9	0	114	410	0
17:45	56	39	5	0	100	16	82	18	0	116	5	34	20	0	59	3	107	8	0	118	393	0
Total	192	184	34	0	410	52	343	83	0	478	27	158	105	0	290	7	387	38	0	432	1610	0
Grand Total	590	630	92	0	1312	206	1122	311	0	1639	77	655	333	0	1065	36	1117	124	0	1277	5293	0
Apprch %	45.0%	48.0%	7.0%	0.0%		12.6%	68.5%	19.0%	0.0%		7.2%	61.5%	31.3%	0.0%		2.8%	87.5%	9.7%	0.0%			
Total %	11.1%	11.9%	1.7%	0.0%	24.8%	3.9%	21.2%	5.9%	0.0%	31.0%	1.5%	12.4%	6.3%	0.0%	20.1%	0.7%	21.1%	2.3%	0.0%	24.1%	100.0%	

AM PEAK HOUR	Havenscourt Boulevard Southbound					Bancroft Avenue Westbound					Havenscourt Boulevard Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	31	43	2	0	76	19	56	20	0	95	9	60	16	0	85	1	46	10	0	57	313
08:00	43	36	3	0	82	13	78	23	0	114	5	76	17	0	98	2	71	11	0	84	378
08:15	44	39	6	0	89	10	82	26	0	118	3	48	23	0	74	3	65	7	0	75	356
08:30	36	48	1	0	85	14	81	14	0	109	6	39	20	0	65	3	64	7	0	74	333
Total Volume	154	166	12	0	332	56	297	83	0	436	23	223	76	0	322	9	246	35	0	290	1380
% App Total	46.4%	50.0%	3.6%	0.0%		12.8%	68.1%	19.0%	0.0%		7.1%	69.3%	23.6%	0.0%		3.1%	84.8%	12.1%	0.0%		
PHF	.875	.865	.500	.000	.933	.737	.905	.798	.000	.924	.639	.734	.826	.000	.821	.750	.866	.795	.000	.863	.913

PM PEAK HOUR	Havenscourt Boulevard Southbound					Bancroft Avenue Westbound					Havenscourt Boulevard Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	42	53	12	0	107	14	79	27	0	120	9	40	32	0	81	1	82	12	0	95	403
17:15	37	49	12	0	98	12	100	18	0	130	7	39	25	0	71	1	95	9	0	105	404
17:30	57	43	5	0	105	10	82	20	0	112	6	45	28	0	79	2	103	9	0	114	410
17:45	56	39	5	0	100	16	82	18	0	116	5	34	20	0	59	3	107	8	0	118	393
Total Volume	192	184	34	0	410	52	343	83	0	478	27	158	105	0	290	7	387	38	0	432	1610
% App Total	46.8%	44.9%	8.3%	0.0%		10.9%	71.8%	17.4%	0.0%		9.3%	54.5%	36.2%	0.0%		1.6%	89.6%	8.8%	0.0%		
PHF	.842	.868	.708	.000	.958	.813	.858	.769	.000	.919	.750	.878	.820	.000	.895	.583	.904	.792	.000	.915	.982

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-065 Havenscourt Boulevard-Bancroft Avenue.ppd
Date : 6/4/2013

Bank 1 Count = Peds & Bikes

	Havenscourt Boulevard Southbound					Bancroft Avenue Westbound					Havenscourt Boulevard Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	10	0	0	1	0	4	1	0	0	0	5	0	0	1	0	6	1	2	25
07:15	0	1	0	12	1	0	0	0	6	0	0	0	0	1	0	0	2	0	3	2	3	22
07:30	1	0	0	9	1	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	2	11
07:45	0	0	0	9	0	0	0	1	7	1	0	0	0	2	0	0	0	0	7	0	1	25
Total	1	1	0	40	2	0	1	1	17	2	0	0	0	9	0	0	4	0	17	4	8	83
08:00	0	0	0	11	0	1	2	0	7	3	1	0	0	2	1	0	1	1	3	2	6	23
08:15	0	0	0	8	0	0	0	0	7	0	0	0	0	3	0	0	2	0	3	2	2	21
08:30	0	0	0	2	0	0	0	1	4	1	0	0	0	1	0	0	0	0	1	0	1	8
08:45	0	0	0	6	0	0	3	0	3	3	0	0	0	3	0	0	0	0	4	0	3	16
Total	0	0	0	27	0	1	5	1	21	7	1	0	0	9	1	0	3	1	11	4	12	68
16:00	0	0	1	16	1	0	1	0	2	1	0	0	0	4	0	0	0	0	11	0	2	33
16:15	0	0	0	24	0	0	0	0	2	0	0	0	0	4	0	0	1	0	6	1	1	36
16:30	0	0	0	13	0	0	1	0	0	1	0	1	0	17	1	0	3	0	4	3	5	34
16:45	0	0	0	14	0	0	3	0	3	3	0	0	0	6	0	0	0	0	4	0	3	27
Total	0	0	1	67	1	0	5	0	7	5	0	1	0	31	1	0	4	0	25	4	11	130
17:00	0	0	0	12	0	0	1	0	5	1	0	2	0	3	2	0	0	0	6	0	3	26
17:15	0	0	0	21	0	0	1	0	2	1	0	0	0	6	0	0	0	0	11	0	1	40
17:30	0	0	0	12	0	0	0	0	7	0	0	0	0	10	0	0	1	0	13	1	1	42
17:45	0	0	0	7	0	0	0	0	4	0	0	0	0	10	0	1	0	0	10	1	1	31
Total	0	0	0	52	0	0	2	0	18	2	0	2	0	29	2	1	1	0	40	2	6	139
Grand Total	1	1	1	186	3	1	13	2	63	16	1	3	0	78	4	1	12	1	93	14	37	420
Apprch %	33.3%	33.3%	33.3%			6.3%	81.3%	12.5%			25.0%	75.0%	0.0%			7.1%	85.7%	7.1%				
Total %	2.7%	2.7%	2.7%		8.1%	2.7%	35.1%	5.4%		43.2%	2.7%	8.1%	0.0%		10.8%	2.7%	32.4%	2.7%		37.8%	100.0%	

AM PEAK HOUR	Havenscourt Boulevard Southbound					Bancroft Avenue Westbound					Havenscourt Boulevard Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	1		1	0	0	0		0	0	0	0		0	1
08:00	0	0	0		0	1	2	0		3	1	0	0		1	0	1	1		2	6
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0		2	2
08:30	0	0	0		0	0	0	1		1	0	0	0		0	0	0	0		0	1
Total Volume	0	0	0		0	1	2	2		5	1	0	0		1	0	3	1		4	10
% App Total	0.0%	0.0%	0.0%			20.0%	40.0%	40.0%			100.0%	0.0%	0.0%			0.0%	75.0%	25.0%			
PHF	.000	.000	.000		.000	.250	.250	.500		.417	.250	.000	.000		.250	.000	.375	.250		.500	.417

PM PEAK HOUR	Havenscourt Boulevard Southbound					Bancroft Avenue Westbound					Havenscourt Boulevard Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	1	0		1	0	2	0		2	0	0	0		0	3
17:15	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
17:45	0	0	0		0	0	0	0		0	0	0	0		0	1	0	0		1	1
Total Volume	0	0	0		0	0	2	0		2	0	2	0		2	1	1	0		2	6
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			50.0%	50.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.500	.000		.500	.000	.250	.000		.250	.250	.250	.000		.500	.500

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-065 Havenscourt Boulevard-Bancroft Avenue.ppd
Date : 6/4/2013

Bank 2 Count = Heavy Trucks

	Havenscourt Boulevard Southbound					Bancroft Avenue Westbound					Havenscourt Boulevard Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	3	0
07:15	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3	0
07:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2	0
07:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	4	0
Total	1	1	0	0	2	0	2	1	0	3	0	3	0	0	3	0	4	0	0	4	12	0
08:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3	0
08:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
08:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
Total	1	0	0	0	1	0	1	0	0	1	0	1	0	0	1	0	5	0	0	5	8	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
16:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4	0
17:00	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	4	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
17:30	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	4	0	0	0	4	1	1	0	0	2	0	0	1	0	1	0	1	0	0	1	8	0
Grand Total	7	3	0	0	10	1	4	1	0	6	0	4	1	0	5	0	11	0	0	11	32	0
Apprch %	70.0%	30.0%	0.0%			16.7%	66.7%	16.7%			0.0%	80.0%	20.0%			0.0%	100.0%	0.0%				
Total %	21.9%	9.4%	0.0%		31.3%	3.1%	12.5%	3.1%		18.8%	0.0%	12.5%	3.1%		15.6%	0.0%	34.4%	0.0%		34.4%	100.0%	

AM PEAK HOUR	Havenscourt Boulevard Southbound					Bancroft Avenue Westbound					Havenscourt Boulevard Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	1	0		1	0	0	0		0	0	1	0		1	0	2	0		2	4
08:00	1	0	0		1	0	0	0		0	0	0	0		0	0	2	0		2	3
08:15	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0		2	2
Total Volume	1	1	0		2	0	0	0		0	0	2	0		2	0	6	0		6	10
% App Total	50.0%	50.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.250	.000		.500	.000	.000	.000		.000	.000	.500	.000		.500	.000	.750	.000		.750	.625

PM PEAK HOUR	Havenscourt Boulevard Southbound					Bancroft Avenue Westbound					Havenscourt Boulevard Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	1	0	0		1	1	1	0		2	0	0	0		0	0	1	0		1	4
17:15	0	0	0		0	0	0	0		0	0	0	1		1	0	0	0		0	1
17:30	2	0	0		2	0	0	0		0	0	0	0		0	0	0	0		0	2
17:45	1	0	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
Total Volume	4	0	0		4	1	1	0		2	0	0	1		1	0	1	0		1	8
% App Total	100.0%	0.0%	0.0%			50.0%	50.0%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			
PHF	.500	.000	.000		.500	.250	.250	.000		.250	.000	.000	.250		.250	.000	.250	.000		.250	.500

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-021 73rd Avenue-Bancroft Avenue.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	7	84	10	0	101	26	32	25	0	83	11	73	13	4	101	4	35	14	0	53	338	4
07:15	9	100	10	1	120	35	55	31	0	121	24	95	19	4	142	6	20	25	0	51	434	5
07:30	11	122	9	1	143	61	70	43	0	174	26	136	31	2	195	6	56	35	0	97	609	3
07:45	17	147	21	1	186	58	112	35	0	205	36	117	35	5	193	8	71	36	0	115	699	6
Total	44	453	50	3	550	180	269	134	0	583	97	421	98	15	631	24	182	110	0	316	2080	18
08:00	14	161	7	0	182	38	127	35	0	200	35	131	32	2	200	12	67	58	0	137	719	2
08:15	16	156	10	0	182	60	116	40	0	216	44	157	28	0	229	7	71	51	0	129	756	0
08:30	23	152	15	0	190	41	96	25	1	163	42	121	35	2	200	12	77	49	2	140	693	5
08:45	26	133	7	3	169	45	79	24	0	148	25	140	25	3	193	3	71	50	0	124	634	6
Total	79	602	39	3	723	184	418	124	1	727	146	549	120	7	822	34	286	208	2	530	2802	13
Grand Total	123	1055	89	6	1273	364	687	258	1	1310	243	970	218	22	1453	58	468	318	2	846	4882	31
Apprch %	9.7%	82.9%	7.0%	0.5%		27.8%	52.4%	19.7%	0.1%		16.7%	66.8%	15.0%	1.5%		6.9%	55.3%	37.6%	0.2%			
Total %	2.5%	21.6%	1.8%	0.1%	26.1%	7.5%	14.1%	5.3%	0.0%	26.8%	5.0%	19.9%	4.5%	0.5%	29.8%	1.2%	9.6%	6.5%	0.0%	17.3%	100.0%	

AM PEAK HOUR	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	17	147	21	1	186	58	112	35	0	205	36	117	35	5	193	8	71	36	0	115	699
08:00	14	161	7	0	182	38	127	35	0	200	35	131	32	2	200	12	67	58	0	137	719
08:15	16	156	10	0	182	60	116	40	0	216	44	157	28	0	229	7	71	51	0	129	756
08:30	23	152	15	0	190	41	96	25	1	163	42	121	35	2	200	12	77	49	2	140	693
Total Volume	70	616	53	1	740	197	451	135	1	784	157	526	130	9	822	39	286	194	2	521	2867
% App Total	9.5%	83.2%	7.2%	0.1%		25.1%	57.5%	17.2%	0.1%		19.1%	64.0%	15.8%	1.1%		7.5%	54.9%	37.2%	0.4%		
PHF	.761	.957	.631	.250	.974	.821	.888	.844	.250	.907	.892	.838	.929	.450	.897	.813	.929	.836	.250	.930	.948

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-021 73rd Avenue-Bancroft Avenue.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	0	7	0	0	13
07:15	0	1	0	5	1	0	0	0	5	0	0	0	0	3	0	0	1	0	7	1	2	20
07:30	0	0	0	1	0	0	1	0	6	1	0	0	0	1	0	0	0	0	9	0	1	17
07:45	1	0	0	0	1	0	0	0	1	0	0	2	0	1	2	0	0	0	9	0	3	11
Total	1	1	0	6	2	0	1	0	14	1	0	2	0	9	2	0	1	0	32	1	6	61
08:00	0	0	0	2	0	0	0	0	4	0	0	0	0	8	0	0	0	0	12	0	0	26
08:15	0	1	0	2	1	0	1	0	4	1	0	0	0	4	0	0	0	0	23	0	2	33
08:30	1	0	0	0	1	0	0	0	1	0	0	0	0	4	0	0	0	0	22	0	1	27
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	15	0	0	16
Total	1	1	0	4	2	0	1	0	9	1	0	0	0	17	0	0	0	0	72	0	3	102
Grand Total	2	2	0	10	4	0	2	0	23	2	0	2	0	26	2	0	1	0	104	1	9	163
Apprch %	50.0%	50.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%				
Total %	22.2%	22.2%	0.0%		44.4%	0.0%	22.2%	0.0%		22.2%	0.0%	22.2%	0.0%		22.2%	0.0%	11.1%	0.0%		11.1%	100.0%	

AM PEAK HOUR	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	1	0	0		1	0	0	0		0	0	2	0		2	0	0	0		0	3
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	1	0		1	0	1	0		1	0	0	0		0	0	0	0		0	2
08:30	1	0	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
Total Volume	2	1	0		3	0	1	0		1	0	2	0		2	0	0	0		0	6
% App Total	66.7%	33.3%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.500	.250	.000		.750	.000	.250	.000		.250	.000	.250	.000		.250	.000	.000	.000		.000	.500

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Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

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File Name : 13-7310-021 73rd Avenue-Bancroft Avenue.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	1	3	0	0	4	0	0	0	0	0	1	6	0	0	7	0	1	0	0	1	12	0
07:15	1	3	2	0	6	1	2	0	0	3	0	4	0	0	4	0	1	0	0	1	14	0
07:30	0	2	0	0	2	0	2	0	0	2	2	1	0	0	3	1	2	0	0	3	10	0
07:45	1	2	0	0	3	0	2	0	0	2	2	0	0	0	2	1	2	1	0	4	11	0
Total	3	10	2	0	15	1	6	0	0	7	5	11	0	0	16	2	6	1	0	9	47	0
08:00	1	3	0	0	4	1	0	0	0	1	0	1	0	0	1	1	2	3	0	6	12	0
08:15	0	3	0	0	3	0	2	0	0	2	2	6	1	0	9	0	0	3	0	3	17	0
08:30	4	2	0	0	6	0	1	0	0	1	0	9	1	0	10	1	0	6	0	7	24	0
08:45	0	2	0	0	2	0	3	0	0	3	0	6	1	0	7	0	3	2	0	5	17	0
Total	5	10	0	0	15	1	6	0	0	7	2	22	3	0	27	2	5	14	0	21	70	0
Grand Total	8	20	2	0	30	2	12	0	0	14	7	33	3	0	43	4	11	15	0	30	117	0
Apprch %	26.7%	66.7%	6.7%			14.3%	85.7%	0.0%			16.3%	76.7%	7.0%			13.3%	36.7%	50.0%				
Total %	6.8%	17.1%	1.7%		25.6%	1.7%	10.3%	0.0%		12.0%	6.0%	28.2%	2.6%		36.8%	3.4%	9.4%	12.8%		25.6%	100.0%	

AM PEAK HOUR	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	1	2	0		3	0	2	0		2	2	0	0		2	1	2	1		4	11
08:00	1	3	0		4	1	0	0		1	0	1	0		1	1	2	3		6	12
08:15	0	3	0		3	0	2	0		2	2	6	1		9	0	0	3		3	17
08:30	4	2	0		6	0	1	0		1	0	9	1		10	1	0	6		7	24
Total Volume	6	10	0		16	1	5	0		6	4	16	2		22	3	4	13		20	64
% App Total	37.5%	62.5%	0.0%			16.7%	83.3%	0.0%			18.2%	72.7%	9.1%			15.0%	20.0%	65.0%			
PHF	.375	.833	.000		.667	.250	.625	.000		.750	.500	.444	.500		.550	.750	.500	.542		.714	.667

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-084 73rd Avenue-Bancroft Avenue.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	36	178	11	2	227	26	79	1	0	106	55	162	42	5	264	14	96	71	1	182	779	8
16:15	46	129	20	2	197	30	87	3	2	122	58	153	44	6	261	14	108	56	0	178	758	10
16:30	37	139	14	4	194	36	100	2	0	138	58	154	32	6	250	6	111	47	0	164	746	10
16:45	49	131	10	1	191	35	79	1	1	116	55	126	36	2	219	13	114	50	0	177	703	4
Total	168	577	55	9	809	127	345	7	3	482	226	595	154	19	994	47	429	224	1	701	2986	32
17:00	40	147	31	1	219	34	81	1	4	120	52	161	52	4	269	12	123	76	1	212	820	10
17:15	36	157	14	0	207	20	69	3	1	93	58	174	39	4	275	13	113	68	1	195	770	6
17:30	35	134	13	1	183	35	94	0	0	129	45	176	30	4	255	15	109	51	1	176	743	6
17:45	36	98	7	2	143	37	75	2	0	114	65	161	35	3	264	9	137	67	0	213	734	5
Total	147	536	65	4	752	126	319	6	5	456	220	672	156	15	1063	49	482	262	3	796	3067	27
Grand Total	315	1113	120	13	1561	253	664	13	8	938	446	1267	310	34	2057	96	911	486	4	1497	6053	59
Apprch %	20.2%	71.3%	7.7%	0.8%		27.0%	70.8%	1.4%	0.9%		21.7%	61.6%	15.1%	1.7%		6.4%	60.9%	32.5%	0.3%			
Total %	5.2%	18.4%	2.0%	0.2%	25.8%	4.2%	11.0%	0.2%	0.1%	15.5%	7.4%	20.9%	5.1%	0.6%	34.0%	1.6%	15.1%	8.0%	0.1%	24.7%	100.0%	

PM PEAK HOUR	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	40	147	31	1	219	34	81	1	4	120	52	161	52	4	269	12	123	76	1	212	820
17:15	36	157	14	0	207	20	69	3	1	93	58	174	39	4	275	13	113	68	1	195	770
17:30	35	134	13	1	183	35	94	0	0	129	45	176	30	4	255	15	109	51	1	176	743
17:45	36	98	7	2	143	37	75	2	0	114	65	161	35	3	264	9	137	67	0	213	734
Total Volume	147	536	65	4	752	126	319	6	5	456	220	672	156	15	1063	49	482	262	3	796	3067
% App Total	19.5%	71.3%	8.6%	0.5%		27.6%	70.0%	1.3%	1.1%		20.7%	63.2%	14.7%	1.4%		6.2%	60.6%	32.9%	0.4%		
PHF	.919	.854	.524	.500	.858	.851	.848	.500	.313	.884	.846	.955	.750	.938	.966	.817	.880	.862	.750	.934	.935

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-084 73rd Avenue-Bancroft Avenue.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	2	1	0	3	3	0	0	0	7	0	0	1	0	3	1	0	0	2	15	2	6	28
16:15	0	2	0	9	2	0	1	0	9	1	0	1	0	2	1	0	1	0	21	1	5	41
16:30	0	3	0	5	3	0	2	0	6	2	3	4	0	2	7	0	0	1	10	1	13	23
16:45	0	0	0	3	0	1	0	0	7	1	0	2	0	1	2	0	1	1	12	2	5	23
Total	2	6	0	20	8	1	3	0	29	4	3	8	0	8	11	0	2	4	58	6	29	115
17:00	1	1	0	9	2	0	1	0	7	1	1	1	0	1	2	0	2	0	2	2	7	19
17:15	0	0	1	8	1	0	0	0	7	0	0	0	1	2	1	0	1	3	10	4	6	27
17:30	0	2	0	6	2	0	0	0	8	0	0	3	0	5	3	0	2	2	20	4	9	39
17:45	0	1	0	4	1	0	2	0	7	2	0	1	0	11	1	0	2	0	10	2	6	32
Total	1	4	1	27	6	0	3	0	29	3	1	5	1	19	7	0	7	5	42	12	28	117
Grand Total	3	10	1	47	14	1	6	0	58	7	4	13	1	27	18	0	9	9	100	18	57	232
Apprch %	21.4%	71.4%	7.1%			14.3%	85.7%	0.0%			22.2%	72.2%	5.6%			0.0%	50.0%	50.0%				
Total %	5.3%	17.5%	1.8%		24.6%	1.8%	10.5%	0.0%		12.3%	7.0%	22.8%	1.8%		31.6%	0.0%	15.8%	15.8%		31.6%	100.0%	

PM PEAK HOUR	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	1	1	0		2	0	1	0		1	1	1	0		2	0	2	0		2	7
17:15	0	0	1		1	0	0	0		0	0	0	1		1	0	1	3		4	6
17:30	0	2	0		2	0	0	0		0	0	3	0		3	0	2	2		4	9
17:45	0	1	0		1	0	2	0		2	0	1	0		1	0	2	0		2	6
Total Volume	1	4	1		6	0	3	0		3	1	5	1		7	0	7	5		12	28
% App Total	16.7%	66.7%	16.7%			0.0%	100.0%	0.0%			14.3%	71.4%	14.3%			0.0%	58.3%	41.7%			
PHF	.250	.500	.250		.750	.000	.375	.000		.375	.250	.417	.250		.583	.000	.875	.417		.750	.778

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-084 73rd Avenue-Bancroft Avenue.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	1	0	0	1	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	4	0
16:45	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	3	0
Total	0	2	0	0	2	0	1	0	0	1	2	2	1	0	5	0	0	0	0	0	8	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
17:15	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	1	2	0	3	5	0
17:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	0	3	4	0
17:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	2	0	0	2	2	0	0	0	2	0	1	0	0	1	0	4	3	0	7	12	0
Grand Total	0	4	0	0	4	2	1	0	0	3	2	3	1	0	6	0	4	3	0	7	20	0
Apprch %	0.0%	100.0%	0.0%			66.7%	33.3%	0.0%			33.3%	50.0%	16.7%			0.0%	57.1%	42.9%				
Total %	0.0%	20.0%	0.0%		20.0%	10.0%	5.0%	0.0%		15.0%	10.0%	15.0%	5.0%		30.0%	0.0%	20.0%	15.0%		35.0%	100.0%	

PM PEAK HOUR	73rd Avenue Southbound					Bancroft Avenue Westbound					73rd Avenue Northbound					Bancroft Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
17:15	0	0	0		0	2	0	0		2	0	0	0		0	0	1	2		3	5
17:30	0	0	0		0	0	0	0		0	0	1	0		1	0	2	1		3	4
17:45	0	2	0		2	0	0	0		0	0	0	0		0	0	0	0		0	2
Total Volume	0	2	0		2	2	0	0		2	0	1	0		1	0	4	3		7	12
% App Total	0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	57.1%	42.9%			
PHF	.000	.250	.000		.250	.250	.000	.000		.250	.000	.250	.000		.250	.000	.500	.375		.583	.600

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-069 23rd Avenue-E 12th Street.ppd
Date : 6/5/2013

Unshifted Count = All Vehicles

	23rd Avenue Southbound					E 12th Street Westbound					23rd Avenue Northbound					E 12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	11	0	19	0	30	0	62	6	1	69	0	0	0	0	0	4	33	0	1	38	137	2
07:15	16	0	21	0	37	0	67	4	1	72	0	0	0	0	0	7	31	0	0	38	147	1
07:30	15	0	13	0	28	0	116	13	1	130	0	0	0	0	0	3	63	0	1	67	225	2
07:45	19	0	22	0	41	0	181	17	2	200	0	0	0	0	0	7	69	0	0	76	317	2
Total	61	0	75	0	136	0	426	40	5	471	0	0	0	0	0	21	196	0	2	219	826	7
08:00	23	0	35	0	58	0	195	25	4	224	0	0	0	0	0	15	82	0	5	102	384	9
08:15	21	3	33	0	57	0	239	26	1	266	0	0	1	0	1	12	88	0	3	103	427	4
08:30	29	1	24	0	54	1	194	19	2	216	0	0	1	0	1	18	85	1	3	107	378	5
08:45	21	1	34	0	56	0	215	27	4	246	0	0	0	0	0	10	86	1	1	98	400	5
Total	94	5	126	0	225	1	843	97	11	952	0	0	2	0	2	55	341	2	12	410	1589	23
16:00	16	0	16	0	32	1	104	29	1	135	1	0	0	0	1	27	126	1	5	159	327	6
16:15	20	0	17	0	37	0	125	23	0	148	1	1	0	0	2	26	134	0	2	162	349	2
16:30	20	0	20	0	40	1	110	29	2	142	0	0	0	0	0	21	178	0	1	200	382	3
16:45	18	0	25	0	43	0	114	23	4	141	0	0	1	0	1	25	191	0	4	220	405	8
Total	74	0	78	0	152	2	453	104	7	566	2	1	1	0	4	99	629	1	12	741	1463	19
17:00	19	1	13	0	33	0	138	18	1	157	0	3	0	0	3	42	219	0	1	262	455	2
17:15	19	0	17	0	36	1	116	33	1	151	1	0	3	0	4	34	217	0	0	251	442	1
17:30	17	0	16	0	33	0	129	27	1	157	2	0	0	0	2	35	199	0	4	238	430	5
17:45	20	0	22	0	42	0	126	31	0	157	0	0	0	0	0	31	174	0	5	210	409	5
Total	75	1	68	0	144	1	509	109	3	622	3	3	3	0	9	142	809	0	10	961	1736	13
Grand Total	304	6	347	0	657	4	2231	350	26	2611	5	4	6	0	15	317	1975	3	36	2331	5614	62
Apprch %	46.3%	0.9%	52.8%	0.0%		0.2%	85.4%	13.4%	1.0%		33.3%	26.7%	40.0%	0.0%		13.6%	84.7%	0.1%	1.5%			
Total %	5.4%	0.1%	6.2%	0.0%	11.7%	0.1%	39.7%	6.2%	0.5%	46.5%	0.1%	0.1%	0.1%	0.0%	0.3%	5.6%	35.2%	0.1%	0.6%	41.5%	100.0%	

AM PEAK HOUR	23rd Avenue Southbound					E 12th Street Westbound					23rd Avenue Northbound					E 12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	23	0	35	0	58	0	195	25	4	224	0	0	0	0	0	15	82	0	5	102	384
08:15	21	3	33	0	57	0	239	26	1	266	0	0	1	0	1	12	88	0	3	103	427
08:30	29	1	24	0	54	1	194	19	2	216	0	0	1	0	1	18	85	1	3	107	378
08:45	21	1	34	0	56	0	215	27	4	246	0	0	0	0	0	10	86	1	1	98	400
Total Volume	94	5	126	0	225	1	843	97	11	952	0	0	2	0	2	55	341	2	12	410	1589
% App Total	41.8%	2.2%	56.0%	0.0%		0.1%	88.6%	10.2%	1.2%		0.0%	0.0%	100.0%	0.0%		13.4%	83.2%	0.5%	2.9%		
PHF	.810	.417	.900	.000	.970	.250	.882	.898	.688	.895	.000	.000	.500	.000	.500	.764	.969	.500	.600	.958	.930

PM PEAK HOUR	23rd Avenue Southbound					E 12th Street Westbound					23rd Avenue Northbound					E 12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	19	1	13	0	33	0	138	18	1	157	0	3	0	0	3	42	219	0	1	262	455
17:15	19	0	17	0	36	1	116	33	1	151	1	0	3	0	4	34	217	0	0	251	442
17:30	17	0	16	0	33	0	129	27	1	157	2	0	0	0	2	35	199	0	4	238	430
17:45	20	0	22	0	42	0	126	31	0	157	0	0	0	0	0	31	174	0	5	210	409
Total Volume	75	1	68	0	144	1	509	109	3	622	3	3	3	0	9	142	809	0	10	961	1736
% App Total	52.1%	0.7%	47.2%	0.0%		0.2%	81.8%	17.5%	0.5%		33.3%	33.3%	33.3%	0.0%		14.8%	84.2%	0.0%	1.0%		
PHF	.938	.250	.773	.000	.857	.250	.922	.826	.750	.990	.375	.250	.250	.000	.563	.845	.924	.000	.500	.917	.954

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-069 23rd Avenue-E 12th Street.ppd
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	23rd Avenue Southbound					E 12th Street Westbound					23rd Avenue Northbound					E 12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0
07:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	0
07:30	0	0	0	0	0	0	3	0	2	3	0	0	0	0	0	0	0	0	0	0	3	2
07:45	1	1	0	0	2	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	6	0
Total	2	1	0	0	3	0	9	0	2	9	0	0	1	0	1	0	2	0	0	2	15	2
08:00	3	0	0	3	3	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	5	3
08:15	0	0	1	6	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	2	7
08:30	2	0	1	2	3	0	0	0	1	0	0	0	0	2	0	0	2	0	0	2	5	5
08:45	1	0	1	4	2	0	0	0	12	0	0	0	0	1	0	0	0	0	0	0	2	17
Total	6	0	3	15	9	0	1	1	13	2	0	0	0	4	0	0	3	0	0	3	14	32
16:00	0	0	0	3	0	0	2	0	1	2	0	0	0	0	0	0	0	0	0	0	2	4
16:15	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
16:30	0	0	0	0	0	0	2	1	1	3	0	0	0	2	0	0	0	0	0	0	3	3
16:45	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5	0
Total	0	0	0	3	0	0	7	1	3	8	0	0	0	3	0	0	2	0	0	2	10	9
17:00	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	2	2	2
17:15	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	3	0	0	3	5	0
17:30	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
17:45	1	0	0	2	1	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	6	2
Total	1	0	0	3	1	0	3	2	1	5	0	0	0	1	0	1	7	0	0	8	14	5
Grand Total	9	1	3	21	13	0	20	4	19	24	0	0	1	8	1	1	14	0	0	15	53	48
Apprch %	69.2%	7.7%	23.1%			0.0%	83.3%	16.7%			0.0%	0.0%	100.0%			6.7%	93.3%	0.0%				
Total %	17.0%	1.9%	5.7%		24.5%	0.0%	37.7%	7.5%		45.3%	0.0%	0.0%	1.9%		1.9%	1.9%	26.4%	0.0%		28.3%	100.0%	

AM PEAK HOUR	23rd Avenue Southbound					E 12th Street Westbound					23rd Avenue Northbound					E 12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	3	0	0		3	0	1	1		2	0	0	0		0	0	0	0		0	5
08:15	0	0	1		1	0	0	0		0	0	0	0		0	0	1	0		1	2
08:30	2	0	1		3	0	0	0		0	0	0	0		0	0	2	0		2	5
08:45	1	0	1		2	0	0	0		0	0	0	0		0	0	0	0		0	2
Total Volume	6	0	3		9	0	1	1		2	0	0	0		0	0	3	0		3	14
% App Total	66.7%	0.0%	33.3%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.500	.000	.750		.750	.000	.250	.250		.250	.000	.000	.000		.000	.000	.375	.000		.375	.700

PM PEAK HOUR	23rd Avenue Southbound					E 12th Street Westbound					23rd Avenue Northbound					E 12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0		2	2
17:15	0	0	0		0	0	0	2		2	0	0	0		0	0	3	0		3	5
17:30	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
17:45	1	0	0		1	0	2	0		2	0	0	0		0	1	2	0		3	6
Total Volume	1	0	0		1	0	3	2		5	0	0	0		0	1	7	0		8	14
% App Total	100.0%	0.0%	0.0%			0.0%	60.0%	40.0%			0.0%	0.0%	0.0%			12.5%	87.5%	0.0%			
PHF	.250	.000	.000		.250	.000	.375	.250		.625	.000	.000	.000		.000	.250	.583	.000		.667	.583

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-069 23rd Avenue-E 12th Street.ppd
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	23rd Avenue Southbound					E 12th Street Westbound					23rd Avenue Northbound					E 12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
07:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
Total	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	6	0
08:00	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4	0
08:15	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	6	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
08:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	0
Total	1	0	0	0	1	0	8	0	0	8	0	0	0	0	0	0	5	0	0	5	14	0
16:00	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	10	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	6	0
16:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	4	0
Total	1	0	1	0	2	0	5	0	0	5	0	0	0	0	0	1	12	0	0	13	20	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
17:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	3	0
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	0
Total	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	8	0	0	8	10	0
Grand Total	2	0	2	0	4	0	17	1	0	18	0	0	0	0	0	1	27	0	0	28	50	0
Apprch %	50.0%	0.0%	50.0%			0.0%	94.4%	5.6%			0.0%	0.0%	0.0%			3.6%	96.4%	0.0%				
Total %	4.0%	0.0%	4.0%		8.0%	0.0%	34.0%	2.0%		36.0%	0.0%	0.0%	0.0%		0.0%	2.0%	54.0%	0.0%		56.0%	100.0%	

AM PEAK HOUR	23rd Avenue Southbound					E 12th Street Westbound					23rd Avenue Northbound					E 12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	3	0		3	0	0	0		0	0	1	0		1	4
08:15	1	0	0		1	0	4	0		4	0	0	0		0	0	1	0		1	6
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
08:45	0	0	0		0	0	1	0		1	0	0	0		0	0	2	0		2	3
Total Volume	1	0	0		1	0	8	0		8	0	0	0		0	0	5	0		5	14
% App Total	100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.000	.000		.250	.000	.500	.000		.500	.000	.000	.000		.000	.000	.625	.000		.625	.583

PM PEAK HOUR	23rd Avenue Southbound					E 12th Street Westbound					23rd Avenue Northbound					E 12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0		2	2
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0		2	2
17:30	0	0	0		0	0	0	1		1	0	0	0		0	0	2	0		2	3
17:45	0	0	0		0	0	1	0		1	0	0	0		0	0	2	0		2	3
Total Volume	0	0	0		0	0	1	1		2	0	0	0		0	0	8	0		8	10
% App Total	0.0%	0.0%	0.0%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.250		.500	.000	.000	.000		.000	.000	1.000	.000		1.000	.833

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-070 5th Avenue-E 10th Street.ppd
Date : 6/5/2013

Unshifted Count = All Vehicles

	5th Avenue Southbound					E 10th Street Westbound					5th Avenue Northbound					E 10th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	41	4	0	45	0	20	0	0	20	2	18	2	0	22	4	5	8	0	17	104	0
07:15	1	42	14	0	57	3	13	1	0	17	3	23	6	0	32	2	12	16	0	30	136	0
07:30	2	56	13	0	71	3	31	2	0	36	2	24	2	0	28	9	9	16	0	34	169	0
07:45	1	69	13	0	83	2	63	3	0	68	11	40	5	0	56	8	19	15	0	42	249	0
Total	4	208	44	0	256	8	127	6	0	141	18	105	15	0	138	23	45	55	0	123	658	0
08:00	1	64	16	0	81	2	59	1	0	62	11	31	5	0	47	8	25	21	0	54	244	0
08:15	3	60	22	0	85	2	79	3	0	84	10	31	2	0	43	6	24	15	0	45	257	0
08:30	1	58	22	0	81	4	49	3	0	56	15	20	1	0	36	21	27	16	0	64	237	0
08:45	1	51	27	0	79	4	45	4	0	53	11	27	2	0	40	6	14	15	0	35	207	0
Total	6	233	87	0	326	12	232	11	0	255	47	109	10	0	166	41	90	67	0	198	945	0
16:00	4	33	13	0	50	5	13	4	0	22	6	67	2	0	75	21	37	13	0	71	218	0
16:15	2	47	11	0	60	1	14	4	0	19	10	82	4	0	96	22	28	7	0	57	232	0
16:30	0	42	16	0	58	6	33	2	0	41	6	73	3	0	82	21	36	10	0	67	248	0
16:45	1	40	12	0	53	0	34	2	0	36	6	86	4	0	96	19	31	5	0	55	240	0
Total	7	162	52	0	221	12	94	12	0	118	28	308	13	0	349	83	132	35	0	250	938	0
17:00	5	55	10	0	70	10	22	5	0	37	7	72	4	0	83	24	50	22	0	96	286	0
17:15	2	41	8	0	51	5	32	5	0	42	6	92	7	0	105	27	58	18	0	103	301	0
17:30	1	35	7	0	43	5	29	4	0	38	10	93	5	0	108	14	45	19	0	78	267	0
17:45	2	33	10	0	45	1	14	3	0	18	12	94	5	0	111	22	39	8	0	69	243	0
Total	10	164	35	0	209	21	97	17	0	135	35	351	21	0	407	87	192	67	0	346	1097	0
Grand Total	27	767	218	0	1012	53	550	46	0	649	128	873	59	0	1060	234	459	224	0	917	3638	0
Apprch %	2.7%	75.8%	21.5%	0.0%		8.2%	84.7%	7.1%	0.0%		12.1%	82.4%	5.6%	0.0%		25.5%	50.1%	24.4%	0.0%			
Total %	0.7%	21.1%	6.0%	0.0%	27.8%	1.5%	15.1%	1.3%	0.0%	17.8%	3.5%	24.0%	1.6%	0.0%	29.1%	6.4%	12.6%	6.2%	0.0%	25.2%	100.0%	

AM PEAK HOUR	5th Avenue Southbound					E 10th Street Westbound					5th Avenue Northbound					E 10th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	1	69	13	0	83	2	63	3	0	68	11	40	5	0	56	8	19	15	0	42	249
08:00	1	64	16	0	81	2	59	1	0	62	11	31	5	0	47	8	25	21	0	54	244
08:15	3	60	22	0	85	2	79	3	0	84	10	31	2	0	43	6	24	15	0	45	257
08:30	1	58	22	0	81	4	49	3	0	56	15	20	1	0	36	21	27	16	0	64	237
Total Volume	6	251	73	0	330	10	250	10	0	270	47	122	13	0	182	43	95	67	0	205	987
% App Total	1.8%	76.1%	22.1%	0.0%		3.7%	92.6%	3.7%	0.0%		25.8%	67.0%	7.1%	0.0%		21.0%	46.3%	32.7%	0.0%		
PHF	.500	.909	.830	.000	.971	.625	.791	.833	.000	.804	.783	.763	.650	.000	.813	.512	.880	.798	.000	.801	.960

PM PEAK HOUR	5th Avenue Southbound					E 10th Street Westbound					5th Avenue Northbound					E 10th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	5	55	10	0	70	10	22	5	0	37	7	72	4	0	83	24	50	22	0	96	286
17:15	2	41	8	0	51	5	32	5	0	42	6	92	7	0	105	27	58	18	0	103	301
17:30	1	35	7	0	43	5	29	4	0	38	10	93	5	0	108	14	45	19	0	78	267
17:45	2	33	10	0	45	1	14	3	0	18	12	94	5	0	111	22	39	8	0	69	243
Total Volume	10	164	35	0	209	21	97	17	0	135	35	351	21	0	407	87	192	67	0	346	1097
% App Total	4.8%	78.5%	16.7%	0.0%		15.6%	71.9%	12.6%	0.0%		8.6%	86.2%	5.2%	0.0%		25.1%	55.5%	19.4%	0.0%		
PHF	.500	.745	.875	.000	.746	.525	.758	.850	.000	.804	.729	.934	.750	.000	.917	.806	.828	.761	.000	.840	.911

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-070 5th Avenue-E 10th Street.ppd
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	5th Avenue Southbound					E 10th Street Westbound					5th Avenue Northbound					E 10th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	1	4	2	1	4	0	3	5	0	0	0	4	0	0	1	0	2	1	8	13
07:15	0	0	2	2	2	0	2	0	0	2	0	2	1	0	3	0	4	0	4	4	11	6
07:30	0	1	0	8	1	0	1	0	2	1	0	1	0	1	1	0	2	0	3	2	5	14
07:45	0	4	1	5	5	1	4	0	1	5	3	2	0	3	5	0	1	0	3	1	16	12
Total	0	6	4	19	10	2	11	0	6	13	3	5	1	8	9	0	8	0	12	8	40	45
08:00	0	0	2	5	2	0	6	0	0	6	2	0	0	2	2	0	2	2	4	4	14	11
08:15	0	0	1	4	1	0	0	0	1	0	0	1	1	3	2	0	0	0	4	0	3	12
08:30	0	1	0	7	1	0	0	0	2	0	0	0	0	6	0	0	2	0	1	2	3	16
08:45	0	1	2	3	3	0	4	0	2	4	1	0	0	5	1	0	4	0	4	4	12	14
Total	0	2	5	19	7	0	10	0	5	10	3	1	1	16	5	0	8	2	13	10	32	53
16:00	0	1	0	0	1	0	0	0	0	0	0	2	0	4	2	1	1	0	3	2	5	7
16:15	0	0	3	1	3	0	0	0	2	0	0	0	0	1	0	2	1	0	2	3	6	6
16:30	0	0	0	2	0	0	0	0	1	0	0	0	0	1	0	0	2	0	4	2	2	8
16:45	0	1	0	2	1	0	1	0	1	1	1	1	1	2	3	3	6	0	0	9	14	5
Total	0	2	3	5	5	0	1	0	4	1	1	3	1	8	5	6	10	0	9	16	27	26
17:00	0	1	0	1	1	0	0	0	1	0	1	0	0	3	1	0	2	1	2	3	5	7
17:15	0	2	1	2	3	0	1	2	0	3	0	1	0	3	1	1	4	0	2	5	12	7
17:30	0	1	1	0	2	0	0	0	1	0	0	2	0	2	2	1	4	1	1	6	10	4
17:45	0	2	0	1	2	0	2	1	1	3	0	4	0	2	4	0	3	0	2	3	12	6
Total	0	6	2	4	8	0	3	3	3	6	1	7	0	10	8	2	13	2	7	17	39	24
Grand Total	0	16	14	47	30	2	25	3	18	30	8	16	3	42	27	8	39	4	41	51	138	148
Apprch %	0.0%	53.3%	46.7%			6.7%	83.3%	10.0%			29.6%	59.3%	11.1%			15.7%	76.5%	7.8%				
Total %	0.0%	11.6%	10.1%		21.7%	1.4%	18.1%	2.2%		21.7%	5.8%	11.6%	2.2%		19.6%	5.8%	28.3%	2.9%		37.0%	100.0%	

AM PEAK HOUR	5th Avenue Southbound					E 10th Street Westbound					5th Avenue Northbound					E 10th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	4	1		5	1	4	0		5	3	2	0		5	0	1	0		1	16
08:00	0	0	2		2	0	6	0		6	2	0	0		2	0	2	2		4	14
08:15	0	0	1		1	0	0	0		0	0	1	1		2	0	0	0		0	3
08:30	0	1	0		1	0	0	0		0	0	0	0		0	0	2	0		2	3
Total Volume	0	5	4		9	1	10	0		11	5	3	1		9	0	5	2		7	36
% App Total	0.0%	55.6%	44.4%			9.1%	90.9%	0.0%			55.6%	33.3%	11.1%			0.0%	71.4%	28.6%			
PHF	.000	.313	.500		.450	.250	.417	.000		.458	.417	.375	.250		.450	.000	.625	.250		.438	.563

PM PEAK HOUR	5th Avenue Southbound					E 10th Street Westbound					5th Avenue Northbound					E 10th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	1	0		1	0	0	0		0	1	0	0		1	0	2	1		3	5
17:15	0	2	1		3	0	1	2		3	0	1	0		1	1	4	0		5	12
17:30	0	1	1		2	0	0	0		0	0	2	0		2	1	4	1		6	10
17:45	0	2	0		2	0	2	1		3	0	4	0		4	0	3	0		3	12
Total Volume	0	6	2		8	0	3	3		6	1	7	0		8	2	13	2		17	39
% App Total	0.0%	75.0%	25.0%			0.0%	50.0%	50.0%			12.5%	87.5%	0.0%			11.8%	76.5%	11.8%			
PHF	.000	.750	.500		.667	.000	.375	.375		.500	.250	.438	.000		.500	.500	.813	.500		.708	.813

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-070 5th Avenue-E 10th Street.ppd
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	5th Avenue Southbound					E 10th Street Westbound					5th Avenue Northbound					E 10th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	1	0	1	0	2	4	0
07:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	2	0
07:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	2	0	1	0	3	8	0
08:00	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	3	0
08:15	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0
08:30	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	2	0	0	0	2	5	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	0	0	4	0	0	1	0	1	0	2	0	0	2	2	0	2	0	4	11	0
16:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	2	3	0
16:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
16:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	3	0	3	7	0
17:00	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	1	0	1	4	0
17:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
17:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	0	2	0	2	7	0
Grand Total	0	9	0	0	9	0	1	1	0	2	1	8	1	0	10	4	0	8	0	12	33	0
Apprch %	0.0%	100.0%	0.0%			0.0%	50.0%	50.0%			10.0%	80.0%	10.0%			33.3%	0.0%	66.7%				
Total %	0.0%	27.3%	0.0%		27.3%	0.0%	3.0%	3.0%		6.1%	3.0%	24.2%	3.0%		30.3%	12.1%	0.0%	24.2%		36.4%	100.0%	

AM PEAK HOUR	5th Avenue Southbound					E 10th Street Westbound					5th Avenue Northbound					E 10th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:00	0	1	0		1	0	0	0		0	0	1	0		1	0	0	1		1	3
08:15	0	2	0		2	0	0	0		0	0	0	0		0	0	0	1		1	3
08:30	0	1	0		1	0	0	1		1	0	1	0		1	2	0	0		2	5
Total Volume	0	4	0		4	0	0	1		1	0	3	0		3	2	0	2		4	12
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			50.0%	0.0%	50.0%			
PHF	.000	.500	.000		.500	.000	.000	.250		.250	.000	.750	.000		.750	.250	.000	.500		.500	.600

PM PEAK HOUR	5th Avenue Southbound					E 10th Street Westbound					5th Avenue Northbound					E 10th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	0	0	0		0	0	2	1		3	0	0	1		1	4
17:15	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	1		1	1
17:45	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
Total Volume	0	2	0		2	0	0	0		0	0	2	1		3	0	0	2		2	7
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	66.7%	33.3%			0.0%	0.0%	100.0%			
PHF	.000	.500	.000		.500	.000	.000	.000		.000	.000	.250	.250		.250	.000	.000	.500		.500	.438

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-071 14th Avenue-E 8th Street.ppd
Date : 6/5/2013

Unshifted Count = All Vehicles

	14th Avenue Southbound					E 8th Street Westbound					14th Avenue Northbound					E 8th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	31	56	0	2	89	0	0	0	0	0	0	11	23	0	34	2	25	0	0	27	150	2
07:15	52	60	0	1	113	0	0	0	0	0	0	19	26	0	45	9	20	1	0	30	188	1
07:30	68	99	0	0	167	0	0	0	0	0	0	7	29	0	36	13	32	0	0	45	248	0
07:45	77	174	0	1	252	0	0	0	0	0	0	10	40	0	50	12	42	2	0	56	358	1
Total	228	389	0	4	621	0	0	0	0	0	0	47	118	0	165	36	119	3	0	158	944	4
08:00	83	170	0	2	255	0	0	0	0	0	0	12	50	0	62	15	57	0	0	72	389	2
08:15	77	190	0	1	268	0	0	0	0	0	0	16	45	0	61	19	54	0	0	73	402	1
08:30	77	145	0	3	225	0	0	0	0	0	0	14	39	0	53	12	58	2	0	72	350	3
08:45	76	178	0	1	255	0	0	0	0	0	0	12	35	0	47	12	61	0	0	73	375	1
Total	313	683	0	7	1003	0	0	0	0	0	0	54	169	0	223	58	230	2	0	290	1516	7
16:00	45	53	0	0	98	0	0	0	0	0	0	37	85	0	122	23	62	0	0	85	305	0
16:15	70	61	0	0	131	0	0	0	0	0	0	47	89	0	136	27	70	2	0	99	366	0
16:30	76	64	0	0	140	0	0	0	0	0	0	62	162	0	224	30	70	3	0	103	467	0
16:45	56	76	0	0	132	0	0	0	0	0	0	90	170	0	260	30	78	2	0	110	502	0
Total	247	254	0	0	501	0	0	0	0	0	0	236	506	0	742	110	280	7	0	397	1640	0
17:00	64	70	0	0	134	0	0	0	0	0	0	75	220	0	295	34	94	1	0	129	558	0
17:15	66	73	0	1	140	0	0	0	0	0	0	91	182	0	273	29	87	0	0	116	529	1
17:30	60	59	0	0	119	0	0	0	0	0	0	81	152	0	233	46	91	1	0	138	490	0
17:45	57	50	0	2	109	0	0	0	0	0	0	83	149	0	232	35	83	1	0	119	460	2
Total	247	252	0	3	502	0	0	0	0	0	0	330	703	0	1033	144	355	3	0	502	2037	3
Grand Total	1035	1578	0	14	2627	0	0	0	0	0	0	667	1496	0	2163	348	984	15	0	1347	6137	14
Apprch %	39.4%	60.1%	0.0%	0.5%		0.0%	0.0%	0.0%	0.0%		0.0%	30.8%	69.2%	0.0%		25.8%	73.1%	1.1%	0.0%			
Total %	16.9%	25.7%	0.0%	0.2%	42.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.9%	24.4%	0.0%	35.2%	5.7%	16.0%	0.2%	0.0%	21.9%	100.0%	

AM PEAK HOUR	14th Avenue Southbound					E 8th Street Westbound					14th Avenue Northbound					E 8th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	83	170	0	2	255	0	0	0	0	0	0	12	50	0	62	15	57	0	0	72	389
08:15	77	190	0	1	268	0	0	0	0	0	0	16	45	0	61	19	54	0	0	73	402
08:30	77	145	0	3	225	0	0	0	0	0	0	14	39	0	53	12	58	2	0	72	350
08:45	76	178	0	1	255	0	0	0	0	0	0	12	35	0	47	12	61	0	0	73	375
Total Volume	313	683	0	7	1003	0	0	0	0	0	0	54	169	0	223	58	230	2	0	290	1516
% App Total	31.2%	68.1%	0.0%	0.7%		0.0%	0.0%	0.0%	0.0%		0.0%	24.2%	75.8%	0.0%		20.0%	79.3%	0.7%	0.0%		
PHF	.943	.899	.000	.583	.936	.000	.000	.000	.000	.000	.000	.844	.845	.000	.899	.763	.943	.250	.000	.993	.943

PM PEAK HOUR	14th Avenue Southbound					E 8th Street Westbound					14th Avenue Northbound					E 8th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	56	76	0	0	132	0	0	0	0	0	0	90	170	0	260	30	78	2	0	110	502
17:00	64	70	0	0	134	0	0	0	0	0	0	75	220	0	295	34	94	1	0	129	558
17:15	66	73	0	1	140	0	0	0	0	0	0	91	182	0	273	29	87	0	0	116	529
17:30	60	59	0	0	119	0	0	0	0	0	0	81	152	0	233	46	91	1	0	138	490
Total Volume	246	278	0	1	525	0	0	0	0	0	0	337	724	0	1061	139	350	4	0	493	2079
% App Total	46.9%	53.0%	0.0%	0.2%		0.0%	0.0%	0.0%	0.0%		0.0%	31.8%	68.2%	0.0%		28.2%	71.0%	0.8%	0.0%		
PHF	.932	.914	.000	.250	.938	.000	.000	.000	.000	.000	.000	.926	.823	.000	.899	.755	.931	.500	.000	.893	.931

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-071 14th Avenue-E 8th Street.ppd
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	14th Avenue Southbound					E 8th Street Westbound					14th Avenue Northbound					E 8th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4	0
08:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
08:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3	0
08:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2	1
08:45	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	5	0
Total	1	0	6	0	7	0	0	0	0	0	0	0	0	0	0	1	3	0	1	4	11	1
16:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	3	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	4	0
Total	0	0	3	0	3	0	0	1	0	1	0	0	0	0	0	3	1	0	1	4	8	1
Grand Total	1	0	14	0	15	0	0	1	0	1	0	0	0	0	0	5	5	0	2	10	26	2
Apprch %	6.7%	0.0%	93.3%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			50.0%	50.0%	0.0%				
Total %	3.8%	0.0%	53.8%		57.7%	0.0%	0.0%	3.8%		3.8%	0.0%	0.0%	0.0%		0.0%	19.2%	19.2%	0.0%		38.5%	100.0%	

AM PEAK HOUR	14th Avenue Southbound					E 8th Street Westbound					14th Avenue Northbound					E 8th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	1		1	0	0	0		0	0	0	0		0	0	0	0		0	1
08:15	0	0	1		1	0	0	0		0	0	0	0		0	0	2	0		2	3
08:30	0	0	1		1	0	0	0		0	0	0	0		0	0	1	0		1	2
08:45	1	0	3		4	0	0	0		0	0	0	0		0	1	0	0		1	5
Total Volume	1	0	6		7	0	0	0		0	0	0	0		0	1	3	0		4	11
% App Total	14.3%	0.0%	85.7%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			25.0%	75.0%	0.0%			
PHF	.250	.000	.500		.438	.000	.000	.000		.000	.000	.000	.000		.000	.250	.375	.000		.500	.550

PM PEAK HOUR	14th Avenue Southbound					E 8th Street Westbound					14th Avenue Northbound					E 8th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:00	0	0	0		0	0	0	0		0	0	0	0		0	2	1	0		3	3
17:15	0	0	0		0	0	0	0		0	0	0	0		0	1	0	0		1	1
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	3	1	0		4	4
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			75.0%	25.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.375	.250	.000		.333	.333

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-071 14th Avenue-E 8th Street.ppd
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	14th Avenue Southbound					E 8th Street Westbound					14th Avenue Northbound					E 8th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	4	4	0
07:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0
Total	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4	0	3	0	7	9	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	8	8	0
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	4	4	0
16:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	5	0
16:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	6	0
Total	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	3	2	7	0	12	17	0
17:00	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	5	0
Grand Total	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	14	3	13	0	30	39	0
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			46.7%	10.0%	43.3%				
Total %	0.0%	23.1%	0.0%		23.1%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	35.9%	7.7%	33.3%		76.9%	100.0%	

AM PEAK HOUR	14th Avenue Southbound					E 8th Street Westbound					14th Avenue Northbound					E 8th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	2	0	0		2	2
08:15	0	0	0		0	0	0	0		0	0	0	0		0	2	0	0		2	2
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	1		1	1
08:45	0	0	0		0	0	0	0		0	0	0	0		0	3	0	0		3	3
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	7	0	1		8	8
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			87.5%	0.0%	12.5%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.583	.000	.250		.667	.667

PM PEAK HOUR	14th Avenue Southbound					E 8th Street Westbound					14th Avenue Northbound					E 8th Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	2	0		2	0	0	0		0	0	0	0		0	2	0	2		4	6
17:00	0	2	0		2	0	0	0		0	0	0	0		0	0	0	1		1	3
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	1	1		2	2
Total Volume	0	4	0		4	0	0	0		0	0	0	0		0	2	1	4		7	11
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			28.6%	14.3%	57.1%			
PHF	.000	.500	.000		.500	.000	.000	.000		.000	.000	.000	.000		.000	.250	.250	.500		.438	.458

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-001 50th Avenue-San Leandro Street.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	1	43	11	0	55	8	23	4	0	35	3	83	7	0	93	6	12	2	0	20	203	0
07:15	4	56	5	0	65	7	18	5	0	30	9	109	5	0	123	8	16	1	0	25	243	0
07:30	3	57	6	0	66	4	34	9	0	47	13	148	0	0	161	8	14	2	0	24	298	0
07:45	4	84	15	0	103	7	29	7	0	43	14	191	4	0	209	14	19	3	0	36	391	0
Total	12	240	37	0	289	26	104	25	0	155	39	531	16	0	586	36	61	8	0	105	1135	0
08:00	1	107	22	0	130	19	25	7	0	51	6	248	9	0	263	10	28	2	0	40	484	0
08:15	5	91	26	0	122	16	33	9	0	58	6	230	6	0	242	15	15	5	0	35	457	0
08:30	5	81	20	0	106	16	34	6	0	56	10	185	5	0	200	21	15	7	0	43	405	0
08:45	6	84	16	0	106	8	30	12	0	50	7	188	4	0	199	8	21	1	0	30	385	0
Total	17	363	84	0	464	59	122	34	0	215	29	851	24	0	904	54	79	15	0	148	1731	0
Grand Total	29	603	121	0	753	85	226	59	0	370	68	1382	40	0	1490	90	140	23	0	253	2866	0
Apprch %	3.9%	80.1%	16.1%	0.0%		23.0%	61.1%	15.9%	0.0%		4.6%	92.8%	2.7%	0.0%		35.6%	55.3%	9.1%	0.0%			
Total %	1.0%	21.0%	4.2%	0.0%	26.3%	3.0%	7.9%	2.1%	0.0%	12.9%	2.4%	48.2%	1.4%	0.0%	52.0%	3.1%	4.9%	0.8%	0.0%	8.8%	100.0%	

AM PEAK HOUR	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	4	84	15	0	103	7	29	7	0	43	14	191	4	0	209	14	19	3	0	36	391
08:00	1	107	22	0	130	19	25	7	0	51	6	248	9	0	263	10	28	2	0	40	484
08:15	5	91	26	0	122	16	33	9	0	58	6	230	6	0	242	15	15	5	0	35	457
08:30	5	81	20	0	106	16	34	6	0	56	10	185	5	0	200	21	15	7	0	43	405
Total Volume	15	363	83	0	461	58	121	29	0	208	36	854	24	0	914	60	77	17	0	154	1737
% App Total	3.3%	78.7%	18.0%	0.0%		27.9%	58.2%	13.9%	0.0%		3.9%	93.4%	2.6%	0.0%		39.0%	50.0%	11.0%	0.0%		
PHF	.750	.848	.798	.000	.887	.763	.890	.806	.000	.897	.643	.861	.667	.000	.869	.714	.688	.607	.000	.895	.897

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-001 50th Avenue-San Leandro Street.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	0	1	0	1	0	0	1	0	1	0	1	1	0	0	0	0	0	3	1
07:15	0	0	0	1	0	0	3	0	0	3	0	1	0	1	1	0	0	0	2	0	4	4
07:30	0	1	1	2	2	0	1	0	0	1	0	1	0	2	1	0	0	0	0	0	4	4
07:45	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	2	1	4	3	0	6	0	0	6	0	3	0	4	3	0	0	0	2	0	12	10
08:00	0	1	1	4	2	0	1	0	0	1	0	1	0	0	1	0	0	0	3	0	4	7
08:15	0	0	0	2	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	3
08:30	0	0	1	0	1	0	1	0	0	1	0	0	0	2	0	0	1	0	0	1	3	2
08:45	0	0	1	3	1	0	0	0	0	0	0	2	1	1	3	0	0	0	1	0	4	5
Total	0	1	3	9	4	0	3	0	1	3	0	3	1	3	4	0	1	0	4	1	12	17
Grand Total	0	3	4	13	7	0	9	0	1	9	0	6	1	7	7	0	1	0	6	1	24	27
Apprch %	0.0%	42.9%	57.1%			0.0%	100.0%	0.0%			0.0%	85.7%	14.3%			0.0%	100.0%	0.0%				
Total %	0.0%	12.5%	16.7%		29.2%	0.0%	37.5%	0.0%		37.5%	0.0%	25.0%	4.2%		29.2%	0.0%	4.2%	0.0%		4.2%	100.0%	

AM PEAK HOUR	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
08:00	0	1	1		2	0	1	0		1	0	1	0		1	0	0	0		0	4
08:15	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
08:30	0	0	1		1	0	1	0		1	0	0	0		0	0	1	0		1	3
Total Volume	0	1	2		3	0	4	0		4	0	1	0		1	0	1	0		1	9
% App Total	0.0%	33.3%	66.7%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.250	.500		.375	.000	1.000	.000		1.000	.000	.250	.000		.250	.000	.250	.000		.250	.563

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-001 50th Avenue-San Leandro Street.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	2	1	0	3	0	1	1	0	2	0	2	0	0	2	0	2	1	0	3	10	0
07:15	0	4	0	0	4	0	0	0	0	0	1	4	0	0	5	0	2	1	0	3	12	0
07:30	0	3	1	0	4	1	0	0	0	1	0	3	0	0	3	0	4	0	0	4	12	0
07:45	0	7	0	0	7	1	0	0	0	1	0	2	0	0	2	2	1	0	0	3	13	0
Total	0	16	2	0	18	2	1	1	0	4	1	11	0	0	12	2	9	2	0	13	47	0
08:00	0	3	1	0	4	0	2	1	0	3	0	8	1	0	9	2	1	0	0	3	19	0
08:15	1	3	1	0	5	1	0	0	0	1	0	5	0	0	5	0	0	1	0	1	12	0
08:30	0	2	1	0	3	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	10	0
08:45	0	1	0	0	1	0	1	0	0	1	1	4	0	0	5	1	2	0	0	3	10	0
Total	1	9	3	0	13	1	3	1	0	5	1	23	1	0	25	4	3	1	0	8	51	0
Grand Total	1	25	5	0	31	3	4	2	0	9	2	34	1	0	37	6	12	3	0	21	98	0
Apprch %	3.2%	80.6%	16.1%			33.3%	44.4%	22.2%			5.4%	91.9%	2.7%			28.6%	57.1%	14.3%				
Total %	1.0%	25.5%	5.1%		31.6%	3.1%	4.1%	2.0%		9.2%	2.0%	34.7%	1.0%		37.8%	6.1%	12.2%	3.1%		21.4%	100.0%	

AM PEAK HOUR	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	7	0		7	1	0	0		1	0	2	0		2	2	1	0		3	13
08:00	0	3	1		4	0	2	1		3	0	8	1		9	2	1	0		3	19
08:15	1	3	1		5	1	0	0		1	0	5	0		5	0	0	1		1	12
08:30	0	2	1		3	0	0	0		0	0	6	0		6	1	0	0		1	10
Total Volume	1	15	3		19	2	2	1		5	0	21	1		22	5	2	1		8	54
% App Total	5.3%	78.9%	15.8%			40.0%	40.0%	20.0%			0.0%	95.5%	4.5%			62.5%	25.0%	12.5%			
PHF	.250	.536	.750		.679	.500	.250	.250		.417	.000	.656	.250		.611	.625	.500	.250		.667	.711

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-085 50th Avenue-San Leandro Street.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	5	183	12	0	200	16	21	9	0	46	4	114	12	0	130	29	35	6	0	70	446	0
16:15	10	209	22	0	241	21	15	9	0	45	3	101	9	0	113	19	48	11	0	78	477	0
16:30	4	181	14	0	199	21	14	9	0	44	3	126	13	0	142	27	44	11	0	82	467	0
16:45	13	197	16	0	226	15	20	5	0	40	2	120	7	0	129	28	41	8	0	77	472	0
Total	32	770	64	0	866	73	70	32	0	175	12	461	41	0	514	103	168	36	0	307	1862	0
17:00	9	215	10	0	234	25	19	4	0	48	4	129	7	0	140	24	47	10	0	81	503	0
17:15	12	212	11	0	235	16	12	10	0	38	3	105	7	0	115	23	59	4	0	86	474	0
17:30	9	226	9	0	244	15	17	9	0	41	6	118	12	0	136	14	45	7	0	66	487	0
17:45	7	212	5	0	224	6	15	11	0	32	6	103	15	0	124	14	34	8	0	56	436	0
Total	37	865	35	0	937	62	63	34	0	159	19	455	41	0	515	75	185	29	0	289	1900	0
Grand Total	69	1635	99	0	1803	135	133	66	0	334	31	916	82	0	1029	178	353	65	0	596	3762	0
Apprch %	3.8%	90.7%	5.5%	0.0%		40.4%	39.8%	19.8%	0.0%		3.0%	89.0%	8.0%	0.0%		29.9%	59.2%	10.9%	0.0%			
Total %	1.8%	43.5%	2.6%	0.0%	47.9%	3.6%	3.5%	1.8%	0.0%	8.9%	0.8%	24.3%	2.2%	0.0%	27.4%	4.7%	9.4%	1.7%	0.0%	15.8%	100.0%	

PM PEAK HOUR	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	13	197	16	0	226	15	20	5	0	40	2	120	7	0	129	28	41	8	0	77	472
17:00	9	215	10	0	234	25	19	4	0	48	4	129	7	0	140	24	47	10	0	81	503
17:15	12	212	11	0	235	16	12	10	0	38	3	105	7	0	115	23	59	4	0	86	474
17:30	9	226	9	0	244	15	17	9	0	41	6	118	12	0	136	14	45	7	0	66	487
Total Volume	43	850	46	0	939	71	68	28	0	167	15	472	33	0	520	89	192	29	0	310	1936
% App Total	4.6%	90.5%	4.9%	0.0%		42.5%	40.7%	16.8%	0.0%		2.9%	90.8%	6.3%	0.0%		28.7%	61.9%	9.4%	0.0%		
PHF	.827	.940	.719	.000	.962	.710	.850	.700	.000	.870	.625	.915	.688	.000	.929	.795	.814	.725	.000	.901	.962

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-085 50th Avenue-San Leandro Street.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
16:15	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0	0	2	3	1
16:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
16:45	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	2
Total	0	1	0	1	1	1	0	0	1	1	0	1	0	2	1	1	1	0	1	2	5	5
17:00	0	1	0	0	1	0	0	0	0	0	0	2	1	0	3	0	0	0	3	0	4	3
17:15	0	0	0	2	0	1	0	0	4	1	0	0	0	0	0	0	2	0	3	2	3	9
17:30	0	0	0	0	0	0	1	0	0	1	0	2	0	2	2	0	0	0	0	0	3	2
17:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	2	0	2	2	1	1	0	4	2	0	4	1	2	5	0	2	0	7	2	11	15
Grand Total	0	3	0	3	3	2	1	0	5	3	0	5	1	4	6	1	3	0	8	4	16	20
Apprch %	0.0%	100.0%	0.0%			66.7%	33.3%	0.0%			0.0%	83.3%	16.7%			25.0%	75.0%	0.0%				
Total %	0.0%	18.8%	0.0%		18.8%	12.5%	6.3%	0.0%		18.8%	0.0%	31.3%	6.3%		37.5%	6.3%	18.8%	0.0%		25.0%	100.0%	

PM PEAK HOUR	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
17:00	0	1	0		1	0	0	0		0	0	2	1		3	0	0	0		0	4
17:15	0	0	0		0	1	0	0		1	0	0	0		0	0	2	0		2	3
17:30	0	0	0		0	0	1	0		1	0	2	0		2	0	0	0		0	3
Total Volume	0	1	0		1	2	1	0		3	0	4	1		5	0	2	0		2	11
% App Total	0.0%	100.0%	0.0%			66.7%	33.3%	0.0%			0.0%	80.0%	20.0%			0.0%	100.0%	0.0%			
PHF	.000	.250	.000		.250	.500	.250	.000		.750	.000	.500	.250		.417	.000	.250	.000		.250	.688

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-085 50th Avenue-San Leandro Street.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	4	1	0	5	0	1	0	0	1	1	0	0	0	1	1	2	1	0	4	11	0
16:15	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	8	0
16:30	0	0	1	0	1	0	1	1	0	2	0	1	0	0	1	3	0	0	0	3	7	0
16:45	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	2	1	0	0	3	9	0
Total	0	13	3	0	16	0	2	1	0	3	1	2	0	0	3	6	6	1	0	13	35	0
17:00	0	2	1	0	3	1	0	1	0	2	0	1	0	0	1	0	1	1	0	2	8	0
17:15	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	0
17:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
17:45	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	5	0
Total	0	5	2	0	7	1	2	1	0	4	0	1	0	0	1	3	2	1	0	6	18	0
Grand Total	0	18	5	0	23	1	4	2	0	7	1	3	0	0	4	9	8	2	0	19	53	0
Apprch %	0.0%	78.3%	21.7%			14.3%	57.1%	28.6%			25.0%	75.0%	0.0%			47.4%	42.1%	10.5%				
Total %	0.0%	34.0%	9.4%		43.4%	1.9%	7.5%	3.8%		13.2%	1.9%	5.7%	0.0%		7.5%	17.0%	15.1%	3.8%		35.8%	100.0%	

PM PEAK HOUR	50th Avenue Southbound					San Leandro Street Westbound					50th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	5	0		5	0	0	0		0	0	1	0		1	2	1	0		3	9
17:00	0	2	1		3	1	0	1		2	0	1	0		1	0	1	1		2	8
17:15	0	1	1		2	0	0	0		0	0	0	0		0	1	0	0		1	3
17:30	0	0	0		0	0	1	0		1	0	0	0		0	0	1	0		1	2
Total Volume	0	8	2		10	1	1	1		3	0	2	0		2	3	3	1		7	22
% App Total	0.0%	80.0%	20.0%			33.3%	33.3%	33.3%			0.0%	100.0%	0.0%			42.9%	42.9%	14.3%			
PHF	.000	.400	.500		.500	.250	.250	.250		.375	.000	.500	.000		.500	.375	.750	.250		.583	.611

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-002 Seminary Avenue-San Leandro Street.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	5	54	0	0	59	61	0	18	0	79	3	84	16	0	103	0	0	1	0	1	242	0
07:15	5	66	2	0	73	40	0	24	0	64	1	107	15	0	123	1	1	3	0	5	265	0
07:30	11	73	1	0	85	80	0	26	0	106	0	156	14	0	170	0	0	1	0	1	362	0
07:45	17	81	4	0	102	84	2	27	0	113	4	181	22	0	207	0	0	1	0	1	423	0
Total	38	274	7	0	319	265	2	95	0	362	8	528	67	0	603	1	1	6	0	8	1292	0
08:00	17	116	1	0	134	83	1	26	0	110	7	222	21	0	250	0	0	1	0	1	495	0
08:15	14	82	2	0	98	62	0	33	0	95	6	257	35	0	298	0	0	4	0	4	495	0
08:30	14	120	0	0	134	63	0	21	0	84	4	186	24	0	214	0	0	7	0	7	439	0
08:45	20	105	3	0	128	58	0	31	0	89	1	207	41	0	249	0	0	5	0	5	471	0
Total	65	423	6	0	494	266	1	111	0	378	18	872	121	0	1011	0	0	17	0	17	1900	0
Grand Total	103	697	13	0	813	531	3	206	0	740	26	1400	188	0	1614	1	1	23	0	25	3192	0
Apprch %	12.7%	85.7%	1.6%	0.0%		71.8%	0.4%	27.8%	0.0%		1.6%	86.7%	11.6%	0.0%		4.0%	4.0%	92.0%	0.0%			
Total %	3.2%	21.8%	0.4%	0.0%	25.5%	16.6%	0.1%	6.5%	0.0%	23.2%	0.8%	43.9%	5.9%	0.0%	50.6%	0.0%	0.0%	0.7%	0.0%	0.8%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	17	116	1	0	134	83	1	26	0	110	7	222	21	0	250	0	0	1	0	1	495
08:15	14	82	2	0	98	62	0	33	0	95	6	257	35	0	298	0	0	4	0	4	495
08:30	14	120	0	0	134	63	0	21	0	84	4	186	24	0	214	0	0	7	0	7	439
08:45	20	105	3	0	128	58	0	31	0	89	1	207	41	0	249	0	0	5	0	5	471
Total Volume	65	423	6	0	494	266	1	111	0	378	18	872	121	0	1011	0	0	17	0	17	1900
% App Total	13.2%	85.6%	1.2%	0.0%		70.4%	0.3%	29.4%	0.0%		1.8%	86.3%	12.0%	0.0%		0.0%	0.0%	100.0%	0.0%		
PHF	.813	.881	.500	.000	.922	.801	.250	.841	.000	.859	.643	.848	.738	.000	.848	.000	.000	.607	.000	.607	.960

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-002 Seminary Avenue-San Leandro Street.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	1	1	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	5	1
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	1	0	1	1	1	0	1	0	2	0	1	1	0	2	0	0	0	1	0	5	2
07:45	0	1	0	2	1	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	3	2
Total	0	3	0	4	3	4	1	1	0	6	0	2	2	0	4	0	0	0	1	0	13	5
08:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:30	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2	0
08:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	2	0	1	0	1	0	2	0	1	0	0	1	0	0	0	2	0	3	4
Grand Total	0	3	0	6	3	5	1	2	0	8	0	3	2	0	5	0	0	0	3	0	16	9
Apprch %	0.0%	100.0%	0.0%			62.5%	12.5%	25.0%			0.0%	60.0%	40.0%			0.0%	0.0%	0.0%				
Total %	0.0%	18.8%	0.0%		18.8%	31.3%	6.3%	12.5%		50.0%	0.0%	18.8%	12.5%		31.3%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:30	0	0	0		0	1	0	0		1	0	1	0		1	0	0	0		0	2
08:45	0	0	0		0	0	0	1		1	0	0	0		0	0	0	0		0	1
Total Volume	0	0	0		0	1	0	1		2	0	1	0		1	0	0	0		0	3
% App Total	0.0%	0.0%	0.0%			50.0%	0.0%	50.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.250	.000	.250		.500	.000	.250	.000		.250	.000	.000	.000		.000	.375

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-002 Seminary Avenue-San Leandro Street.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	2	0	0	2	1	0	0	0	1	1	3	1	0	5	0	0	1	0	1	9	0
07:15	0	4	0	0	4	0	0	0	0	0	0	3	3	0	6	1	0	2	0	3	13	0
07:30	0	6	0	0	6	1	0	0	0	1	0	2	2	0	4	0	0	1	0	1	12	0
07:45	0	6	2	0	8	3	0	0	0	3	1	2	2	0	5	0	0	1	0	1	17	0
Total	0	18	2	0	20	5	0	0	0	5	2	10	8	0	20	1	0	5	0	6	51	0
08:00	0	3	0	0	3	0	0	0	0	0	2	9	0	0	11	0	0	0	0	0	14	0
08:15	0	4	1	0	5	1	0	1	0	2	2	4	1	0	7	0	0	2	0	2	16	0
08:30	1	3	0	0	4	1	0	0	0	1	1	6	0	0	7	0	0	3	0	3	15	0
08:45	0	4	1	0	5	2	0	1	0	3	0	7	3	0	10	0	0	2	0	2	20	0
Total	1	14	2	0	17	4	0	2	0	6	5	26	4	0	35	0	0	7	0	7	65	0
Grand Total	1	32	4	0	37	9	0	2	0	11	7	36	12	0	55	1	0	12	0	13	116	0
Apprch %	2.7%	86.5%	10.8%			81.8%	0.0%	18.2%			12.7%	65.5%	21.8%			7.7%	0.0%	92.3%				
Total %	0.9%	27.6%	3.4%		31.9%	7.8%	0.0%	1.7%		9.5%	6.0%	31.0%	10.3%		47.4%	0.9%	0.0%	10.3%		11.2%	100.0%	

AM PEAK HOUR	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	3	0		3	0	0	0		0	2	9	0		11	0	0	0		0	14
08:15	0	4	1		5	1	0	1		2	2	4	1		7	0	0	2		2	16
08:30	1	3	0		4	1	0	0		1	1	6	0		7	0	0	3		3	15
08:45	0	4	1		5	2	0	1		3	0	7	3		10	0	0	2		2	20
Total Volume	1	14	2		17	4	0	2		6	5	26	4		35	0	0	7		7	65
% App Total	5.9%	82.4%	11.8%			66.7%	0.0%	33.3%			14.3%	74.3%	11.4%			0.0%	0.0%	100.0%			
PHF	.250	.875	.500		.850	.500	.000	.500		.500	.625	.722	.333		.795	.000	.000	.583		.583	.813

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-086 Seminary Avenue-San Leandro Street.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	13	184	0	0	197	50	0	22	0	72	2	116	55	0	173	0	0	5	0	5	447	0
16:15	27	227	0	0	254	52	0	14	0	66	2	110	56	0	168	0	0	2	0	2	490	0
16:30	39	189	2	0	230	54	0	17	0	71	0	124	60	0	184	3	0	6	0	9	494	0
16:45	28	199	1	0	228	58	0	15	0	73	2	123	52	0	177	2	1	3	0	6	484	0
Total	107	799	3	0	909	214	0	68	0	282	6	473	223	0	702	5	1	16	0	22	1915	0
17:00	28	228	0	0	256	61	1	20	0	82	1	110	53	0	164	0	1	3	0	4	506	0
17:15	30	201	1	0	232	59	0	9	0	68	1	125	57	0	183	0	2	0	0	2	485	0
17:30	30	231	0	0	261	48	0	13	0	61	1	126	53	0	180	1	0	1	0	2	504	0
17:45	22	216	0	0	238	52	0	11	0	63	0	109	48	0	157	0	0	0	0	0	458	0
Total	110	876	1	0	987	220	1	53	0	274	3	470	211	0	684	1	3	4	0	8	1953	0
Grand Total	217	1675	4	0	1896	434	1	121	0	556	9	943	434	0	1386	6	4	20	0	30	3868	0
Apprch %	11.4%	88.3%	0.2%	0.0%		78.1%	0.2%	21.8%	0.0%		0.6%	68.0%	31.3%	0.0%		20.0%	13.3%	66.7%	0.0%			
Total %	5.6%	43.3%	0.1%	0.0%	49.0%	11.2%	0.0%	3.1%	0.0%	14.4%	0.2%	24.4%	11.2%	0.0%	35.8%	0.2%	0.1%	0.5%	0.0%	0.8%	100.0%	

PM PEAK HOUR	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	28	199	1	0	228	58	0	15	0	73	2	123	52	0	177	2	1	3	0	6	484
17:00	28	228	0	0	256	61	1	20	0	82	1	110	53	0	164	0	1	3	0	4	506
17:15	30	201	1	0	232	59	0	9	0	68	1	125	57	0	183	0	2	0	0	2	485
17:30	30	231	0	0	261	48	0	13	0	61	1	126	53	0	180	1	0	1	0	2	504
Total Volume	116	859	2	0	977	226	1	57	0	284	5	484	215	0	704	3	4	7	0	14	1979
% App Total	11.9%	87.9%	0.2%	0.0%		79.6%	0.4%	20.1%	0.0%		0.7%	68.8%	30.5%	0.0%		21.4%	28.6%	50.0%	0.0%		
PHF	.967	.930	.500	.000	.936	.926	.250	.713	.000	.866	.625	.960	.943	.000	.962	.375	.500	.583	.000	.583	.978

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-086 Seminary Avenue-San Leandro Street.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	1	0	0	1	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	2	2
16:15	0	1	0	0	1	1	0	0	2	1	0	2	0	0	2	0	0	0	0	0	4	2
16:30	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	1	1	3	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	2	0	0	2	2	1	0	2	3	0	2	1	2	3	0	1	0	2	1	9	6
17:00	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	0
17:15	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	2
17:30	1	1	0	0	2	0	0	0	0	0	0	2	0	1	2	0	0	0	1	0	4	2
17:45	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	3	1
Total	1	5	0	0	6	0	0	0	0	0	0	5	0	2	5	0	0	0	3	0	11	5
Grand Total	1	7	0	0	8	2	1	0	2	3	0	7	1	4	8	0	1	0	5	1	20	11
Apprch %	12.5%	87.5%	0.0%			66.7%	33.3%	0.0%			0.0%	87.5%	12.5%			0.0%	100.0%	0.0%				
Total %	5.0%	35.0%	0.0%		40.0%	10.0%	5.0%	0.0%		15.0%	0.0%	35.0%	5.0%		40.0%	0.0%	5.0%	0.0%		5.0%	100.0%	

PM PEAK HOUR	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:00	0	1	0		1	0	0	0		0	0	2	0		2	0	0	0		0	3
17:15	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:30	1	1	0		2	0	0	0		0	0	2	0		2	0	0	0		0	4
Total Volume	1	3	0		4	0	0	0		0	0	4	0		4	0	0	0		0	8
% App Total	25.0%	75.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.250	.750	.000		.500	.000	.000	.000		.000	.000	.500	.000		.500	.000	.000	.000		.000	.500

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-086 Seminary Avenue-San Leandro Street.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	7	0	0	7	1	0	1	0	2	1	0	0	0	1	0	0	0	0	0	10	0
16:15	0	5	0	0	5	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	8	0
16:30	0	0	0	0	0	1	0	0	0	1	0	2	0	0	2	0	0	1	0	1	4	0
16:45	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4	0
Total	0	14	1	0	15	2	0	1	0	3	3	4	0	0	7	0	0	1	0	1	26	0
17:00	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
17:15	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	2	0
17:30	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0
17:45	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	4	0	0	4	1	0	0	0	1	1	1	2	0	4	0	0	0	0	0	9	0
Grand Total	0	18	1	0	19	3	0	1	0	4	4	5	2	0	11	0	0	1	0	1	35	0
Apprch %	0.0%	94.7%	5.3%			75.0%	0.0%	25.0%			36.4%	45.5%	18.2%			0.0%	0.0%	100.0%				
Total %	0.0%	51.4%	2.9%		54.3%	8.6%	0.0%	2.9%		11.4%	11.4%	14.3%	5.7%		31.4%	0.0%	0.0%	2.9%		2.9%	100.0%	

PM PEAK HOUR	Seminary Avenue Southbound					San Leandro Street Westbound					Seminary Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	2	1		3	0	0	0		0	0	1	0		1	0	0	0		0	4
17:00	0	2	0		2	0	0	0		0	0	1	0		1	0	0	0		0	3
17:15	0	0	0		0	0	0	0		0	1	0	1		2	0	0	0		0	2
17:30	0	1	0		1	0	0	0		0	0	0	1		1	0	0	0		0	2
Total Volume	0	5	1		6	0	0	0		0	1	2	2		5	0	0	0		0	11
% App Total	0.0%	83.3%	16.7%			0.0%	0.0%	0.0%			20.0%	40.0%	40.0%			0.0%	0.0%	0.0%			
PHF	.000	.625	.250		.500	.000	.000	.000		.000	.250	.500	.500		.625	.000	.000	.000		.000	.688

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-087 81st Avenue-San Leandro Street.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	24	220	0	0	244	19	0	26	0	45	0	129	17	0	146	0	0	0	0	0	435	0
16:15	33	234	0	0	267	13	0	23	0	36	0	135	8	0	143	0	0	0	0	0	446	0
16:30	22	241	0	0	263	21	0	29	0	50	0	133	14	0	147	0	0	0	0	0	460	0
16:45	28	228	0	0	256	13	0	20	0	33	0	166	17	0	183	0	0	0	0	0	472	0
Total	107	923	0	0	1030	66	0	98	0	164	0	563	56	0	619	0	0	0	0	0	1813	0
17:00	24	235	0	0	259	16	0	29	0	45	0	143	17	0	160	0	0	0	0	0	464	0
17:15	43	236	0	0	279	16	0	18	0	34	0	123	8	0	131	0	0	0	0	0	444	0
17:30	29	240	0	0	269	22	0	33	0	55	0	136	11	0	147	0	0	0	0	0	471	0
17:45	34	236	0	0	270	16	0	29	0	45	0	120	7	0	127	0	0	0	0	0	442	0
Total	130	947	0	0	1077	70	0	109	0	179	0	522	43	0	565	0	0	0	0	0	1821	0
Grand Total	237	1870	0	0	2107	136	0	207	0	343	0	1085	99	0	1184	0	0	0	0	0	3634	0
Apprch %	11.2%	88.8%	0.0%	0.0%		39.7%	0.0%	60.3%	0.0%		0.0%	91.6%	8.4%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	6.5%	51.5%	0.0%	0.0%	58.0%	3.7%	0.0%	5.7%	0.0%	9.4%	0.0%	29.9%	2.7%	0.0%	32.6%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

PM PEAK HOUR	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	28	228	0	0	256	13	0	20	0	33	0	166	17	0	183	0	0	0	0	0	472
17:00	24	235	0	0	259	16	0	29	0	45	0	143	17	0	160	0	0	0	0	0	464
17:15	43	236	0	0	279	16	0	18	0	34	0	123	8	0	131	0	0	0	0	0	444
17:30	29	240	0	0	269	22	0	33	0	55	0	136	11	0	147	0	0	0	0	0	471
Total Volume	124	939	0	0	1063	67	0	100	0	167	0	568	53	0	621	0	0	0	0	0	1851
% App Total	11.7%	88.3%	0.0%	0.0%		40.1%	0.0%	59.9%	0.0%		0.0%	91.5%	8.5%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.721	.978	.000	.000	.953	.761	.000	.758	.000	.759	.000	.855	.779	.000	.848	.000	.000	.000	.000	.000	.980

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-087 81st Avenue-San Leandro Street.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	1	1	0	4	2	0	0	0	1	0	0	2	0	0	2	0	0	0	6	0	4	11
16:15	0	1	0	0	1	0	0	1	2	1	0	2	0	0	2	0	0	0	1	0	4	3
16:30	0	2	0	0	2	1	0	0	1	1	0	0	0	1	0	0	0	0	1	0	3	3
16:45	0	2	0	0	2	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3	1
Total	1	6	0	4	7	1	0	2	5	3	0	4	0	1	4	0	0	0	8	0	14	18
17:00	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
17:15	0	3	0	0	3	0	0	0	1	0	0	3	0	0	3	0	0	0	0	0	6	1
17:30	0	0	0	0	0	0	0	1	0	1	0	1	0	1	1	0	0	0	1	0	2	2
17:45	0	3	0	0	3	0	0	1	1	1	0	0	0	0	0	0	0	0	3	0	4	4
Total	0	7	0	0	7	0	0	2	3	2	0	4	0	1	4	0	0	0	4	0	13	8
Grand Total	1	13	0	4	14	1	0	4	8	5	0	8	0	2	8	0	0	0	12	0	27	26
Apprch %	7.1%	92.9%	0.0%			20.0%	0.0%	80.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	3.7%	48.1%	0.0%		51.9%	3.7%	0.0%	14.8%		18.5%	0.0%	29.6%	0.0%		29.6%	0.0%	0.0%	0.0%		0.0%	100.0%	

PM PEAK HOUR	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	2	0		2	0	0	1		1	0	0	0		0	0	0	0		0	3
17:00	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:15	0	3	0		3	0	0	0		0	0	3	0		3	0	0	0		0	6
17:30	0	0	0		0	0	0	1		1	0	1	0		1	0	0	0		0	2
Total Volume	0	6	0		6	0	0	2		2	0	4	0		4	0	0	0		0	12
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.500	.000		.500	.000	.000	.500		.500	.000	.333	.000		.333	.000	.000	.000		.000	.500

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-087 81st Avenue-San Leandro Street.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	2	10	0	0	12	1	0	1	0	2	0	4	2	0	6	0	0	0	0	0	20	0
16:15	4	7	0	0	11	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	16	0
16:30	2	6	0	0	8	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	10	0
16:45	4	5	0	0	9	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	12	0
Total	12	28	0	0	40	1	0	2	0	3	0	12	3	0	15	0	0	0	0	0	58	0
17:00	2	6	0	0	8	1	0	1	0	2	0	6	1	0	7	0	0	0	0	0	17	0
17:15	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4	0
17:30	2	1	0	0	3	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	5	0
17:45	3	2	0	0	5	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	7	0
Total	8	11	0	0	19	1	0	2	0	3	0	9	2	0	11	0	0	0	0	0	33	0
Grand Total	20	39	0	0	59	2	0	4	0	6	0	21	5	0	26	0	0	0	0	0	91	0
Apprch %	33.9%	66.1%	0.0%			33.3%	0.0%	66.7%			0.0%	80.8%	19.2%			0.0%	0.0%	0.0%				
Total %	22.0%	42.9%	0.0%		64.8%	2.2%	0.0%	4.4%		6.6%	0.0%	23.1%	5.5%		28.6%	0.0%	0.0%	0.0%		0.0%	100.0%	

PM PEAK HOUR	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	4	5	0		9	0	0	0		0	0	2	1		3	0	0	0		0	12
17:00	2	6	0		8	1	0	1		2	0	6	1		7	0	0	0		0	17
17:15	1	2	0		3	0	0	0		0	0	1	0		1	0	0	0		0	4
17:30	2	1	0		3	0	0	1		1	0	1	0		1	0	0	0		0	5
Total Volume	9	14	0		23	1	0	2		3	0	10	2		12	0	0	0		0	38
% App Total	39.1%	60.9%	0.0%			33.3%	0.0%	66.7%			0.0%	83.3%	16.7%			0.0%	0.0%	0.0%			
PHF	.563	.583	.000		.639	.250	.000	.500		.375	.000	.417	.500		.429	.000	.000	.000		.000	.559

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-003 81st Avenue-San Leandro Street.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	11	70	0	0	81	12	0	26	0	38	0	96	15	0	111	1	0	0	0	1	231	0
07:15	14	81	0	0	95	14	0	24	0	38	0	140	9	0	149	0	0	0	0	0	282	0
07:30	17	92	1	0	110	7	0	28	0	35	0	179	6	0	185	0	0	0	0	0	330	0
07:45	16	117	0	0	133	13	0	40	0	53	0	230	14	0	244	0	0	0	0	0	430	0
Total	58	360	1	0	419	46	0	118	0	164	0	645	44	0	689	1	0	0	0	1	1273	0
08:00	28	122	2	0	152	10	0	29	0	39	0	237	27	0	264	2	0	0	0	2	457	0
08:15	27	101	1	0	129	20	0	28	0	48	0	207	36	0	243	0	0	0	0	0	420	0
08:30	25	112	0	0	137	24	0	52	0	76	0	212	15	0	227	0	0	0	0	0	440	0
08:45	23	139	3	0	165	16	0	33	0	49	1	169	10	0	180	2	0	0	0	2	396	0
Total	103	474	6	0	583	70	0	142	0	212	1	825	88	0	914	4	0	0	0	4	1713	0
Grand Total	161	834	7	0	1002	116	0	260	0	376	1	1470	132	0	1603	5	0	0	0	5	2986	0
Apprch %	16.1%	83.2%	0.7%	0.0%		30.9%	0.0%	69.1%	0.0%		0.1%	91.7%	8.2%	0.0%		100.0%	0.0%	0.0%	0.0%			
Total %	5.4%	27.9%	0.2%	0.0%	33.6%	3.9%	0.0%	8.7%	0.0%	12.6%	0.0%	49.2%	4.4%	0.0%	53.7%	0.2%	0.0%	0.0%	0.0%	0.2%	100.0%	

AM PEAK HOUR	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	16	117	0	0	133	13	0	40	0	53	0	230	14	0	244	0	0	0	0	0	430
08:00	28	122	2	0	152	10	0	29	0	39	0	237	27	0	264	2	0	0	0	2	457
08:15	27	101	1	0	129	20	0	28	0	48	0	207	36	0	243	0	0	0	0	0	420
08:30	25	112	0	0	137	24	0	52	0	76	0	212	15	0	227	0	0	0	0	0	440
Total Volume	96	452	3	0	551	67	0	149	0	216	0	886	92	0	978	2	0	0	0	2	1747
% App Total	17.4%	82.0%	0.5%	0.0%		31.0%	0.0%	69.0%	0.0%		0.0%	90.6%	9.4%	0.0%		100.0%	0.0%	0.0%	0.0%		
PHF	.857	.926	.375	.000	.906	.698	.000	.716	.000	.711	.000	.935	.639	.000	.926	.250	.000	.000	.000	.250	.956

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-003 81st Avenue-San Leandro Street.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	0	2	0	1	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	1
07:30	0	2	0	1	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	1
07:45	0	1	0	1	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	2	2
Total	0	5	0	3	5	0	0	0	2	0	0	3	0	0	3	0	0	0	0	0	8	5
08:00	0	3	0	1	3	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	5	2
08:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
08:45	0	0	0	4	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2	4
Total	1	3	0	6	4	0	0	0	1	0	0	3	1	0	4	0	0	0	0	0	8	7
Grand Total	1	8	0	9	9	0	0	0	3	0	0	6	1	0	7	0	0	0	0	0	16	12
Apprch %	11.1%	88.9%	0.0%			0.0%	0.0%	0.0%			0.0%	85.7%	14.3%			0.0%	0.0%	0.0%				
Total %	6.3%	50.0%	0.0%		56.3%	0.0%	0.0%	0.0%		0.0%	0.0%	37.5%	6.3%		43.8%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	1	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
08:00	0	3	0		3	0	0	0		0	0	2	0		2	0	0	0		0	5
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:30	1	0	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
Total Volume	1	4	0		5	0	0	0		0	0	3	0		3	0	0	0		0	8
% App Total	20.0%	80.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.250	.333	.000		.417	.000	.000	.000		.000	.000	.375	.000		.375	.000	.000	.000		.000	.400

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-003 81st Avenue-San Leandro Street.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	2	5	0	0	7	3	0	5	0	8	0	10	2	0	12	1	0	0	0	1	28	0
07:15	1	4	0	0	5	4	0	3	0	7	0	6	2	0	8	0	0	0	0	0	20	0
07:30	1	9	1	0	11	1	0	2	0	3	0	5	0	0	5	0	0	0	0	0	19	0
07:45	3	6	0	0	9	1	0	1	0	2	0	14	2	0	16	0	0	0	0	0	27	0
Total	7	24	1	0	32	9	0	11	0	20	0	35	6	0	41	1	0	0	0	1	94	0
08:00	2	11	1	0	14	0	0	1	0	1	0	6	1	0	7	1	0	0	0	1	23	0
08:15	2	7	0	0	9	2	0	1	0	3	0	6	1	0	7	0	0	0	0	0	19	0
08:30	1	10	0	0	11	2	0	5	0	7	0	13	2	0	15	0	0	0	0	0	33	0
08:45	2	13	1	0	16	1	0	1	0	2	0	9	1	0	10	1	0	0	0	1	29	0
Total	7	41	2	0	50	5	0	8	0	13	0	34	5	0	39	2	0	0	0	2	104	0
Grand Total	14	65	3	0	82	14	0	19	0	33	0	69	11	0	80	3	0	0	0	3	198	0
Apprch %	17.1%	79.3%	3.7%			42.4%	0.0%	57.6%			0.0%	86.3%	13.8%			100.0%	0.0%	0.0%				
Total %	7.1%	32.8%	1.5%		41.4%	7.1%	0.0%	9.6%		16.7%	0.0%	34.8%	5.6%		40.4%	1.5%	0.0%	0.0%		1.5%	100.0%	

AM PEAK HOUR	81st Avenue Southbound					San Leandro Street Westbound					81st Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	3	6	0		9	1	0	1		2	0	14	2		16	0	0	0		0	27
08:00	2	11	1		14	0	0	1		1	0	6	1		7	1	0	0		1	23
08:15	2	7	0		9	2	0	1		3	0	6	1		7	0	0	0		0	19
08:30	1	10	0		11	2	0	5		7	0	13	2		15	0	0	0		0	33
Total Volume	8	34	1		43	5	0	8		13	0	39	6		45	1	0	0		1	102
% App Total	18.6%	79.1%	2.3%			38.5%	0.0%	61.5%			0.0%	86.7%	13.3%			100.0%	0.0%	0.0%			
PHF	.667	.773	.250		.768	.625	.000	.400		.464	.000	.696	.750		.703	.250	.000	.000		.250	.773

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-088 85th Avenue-San Leandro Street.ppd
Date : 6/16/2013

Unshifted Count = All Vehicles

	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	47	182	23	0	252	8	47	27	0	82	19	99	10	0	128	15	58	29	0	102	564	0
16:15	36	179	34	0	249	7	36	22	0	65	10	100	10	0	120	26	62	25	0	113	547	0
16:30	37	216	24	0	277	10	45	29	0	84	11	103	21	0	135	23	64	26	0	113	609	0
16:45	40	185	18	0	243	9	44	38	0	91	8	121	17	0	146	15	62	29	0	106	586	0
Total	160	762	99	0	1021	34	172	116	0	322	48	423	58	0	529	79	246	109	0	434	2306	0
17:00	44	186	17	0	247	20	31	23	0	74	11	104	13	0	128	20	66	41	0	127	576	0
17:15	28	205	18	0	251	7	39	20	0	66	8	89	14	0	111	14	57	19	0	90	518	0
17:30	40	203	22	0	265	18	39	30	0	87	11	107	20	0	138	12	60	18	0	90	580	0
17:45	44	185	27	0	256	11	28	22	0	61	6	78	5	0	89	18	57	15	0	90	496	0
Total	156	779	84	0	1019	56	137	95	0	288	36	378	52	0	466	64	240	93	0	397	2170	0
Grand Total	316	1541	183	0	2040	90	309	211	0	610	84	801	110	0	995	143	486	202	0	831	4476	0
Apprch %	15.5%	75.5%	9.0%	0.0%		14.8%	50.7%	34.6%	0.0%		8.4%	80.5%	11.1%	0.0%		17.2%	58.5%	24.3%	0.0%			
Total %	7.1%	34.4%	4.1%	0.0%	45.6%	2.0%	6.9%	4.7%	0.0%	13.6%	1.9%	17.9%	2.5%	0.0%	22.2%	3.2%	10.9%	4.5%	0.0%	18.6%	100.0%	

PM PEAK HOUR	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	36	179	34	0	249	7	36	22	0	65	10	100	10	0	120	26	62	25	0	113	547
16:30	37	216	24	0	277	10	45	29	0	84	11	103	21	0	135	23	64	26	0	113	609
16:45	40	185	18	0	243	9	44	38	0	91	8	121	17	0	146	15	62	29	0	106	586
17:00	44	186	17	0	247	20	31	23	0	74	11	104	13	0	128	20	66	41	0	127	576
Total Volume	157	766	93	0	1016	46	156	112	0	314	40	428	61	0	529	84	254	121	0	459	2318
% App Total	15.5%	75.4%	9.2%	0.0%		14.6%	49.7%	35.7%	0.0%		7.6%	80.9%	11.5%	0.0%		18.3%	55.3%	26.4%	0.0%		
PHF	.892	.887	.684	.000	.917	.575	.867	.737	.000	.863	.909	.884	.726	.000	.906	.808	.962	.738	.000	.904	.952

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-088 85th Avenue-San Leandro Street.ppd
Date : 6/16/2013

Bank 1 Count = Peds & Bikes

	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	0	0	2	0	0	0	0	0	0	0	1	0	0	1	2	1	0	1	3	4	3
16:15	0	2	0	5	2	0	0	0	0	0	0	1	0	0	1	0	1	0	4	1	4	9
16:30	1	2	0	1	3	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	4	3
16:45	0	1	0	3	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	3	3
Total	1	5	0	11	6	0	1	1	1	2	0	3	0	0	3	2	2	0	6	4	15	18
17:00	0	1	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	3
17:15	1	1	0	3	2	0	0	0	0	0	0	2	0	2	2	0	0	0	0	0	4	5
17:30	0	1	0	1	1	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	2	3
17:45	0	2	0	1	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	3
Total	1	5	0	7	6	0	0	0	1	0	0	3	0	5	3	0	0	0	1	0	9	14
Grand Total	2	10	0	18	12	0	1	1	2	2	0	6	0	5	6	2	2	0	7	4	24	32
Apprch %	16.7%	83.3%	0.0%			0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			50.0%	50.0%	0.0%				
Total %	8.3%	41.7%	0.0%		50.0%	0.0%	4.2%	4.2%		8.3%	0.0%	25.0%	0.0%		25.0%	8.3%	8.3%	0.0%		16.7%	100.0%	

PM PEAK HOUR	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	0	2	0		2	0	0	0		0	0	1	0		1	0	1	0		1	4
16:30	1	2	0		3	0	0	1		1	0	0	0		0	0	0	0		0	4
16:45	0	1	0		1	0	1	0		1	0	1	0		1	0	0	0		0	3
17:00	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
Total Volume	1	6	0		7	0	1	1		2	0	2	0		2	0	1	0		1	12
% App Total	14.3%	85.7%	0.0%			0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.750	.000		.583	.000	.250	.250		.500	.000	.500	.000		.500	.000	.250	.000		.250	.750

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-088 85th Avenue-San Leandro Street.ppd
Date : 6/16/2013

Bank 2 Count = Heavy Trucks

	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	2	6	2	0	10	1	0	0	0	1	1	3	0	0	4	1	5	0	0	6	21	0
16:15	2	8	0	0	10	1	0	2	0	3	0	4	1	0	5	1	4	1	0	6	24	0
16:30	0	7	0	0	7	0	1	0	0	1	0	2	1	0	3	0	1	1	0	2	13	0
16:45	2	9	1	0	12	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	15	0
Total	6	30	3	0	39	2	1	5	0	8	1	9	2	0	12	2	10	2	0	14	73	0
17:00	0	5	0	0	5	0	0	0	0	0	2	5	1	0	8	0	0	1	0	1	14	0
17:15	0	3	1	0	4	0	0	0	0	0	0	0	1	0	1	0	5	0	0	5	10	0
17:30	1	2	0	0	3	0	0	1	0	1	0	4	0	0	4	0	3	1	0	4	12	0
17:45	1	2	0	0	3	0	0	1	0	1	1	1	0	0	2	1	1	0	0	2	8	0
Total	2	12	1	0	15	0	0	2	0	2	3	10	2	0	15	1	9	2	0	12	44	0
Grand Total	8	42	4	0	54	2	1	7	0	10	4	19	4	0	27	3	19	4	0	26	117	0
Apprch %	14.8%	77.8%	7.4%			20.0%	10.0%	70.0%			14.8%	70.4%	14.8%			11.5%	73.1%	15.4%				
Total %	6.8%	35.9%	3.4%		46.2%	1.7%	0.9%	6.0%		8.5%	3.4%	16.2%	3.4%		23.1%	2.6%	16.2%	3.4%		22.2%	100.0%	

PM PEAK HOUR	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	2	8	0		10	1	0	2		3	0	4	1		5	1	4	1		6	24
16:30	0	7	0		7	0	1	0		1	0	2	1		3	0	1	1		2	13
16:45	2	9	1		12	0	0	3		3	0	0	0		0	0	0	0		0	15
17:00	0	5	0		5	0	0	0		0	2	5	1		8	0	0	1		1	14
Total Volume	4	29	1		34	1	1	5		7	2	11	3		16	1	5	3		9	66
% App Total	11.8%	85.3%	2.9%			14.3%	14.3%	71.4%			12.5%	68.8%	18.8%			11.1%	55.6%	33.3%			
PHF	.500	.806	.250		.708	.250	.250	.417		.583	.250	.550	.750		.500	.250	.313	.750		.375	.688

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-004 85th Avenue-San Leandro Street.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	16	48	9	0	73	5	39	25	0	69	13	75	3	0	91	13	14	12	0	39	272	0
07:15	16	58	10	0	84	9	38	29	0	76	15	114	4	0	133	10	17	9	0	36	329	0
07:30	17	66	13	0	96	13	50	34	0	97	20	157	4	0	181	8	28	5	0	41	415	0
07:45	19	94	16	0	129	9	53	35	0	97	23	194	13	0	230	18	26	6	0	50	506	0
Total	68	266	48	0	382	36	180	123	0	339	71	540	24	0	635	49	85	32	0	166	1522	0
08:00	31	65	23	0	119	7	55	31	0	93	26	212	12	0	250	14	27	7	0	48	510	0
08:15	28	82	22	0	132	6	42	33	0	81	19	202	13	0	234	20	27	4	0	51	498	0
08:30	22	85	24	0	131	7	56	37	0	100	16	168	13	0	197	19	29	11	0	59	487	0
08:45	30	93	23	0	146	11	32	28	0	71	13	138	11	0	162	22	25	21	0	68	447	0
Total	111	325	92	0	528	31	185	129	0	345	74	720	49	0	843	75	108	43	0	226	1942	0
Grand Total	179	591	140	0	910	67	365	252	0	684	145	1260	73	0	1478	124	193	75	0	392	3464	0
Apprch %	19.7%	64.9%	15.4%	0.0%		9.8%	53.4%	36.8%	0.0%		9.8%	85.3%	4.9%	0.0%		31.6%	49.2%	19.1%	0.0%			
Total %	5.2%	17.1%	4.0%	0.0%	26.3%	1.9%	10.5%	7.3%	0.0%	19.7%	4.2%	36.4%	2.1%	0.0%	42.7%	3.6%	5.6%	2.2%	0.0%	11.3%	100.0%	

AM PEAK HOUR	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	19	94	16	0	129	9	53	35	0	97	23	194	13	0	230	18	26	6	0	50	506
08:00	31	65	23	0	119	7	55	31	0	93	26	212	12	0	250	14	27	7	0	48	510
08:15	28	82	22	0	132	6	42	33	0	81	19	202	13	0	234	20	27	4	0	51	498
08:30	22	85	24	0	131	7	56	37	0	100	16	168	13	0	197	19	29	11	0	59	487
Total Volume	100	326	85	0	511	29	206	136	0	371	84	776	51	0	911	71	109	28	0	208	2001
% App Total	19.6%	63.8%	16.6%	0.0%		7.8%	55.5%	36.7%	0.0%		9.2%	85.2%	5.6%	0.0%		34.1%	52.4%	13.5%	0.0%		
PHF	.806	.867	.885	.000	.968	.806	.920	.919	.000	.928	.808	.915	.981	.000	.911	.888	.940	.636	.000	.881	.981

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-004 85th Avenue-San Leandro Street.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	2	0	0	2	0	0	1	0	1	0	0	0	3	0	0	0	0	1	0	3	4
07:30	0	2	0	2	2	0	0	0	0	0	0	1	0	3	1	0	0	0	1	0	3	6
07:45	1	0	0	0	1	0	0	0	0	0	0	2	0	2	2	0	0	0	1	0	3	3
Total	1	4	0	2	5	0	0	1	0	1	0	3	0	8	3	0	0	0	3	0	9	13
08:00	0	1	1	1	2	0	1	1	1	2	0	1	0	1	1	0	0	0	1	0	5	4
08:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
08:30	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2	0
08:45	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	3
Total	0	1	1	3	2	0	1	2	1	3	0	2	0	2	2	0	0	0	3	0	7	9
Grand Total	1	5	1	5	7	0	1	3	1	4	0	5	0	10	5	0	0	0	6	0	16	22
Apprch %	14.3%	71.4%	14.3%			0.0%	25.0%	75.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	6.3%	31.3%	6.3%		43.8%	0.0%	6.3%	18.8%		25.0%	0.0%	31.3%	0.0%		31.3%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	1	0	0		1	0	0	0		0	0	2	0		2	0	0	0		0	3
08:00	0	1	1		2	0	1	1		2	0	1	0		1	0	0	0		0	5
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:30	0	0	0		0	0	0	1		1	0	1	0		1	0	0	0		0	2
Total Volume	1	1	1		3	0	1	2		3	0	4	0		4	0	0	0		0	10
% App Total	33.3%	33.3%	33.3%			0.0%	33.3%	66.7%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.250	.250	.250		.375	.000	.250	.500		.375	.000	.500	.000		.500	.000	.000	.000		.000	.500

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-004 85th Avenue-San Leandro Street.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	3	3	0	0	6	0	1	3	0	4	4	8	2	0	14	2	0	2	0	4	28	0
07:15	1	7	0	0	8	2	4	1	0	7	4	7	0	0	11	1	1	3	0	5	31	0
07:30	0	5	3	0	8	2	2	1	0	5	2	4	0	0	6	1	1	1	0	3	22	0
07:45	2	6	1	0	9	1	2	2	0	5	1	10	1	0	12	3	2	1	0	6	32	0
Total	6	21	4	0	31	5	9	7	0	21	11	29	3	0	43	7	4	7	0	18	113	0
08:00	4	4	3	0	11	0	3	1	0	4	5	5	0	0	10	1	1	0	0	2	27	0
08:15	5	3	2	0	10	1	1	3	0	5	0	5	0	0	5	0	1	0	0	1	21	0
08:30	2	8	4	0	14	0	3	3	0	6	1	7	1	0	9	1	0	1	0	2	31	0
08:45	3	8	2	0	13	2	0	2	0	4	0	3	0	0	3	4	1	4	0	9	29	0
Total	14	23	11	0	48	3	7	9	0	19	6	20	1	0	27	6	3	5	0	14	108	0
Grand Total	20	44	15	0	79	8	16	16	0	40	17	49	4	0	70	13	7	12	0	32	221	0
Apprch %	25.3%	55.7%	19.0%			20.0%	40.0%	40.0%			24.3%	70.0%	5.7%			40.6%	21.9%	37.5%				
Total %	9.0%	19.9%	6.8%		35.7%	3.6%	7.2%	7.2%		18.1%	7.7%	22.2%	1.8%		31.7%	5.9%	3.2%	5.4%		14.5%	100.0%	

AM PEAK HOUR	85th Avenue Southbound					San Leandro Street Westbound					85th Avenue Northbound					San Leandro Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	2	6	1		9	1	2	2		5	1	10	1		12	3	2	1		6	32
08:00	4	4	3		11	0	3	1		4	5	5	0		10	1	1	0		2	27
08:15	5	3	2		10	1	1	3		5	0	5	0		5	0	1	0		1	21
08:30	2	8	4		14	0	3	3		6	1	7	1		9	1	0	1		2	31
Total Volume	13	21	10		44	2	9	9		20	7	27	2		36	5	4	2		11	111
% App Total	29.5%	47.7%	22.7%			10.0%	45.0%	45.0%			19.4%	75.0%	5.6%			45.5%	36.4%	18.2%			
PHF	.650	.656	.625		.786	.500	.750	.750		.833	.350	.675	.500		.750	.417	.500	.500		.458	.867

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-072 San Leandro Boulevard-Williams Street.ppd
Date : 6/5/2013

Unshifted Count = All Vehicles

	San Leandro Boulevard Southbound					Williams Street Westbound					San Leandro Boulevard Northbound					Williams Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	47	45	0	92	6	20	2	0	28	16	104	1	0	121	24	11	24	0	59	300	0
07:15	2	57	38	0	97	1	23	6	0	30	23	117	3	0	143	33	16	12	0	61	331	0
07:30	1	61	37	0	99	3	28	1	0	32	25	144	3	0	172	30	18	18	0	66	369	0
07:45	5	82	66	0	153	7	30	4	0	41	23	168	3	0	194	35	23	16	0	74	462	0
Total	8	247	186	0	441	17	101	13	0	131	87	533	10	0	630	122	68	70	0	260	1462	0
08:00	5	81	44	0	130	1	30	3	0	34	30	234	4	0	268	33	23	18	0	74	506	0
08:15	0	58	53	0	111	2	30	1	0	33	17	208	1	0	226	40	29	18	0	87	457	0
08:30	5	71	42	0	118	1	16	1	0	18	27	155	5	0	187	26	15	18	0	59	382	0
08:45	2	95	61	0	158	4	28	7	0	39	17	132	2	0	151	30	21	28	0	79	427	0
Total	12	305	200	0	517	8	104	12	0	124	91	729	12	0	832	129	88	82	0	299	1772	0
16:00	3	128	50	0	181	2	26	3	0	31	21	134	3	0	158	38	39	40	0	117	487	0
16:15	3	113	54	0	170	6	23	4	0	33	20	117	3	0	140	34	46	26	0	106	449	0
16:30	3	119	69	0	191	0	26	3	0	29	26	130	5	0	161	41	44	33	0	118	499	0
16:45	5	132	63	0	200	0	26	7	0	33	21	120	2	0	143	47	45	47	0	139	515	0
Total	14	492	236	0	742	8	101	17	0	126	88	501	13	0	602	160	174	146	0	480	1950	0
17:00	1	131	76	0	208	4	26	3	0	33	23	133	4	0	160	35	52	37	0	124	525	0
17:15	8	140	73	0	221	2	21	3	0	26	25	139	6	0	170	43	42	37	0	122	539	0
17:30	1	148	73	0	222	2	30	6	0	38	30	126	7	0	163	47	43	35	0	125	548	0
17:45	7	150	89	0	246	6	26	5	0	37	24	128	3	0	155	57	49	38	0	144	582	0
Total	17	569	311	0	897	14	103	17	0	134	102	526	20	0	648	182	186	147	0	515	2194	0
Grand Total	51	1613	933	0	2597	47	409	59	0	515	368	2289	55	0	2712	593	516	445	0	1554	7378	0
Apprch %	2.0%	62.1%	35.9%	0.0%		9.1%	79.4%	11.5%	0.0%		13.6%	84.4%	2.0%	0.0%		38.2%	33.2%	28.6%	0.0%			
Total %	0.7%	21.9%	12.6%	0.0%	35.2%	0.6%	5.5%	0.8%	0.0%	7.0%	5.0%	31.0%	0.7%	0.0%	36.8%	8.0%	7.0%	6.0%	0.0%	21.1%	100.0%	

AM PEAK HOUR	San Leandro Boulevard Southbound					Williams Street Westbound					San Leandro Boulevard Northbound					Williams Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	5	82	66	0	153	7	30	4	0	41	23	168	3	0	194	35	23	16	0	74	462
08:00	5	81	44	0	130	1	30	3	0	34	30	234	4	0	268	33	23	18	0	74	506
08:15	0	58	53	0	111	2	30	1	0	33	17	208	1	0	226	40	29	18	0	87	457
08:30	5	71	42	0	118	1	16	1	0	18	27	155	5	0	187	26	15	18	0	59	382
Total Volume	15	292	205	0	512	11	106	9	0	126	97	765	13	0	875	134	90	70	0	294	1807
% App Total	2.9%	57.0%	40.0%	0.0%		8.7%	84.1%	7.1%	0.0%		11.1%	87.4%	1.5%	0.0%		45.6%	30.6%	23.8%	0.0%		
PHF	.750	.890	.777	.000	.837	.393	.883	.563	.000	.768	.808	.817	.650	.000	.816	.838	.776	.972	.000	.845	.893

PM PEAK HOUR	San Leandro Boulevard Southbound					Williams Street Westbound					San Leandro Boulevard Northbound					Williams Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	1	131	76	0	208	4	26	3	0	33	23	133	4	0	160	35	52	37	0	124	525
17:15	8	140	73	0	221	2	21	3	0	26	25	139	6	0	170	43	42	37	0	122	539
17:30	1	148	73	0	222	2	30	6	0	38	30	126	7	0	163	47	43	35	0	125	548
17:45	7	150	89	0	246	6	26	5	0	37	24	128	3	0	155	57	49	38	0	144	582
Total Volume	17	569	311	0	897	14	103	17	0	134	102	526	20	0	648	182	186	147	0	515	2194
% App Total	1.9%	63.4%	34.7%	0.0%		10.4%	76.9%	12.7%	0.0%		15.7%	81.2%	3.1%	0.0%		35.3%	36.1%	28.5%	0.0%		
PHF	.531	.948	.874	.000	.912	.583	.858	.708	.000	.882	.850	.946	.714	.000	.953	.798	.894	.967	.000	.894	.942

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
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File Name : 13-7347-072 San Leandro Boulevard-Williams Street.ppd
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	San Leandro Boulevard Southbound					Williams Street Westbound					San Leandro Boulevard Northbound					Williams Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	4	1	0	1	0	3	1	0	0	0	1	0	0	1	0	4	1	3	12
07:15	0	0	0	1	0	0	0	0	1	0	1	0	0	1	1	0	0	0	1	0	1	4
07:30	0	1	0	6	1	0	2	0	5	2	0	2	0	2	2	1	0	0	1	1	6	14
07:45	0	2	1	3	3	0	4	1	7	5	1	0	0	3	1	0	1	0	0	1	10	13
Total	0	4	1	14	5	0	7	1	16	8	2	2	0	7	4	1	2	0	6	3	20	43
08:00	0	0	2	3	2	0	2	0	2	2	0	2	0	1	2	1	0	0	2	1	7	8
08:15	0	0	0	11	0	0	2	0	9	2	0	1	0	1	1	0	0	0	0	0	3	21
08:30	0	1	1	3	2	0	1	0	5	1	0	1	0	4	1	0	1	0	1	1	5	13
08:45	1	0	0	4	1	0	0	0	3	0	1	1	0	5	2	1	1	0	4	2	5	16
Total	1	1	3	21	5	0	5	0	19	5	1	5	0	11	6	2	2	0	7	4	20	58
16:00	0	1	0	1	1	0	1	0	1	1	0	1	0	3	1	0	3	0	1	3	6	6
16:15	0	0	0	4	0	0	2	2	5	4	0	1	0	1	1	0	3	0	2	3	8	12
16:30	1	1	0	3	2	0	0	0	3	0	0	2	0	0	2	0	1	1	0	2	6	6
16:45	0	0	0	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	4
Total	1	2	0	9	3	0	3	2	11	5	0	4	0	5	4	0	7	1	3	8	20	28
17:00	0	2	0	9	2	0	2	0	3	2	0	0	0	4	0	0	2	0	5	2	6	21
17:15	0	1	0	5	1	0	0	1	2	1	1	0	0	1	1	0	2	1	0	3	6	8
17:30	0	0	0	4	0	0	0	0	7	0	0	1	0	1	1	0	2	0	0	2	3	12
17:45	0	0	0	8	0	0	2	0	6	2	0	0	0	3	0	0	2	0	2	2	4	19
Total	0	3	0	26	3	0	4	1	18	5	1	1	0	9	2	0	8	1	7	9	19	60
Grand Total	2	10	4	70	16	0	19	4	64	23	4	12	0	32	16	3	19	2	23	24	79	189
Apprch %	12.5%	62.5%	25.0%			0.0%	82.6%	17.4%			25.0%	75.0%	0.0%			12.5%	79.2%	8.3%				
Total %	2.5%	12.7%	5.1%		20.3%	0.0%	24.1%	5.1%		29.1%	5.1%	15.2%	0.0%		20.3%	3.8%	24.1%	2.5%		30.4%	100.0%	

AM PEAK HOUR	San Leandro Boulevard Southbound					Williams Street Westbound					San Leandro Boulevard Northbound					Williams Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	2	1		3	0	4	1		5	1	0	0		1	0	1	0		1	10
08:00	0	0	2		2	0	2	0		2	0	2	0		2	1	0	0		1	7
08:15	0	0	0		0	0	2	0		2	0	1	0		1	0	0	0		0	3
08:30	0	1	1		2	0	1	0		1	0	1	0		1	0	1	0		1	5
Total Volume	0	3	4		7	0	9	1		10	1	4	0		5	1	2	0		3	25
% App Total	0.0%	42.9%	57.1%			0.0%	90.0%	10.0%			20.0%	80.0%	0.0%			33.3%	66.7%	0.0%			
PHF	.000	.375	.500		.583	.000	.563	.250		.500	.250	.500	.000		.625	.250	.500	.000		.750	.625

PM PEAK HOUR	San Leandro Boulevard Southbound					Williams Street Westbound					San Leandro Boulevard Northbound					Williams Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	2	0		2	0	2	0		2	0	0	0		0	0	2	0		2	6
17:15	0	1	0		1	0	0	1		1	1	0	0		1	0	2	1		3	6
17:30	0	0	0		0	0	0	0		0	0	1	0		1	0	2	0		2	3
17:45	0	0	0		0	0	2	0		2	0	0	0		0	0	2	0		2	4
Total Volume	0	3	0		3	0	4	1		5	1	1	0		2	0	8	1		9	19
% App Total	0.0%	100.0%	0.0%			0.0%	80.0%	20.0%			50.0%	50.0%	0.0%			0.0%	88.9%	11.1%			
PHF	.000	.375	.000		.375	.000	.500	.250		.625	.250	.250	.000		.500	.000	1.000	.250		.750	.792

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-072 San Leandro Boulevard-Williams Street.ppd
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	San Leandro Boulevard Southbound					Williams Street Westbound					San Leandro Boulevard Northbound					Williams Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2	0
07:15	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	4	0
07:30	0	1	2	0	3	0	0	0	0	0	0	2	0	0	2	1	1	0	0	2	7	0
07:45	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	2	3	0	5	0	0	0	0	0	0	5	2	0	7	1	2	0	0	3	15	0
08:00	1	1	0	0	2	0	0	0	0	0	1	2	0	0	3	1	0	2	0	3	8	0
08:15	0	0	0	0	0	0	2	0	0	2	0	3	0	0	3	1	0	0	0	1	6	0
08:30	0	2	2	0	4	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	6	0
08:45	1	1	0	0	2	1	0	0	0	1	2	4	1	0	7	1	1	0	0	2	12	0
Total	2	4	2	0	8	1	2	0	0	3	3	10	1	0	14	3	2	2	0	7	32	0
16:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	1	0	2	3	0
16:15	0	4	0	0	4	1	0	0	0	1	0	1	0	0	1	0	0	1	0	1	7	0
16:30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	1	0	1	3	0
16:45	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1	0	0	0	1	3	0
Total	0	4	0	0	4	1	1	0	0	2	2	3	0	0	5	2	0	3	0	5	16	0
17:00	0	1	2	0	3	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	7	0
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	3	0
17:30	0	1	3	0	4	0	0	0	0	0	0	2	0	0	2	0	1	1	0	2	8	0
17:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	3	5	0	8	0	0	0	0	0	0	6	0	0	6	1	2	3	0	6	20	0
Grand Total	2	13	10	0	25	2	3	0	0	5	5	24	3	0	32	7	6	8	0	21	83	0
Apprch %	8.0%	52.0%	40.0%			40.0%	60.0%	0.0%			15.6%	75.0%	9.4%			33.3%	28.6%	38.1%				
Total %	2.4%	15.7%	12.0%		30.1%	2.4%	3.6%	0.0%		6.0%	6.0%	28.9%	3.6%		38.6%	8.4%	7.2%	9.6%		25.3%	100.0%	

AM PEAK HOUR	San Leandro Boulevard Southbound				Williams Street Westbound				San Leandro Boulevard Northbound				Williams Street Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																	
Peak Hour For Entire Intersection Begins at 07:45																	
07:45	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:00	1	1	0	2	0	0	0	0	1	2	0	3	1	0	2	3	8
08:15	0	0	0	0	0	2	0	2	0	3	0	3	1	0	0	1	6
08:30	0	2	2	4	0	0	0	0	0	1	0	1	0	1	0	1	6
Total Volume	1	3	3	7	0	2	0	2	1	7	0	8	2	1	2	5	22
% App Total	14.3%	42.9%	42.9%		0.0%	100.0%	0.0%		12.5%	87.5%	0.0%		40.0%	20.0%	40.0%		
PHF	.250	.375	.375	.438	.000	.250	.000	.250	.250	.583	.000	.667	.500	.250	.250	.417	.688

PM PEAK HOUR	San Leandro Boulevard Southbound				Williams Street Westbound				San Leandro Boulevard Northbound				Williams Street Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																	
Peak Hour For Entire Intersection Begins at 17:00																	
17:00	0	1	2	3	0	0	0	0	0	2	0	2	1	0	1	2	7
17:15	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	3
17:30	0	1	3	4	0	0	0	0	0	2	0	2	0	1	1	2	8
17:45	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	3	5	8	0	0	0	0	0	6	0	6	1	2	3	6	20
% App Total	0.0%	37.5%	62.5%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		16.7%	33.3%	50.0%		
PHF	.000	.750	.417	.500	.000	.000	.000	.000	.000	.750	.000	.750	.250	.500	.750	.750	.625

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-073 Washington Avenue-San Leandro Boulevard.
Date : 6/5/2013

Unshifted Count = All Vehicles

	Washington Avenue Southbound					San Leandro Boulevard Westbound					Washington Avenue Northbound					San Leandro Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	6	21	2	0	29	20	73	6	0	99	50	20	15	0	85	2	46	30	0	78	291	0
07:15	2	22	3	0	27	19	93	4	0	116	58	31	8	0	97	0	43	30	1	74	314	1
07:30	11	25	2	0	38	16	96	11	0	123	94	36	5	0	135	4	45	36	1	86	382	1
07:45	12	36	3	0	51	19	112	10	2	143	111	72	26	0	209	1	75	74	2	152	555	4
Total	31	104	10	0	145	74	374	31	2	481	313	159	54	0	526	7	209	170	4	390	1542	6
08:00	15	53	2	0	70	23	104	22	4	153	123	65	22	0	210	5	67	53	3	128	561	7
08:15	15	42	9	0	66	16	91	13	0	120	114	80	33	0	227	3	73	60	1	137	550	1
08:30	13	46	3	0	62	14	75	13	1	103	83	48	34	0	165	8	74	61	0	143	473	1
08:45	10	32	2	0	44	20	105	16	1	142	60	44	41	0	145	2	142	53	0	197	528	1
Total	53	173	16	0	242	73	375	64	6	518	380	237	130	0	747	18	356	227	4	605	2112	10
16:00	20	59	4	0	83	18	60	7	0	85	84	71	21	0	176	5	127	91	2	225	569	2
16:15	28	65	8	0	101	23	84	13	0	120	53	72	17	0	142	7	83	99	1	190	553	1
16:30	13	49	5	0	67	31	56	14	0	101	82	72	16	0	170	3	100	94	1	198	536	1
16:45	25	73	5	0	103	30	65	14	1	110	82	58	26	0	166	5	106	101	0	212	591	1
Total	86	246	22	0	354	102	265	48	1	416	301	273	80	0	654	20	416	385	4	825	2249	5
17:00	26	72	3	0	101	25	78	8	1	112	67	58	16	0	141	1	110	118	5	234	588	6
17:15	20	75	6	0	101	36	65	9	0	110	80	56	21	0	157	10	112	103	5	230	598	5
17:30	29	67	2	0	98	33	71	11	0	115	63	54	26	0	143	7	97	111	3	218	574	3
17:45	12	79	3	0	94	13	69	9	0	91	53	72	19	0	144	6	105	121	2	234	563	2
Total	87	293	14	0	394	107	283	37	1	428	263	240	82	0	585	24	424	453	15	916	2323	16
Grand Total	257	816	62	0	1135	356	1297	180	10	1843	1257	909	346	0	2512	69	1405	1235	27	2736	8226	37
Apprch %	22.6%	71.9%	5.5%	0.0%		19.3%	70.4%	9.8%	0.5%		50.0%	36.2%	13.8%	0.0%		2.5%	51.4%	45.1%	1.0%			
Total %	3.1%	9.9%	0.8%	0.0%	13.8%	4.3%	15.8%	2.2%	0.1%	22.4%	15.3%	11.1%	4.2%	0.0%	30.5%	0.8%	17.1%	15.0%	0.3%	33.3%	100.0%	

AM PEAK HOUR	Washington Avenue Southbound					San Leandro Boulevard Westbound					Washington Avenue Northbound					San Leandro Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	12	36	3	0	51	19	112	10	2	143	111	72	26	0	209	1	75	74	2	152	555
08:00	15	53	2	0	70	23	104	22	4	153	123	65	22	0	210	5	67	53	3	128	561
08:15	15	42	9	0	66	16	91	13	0	120	114	80	33	0	227	3	73	60	1	137	550
08:30	13	46	3	0	62	14	75	13	1	103	83	48	34	0	165	8	74	61	0	143	473
Total Volume	55	177	17	0	249	72	382	58	7	519	431	265	115	0	811	17	289	248	6	560	2139
% App Total	22.1%	71.1%	6.8%	0.0%		13.9%	73.6%	11.2%	1.3%		53.1%	32.7%	14.2%	0.0%		3.0%	51.6%	44.3%	1.1%		
PHF	.917	.835	.472	.000	.889	.783	.853	.659	.438	.848	.876	.828	.846	.000	.893	.531	.963	.838	.500	.921	.953

PM PEAK HOUR	Washington Avenue Southbound					San Leandro Boulevard Westbound					Washington Avenue Northbound					San Leandro Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	25	73	5	0	103	30	65	14	1	110	82	58	26	0	166	5	106	101	0	212	591
17:00	26	72	3	0	101	25	78	8	1	112	67	58	16	0	141	1	110	118	5	234	588
17:15	20	75	6	0	101	36	65	9	0	110	80	56	21	0	157	10	112	103	5	230	598
17:30	29	67	2	0	98	33	71	11	0	115	63	54	26	0	143	7	97	111	3	218	574
Total Volume	100	287	16	0	403	124	279	42	2	447	292	226	89	0	607	23	425	433	13	894	2351
% App Total	24.8%	71.2%	4.0%	0.0%		27.7%	62.4%	9.4%	0.4%		48.1%	37.2%	14.7%	0.0%		2.6%	47.5%	48.4%	1.5%		
PHF	.862	.957	.667	.000	.978	.861	.894	.750	.500	.972	.890	.974	.856	.000	.914	.575	.949	.917	.650	.955	.983

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-073 Washington Avenue-San Leandro Boulevard.
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	Washington Avenue Southbound					San Leandro Boulevard Westbound					Washington Avenue Northbound					San Leandro Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	2	0	0	1	0	1	1	0	0	0	1	0	0	0	0	1	0	1	5
07:15	1	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	4
07:30	1	0	0	2	1	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	4	2
07:45	0	1	0	2	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	3	2
Total	2	1	0	8	3	0	2	1	2	3	0	0	0	1	0	0	1	2	2	3	9	13
08:00	0	0	0	2	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	3
08:15	0	0	0	2	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	3
08:30	0	0	0	4	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3	4
08:45	0	0	0	1	0	0	1	0	0	1	1	0	0	0	1	0	0	1	0	1	3	1
Total	0	0	0	9	0	0	4	0	2	4	1	2	0	0	3	0	0	1	0	1	8	11
16:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	1	0	2	1	4	0	0	0	4	0	0	0	0	0	5	2
16:30	0	0	0	2	0	0	1	0	1	1	0	1	0	0	1	0	3	0	0	3	5	3
16:45	1	0	0	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	1	4
Total	1	0	0	4	1	0	2	0	4	2	4	1	0	1	5	0	3	0	1	3	11	10
17:00	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	1	0	0	1	1	3
17:15	0	0	0	8	0	0	1	0	4	1	0	0	0	0	0	0	0	0	0	0	1	12
17:30	1	0	0	0	1	0	1	1	0	2	0	0	0	1	0	0	1	0	1	1	4	2
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	8	1	0	2	1	6	3	0	0	0	2	0	0	2	0	1	2	6	17
Grand Total	4	1	0	29	5	0	10	2	14	12	5	3	0	4	8	0	6	3	4	9	34	51
Apprch %	80.0%	20.0%	0.0%			0.0%	83.3%	16.7%			62.5%	37.5%	0.0%			0.0%	66.7%	33.3%				
Total %	11.8%	2.9%	0.0%		14.7%	0.0%	29.4%	5.9%		35.3%	14.7%	8.8%	0.0%		23.5%	0.0%	17.6%	8.8%		26.5%	100.0%	

AM PEAK HOUR	Washington Avenue Southbound					San Leandro Boulevard Westbound					Washington Avenue Northbound					San Leandro Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	1	0		1	0	0	1		1	0	0	0		0	0	0	1		1	3
08:00	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:15	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:30	0	0	0		0	0	3	0		3	0	0	0		0	0	0	0		0	3
Total Volume	0	1	0		1	0	3	1		4	0	2	0		2	0	0	1		1	8
% App Total	0.0%	100.0%	0.0%			0.0%	75.0%	25.0%			0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			
PHF	.000	.250	.000		.250	.000	.250	.250		.333	.000	.500	.000		.500	.000	.000	.250		.250	.667

PM PEAK HOUR	Washington Avenue Southbound					San Leandro Boulevard Westbound					Washington Avenue Northbound					San Leandro Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	1	0	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
17:15	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
17:30	1	0	0		1	0	1	1		2	0	0	0		0	0	1	0		1	4
Total Volume	2	0	0		2	0	2	1		3	0	0	0		0	0	2	0		2	7
% App Total	100.0%	0.0%	0.0%			0.0%	66.7%	33.3%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.500	.000	.000		.500	.000	.500	.250		.375	.000	.000	.000		.000	.000	.500	.000		.500	.438

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-073 Washington Avenue-San Leandro Boulevard.
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	Washington Avenue Southbound					San Leandro Boulevard Westbound					Washington Avenue Northbound					San Leandro Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	1	2	0	0	3	6	0
07:15	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	3	1	0	4	7	0
07:30	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	1	1	1	0	3	5	0
07:45	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	0	3	0	3	6	0
Total	0	1	1	0	2	0	4	0	0	4	3	2	0	0	5	2	6	5	0	13	24	0
08:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	1	0	3	4	0
08:15	0	0	1	0	1	1	0	0	0	1	2	0	0	0	2	0	3	2	0	5	9	0
08:30	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	3	0	4	6	0
08:45	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	1	0	3	5	0
Total	0	1	1	0	2	1	2	0	0	3	4	0	0	0	4	0	8	7	0	15	24	0
16:00	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	2	0	2	4	0
16:15	0	0	1	0	1	0	1	0	0	1	3	2	1	0	6	0	1	2	0	3	11	0
16:30	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	0	1	2	0	3	6	0
16:45	0	0	0	0	0	0	1	0	0	1	2	0	0	0	2	1	0	0	0	1	4	0
Total	0	2	1	0	3	0	3	0	0	3	7	2	1	0	10	1	2	6	0	9	25	0
17:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
17:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	3	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
17:45	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	1	0	2	0	3	5	0
Total	0	0	2	0	2	0	1	0	0	1	0	0	1	0	1	4	1	2	0	7	11	0
Grand Total	0	4	5	0	9	1	10	0	0	11	14	4	2	0	20	7	17	20	0	44	84	0
Apprch %	0.0%	44.4%	55.6%			9.1%	90.9%	0.0%			70.0%	20.0%	10.0%			15.9%	38.6%	45.5%				
Total %	0.0%	4.8%	6.0%		10.7%	1.2%	11.9%	0.0%		13.1%	16.7%	4.8%	2.4%		23.8%	8.3%	20.2%	23.8%		52.4%	100.0%	

AM PEAK HOUR	Washington Avenue Southbound					San Leandro Boulevard Westbound					Washington Avenue Northbound					San Leandro Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	2	0		2	1	0	0		1	0	0	3		3	6
08:00	0	0	0		0	0	0	0		0	1	0	0		1	0	2	1		3	4
08:15	0	0	1		1	1	0	0		1	2	0	0		2	0	3	2		5	9
08:30	0	1	0		1	0	1	0		1	0	0	0		0	0	1	3		4	6
Total Volume	0	1	1		2	1	3	0		4	4	0	0		4	0	6	9		15	25
% App Total	0.0%	50.0%	50.0%			25.0%	75.0%	0.0%			100.0%	0.0%	0.0%			0.0%	40.0%	60.0%			
PHF	.000	.250	.250		.500	.250	.375	.000		.500	.500	.000	.000		.500	.000	.500	.750		.750	.694

PM PEAK HOUR	Washington Avenue Southbound					San Leandro Boulevard Westbound					Washington Avenue Northbound					San Leandro Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	0	1	0		1	2	0	0		2	1	0	0		1	4
17:00	0	0	1		1	0	0	0		0	0	0	0		0	0	1	0		1	2
17:15	0	0	0		0	0	1	0		1	0	0	0		0	2	0	0		2	3
17:30	0	0	0		0	0	0	0		0	0	0	0		0	1	0	0		1	1
Total Volume	0	0	1		1	0	2	0		2	2	0	0		2	4	1	0		5	10
% App Total	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			80.0%	20.0%	0.0%			
PHF	.000	.000	.250		.250	.000	.500	.000		.500	.250	.000	.000		.250	.500	.250	.000		.625	.625

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-005 50th Avenue-Coliseum Way.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	20	23	3	0	46	22	2	17	0	41	0	7	7	0	14	0	0	0	0	0	101	0
07:15	18	16	3	0	37	14	0	20	0	34	2	9	12	0	23	0	0	1	0	1	95	0
07:30	15	15	1	0	31	25	3	25	0	53	0	11	14	0	25	0	0	1	0	1	110	0
07:45	11	28	0	0	39	27	0	16	0	43	0	13	31	0	44	0	0	0	0	0	126	0
Total	64	82	7	0	153	88	5	78	0	171	2	40	64	0	106	0	0	2	0	2	432	0
08:00	11	17	1	0	29	34	2	21	0	57	0	21	33	0	54	1	1	1	0	3	143	0
08:15	9	20	1	0	30	53	2	17	0	72	3	28	23	0	54	1	0	0	0	1	157	0
08:30	9	23	1	0	33	47	0	21	0	68	1	29	31	0	61	0	1	1	0	2	164	0
08:45	14	19	1	0	34	44	1	19	0	64	1	31	28	0	60	0	1	2	0	3	161	0
Total	43	79	4	0	126	178	5	78	0	261	5	109	115	0	229	2	3	4	0	9	625	0
Grand Total	107	161	11	0	279	266	10	156	0	432	7	149	179	0	335	2	3	6	0	11	1057	0
Apprch %	38.4%	57.7%	3.9%	0.0%		61.6%	2.3%	36.1%	0.0%		2.1%	44.5%	53.4%	0.0%		18.2%	27.3%	54.5%	0.0%			
Total %	10.1%	15.2%	1.0%	0.0%	26.4%	25.2%	0.9%	14.8%	0.0%	40.9%	0.7%	14.1%	16.9%	0.0%	31.7%	0.2%	0.3%	0.6%	0.0%	1.0%	100.0%	

AM PEAK HOUR	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	11	17	1	0	29	34	2	21	0	57	0	21	33	0	54	1	1	1	0	3	143
08:15	9	20	1	0	30	53	2	17	0	72	3	28	23	0	54	1	0	0	0	1	157
08:30	9	23	1	0	33	47	0	21	0	68	1	29	31	0	61	0	1	1	0	2	164
08:45	14	19	1	0	34	44	1	19	0	64	1	31	28	0	60	0	1	2	0	3	161
Total Volume	43	79	4	0	126	178	5	78	0	261	5	109	115	0	229	2	3	4	0	9	625
% App Total	34.1%	62.7%	3.2%	0.0%		68.2%	1.9%	29.9%	0.0%		2.2%	47.6%	50.2%	0.0%		22.2%	33.3%	44.4%	0.0%		
PHF	.768	.859	1.000	.000	.926	.840	.625	.929	.000	.906	.417	.879	.871	.000	.939	.500	.750	.500	.000	.750	.953

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-005 50th Avenue-Coliseum Way.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
07:15	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
07:30	0	0	0	0	0	1	1	0	1	2	0	0	0	0	0	0	0	0	0	0	2	1
07:45	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	1	0	0	1	4	2	0	1	6	0	0	0	0	0	0	0	0	0	0	7	1
08:00	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0
08:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
08:30	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
08:45	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	1	0	0	1	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	8	0
Grand Total	0	2	0	0	2	11	2	0	1	13	0	0	0	0	0	0	0	0	0	0	15	1
Apprch %	0.0%	100.0%	0.0%			84.6%	15.4%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	13.3%	0.0%		13.3%	73.3%	13.3%	0.0%		86.7%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	1	0		1	2	0	0		2	0	0	0		0	0	0	0		0	3
08:15	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
08:30	0	0	0		0	2	0	0		2	0	0	0		0	0	0	0		0	2
08:45	0	0	0		0	2	0	0		2	0	0	0		0	0	0	0		0	2
Total Volume	0	1	0		1	7	0	0		7	0	0	0		0	0	0	0		0	8
% App Total	0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.875	.000	.000		.875	.000	.000	.000		.000	.000	.000	.000		.000	.667

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-005 50th Avenue-Coliseum Way.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	2	0	0	2	2	0	1	0	3	0	1	2	0	3	0	0	0	0	0	8	0
07:15	0	1	0	0	1	0	0	2	0	2	0	1	2	0	3	0	0	0	0	0	6	0
07:30	2	0	0	0	2	2	0	1	0	3	0	3	2	0	5	0	0	0	0	0	10	0
07:45	1	2	0	0	3	1	0	0	0	1	0	3	1	0	4	0	0	0	0	0	8	0
Total	3	5	0	0	8	5	0	4	0	9	0	8	7	0	15	0	0	0	0	0	32	0
08:00	1	1	0	0	2	0	0	1	0	1	0	2	2	0	4	0	0	0	0	0	7	0
08:15	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8	0
08:30	0	0	0	0	0	1	0	0	0	1	0	3	1	0	4	0	0	0	0	0	5	0
08:45	0	2	0	0	2	1	0	0	0	1	0	1	4	0	5	0	0	0	0	0	8	0
Total	1	5	0	0	6	2	0	1	0	3	0	12	7	0	19	0	0	0	0	0	28	0
Grand Total	4	10	0	0	14	7	0	5	0	12	0	20	14	0	34	0	0	0	0	0	60	0
Apprch %	28.6%	71.4%	0.0%			58.3%	0.0%	41.7%			0.0%	58.8%	41.2%			0.0%	0.0%	0.0%				
Total %	6.7%	16.7%	0.0%		23.3%	11.7%	0.0%	8.3%		20.0%	0.0%	33.3%	23.3%		56.7%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	1	1	0		2	0	0	1		1	0	2	2		4	0	0	0		0	7
08:15	0	2	0		2	0	0	0		0	0	6	0		6	0	0	0		0	8
08:30	0	0	0		0	1	0	0		1	0	3	1		4	0	0	0		0	5
08:45	0	2	0		2	1	0	0		1	0	1	4		5	0	0	0		0	8
Total Volume	1	5	0		6	2	0	1		3	0	12	7		19	0	0	0		0	28
% App Total	16.7%	83.3%	0.0%			66.7%	0.0%	33.3%			0.0%	63.2%	36.8%			0.0%	0.0%	0.0%			
PHF	.250	.625	.000		.750	.500	.000	.250		.750	.000	.500	.438		.792	.000	.000	.000		.000	.875

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-089 50th Avenue-Coliseum Way.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	42	8	0	0	50	35	0	9	0	44	0	20	36	0	56	3	4	0	0	7	157	0
16:15	44	11	0	0	55	22	2	17	0	41	0	19	36	0	55	2	2	1	0	5	156	0
16:30	58	15	0	0	73	18	0	23	0	41	1	15	23	0	39	0	1	0	0	1	154	0
16:45	53	13	0	0	66	18	1	9	0	28	0	11	22	0	33	0	2	1	0	3	130	0
Total	197	47	0	0	244	93	3	58	0	154	1	65	117	0	183	5	9	2	0	16	597	0
17:00	36	8	0	0	44	19	0	16	0	35	0	14	26	0	40	3	2	1	0	6	125	0
17:15	49	6	0	0	55	9	0	9	0	18	0	16	33	0	49	0	0	0	0	0	122	0
17:30	41	8	0	0	49	16	0	10	0	26	0	14	21	0	35	0	0	0	0	0	110	0
17:45	53	7	0	0	60	14	0	12	0	26	0	6	22	0	28	0	0	0	0	0	114	0
Total	179	29	0	0	208	58	0	47	0	105	0	50	102	0	152	3	2	1	0	6	471	0
Grand Total	376	76	0	0	452	151	3	105	0	259	1	115	219	0	335	8	11	3	0	22	1068	0
Apprch %	83.2%	16.8%	0.0%	0.0%		58.3%	1.2%	40.5%	0.0%		0.3%	34.3%	65.4%	0.0%		36.4%	50.0%	13.6%	0.0%			
Total %	35.2%	7.1%	0.0%	0.0%	42.3%	14.1%	0.3%	9.8%	0.0%	24.3%	0.1%	10.8%	20.5%	0.0%	31.4%	0.7%	1.0%	0.3%	0.0%	2.1%	100.0%	

PM PEAK HOUR	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	42	8	0	0	50	35	0	9	0	44	0	20	36	0	56	3	4	0	0	7	157
16:15	44	11	0	0	55	22	2	17	0	41	0	19	36	0	55	2	2	1	0	5	156
16:30	58	15	0	0	73	18	0	23	0	41	1	15	23	0	39	0	1	0	0	1	154
16:45	53	13	0	0	66	18	1	9	0	28	0	11	22	0	33	0	2	1	0	3	130
Total Volume	197	47	0	0	244	93	3	58	0	154	1	65	117	0	183	5	9	2	0	16	597
% App Total	80.7%	19.3%	0.0%	0.0%		60.4%	1.9%	37.7%	0.0%		0.5%	35.5%	63.9%	0.0%		31.3%	56.3%	12.5%	0.0%		
PHF	.849	.783	.000	.000	.836	.664	.375	.630	.000	.875	.250	.813	.813	.000	.817	.417	.563	.500	.000	.571	.951

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-089 50th Avenue-Coliseum Way.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	3	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	2	2	4	0	1	0	0	1	5	2
17:00	0	1	0	0	1	1	0	0	1	1	0	0	0	2	0	0	1	0	0	1	3	3
17:15	1	0	0	1	1	0	0	0	0	0	0	0	4	1	4	0	0	0	1	0	5	3
17:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0
Total	1	2	0	1	3	1	0	0	1	1	0	0	7	3	7	0	1	0	1	1	12	6
Grand Total	1	2	0	1	3	1	0	0	1	1	0	2	9	5	11	0	2	0	1	2	17	8
Apprch %	33.3%	66.7%	0.0%			100.0%	0.0%	0.0%			0.0%	18.2%	81.8%			0.0%	100.0%	0.0%				
Total %	5.9%	11.8%	0.0%		17.6%	5.9%	0.0%	0.0%		5.9%	0.0%	11.8%	52.9%		64.7%	0.0%	11.8%	0.0%		11.8%	100.0%	

PM PEAK HOUR	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:15	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
16:30	0	0	0		0	0	0	0		0	0	0	1		1	0	0	0		0	1
16:45	0	0	0		0	0	0	0		0	0	2	1		3	0	0	0		0	3
Total Volume	0	0	0		0	0	0	0		0	0	2	2		4	0	1	0		1	5
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.500		.333	.000	.250	.000		.250	.417

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-089 50th Avenue-Coliseum Way.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	1	0	1	0	2	1	0	2	0	3	0	0	5	0	5	0	0	0	0	0	10	0
16:15	1	2	0	0	3	0	0	0	0	0	0	1	2	0	3	1	0	0	0	1	7	0
16:30	4	0	0	0	4	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	7	0
16:45	0	0	0	0	0	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	3	0
Total	6	2	1	0	9	2	0	2	0	4	0	4	9	0	13	1	0	0	0	1	27	0
17:00	0	1	0	0	1	0	0	0	0	0	1	1	3	0	5	0	0	0	0	0	6	0
17:15	2	0	0	0	2	0	0	1	0	1	0	1	1	0	2	0	0	0	0	0	5	0
17:30	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0
17:45	1	0	0	0	1	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	4	0
Total	3	2	0	0	5	1	0	1	0	2	1	2	7	0	10	0	0	0	0	0	17	0
Grand Total	9	4	1	0	14	3	0	3	0	6	1	6	16	0	23	1	0	0	0	1	44	0
Apprch %	64.3%	28.6%	7.1%			50.0%	0.0%	50.0%			4.3%	26.1%	69.6%			100.0%	0.0%	0.0%				
Total %	20.5%	9.1%	2.3%		31.8%	6.8%	0.0%	6.8%		13.6%	2.3%	13.6%	36.4%		52.3%	2.3%	0.0%	0.0%		2.3%	100.0%	

PM PEAK HOUR	50th Avenue Southbound					Coliseum Way Westbound					50th Avenue Northbound					Coliseum Way Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	1	0	1		2	1	0	2		3	0	0	5		5	0	0	0		0	10
16:15	1	2	0		3	0	0	0		0	0	1	2		3	1	0	0		1	7
16:30	4	0	0		4	0	0	0		0	0	1	2		3	0	0	0		0	7
16:45	0	0	0		0	1	0	0		1	0	2	0		2	0	0	0		0	3
Total Volume	6	2	1		9	2	0	2		4	0	4	9		13	1	0	0		1	27
% App Total	66.7%	22.2%	11.1%			50.0%	0.0%	50.0%			0.0%	30.8%	69.2%			100.0%	0.0%	0.0%			
PHF	.375	.250	.250		.563	.500	.000	.250		.333	.000	.500	.450		.650	.250	.000	.000		.250	.675

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-074 Coliseum Access-Coliseum Way-66th Avenue
Date : 6/6/2013

Unshifted Count = All Vehicles

	Coliseum Way Southbound					66th Avenue Westbound					Coliseum Access Northbound					66th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	8	0	13	0	21	0	131	10	0	141	3	0	1	0	4	44	84	7	0	135	301	0
07:15	4	0	28	0	32	4	136	19	0	159	3	1	0	0	4	61	78	10	0	149	344	0
07:30	4	0	29	0	33	1	174	14	0	189	3	0	0	0	3	50	78	5	0	133	358	0
07:45	3	0	24	0	27	1	146	14	0	161	2	1	1	0	4	69	89	16	0	174	366	0
Total	19	0	94	0	113	6	587	57	0	650	11	2	2	0	15	224	329	38	0	591	1369	0
08:00	11	0	31	0	42	2	140	22	0	164	1	0	1	0	2	57	92	14	0	163	371	0
08:15	9	1	40	0	50	1	133	15	0	149	2	0	1	0	3	68	106	20	0	194	396	0
08:30	10	1	26	0	37	2	129	24	0	155	1	0	1	0	2	76	96	24	0	196	390	0
08:45	12	0	37	0	49	4	125	27	0	156	1	0	1	0	2	82	102	12	0	196	403	0
Total	42	2	134	0	178	9	527	88	0	624	5	0	4	0	9	283	396	70	0	749	1560	0
16:00	17	0	82	0	99	5	113	21	0	139	4	1	6	0	11	39	149	6	0	194	443	0
16:15	25	1	58	0	84	1	114	15	0	130	10	0	4	0	14	36	147	10	0	193	421	0
16:30	24	1	56	0	81	3	145	13	0	161	25	3	10	0	38	28	165	5	0	198	478	0
16:45	19	0	54	0	73	1	120	15	0	136	17	0	3	0	20	34	143	7	0	184	413	0
Total	85	2	250	0	337	10	492	64	0	566	56	4	23	0	83	137	604	28	0	769	1755	0
17:00	28	0	64	0	92	0	138	15	0	153	33	1	2	0	36	39	146	3	0	188	469	0
17:15	17	0	33	0	50	1	118	11	0	130	11	1	1	0	13	23	121	1	0	145	338	0
17:30	18	0	35	0	53	0	123	5	0	128	6	0	1	0	7	19	129	1	0	149	337	0
17:45	9	0	22	0	31	0	115	11	0	126	4	0	0	0	4	20	147	0	0	167	328	0
Total	72	0	154	0	226	1	494	42	0	537	54	2	4	0	60	101	543	5	0	649	1472	0
Grand Total	218	4	632	0	854	26	2100	251	0	2377	126	8	33	0	167	745	1872	141	0	2758	6156	0
Apprch %	25.5%	0.5%	74.0%	0.0%		1.1%	88.3%	10.6%	0.0%		75.4%	4.8%	19.8%	0.0%		27.0%	67.9%	5.1%	0.0%			
Total %	3.5%	0.1%	10.3%	0.0%	13.9%	0.4%	34.1%	4.1%	0.0%	38.6%	2.0%	0.1%	0.5%	0.0%	2.7%	12.1%	30.4%	2.3%	0.0%	44.8%	100.0%	

AM PEAK HOUR	Coliseum Way Southbound					66th Avenue Westbound					Coliseum Access Northbound					66th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	11	0	31	0	42	2	140	22	0	164	1	0	1	0	2	57	92	14	0	163	371
08:15	9	1	40	0	50	1	133	15	0	149	2	0	1	0	3	68	106	20	0	194	396
08:30	10	1	26	0	37	2	129	24	0	155	1	0	1	0	2	76	96	24	0	196	390
08:45	12	0	37	0	49	4	125	27	0	156	1	0	1	0	2	82	102	12	0	196	403
Total Volume	42	2	134	0	178	9	527	88	0	624	5	0	4	0	9	283	396	70	0	749	1560
% App Total	23.6%	1.1%	75.3%	0.0%		1.4%	84.5%	14.1%	0.0%		55.6%	0.0%	44.4%	0.0%		37.8%	52.9%	9.3%	0.0%		
PHF	.875	.500	.838	.000	.890	.563	.941	.815	.000	.951	.625	.000	1.000	.000	.750	.863	.934	.729	.000	.955	.968

PM PEAK HOUR	Coliseum Way Southbound					66th Avenue Westbound					Coliseum Access Northbound					66th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	25	1	58	0	84	1	114	15	0	130	10	0	4	0	14	36	147	10	0	193	421
16:30	24	1	56	0	81	3	145	13	0	161	25	3	10	0	38	28	165	5	0	198	478
16:45	19	0	54	0	73	1	120	15	0	136	17	0	3	0	20	34	143	7	0	184	413
17:00	28	0	64	0	92	0	138	15	0	153	33	1	2	0	36	39	146	3	0	188	469
Total Volume	96	2	232	0	330	5	517	58	0	580	85	4	19	0	108	137	601	25	0	763	1781
% App Total	29.1%	0.6%	70.3%	0.0%		0.9%	89.1%	10.0%	0.0%		78.7%	3.7%	17.6%	0.0%		18.0%	78.8%	3.3%	0.0%		
PHF	.857	.500	.906	.000	.897	.417	.891	.967	.000	.901	.644	.333	.475	.000	.711	.878	.911	.625	.000	.963	.931

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-074 Coliseum Access-Coliseum Way-66th Avenue
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	Coliseum Way Southbound					66th Avenue Westbound					Coliseum Access Northbound					66th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	0	0	1	0	1	0	2	2	0	4	0	0	0	0	0	0	1	0	0	1	6	0
07:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2	0
07:45	0	0	0	0	0	0	2	1	2	3	0	0	0	0	0	0	1	0	0	1	4	2
Total	0	0	1	0	1	0	4	3	3	7	1	0	0	0	1	0	3	0	0	3	12	3
08:00	0	0	0	5	0	0	0	0	7	0	0	1	0	0	1	0	0	0	0	0	1	12
08:15	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1
08:30	0	0	0	2	0	0	1	0	1	1	0	2	0	0	2	0	0	0	0	0	3	3
08:45	0	0	0	0	0	0	2	0	0	2	2	1	0	0	3	0	1	0	0	1	6	0
Total	0	0	0	8	0	0	3	0	8	3	3	4	0	0	7	0	1	0	0	1	11	16
16:00	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
16:15	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	3	0
16:30	0	1	0	4	1	0	0	0	3	0	0	0	0	0	0	0	1	0	0	1	2	7
16:45	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	1	2	0	4	3	0	2	0	5	2	0	0	0	0	0	1	1	0	0	2	7	9
17:00	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	4	0
17:15	1	0	0	0	1	0	1	0	2	1	0	0	0	0	0	0	0	1	0	1	3	2
17:30	1	1	0	1	2	0	0	1	1	1	0	0	0	0	0	0	1	0	0	1	4	2
17:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	4	0
Total	3	2	0	1	5	0	2	1	3	3	0	0	0	0	0	0	4	3	0	7	15	4
Grand Total	4	4	1	13	9	0	11	4	19	15	4	4	0	0	8	1	9	3	0	13	45	32
Apprch %	44.4%	44.4%	11.1%			0.0%	73.3%	26.7%			50.0%	50.0%	0.0%			7.7%	69.2%	23.1%				
Total %	8.9%	8.9%	2.2%		20.0%	0.0%	24.4%	8.9%		33.3%	8.9%	8.9%	0.0%		17.8%	2.2%	20.0%	6.7%		28.9%	100.0%	

AM PEAK HOUR	Coliseum Way Southbound					66th Avenue Westbound					Coliseum Access Northbound					66th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:15	0	0	0		0	0	0	0		0	1	0	0		1	0	0	0		0	1
08:30	0	0	0		0	0	1	0		1	0	2	0		2	0	0	0		0	3
08:45	0	0	0		0	0	2	0		2	2	1	0		3	0	1	0		1	6
Total Volume	0	0	0		0	0	3	0		3	3	4	0		7	0	1	0		1	11
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			42.9%	57.1%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.375	.000		.375	.375	.500	.000		.583	.000	.250	.000		.250	.458

PM PEAK HOUR	Coliseum Way Southbound					66th Avenue Westbound					Coliseum Access Northbound					66th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	1	0	0		1	0	1	0		1	0	0	0		0	1	0	0		1	3
16:30	0	1	0		1	0	0	0		0	0	0	0		0	0	1	0		1	2
16:45	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:00	0	1	0		1	0	1	0		1	0	0	0		0	0	2	0		2	4
Total Volume	1	3	0		4	0	2	0		2	0	0	0		0	1	3	0		4	10
% App Total	25.0%	75.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			25.0%	75.0%	0.0%			
PHF	.250	.750	.000		1.000	.000	.500	.000		.500	.000	.000	.000		.000	.250	.375	.000		.500	.625

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-074 Coliseum Access-Coliseum Way-66th Avenue
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	Coliseum Way Southbound					66th Avenue Westbound					Coliseum Access Northbound					66th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	2	0	2	0	14	0	0	14	0	0	0	0	0	0	12	1	0	13	29	0
07:15	0	0	1	0	1	2	6	0	0	8	2	0	0	0	2	7	5	2	0	14	25	0
07:30	0	0	5	0	5	0	9	1	0	10	1	0	0	0	1	6	2	1	0	9	25	0
07:45	0	0	5	0	5	0	9	0	0	9	1	1	1	0	3	5	5	1	0	11	28	0
Total	0	0	13	0	13	2	38	1	0	41	4	1	1	0	6	18	24	5	0	47	107	0
08:00	2	0	8	0	10	0	9	0	0	9	0	0	0	0	0	5	3	0	0	8	27	0
08:15	2	0	8	0	10	0	3	0	0	3	0	0	0	0	0	4	4	0	0	8	21	0
08:30	0	0	6	0	6	0	9	1	0	10	0	0	0	0	0	9	6	0	0	15	31	0
08:45	1	0	9	0	10	0	13	1	0	14	0	0	0	0	0	14	7	0	0	21	45	0
Total	5	0	31	0	36	0	34	2	0	36	0	0	0	0	0	32	20	0	0	52	124	0
16:00	1	0	6	0	7	0	2	1	0	3	0	0	0	0	0	2	6	0	0	8	18	0
16:15	0	0	4	0	4	0	2	0	0	2	0	0	0	0	0	4	4	0	0	8	14	0
16:30	1	0	3	0	4	0	10	0	0	10	0	0	0	0	0	4	10	0	0	14	28	0
16:45	1	0	2	0	3	0	2	1	0	3	0	0	0	0	0	3	6	0	0	9	15	0
Total	3	0	15	0	18	0	16	2	0	18	0	0	0	0	0	13	26	0	0	39	75	0
17:00	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	2	5	0	0	7	12	0
17:15	0	0	1	0	1	0	4	1	0	5	0	0	0	0	0	2	2	0	0	4	10	0
17:30	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	4	0
17:45	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	4	0
Total	1	0	3	0	4	0	11	1	0	12	0	0	0	0	0	6	8	0	0	14	30	0
Grand Total	9	0	62	0	71	2	99	6	0	107	4	1	1	0	6	69	78	5	0	152	336	0
Apprch %	12.7%	0.0%	87.3%			1.9%	92.5%	5.6%			66.7%	16.7%	16.7%			45.4%	51.3%	3.3%				
Total %	2.7%	0.0%	18.5%		21.1%	0.6%	29.5%	1.8%		31.8%	1.2%	0.3%	0.3%		1.8%	20.5%	23.2%	1.5%		45.2%	100.0%	

AM PEAK HOUR	Coliseum Way Southbound					66th Avenue Westbound					Coliseum Access Northbound					66th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	2	0	8		10	0	9	0		9	0	0	0		0	5	3	0		8	27
08:15	2	0	8		10	0	3	0		3	0	0	0		0	4	4	0		8	21
08:30	0	0	6		6	0	9	1		10	0	0	0		0	9	6	0		15	31
08:45	1	0	9		10	0	13	1		14	0	0	0		0	14	7	0		21	45
Total Volume	5	0	31		36	0	34	2		36	0	0	0		0	32	20	0		52	124
% App Total	13.9%	0.0%	86.1%			0.0%	94.4%	5.6%			0.0%	0.0%	0.0%			61.5%	38.5%	0.0%			
PHF	.625	.000	.861		.900	.000	.654	.500		.643	.000	.000	.000		.000	.571	.714	.000		.619	.689

PM PEAK HOUR	Coliseum Way Southbound					66th Avenue Westbound					Coliseum Access Northbound					66th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	0	0	4		4	0	2	0		2	0	0	0		0	4	4	0		8	14
16:30	1	0	3		4	0	10	0		10	0	0	0		0	4	10	0		14	28
16:45	1	0	2		3	0	2	1		3	0	0	0		0	3	6	0		9	15
17:00	0	0	0		0	0	5	0		5	0	0	0		0	2	5	0		7	12
Total Volume	2	0	9		11	0	19	1		20	0	0	0		0	13	25	0		38	69
% App Total	18.2%	0.0%	81.8%			0.0%	95.0%	5.0%			0.0%	0.0%	0.0%			34.2%	65.8%	0.0%			
PHF	.500	.000	.563		.688	.000	.475	.250		.500	.000	.000	.000		.000	.813	.625	.000		.679	.616

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-007 Hegenberger Road-Baldwin Street.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	11	201	0	2	214	13	0	7	0	20	0	134	13	3	150	0	0	0	0	0	384	5
07:15	9	226	0	0	235	14	0	8	0	22	0	150	10	4	164	0	0	0	0	0	421	4
07:30	12	275	0	0	287	12	0	12	0	24	0	177	10	4	191	0	0	0	0	0	502	4
07:45	23	257	0	1	281	14	0	12	0	26	0	157	26	11	194	0	0	0	0	0	501	12
Total	55	959	0	3	1017	53	0	39	0	92	0	618	59	22	699	0	0	0	0	0	1808	25
08:00	19	333	0	2	354	24	0	14	0	38	0	244	18	9	271	0	0	0	0	0	663	11
08:15	19	343	0	2	364	16	0	18	0	34	0	244	17	7	268	0	0	0	0	0	666	9
08:30	18	309	0	1	328	23	0	12	0	35	0	251	18	7	276	0	0	0	0	0	639	8
08:45	17	253	0	4	274	15	0	10	0	25	0	252	24	8	284	0	0	0	0	0	583	12
Total	73	1238	0	9	1320	78	0	54	0	132	0	991	77	31	1099	0	0	0	0	0	2551	40
Grand Total	128	2197	0	12	2337	131	0	93	0	224	0	1609	136	53	1798	0	0	0	0	0	4359	65
Apprch %	5.5%	94.0%	0.0%	0.5%		58.5%	0.0%	41.5%	0.0%		0.0%	89.5%	7.6%	2.9%		0.0%	0.0%	0.0%	0.0%			
Total %	2.9%	50.4%	0.0%	0.3%	53.6%	3.0%	0.0%	2.1%	0.0%	5.1%	0.0%	36.9%	3.1%	1.2%	41.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	19	333	0	2	354	24	0	14	0	38	0	244	18	9	271	0	0	0	0	0	663
08:15	19	343	0	2	364	16	0	18	0	34	0	244	17	7	268	0	0	0	0	0	666
08:30	18	309	0	1	328	23	0	12	0	35	0	251	18	7	276	0	0	0	0	0	639
08:45	17	253	0	4	274	15	0	10	0	25	0	252	24	8	284	0	0	0	0	0	583
Total Volume	73	1238	0	9	1320	78	0	54	0	132	0	991	77	31	1099	0	0	0	0	0	2551
% App Total	5.5%	93.8%	0.0%	0.7%		59.1%	0.0%	40.9%	0.0%		0.0%	90.2%	7.0%	2.8%		0.0%	0.0%	0.0%	0.0%		
PHF	.961	.902	.000	.563	.907	.813	.000	.750	.000	.868	.000	.983	.802	.861	.967	.000	.000	.000	.000	.000	.958

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-007 Hegenberger Road-Baldwin Street.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1	2
07:15	0	1	0	0	1	0	0	0	0	0	0	1	0	1	1	0	0	0	4	0	2	5
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
07:45	1	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	8	0	1	13
Total	1	1	0	0	2	0	0	0	1	0	0	2	0	6	2	0	0	0	14	0	4	21
08:00	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	3	0	1	4
08:15	0	2	0	0	2	0	0	0	0	0	0	0	0	5	0	0	0	0	2	0	2	7
08:30	0	1	0	0	1	0	0	0	0	0	0	0	1	3	1	0	0	0	2	0	2	5
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	0	5
Total	0	3	0	0	3	0	0	0	0	0	0	1	1	11	2	0	0	0	10	0	5	21
Grand Total	1	4	0	0	5	0	0	0	1	0	0	3	1	17	4	0	0	0	24	0	9	42
Apprch %	20.0%	80.0%	0.0%			0.0%	0.0%	0.0%			0.0%	75.0%	25.0%			0.0%	0.0%	0.0%				
Total %	11.1%	44.4%	0.0%		55.6%	0.0%	0.0%	0.0%		0.0%	0.0%	33.3%	11.1%		44.4%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
08:15	0	2	0		2	0	0	0		0	0	0	0		0	0	0	0		0	2
08:30	0	1	0		1	0	0	0		0	0	0	1		1	0	0	0		0	2
08:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	3	0		3	0	0	0		0	0	1	1		2	0	0	0		0	5
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			
PHF	.000	.375	.000		.375	.000	.000	.000		.000	.000	.250	.250		.500	.000	.000	.000		.000	.625

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-007 Hegenberger Road-Baldwin Street.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	11	0	0	11	4	0	1	0	5	0	16	2	0	18	0	0	0	0	0	34	0
07:15	1	11	0	0	12	5	0	0	0	5	0	12	1	0	13	0	0	0	0	0	30	0
07:30	0	12	0	0	12	5	0	1	0	6	0	13	1	0	14	0	0	0	0	0	32	0
07:45	0	10	0	0	10	6	0	1	0	7	0	5	0	0	5	0	0	0	0	0	22	0
Total	1	44	0	0	45	20	0	3	0	23	0	46	4	0	50	0	0	0	0	0	118	0
08:00	1	13	0	0	14	4	0	1	0	5	0	12	3	0	15	0	0	0	0	0	34	0
08:15	1	10	0	0	11	3	0	2	0	5	0	15	2	0	17	0	0	0	0	0	33	0
08:30	2	19	0	0	21	7	0	1	0	8	0	19	3	0	22	0	0	0	0	0	51	0
08:45	0	19	0	0	19	1	0	1	0	2	0	26	3	0	29	0	0	0	0	0	50	0
Total	4	61	0	0	65	15	0	5	0	20	0	72	11	0	83	0	0	0	0	0	168	0
Grand Total	5	105	0	0	110	35	0	8	0	43	0	118	15	0	133	0	0	0	0	0	286	0
Apprch %	4.5%	95.5%	0.0%			81.4%	0.0%	18.6%			0.0%	88.7%	11.3%			0.0%	0.0%	0.0%				
Total %	1.7%	36.7%	0.0%		38.5%	12.2%	0.0%	2.8%		15.0%	0.0%	41.3%	5.2%		46.5%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	1	13	0		14	4	0	1		5	0	12	3		15	0	0	0		0	34
08:15	1	10	0		11	3	0	2		5	0	15	2		17	0	0	0		0	33
08:30	2	19	0		21	7	0	1		8	0	19	3		22	0	0	0		0	51
08:45	0	19	0		19	1	0	1		2	0	26	3		29	0	0	0		0	50
Total Volume	4	61	0		65	15	0	5		20	0	72	11		83	0	0	0		0	168
% App Total	6.2%	93.8%	0.0%			75.0%	0.0%	25.0%			0.0%	86.7%	13.3%			0.0%	0.0%	0.0%			
PHF	.500	.803	.000		.774	.536	.000	.625		.625	.000	.692	.917		.716	.000	.000	.000		.000	.824

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-090 Hegenberger Road-Baldwin Street.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	15	304	0	4	323	25	0	21	0	46	0	315	15	7	337	0	0	0	0	0	706	11
16:15	23	248	0	3	274	31	0	28	0	59	0	279	18	11	308	0	0	0	0	0	641	14
16:30	26	286	0	3	315	24	0	19	0	43	0	318	17	7	342	0	0	0	0	0	700	10
16:45	20	274	0	1	295	21	0	12	0	33	0	310	26	8	344	0	0	0	0	0	672	9
Total	84	1112	0	11	1207	101	0	80	0	181	0	1222	76	33	1331	0	0	0	0	0	2719	44
17:00	20	297	0	2	319	15	0	20	0	35	0	304	19	11	334	0	0	0	0	0	688	13
17:15	20	289	0	4	313	20	0	20	0	40	0	325	22	4	351	0	0	0	0	0	704	8
17:30	25	304	0	5	334	24	0	21	0	45	0	295	13	4	312	0	0	0	0	0	691	9
17:45	27	243	0	1	271	14	0	21	0	35	0	226	12	7	245	0	0	0	0	0	551	8
Total	92	1133	0	12	1237	73	0	82	0	155	0	1150	66	26	1242	0	0	0	0	0	2634	38
Grand Total	176	2245	0	23	2444	174	0	162	0	336	0	2372	142	59	2573	0	0	0	0	0	5353	82
Apprch %	7.2%	91.9%	0.0%	0.9%		51.8%	0.0%	48.2%	0.0%		0.0%	92.2%	5.5%	2.3%		0.0%	0.0%	0.0%	0.0%			
Total %	3.3%	41.9%	0.0%	0.4%	45.7%	3.3%	0.0%	3.0%	0.0%	6.3%	0.0%	44.3%	2.7%	1.1%	48.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

PM PEAK HOUR	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	26	286	0	3	315	24	0	19	0	43	0	318	17	7	342	0	0	0	0	0	700
16:45	20	274	0	1	295	21	0	12	0	33	0	310	26	8	344	0	0	0	0	0	672
17:00	20	297	0	2	319	15	0	20	0	35	0	304	19	11	334	0	0	0	0	0	688
17:15	20	289	0	4	313	20	0	20	0	40	0	325	22	4	351	0	0	0	0	0	704
Total Volume	86	1146	0	10	1242	80	0	71	0	151	0	1257	84	30	1371	0	0	0	0	0	2764
% App Total	6.9%	92.3%	0.0%	0.8%		53.0%	0.0%	47.0%	0.0%		0.0%	91.7%	6.1%	2.2%		0.0%	0.0%	0.0%	0.0%		
PHF	.827	.965	.000	.625	.973	.833	.000	.888	.000	.878	.000	.967	.808	.682	.976	.000	.000	.000	.000	.000	.982

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-090 Hegenberger Road-Baldwin Street.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	2	0	1	3
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	6	0	0	14
16:30	0	1	0	0	1	0	0	1	1	1	0	0	0	2	0	0	0	0	6	0	2	9
16:45	0	1	0	0	1	0	0	0	1	0	0	1	0	6	1	0	0	0	6	0	2	13
Total	0	2	0	0	2	0	0	2	2	2	0	1	0	17	1	0	0	0	20	0	5	39
17:00	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	1	5
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	4	0	0	11
17:45	0	1	0	0	1	0	0	1	1	1	0	0	0	1	0	0	0	0	2	0	2	4
Total	0	2	0	0	2	0	0	1	3	1	0	0	0	8	0	0	0	0	9	0	3	20
Grand Total	0	4	0	0	4	0	0	3	5	3	0	1	0	25	1	0	0	0	29	0	8	59
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	50.0%	0.0%		50.0%	0.0%	0.0%	37.5%		37.5%	0.0%	12.5%	0.0%		12.5%	0.0%	0.0%	0.0%		0.0%	100.0%	

PM PEAK HOUR	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	1	0		1	0	0	1		1	0	0	0		0	0	0	0		0	2
16:45	0	1	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
17:00	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	3	0		3	0	0	1		1	0	1	0		1	0	0	0		0	5
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.750	.000		.750	.000	.000	.250		.250	.000	.250	.000		.250	.000	.000	.000		.000	.625

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-090 Hegenberger Road-Baldwin Street.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	1	5	0	0	6	0	0	0	0	0	0	6	2	0	8	0	0	0	0	0	14	0
16:15	0	6	0	0	6	2	0	0	0	2	0	4	2	0	6	0	0	0	0	0	14	0
16:30	0	3	0	0	3	0	0	1	0	1	0	7	1	0	8	0	0	0	0	0	12	0
16:45	0	5	0	0	5	1	0	0	0	1	0	10	1	0	11	0	0	0	0	0	17	0
Total	1	19	0	0	20	3	0	1	0	4	0	27	6	0	33	0	0	0	0	0	57	0
17:00	0	3	0	0	3	2	0	0	0	2	0	4	0	0	4	0	0	0	0	0	9	0
17:15	0	5	0	0	5	1	0	1	0	2	0	1	2	0	3	0	0	0	0	0	10	0
17:30	0	5	0	0	5	3	0	0	0	3	0	5	1	0	6	0	0	0	0	0	14	0
17:45	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6	0
Total	0	14	0	0	14	6	0	1	0	7	0	15	3	0	18	0	0	0	0	0	39	0
Grand Total	1	33	0	0	34	9	0	2	0	11	0	42	9	0	51	0	0	0	0	0	96	0
Apprch %	2.9%	97.1%	0.0%			81.8%	0.0%	18.2%			0.0%	82.4%	17.6%			0.0%	0.0%	0.0%				
Total %	1.0%	34.4%	0.0%		35.4%	9.4%	0.0%	2.1%		11.5%	0.0%	43.8%	9.4%		53.1%	0.0%	0.0%	0.0%		0.0%	100.0%	

PM PEAK HOUR	Hegenberger Road Southbound					Baldwin Street Westbound					Hegenberger Road Northbound					Baldwin Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	3	0		3	0	0	1		1	0	7	1		8	0	0	0		0	12
16:45	0	5	0		5	1	0	0		1	0	10	1		11	0	0	0		0	17
17:00	0	3	0		3	2	0	0		2	0	4	0		4	0	0	0		0	9
17:15	0	5	0		5	1	0	1		2	0	1	2		3	0	0	0		0	10
Total Volume	0	16	0		16	4	0	2		6	0	22	4		26	0	0	0		0	48
% App Total	0.0%	100.0%	0.0%			66.7%	0.0%	33.3%			0.0%	84.6%	15.4%			0.0%	0.0%	0.0%			
PHF	.000	.800	.000		.800	.500	.000	.500		.750	.000	.550	.500		.591	.000	.000	.000		.000	.706

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-014 98th Avenue-Edes Avenue.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	8	6	11	0	25	4	172	10	0	186	43	12	8	0	63	8	105	12	0	125	399	0
07:15	8	10	15	0	33	7	210	7	0	224	42	17	14	0	73	10	113	20	0	143	473	0
07:30	11	17	16	0	44	3	238	18	0	259	47	36	15	0	98	11	97	21	0	129	530	0
07:45	15	24	8	0	47	14	252	26	0	292	40	38	24	0	102	12	146	39	0	197	638	0
Total	42	57	50	0	149	28	872	61	0	961	172	103	61	0	336	41	461	92	0	594	2040	0
08:00	14	23	17	0	54	9	234	31	0	274	51	58	22	0	131	22	156	31	0	209	668	0
08:15	20	18	23	0	61	10	226	35	0	271	49	38	25	0	112	16	144	22	0	182	626	0
08:30	22	15	26	0	63	16	220	40	0	276	54	38	12	0	104	12	153	27	0	192	635	0
08:45	12	12	20	0	44	9	171	26	0	206	36	23	19	0	78	11	177	24	0	212	540	0
Total	68	68	86	0	222	44	851	132	0	1027	190	157	78	0	425	61	630	104	0	795	2469	0
Grand Total	110	125	136	0	371	72	1723	193	0	1988	362	260	139	0	761	102	1091	196	0	1389	4509	0
Apprch %	29.6%	33.7%	36.7%	0.0%		3.6%	86.7%	9.7%	0.0%		47.6%	34.2%	18.3%	0.0%		7.3%	78.5%	14.1%	0.0%			
Total %	2.4%	2.8%	3.0%	0.0%	8.2%	1.6%	38.2%	4.3%	0.0%	44.1%	8.0%	5.8%	3.1%	0.0%	16.9%	2.3%	24.2%	4.3%	0.0%	30.8%	100.0%	

AM PEAK HOUR	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	15	24	8	0	47	14	252	26	0	292	40	38	24	0	102	12	146	39	0	197	638
08:00	14	23	17	0	54	9	234	31	0	274	51	58	22	0	131	22	156	31	0	209	668
08:15	20	18	23	0	61	10	226	35	0	271	49	38	25	0	112	16	144	22	0	182	626
08:30	22	15	26	0	63	16	220	40	0	276	54	38	12	0	104	12	153	27	0	192	635
Total Volume	71	80	74	0	225	49	932	132	0	1113	194	172	83	0	449	62	599	119	0	780	2567
% App Total	31.6%	35.6%	32.9%	0.0%		4.4%	83.7%	11.9%	0.0%		43.2%	38.3%	18.5%	0.0%		7.9%	76.8%	15.3%	0.0%		
PHF	.807	.833	.712	.000	.893	.766	.925	.825	.000	.953	.898	.741	.830	.000	.857	.705	.960	.763	.000	.933	.961

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-014 98th Avenue-Edes Avenue.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	4	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	0	0	10
07:15	1	0	0	0	1	0	0	0	1	0	0	0	0	2	0	0	1	0	1	1	2	4
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	2	2	1
07:45	0	1	0	1	1	0	0	0	6	0	0	0	0	4	0	0	0	1	0	1	2	11
Total	1	1	0	5	2	0	0	0	10	0	0	0	0	7	0	0	3	1	4	4	6	26
08:00	0	0	0	1	0	0	0	1	3	1	0	0	0	5	0	0	0	0	1	0	1	10
08:15	0	0	0	1	0	0	0	0	2	0	0	0	0	6	0	1	0	0	0	1	1	9
08:30	0	0	1	0	1	0	0	0	3	0	0	0	0	3	0	0	2	0	1	2	3	7
08:45	0	0	0	3	0	0	0	0	1	0	0	0	0	2	0	0	1	1	2	2	2	8
Total	0	0	1	5	1	0	0	1	9	1	0	0	0	16	0	1	3	1	4	5	7	34
Grand Total	1	1	1	10	3	0	0	1	19	1	0	0	0	23	0	1	6	2	8	9	13	60
Apprch %	33.3%	33.3%	33.3%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			11.1%	66.7%	22.2%				
Total %	7.7%	7.7%	7.7%		23.1%	0.0%	0.0%	7.7%		7.7%	0.0%	0.0%	0.0%		0.0%	7.7%	46.2%	15.4%		69.2%	100.0%	

AM PEAK HOUR	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	1	0		1	0	0	0		0	0	0	0		0	0	0	1		1	2
08:00	0	0	0		0	0	0	1		1	0	0	0		0	0	0	0		0	1
08:15	0	0	0		0	0	0	0		0	0	0	0		0	1	0	0		1	1
08:30	0	0	1		1	0	0	0		0	0	0	0		0	0	2	0		2	3
Total Volume	0	1	1		2	0	0	1		1	0	0	0		0	1	2	1		4	7
% App Total	0.0%	50.0%	50.0%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			25.0%	50.0%	25.0%			
PHF	.000	.250	.250		.500	.000	.000	.250		.250	.000	.000	.000		.000	.250	.250	.250		.500	.583

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-014 98th Avenue-Edes Avenue.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	1	0	2	0	15	0	0	15	1	1	1	0	3	1	15	1	0	17	37	0
07:15	1	2	0	0	3	0	11	0	0	11	1	2	1	0	4	1	10	2	0	13	31	0
07:30	1	1	4	0	6	0	13	0	0	13	3	1	1	0	5	3	9	0	0	12	36	0
07:45	0	3	0	0	3	0	14	1	0	15	0	0	0	0	0	0	15	0	0	15	33	0
Total	2	7	5	0	14	0	53	1	0	54	5	4	3	0	12	5	49	3	0	57	137	0
08:00	0	2	4	0	6	1	10	0	0	11	1	1	0	0	2	4	5	0	0	9	28	0
08:15	3	1	3	0	7	1	9	0	0	10	0	0	1	0	1	0	15	1	0	16	34	0
08:30	1	0	4	0	5	1	11	1	0	13	2	1	1	0	4	0	17	2	0	19	41	0
08:45	0	1	3	0	4	0	15	0	0	15	1	3	1	0	5	0	22	2	0	24	48	0
Total	4	4	14	0	22	3	45	1	0	49	4	5	3	0	12	4	59	5	0	68	151	0
Grand Total	6	11	19	0	36	3	98	2	0	103	9	9	6	0	24	9	108	8	0	125	288	0
Apprch %	16.7%	30.6%	52.8%			2.9%	95.1%	1.9%			37.5%	37.5%	25.0%			7.2%	86.4%	6.4%				
Total %	2.1%	3.8%	6.6%		12.5%	1.0%	34.0%	0.7%		35.8%	3.1%	3.1%	2.1%		8.3%	3.1%	37.5%	2.8%		43.4%	100.0%	

AM PEAK HOUR	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	3	0		3	0	14	1		15	0	0	0		0	0	15	0		15	33
08:00	0	2	4		6	1	10	0		11	1	1	0		2	4	5	0		9	28
08:15	3	1	3		7	1	9	0		10	0	0	1		1	0	15	1		16	34
08:30	1	0	4		5	1	11	1		13	2	1	1		4	0	17	2		19	41
Total Volume	4	6	11		21	3	44	2		49	3	2	2		7	4	52	3		59	136
% App Total	19.0%	28.6%	52.4%			6.1%	89.8%	4.1%			42.9%	28.6%	28.6%			6.8%	88.1%	5.1%			
PHF	.333	.500	.688		.750	.750	.786	.500		.817	.375	.500	.500		.438	.250	.765	.375		.776	.829

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-091 98th Avenue-Edes Avenue.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	22	17	31	1	71	16	159	21	0	196	32	24	16	1	73	14	252	46	0	312	652	2
16:15	18	15	22	1	56	12	205	16	0	233	41	19	12	3	75	16	277	46	0	339	703	4
16:30	15	20	34	0	69	16	194	14	0	224	36	18	14	2	70	16	224	24	0	264	627	2
16:45	18	21	27	0	66	9	156	12	0	177	25	18	18	1	62	19	236	31	0	286	591	1
Total	73	73	114	2	262	53	714	63	0	830	134	79	60	7	280	65	989	147	0	1201	2573	9
17:00	18	24	28	0	70	11	164	21	0	196	36	19	12	2	69	16	261	39	0	316	651	2
17:15	17	32	19	0	68	14	168	21	0	203	35	22	15	0	72	19	260	46	0	325	668	0
17:30	20	26	29	0	75	10	156	19	0	185	25	16	11	2	54	5	229	51	0	285	599	2
17:45	20	20	21	0	61	9	170	18	0	197	38	19	8	2	67	12	227	52	0	291	616	2
Total	75	102	97	0	274	44	658	79	0	781	134	76	46	6	262	52	977	188	0	1217	2534	6
Grand Total	148	175	211	2	536	97	1372	142	0	1611	268	155	106	13	542	117	1966	335	0	2418	5107	15
Apprch %	27.6%	32.6%	39.4%	0.4%		6.0%	85.2%	8.8%	0.0%		49.4%	28.6%	19.6%	2.4%		4.8%	81.3%	13.9%	0.0%			
Total %	2.9%	3.4%	4.1%	0.0%	10.5%	1.9%	26.9%	2.8%	0.0%	31.5%	5.2%	3.0%	2.1%	0.3%	10.6%	2.3%	38.5%	6.6%	0.0%	47.3%	100.0%	

PM PEAK HOUR	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	22	17	31	1	71	16	159	21	0	196	32	24	16	1	73	14	252	46	0	312	652
16:15	18	15	22	1	56	12	205	16	0	233	41	19	12	3	75	16	277	46	0	339	703
16:30	15	20	34	0	69	16	194	14	0	224	36	18	14	2	70	16	224	24	0	264	627
16:45	18	21	27	0	66	9	156	12	0	177	25	18	18	1	62	19	236	31	0	286	591
Total Volume	73	73	114	2	262	53	714	63	0	830	134	79	60	7	280	65	989	147	0	1201	2573
% App Total	27.9%	27.9%	43.5%	0.8%		6.4%	86.0%	7.6%	0.0%		47.9%	28.2%	21.4%	2.5%		5.4%	82.3%	12.2%	0.0%		
PHF	.830	.869	.838	.500	.923	.828	.871	.750	.000	.891	.817	.823	.833	.583	.933	.855	.893	.799	.000	.886	.915

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-091 98th Avenue-Edes Avenue.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	1	0	0	1	0	0	0	7	0	0	0	0	2	0	0	0	0	3	0	1	12
16:15	0	0	0	5	0	0	1	0	5	1	0	0	0	1	0	0	0	0	5	0	1	16
16:30	0	0	0	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	7	0	0	11
16:45	0	1	0	12	1	0	1	0	2	1	0	0	0	2	0	0	1	0	4	1	3	20
Total	0	2	0	18	2	0	2	0	16	2	0	0	0	6	0	0	1	0	19	1	5	59
17:00	1	0	0	7	1	0	2	0	1	2	0	0	0	1	0	0	0	1	0	1	4	9
17:15	0	1	0	6	1	0	0	0	3	0	0	0	0	1	0	0	1	0	3	1	2	13
17:30	0	0	0	7	0	0	0	0	6	0	0	0	0	2	0	0	0	0	5	0	0	20
17:45	0	0	0	6	0	0	1	0	1	1	0	1	0	0	1	0	0	0	1	0	2	8
Total	1	1	0	26	2	0	3	0	11	3	0	1	0	4	1	0	1	1	9	2	8	50
Grand Total	1	3	0	44	4	0	5	0	27	5	0	1	0	10	1	0	2	1	28	3	13	109
Apprch %	25.0%	75.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	66.7%	33.3%				
Total %	7.7%	23.1%	0.0%		30.8%	0.0%	38.5%	0.0%		38.5%	0.0%	7.7%	0.0%		7.7%	0.0%	15.4%	7.7%		23.1%	100.0%	

PM PEAK HOUR	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
16:15	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:45	0	1	0		1	0	1	0		1	0	0	0		0	0	1	0		1	3
Total Volume	0	2	0		2	0	2	0		2	0	0	0		0	0	1	0		1	5
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.500	.000		.500	.000	.500	.000		.500	.000	.000	.000		.000	.000	.250	.000		.250	.417

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-091 98th Avenue-Edes Avenue.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	0	6	0	6	0	9	0	0	9	0	0	0	0	0	1	4	0	0	5	20	0
16:15	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	1	2	0	0	3	16	0
16:30	0	0	4	0	4	1	11	0	0	12	1	0	0	0	1	0	7	1	0	8	25	0
16:45	1	0	1	0	2	0	6	0	0	6	1	0	1	0	2	1	2	0	0	3	13	0
Total	1	0	11	0	12	1	39	0	0	40	2	0	1	0	3	3	15	1	0	19	74	0
17:00	0	0	3	0	3	0	7	1	0	8	0	0	0	0	0	0	5	0	0	5	16	0
17:15	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	9	0
17:30	1	0	1	0	2	1	5	0	0	6	0	0	0	0	0	1	3	0	0	4	12	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	0
Total	1	0	5	0	6	1	16	1	0	18	0	0	0	0	0	1	15	0	0	16	40	0
Grand Total	2	0	16	0	18	2	55	1	0	58	2	0	1	0	3	4	30	1	0	35	114	0
Apprch %	11.1%	0.0%	88.9%			3.4%	94.8%	1.7%			66.7%	0.0%	33.3%			11.4%	85.7%	2.9%				
Total %	1.8%	0.0%	14.0%		15.8%	1.8%	48.2%	0.9%		50.9%	1.8%	0.0%	0.9%		2.6%	3.5%	26.3%	0.9%		30.7%	100.0%	

PM PEAK HOUR	98th Avenue Southbound					Edes Avenue Westbound					98th Avenue Northbound					Edes Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	6		6	0	9	0		9	0	0	0		0	1	4	0		5	20
16:15	0	0	0		0	0	13	0		13	0	0	0		0	1	2	0		3	16
16:30	0	0	4		4	1	11	0		12	1	0	0		1	0	7	1		8	25
16:45	1	0	1		2	0	6	0		6	1	0	1		2	1	2	0		3	13
Total Volume	1	0	11		12	1	39	0		40	2	0	1		3	3	15	1		19	74
% App Total	8.3%	0.0%	91.7%			2.5%	97.5%	0.0%			66.7%	0.0%	33.3%			15.8%	78.9%	5.3%			
PHF	.250	.000	.458		.500	.250	.750	.000		.769	.500	.000	.250		.375	.750	.536	.250		.594	.740

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-092 Oakport Street-Zhone Way.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	44	22	0	0	66	80	0	14	8	102	0	26	115	0	141	0	0	0	0	0	309	8
16:15	36	30	0	0	66	79	0	17	1	97	0	25	91	0	116	0	0	0	0	0	279	1
16:30	46	29	0	0	75	81	0	20	6	107	0	24	136	0	160	0	0	0	0	0	342	6
16:45	22	30	0	0	52	83	0	15	3	101	0	27	107	0	134	0	0	0	0	0	287	3
Total	148	111	0	0	259	323	0	66	18	407	0	102	449	0	551	0	0	0	0	0	1217	18
17:00	27	29	0	0	56	71	0	18	6	95	0	29	194	0	223	0	0	0	0	0	374	6
17:15	28	25	0	0	53	72	0	17	1	90	0	25	114	0	139	0	0	0	0	0	282	1
17:30	24	32	0	0	56	81	0	21	1	103	0	27	103	0	130	0	0	0	0	0	289	1
17:45	20	29	0	0	49	70	0	16	1	87	0	26	96	0	122	0	0	0	0	0	258	1
Total	99	115	0	0	214	294	0	72	9	375	0	107	507	0	614	0	0	0	0	0	1203	9
Grand Total	247	226	0	0	473	617	0	138	27	782	0	209	956	0	1165	0	0	0	0	0	2420	27
Apprch %	52.2%	47.8%	0.0%	0.0%		78.9%	0.0%	17.6%	3.5%		0.0%	17.9%	82.1%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	10.2%	9.3%	0.0%	0.0%	19.5%	25.5%	0.0%	5.7%	1.1%	32.3%	0.0%	8.6%	39.5%	0.0%	48.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

PM PEAK HOUR	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	46	29	0	0	75	81	0	20	6	107	0	24	136	0	160	0	0	0	0	0	342
16:45	22	30	0	0	52	83	0	15	3	101	0	27	107	0	134	0	0	0	0	0	287
17:00	27	29	0	0	56	71	0	18	6	95	0	29	194	0	223	0	0	0	0	0	374
17:15	28	25	0	0	53	72	0	17	1	90	0	25	114	0	139	0	0	0	0	0	282
Total Volume	123	113	0	0	236	307	0	70	16	393	0	105	551	0	656	0	0	0	0	0	1285
% App Total	52.1%	47.9%	0.0%	0.0%		78.1%	0.0%	17.8%	4.1%		0.0%	16.0%	84.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.668	.942	.000	.000	.787	.925	.000	.875	.667	.918	.000	.905	.710	.000	.735	.000	.000	.000	.000	.000	.859

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-092 Oakport Street-Zhone Way.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	1	2
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Grand Total	0	0	0	0	0	1	0	0	0	1	0	0	0	5	0	0	0	0	0	0	1	5
Apprch %	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		100.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

PM PEAK HOUR	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-092 Oakport Street-Zhone Way.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	3	4	0	0	7	4	0	0	0	4	0	1	1	0	2	0	0	0	0	0	13	0
16:15	0	2	0	0	2	2	0	2	0	4	0	1	0	0	1	0	0	0	0	0	7	0
16:30	2	0	0	0	2	8	0	6	0	14	0	1	0	0	1	0	0	0	0	0	17	0
16:45	0	0	0	0	0	3	0	3	0	6	0	0	2	0	2	0	0	0	0	0	8	0
Total	5	6	0	0	11	17	0	11	0	28	0	3	3	0	6	0	0	0	0	0	45	0
17:00	0	0	0	0	0	5	0	3	0	8	0	0	0	0	0	0	0	0	0	0	8	0
17:15	0	1	0	0	1	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0	7	0
17:30	1	1	0	0	2	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	6	0
17:45	1	1	0	0	2	2	0	2	0	4	0	0	1	0	1	0	0	0	0	0	7	0
Total	2	3	0	0	5	12	0	10	0	22	0	0	1	0	1	0	0	0	0	0	28	0
Grand Total	7	9	0	0	16	29	0	21	0	50	0	3	4	0	7	0	0	0	0	0	73	0
Apprch %	43.8%	56.3%	0.0%			58.0%	0.0%	42.0%			0.0%	42.9%	57.1%			0.0%	0.0%	0.0%				
Total %	9.6%	12.3%	0.0%		21.9%	39.7%	0.0%	28.8%		68.5%	0.0%	4.1%	5.5%		9.6%	0.0%	0.0%	0.0%		0.0%	100.0%	

PM PEAK HOUR	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	2	0	0		2	8	0	6		14	0	1	0		1	0	0	0		0	17
16:45	0	0	0		0	3	0	3		6	0	0	2		2	0	0	0		0	8
17:00	0	0	0		0	5	0	3		8	0	0	0		0	0	0	0		0	8
17:15	0	1	0		1	3	0	3		6	0	0	0		0	0	0	0		0	7
Total Volume	2	1	0		3	19	0	15		34	0	1	2		3	0	0	0		0	40
% App Total	66.7%	33.3%	0.0%			55.9%	0.0%	44.1%			0.0%	33.3%	66.7%			0.0%	0.0%	0.0%			
PHF	.250	.250	.000		.375	.594	.000	.625		.607	.000	.250	.250		.375	.000	.000	.000		.000	.588

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-006 Oakport Street-Zhone Way.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	4	7	0	0	11	78	0	17	0	95	0	10	45	0	55	0	0	0	0	0	161	0
07:15	9	12	0	0	21	74	0	30	0	104	0	3	22	0	25	0	0	0	0	0	150	0
07:30	8	9	0	0	17	83	0	33	0	116	0	6	30	0	36	0	0	0	0	0	169	0
07:45	20	23	0	0	43	124	0	30	0	154	0	5	34	0	39	0	0	0	0	0	236	0
Total	41	51	0	0	92	359	0	110	0	469	0	24	131	0	155	0	0	0	0	0	716	0
08:00	23	26	0	0	49	123	0	40	0	163	0	14	32	0	46	0	0	0	0	0	258	0
08:15	25	24	0	0	49	114	0	24	0	138	0	12	38	0	50	0	0	0	0	0	237	0
08:30	18	18	0	0	36	118	0	27	0	145	0	24	53	0	77	0	0	0	0	0	258	0
08:45	20	11	0	0	31	107	0	27	0	134	0	19	56	0	75	0	0	0	0	0	240	0
Total	86	79	0	0	165	462	0	118	0	580	0	69	179	0	248	0	0	0	0	0	993	0
Grand Total	127	130	0	0	257	821	0	228	0	1049	0	93	310	0	403	0	0	0	0	0	1709	0
Apprch %	49.4%	50.6%	0.0%	0.0%		78.3%	0.0%	21.7%	0.0%		0.0%	23.1%	76.9%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	7.4%	7.6%	0.0%	0.0%	15.0%	48.0%	0.0%	13.3%	0.0%	61.4%	0.0%	5.4%	18.1%	0.0%	23.6%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	23	26	0	0	49	123	0	40	0	163	0	14	32	0	46	0	0	0	0	0	258
08:15	25	24	0	0	49	114	0	24	0	138	0	12	38	0	50	0	0	0	0	0	237
08:30	18	18	0	0	36	118	0	27	0	145	0	24	53	0	77	0	0	0	0	0	258
08:45	20	11	0	0	31	107	0	27	0	134	0	19	56	0	75	0	0	0	0	0	240
Total Volume	86	79	0	0	165	462	0	118	0	580	0	69	179	0	248	0	0	0	0	0	993
% App Total	52.1%	47.9%	0.0%	0.0%		79.7%	0.0%	20.3%	0.0%		0.0%	27.8%	72.2%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.860	.760	.000	.000	.842	.939	.000	.738	.000	.890	.000	.719	.799	.000	.805	.000	.000	.000	.000	.000	.962

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-006 Oakport Street-Zhone Way.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
07:45	0	1	0	0	1	0	0	0	0	0	0	1	0	1	1	0	0	1	0	1	3	1
Total	0	2	0	0	2	0	0	0	0	0	0	1	0	2	1	0	0	3	0	3	6	2
08:00	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
08:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
08:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
08:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	2	0
Total	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	8	0
Grand Total	0	7	0	0	7	0	0	0	0	0	0	3	0	2	3	1	0	3	0	4	14	2
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			25.0%	0.0%	75.0%				
Total %	0.0%	50.0%	0.0%		50.0%	0.0%	0.0%	0.0%		0.0%	0.0%	21.4%	0.0%		21.4%	7.1%	0.0%	21.4%		28.6%	100.0%	

AM PEAK HOUR	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	2	0		2	0	0	0		0	0	1	0		1	0	0	0		0	3
08:15	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
08:30	0	2	0		2	0	0	0		0	0	0	0		0	0	0	0		0	2
08:45	0	0	0		0	0	0	0		0	0	1	0		1	1	0	0		1	2
Total Volume	0	5	0		5	0	0	0		0	0	2	0		2	1	0	0		1	8
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			
PHF	.000	.625	.000		.625	.000	.000	.000		.000	.000	.500	.000		.500	.250	.000	.000		.250	.667

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-006 Oakport Street-Zhone Way.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	4	0	0	0	4	2	0	1	0	3	0	0	8	0	8	0	0	0	0	0	15	0
07:15	3	1	0	0	4	4	0	5	0	9	0	0	4	0	4	0	0	0	0	0	17	0
07:30	2	0	0	0	2	1	0	3	0	4	0	0	8	0	8	0	0	0	0	0	14	0
07:45	13	0	0	0	13	3	0	2	0	5	0	0	3	0	3	0	0	0	0	0	21	0
Total	22	1	0	0	23	10	0	11	0	21	0	0	23	0	23	0	0	0	0	0	67	0
08:00	5	0	0	0	5	2	0	4	0	6	0	0	3	0	3	0	0	0	0	0	14	0
08:15	4	2	0	0	6	2	0	3	0	5	0	1	3	0	4	0	0	0	0	0	15	0
08:30	3	0	0	0	3	4	0	3	0	7	0	1	4	0	5	0	0	0	0	0	15	0
08:45	4	0	0	0	4	1	0	4	0	5	0	3	9	0	12	0	0	0	0	0	21	0
Total	16	2	0	0	18	9	0	14	0	23	0	5	19	0	24	0	0	0	0	0	65	0
Grand Total	38	3	0	0	41	19	0	25	0	44	0	5	42	0	47	0	0	0	0	0	132	0
Apprch %	92.7%	7.3%	0.0%			43.2%	0.0%	56.8%			0.0%	10.6%	89.4%			0.0%	0.0%	0.0%				
Total %	28.8%	2.3%	0.0%		31.1%	14.4%	0.0%	18.9%		33.3%	0.0%	3.8%	31.8%		35.6%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Oakport Street Southbound					Zhone Way Westbound					Oakport Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	5	0	0		5	2	0	4		6	0	0	3		3	0	0	0		0	14
08:15	4	2	0		6	2	0	3		5	0	1	3		4	0	0	0		0	15
08:30	3	0	0		3	4	0	3		7	0	1	4		5	0	0	0		0	15
08:45	4	0	0		4	1	0	4		5	0	3	9		12	0	0	0		0	21
Total Volume	16	2	0		18	9	0	14		23	0	5	19		24	0	0	0		0	65
% App Total	88.9%	11.1%	0.0%			39.1%	0.0%	60.9%			0.0%	20.8%	79.2%			0.0%	0.0%	0.0%			
PHF	.800	.250	.000		.750	.563	.000	.875		.821	.000	.417	.528		.500	.000	.000	.000		.000	.774

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-008 Edes Avenue-I-880 NB Ramps.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	18	3	0	21	0	0	0	0	0	32	13	0	0	45	131	0	27	0	158	224	0
07:15	0	21	2	0	23	0	0	0	0	0	38	18	0	0	56	126	0	19	0	145	224	0
07:30	0	14	2	0	16	0	0	0	0	0	50	21	0	0	71	137	0	19	0	156	243	0
07:45	0	21	2	0	23	0	0	0	0	0	58	44	0	0	102	132	0	25	0	157	282	0
Total	0	74	9	0	83	0	0	0	0	0	178	96	0	0	274	526	0	90	0	616	973	0
08:00	0	32	4	0	36	0	0	0	0	0	40	34	0	0	74	156	0	35	0	191	301	0
08:15	0	34	3	0	37	0	0	0	0	0	27	39	0	0	66	181	0	23	0	204	307	0
08:30	0	38	2	0	40	0	0	0	0	0	39	43	0	0	82	198	0	27	0	225	347	0
08:45	0	39	2	0	41	0	0	0	0	0	28	43	0	0	71	206	0	27	0	233	345	0
Total	0	143	11	0	154	0	0	0	0	0	134	159	0	0	293	741	0	112	0	853	1300	0
Grand Total	0	217	20	0	237	0	0	0	0	0	312	255	0	0	567	1267	0	202	0	1469	2273	0
Apprch %	0.0%	91.6%	8.4%	0.0%		0.0%	0.0%	0.0%	0.0%		55.0%	45.0%	0.0%	0.0%		86.2%	0.0%	13.8%	0.0%			
Total %	0.0%	9.5%	0.9%	0.0%	10.4%	0.0%	0.0%	0.0%	0.0%	0.0%	13.7%	11.2%	0.0%	0.0%	24.9%	55.7%	0.0%	8.9%	0.0%	64.6%	100.0%	

AM PEAK HOUR	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	32	4	0	36	0	0	0	0	0	40	34	0	0	74	156	0	35	0	191	301
08:15	0	34	3	0	37	0	0	0	0	0	27	39	0	0	66	181	0	23	0	204	307
08:30	0	38	2	0	40	0	0	0	0	0	39	43	0	0	82	198	0	27	0	225	347
08:45	0	39	2	0	41	0	0	0	0	0	28	43	0	0	71	206	0	27	0	233	345
Total Volume	0	143	11	0	154	0	0	0	0	0	134	159	0	0	293	741	0	112	0	853	1300
% App Total	0.0%	92.9%	7.1%	0.0%		0.0%	0.0%	0.0%	0.0%		45.7%	54.3%	0.0%	0.0%		86.9%	0.0%	13.1%	0.0%		
PHF	.000	.917	.688	.000	.939	.000	.000	.000	.000	.000	.838	.924	.000	.000	.893	.899	.000	.800	.000	.915	.937

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-008 Edes Avenue-I-880 NB Ramps.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3
Grand Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	4
Apprch %	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	

AM PEAK HOUR	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-008 Edes Avenue-I-880 NB Ramps.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	0	1	0	0	0	0	0	9	3	0	0	12	4	0	5	0	9	22	0
07:15	0	2	0	0	2	0	0	0	0	0	5	1	0	0	6	7	0	6	0	13	21	0
07:30	0	3	0	0	3	0	0	0	0	0	4	2	0	0	6	3	0	1	0	4	13	0
07:45	0	2	0	0	2	0	0	0	0	0	4	2	0	0	6	9	0	6	0	15	23	0
Total	0	8	0	0	8	0	0	0	0	0	22	8	0	0	30	23	0	18	0	41	79	0
08:00	0	1	0	0	1	0	0	0	0	0	3	1	0	0	4	10	0	9	0	19	24	0
08:15	0	0	1	0	1	0	0	0	0	0	3	3	0	0	6	13	0	0	0	13	20	0
08:30	0	3	0	0	3	0	0	0	0	0	9	4	0	0	13	9	0	5	0	14	30	0
08:45	0	2	0	0	2	0	0	0	0	0	5	2	0	0	7	12	0	3	0	15	24	0
Total	0	6	1	0	7	0	0	0	0	0	20	10	0	0	30	44	0	17	0	61	98	0
Grand Total	0	14	1	0	15	0	0	0	0	0	42	18	0	0	60	67	0	35	0	102	177	0
Apprch %	0.0%	93.3%	6.7%			0.0%	0.0%	0.0%			70.0%	30.0%	0.0%			65.7%	0.0%	34.3%				
Total %	0.0%	7.9%	0.6%		8.5%	0.0%	0.0%	0.0%		0.0%	23.7%	10.2%	0.0%		33.9%	37.9%	0.0%	19.8%		57.6%	100.0%	

AM PEAK HOUR	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	1	0		1	0	0	0		0	3	1	0		4	10	0	9		19	24
08:15	0	0	1		1	0	0	0		0	3	3	0		6	13	0	0		13	20
08:30	0	3	0		3	0	0	0		0	9	4	0		13	9	0	5		14	30
08:45	0	2	0		2	0	0	0		0	5	2	0		7	12	0	3		15	24
Total Volume	0	6	1		7	0	0	0		0	20	10	0		30	44	0	17		61	98
% App Total	0.0%	85.7%	14.3%			0.0%	0.0%	0.0%			66.7%	33.3%	0.0%			72.1%	0.0%	27.9%			
PHF	.000	.500	.250		.583	.000	.000	.000		.000	.556	.625	.000		.577	.846	.000	.472		.803	.817

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-093 Edes Avenue-I-880 NB Ramps.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	0	31	5	0	36	0	0	0	0	0	48	32	0	0	80	143	0	26	0	169	285	0
16:15	0	40	2	0	42	0	0	0	0	0	27	28	0	0	55	141	0	48	0	189	286	0
16:30	0	33	0	0	33	0	0	0	0	0	44	33	0	0	77	135	0	31	0	166	276	0
16:45	0	30	2	0	32	0	0	0	0	0	35	39	0	0	74	138	0	27	0	165	271	0
Total	0	134	9	0	143	0	0	0	0	0	154	132	0	0	286	557	0	132	0	689	1118	0
17:00	0	26	1	0	27	0	0	0	0	0	31	38	0	0	69	107	0	21	0	128	224	0
17:15	0	32	2	0	34	0	0	0	0	0	36	16	0	0	52	145	0	35	0	180	266	0
17:30	0	20	1	0	21	0	0	0	0	0	23	19	0	0	42	116	0	25	0	141	204	0
17:45	0	41	2	0	43	0	0	0	0	0	35	31	0	0	66	153	0	22	0	175	284	0
Total	0	119	6	0	125	0	0	0	0	0	125	104	0	0	229	521	0	103	0	624	978	0
Grand Total	0	253	15	0	268	0	0	0	0	0	279	236	0	0	515	1078	0	235	0	1313	2096	0
Apprch %	0.0%	94.4%	5.6%	0.0%		0.0%	0.0%	0.0%	0.0%		54.2%	45.8%	0.0%	0.0%		82.1%	0.0%	17.9%	0.0%			
Total %	0.0%	12.1%	0.7%	0.0%	12.8%	0.0%	0.0%	0.0%	0.0%	0.0%	13.3%	11.3%	0.0%	0.0%	24.6%	51.4%	0.0%	11.2%	0.0%	62.6%	100.0%	

PM PEAK HOUR	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	31	5	0	36	0	0	0	0	0	48	32	0	0	80	143	0	26	0	169	285
16:15	0	40	2	0	42	0	0	0	0	0	27	28	0	0	55	141	0	48	0	189	286
16:30	0	33	0	0	33	0	0	0	0	0	44	33	0	0	77	135	0	31	0	166	276
16:45	0	30	2	0	32	0	0	0	0	0	35	39	0	0	74	138	0	27	0	165	271
Total Volume	0	134	9	0	143	0	0	0	0	0	154	132	0	0	286	557	0	132	0	689	1118
% App Total	0.0%	93.7%	6.3%	0.0%		0.0%	0.0%	0.0%	0.0%		53.8%	46.2%	0.0%	0.0%		80.8%	0.0%	19.2%	0.0%		
PHF	.000	.838	.450	.000	.851	.000	.000	.000	.000	.000	.802	.846	.000	.000	.894	.974	.000	.688	.000	.911	.977

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-093 Edes Avenue-I-880 NB Ramps.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	1
Apprch %	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		100.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

PM PEAK HOUR	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
16:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.250

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-093 Edes Avenue-I-880 NB Ramps.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	7	0	10	13	0
16:15	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	7	0	8	11	0
16:30	0	2	0	0	2	0	0	0	0	0	2	0	0	0	2	6	0	5	0	11	15	0
16:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	6	0	2	0	8	9	0
Total	1	4	0	0	5	0	0	0	0	0	5	1	0	0	6	16	0	21	0	37	48	0
17:00	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	2	0	2	0	4	7	0
17:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	6	0	2	0	8	9	0
17:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	7	0	7	0	14	15	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	5	5	0
Total	1	2	0	0	3	0	0	0	0	0	1	1	0	0	2	18	0	13	0	31	36	0
Grand Total	2	6	0	0	8	0	0	0	0	0	6	2	0	0	8	34	0	34	0	68	84	0
Apprch %	25.0%	75.0%	0.0%			0.0%	0.0%	0.0%			75.0%	25.0%	0.0%			50.0%	0.0%	50.0%				
Total %	2.4%	7.1%	0.0%		9.5%	0.0%	0.0%	0.0%		0.0%	7.1%	2.4%	0.0%		9.5%	40.5%	0.0%	40.5%		81.0%	100.0%	

PM PEAK HOUR	Edes Avenue Southbound					Westbound					Edes Avenue Northbound					I-880 NB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0		0	0	0	0		0	3	0	0		3	3	0	7		10	13
16:15	0	2	0		2	0	0	0		0	0	1	0		1	1	0	7		8	11
16:30	0	2	0		2	0	0	0		0	2	0	0		2	6	0	5		11	15
16:45	1	0	0		1	0	0	0		0	0	0	0		0	6	0	2		8	9
Total Volume	1	4	0		5	0	0	0		0	5	1	0		6	16	0	21		37	48
% App Total	20.0%	80.0%	0.0%			0.0%	0.0%	0.0%			83.3%	16.7%	0.0%			43.2%	0.0%	56.8%			
PHF	.250	.500	.000		.625	.000	.000	.000		.000	.417	.250	.000		.500	.667	.000	.750		.841	.800

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-009 Hegenberger Road-I-880 SB Off-Ramp.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	157	73	0	230	0	0	0	0	0	0	125	0	0	125	76	0	200	0	276	631	0
07:15	0	181	87	0	268	0	0	0	0	0	0	158	0	0	158	61	0	206	0	267	693	0
07:30	0	189	86	0	275	0	0	0	0	0	0	184	0	0	184	81	0	215	0	296	755	0
07:45	0	224	68	0	292	0	0	0	0	0	0	180	0	0	180	66	0	224	0	290	762	0
Total	0	751	314	0	1065	0	0	0	0	0	0	647	0	0	647	284	0	845	0	1129	2841	0
08:00	0	239	69	0	308	0	0	0	0	0	0	188	0	0	188	95	0	233	0	328	824	0
08:15	0	304	60	0	364	0	0	0	0	0	0	236	0	0	236	78	0	259	0	337	937	0
08:30	0	261	58	0	319	0	0	0	0	0	0	238	0	0	238	92	0	217	0	309	866	0
08:45	0	250	53	0	303	0	0	0	0	0	0	230	0	0	230	81	0	210	0	291	824	0
Total	0	1054	240	0	1294	0	0	0	0	0	0	892	0	0	892	346	0	919	0	1265	3451	0
Grand Total	0	1805	554	0	2359	0	0	0	0	0	0	1539	0	0	1539	630	0	1764	0	2394	6292	0
Apprch %	0.0%	76.5%	23.5%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		26.3%	0.0%	73.7%	0.0%			
Total %	0.0%	28.7%	8.8%	0.0%	37.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.5%	0.0%	0.0%	24.5%	10.0%	0.0%	28.0%	0.0%	38.0%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	239	69	0	308	0	0	0	0	0	0	188	0	0	188	95	0	233	0	328	824
08:15	0	304	60	0	364	0	0	0	0	0	0	236	0	0	236	78	0	259	0	337	937
08:30	0	261	58	0	319	0	0	0	0	0	0	238	0	0	238	92	0	217	0	309	866
08:45	0	250	53	0	303	0	0	0	0	0	0	230	0	0	230	81	0	210	0	291	824
Total Volume	0	1054	240	0	1294	0	0	0	0	0	0	892	0	0	892	346	0	919	0	1265	3451
% App Total	0.0%	81.5%	18.5%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		27.4%	0.0%	72.6%	0.0%		
PHF	.000	.867	.870	.000	.889	.000	.000	.000	.000	.000	.000	.937	.000	.000	.937	.911	.000	.887	.000	.938	.921

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-009 Hegenberger Road-I-880 SB Off-Ramp.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	4	0	1	4
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1
Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	7	0	3	7
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Grand Total	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	7	0	5	7
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	60.0%	0.0%		60.0%	0.0%	0.0%	0.0%		0.0%	0.0%	40.0%	0.0%		40.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	2	0		2	0	0	0		0	0	0	0		0	0	0	0		0	2
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	2	0		2	0	0	0		0	0	0	0		0	0	0	0		0	2
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.250

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-009 Hegenberger Road-I-880 SB Off-Ramp.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	7	0	0	7	0	0	0	0	0	0	15	0	0	15	5	0	0	0	5	27	0
07:15	0	3	0	0	3	0	0	0	0	0	0	17	0	0	17	5	0	3	0	8	28	0
07:30	0	5	0	0	5	0	0	0	0	0	0	22	0	0	22	7	0	6	0	13	40	0
07:45	0	9	0	0	9	0	0	0	0	0	0	16	0	0	16	2	0	3	0	5	30	0
Total	0	24	0	0	24	0	0	0	0	0	0	70	0	0	70	19	0	12	0	31	125	0
08:00	0	4	0	0	4	0	0	0	0	0	0	12	0	0	12	4	0	4	0	8	24	0
08:15	0	15	0	0	15	0	0	0	0	0	0	11	0	0	11	7	0	1	0	8	34	0
08:30	0	9	0	0	9	0	0	0	0	0	0	10	0	0	10	6	0	6	0	12	31	0
08:45	0	7	0	0	7	0	0	0	0	0	0	9	0	0	9	5	0	4	0	9	25	0
Total	0	35	0	0	35	0	0	0	0	0	0	42	0	0	42	22	0	15	0	37	114	0
Grand Total	0	59	0	0	59	0	0	0	0	0	0	112	0	0	112	41	0	27	0	68	239	0
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			60.3%	0.0%	39.7%				
Total %	0.0%	24.7%	0.0%		24.7%	0.0%	0.0%	0.0%		0.0%	0.0%	46.9%	0.0%		46.9%	17.2%	0.0%	11.3%		28.5%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	4	0		4	0	0	0		0	0	12	0		12	4	0	4		8	24
08:15	0	15	0		15	0	0	0		0	0	11	0		11	7	0	1		8	34
08:30	0	9	0		9	0	0	0		0	0	10	0		10	6	0	6		12	31
08:45	0	7	0		7	0	0	0		0	0	9	0		9	5	0	4		9	25
Total Volume	0	35	0		35	0	0	0		0	0	42	0		42	22	0	15		37	114
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			59.5%	0.0%	40.5%			
PHF	.000	.583	.000		.583	.000	.000	.000		.000	.000	.875	.000		.875	.786	.000	.625		.771	.838

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-094 Hegenberger Road-I-880 SB Off-Ramp.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	0	236	0	0	236	0	0	0	0	0	0	321	0	0	321	57	0	177	0	234	791	0
16:15	0	205	0	0	205	0	0	0	0	0	0	273	0	0	273	51	0	149	0	200	678	0
16:30	0	207	0	0	207	0	0	0	0	0	0	290	0	0	290	74	0	149	0	223	720	0
16:45	0	235	0	0	235	0	0	0	0	0	0	308	0	0	308	68	0	143	0	211	754	0
Total	0	883	0	0	883	0	0	0	0	0	0	1192	0	0	1192	250	0	618	0	868	2943	0
17:00	0	200	0	0	200	0	0	0	0	0	0	306	0	0	306	61	0	164	0	225	731	0
17:15	0	215	0	0	215	0	0	0	0	0	0	348	0	0	348	59	0	132	0	191	754	0
17:30	0	229	0	0	229	0	0	0	0	0	0	265	0	0	265	71	0	131	0	202	696	0
17:45	0	247	0	0	247	0	0	0	0	0	0	293	0	0	293	46	0	140	0	186	726	0
Total	0	891	0	0	891	0	0	0	0	0	0	1212	0	0	1212	237	0	567	0	804	2907	0
Grand Total	0	1774	0	0	1774	0	0	0	0	0	0	2404	0	0	2404	487	0	1185	0	1672	5850	0
Apprch %	0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		29.1%	0.0%	70.9%	0.0%			
Total %	0.0%	30.3%	0.0%	0.0%	30.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	41.1%	0.0%	0.0%	41.1%	8.3%	0.0%	20.3%	0.0%	28.6%	100.0%	

PM PEAK HOUR	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	207	0	0	207	0	0	0	0	0	0	290	0	0	290	74	0	149	0	223	720
16:45	0	235	0	0	235	0	0	0	0	0	0	308	0	0	308	68	0	143	0	211	754
17:00	0	200	0	0	200	0	0	0	0	0	0	306	0	0	306	61	0	164	0	225	731
17:15	0	215	0	0	215	0	0	0	0	0	0	348	0	0	348	59	0	132	0	191	754
Total Volume	0	857	0	0	857	0	0	0	0	0	0	1252	0	0	1252	262	0	588	0	850	2959
% App Total	0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		30.8%	0.0%	69.2%	0.0%		
PHF	.000	.912	.000	.000	.912	.000	.000	.000	.000	.000	.000	.899	.000	.000	.899	.885	.000	.896	.000	.944	.981

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-094 Hegenberger Road-I-880 SB Off-Ramp.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	3	0	2	3
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6
16:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	6
16:45	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	3	1
Total	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	16	0	6	16
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
17:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	2
Grand Total	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	18	0	7	18
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	57.1%	0.0%		57.1%	0.0%	0.0%	0.0%		0.0%	0.0%	42.9%	0.0%		42.9%	0.0%	0.0%	0.0%		0.0%	100.0%	

PM PEAK HOUR	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
16:45	0	2	0		2	0	0	0		0	0	1	0		1	0	0	0		0	3
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	3	0		3	0	0	0		0	0	1	0		1	0	0	0		0	4
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.375	.000		.375	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.333

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-094 Hegenberger Road-I-880 SB Off-Ramp.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6	0	5	0	11	17	0
16:15	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	8	0	2	0	10	15	0
16:30	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	8	0	3	0	11	19	0
16:45	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	7	0	4	0	11	16	0
Total	0	10	0	0	10	0	0	0	0	0	0	14	0	0	14	29	0	14	0	43	67	0
17:00	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	2	0	4	0	6	14	0
17:15	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	10	0
17:30	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	5	0	3	0	8	11	0
17:45	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	3	0	4	8	0
Total	0	18	0	0	18	0	0	0	0	0	0	4	0	0	4	11	0	10	0	21	43	0
Grand Total	0	28	0	0	28	0	0	0	0	0	0	18	0	0	18	40	0	24	0	64	110	0
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			62.5%	0.0%	37.5%				
Total %	0.0%	25.5%	0.0%		25.5%	0.0%	0.0%	0.0%		0.0%	0.0%	16.4%	0.0%		16.4%	36.4%	0.0%	21.8%		58.2%	100.0%	

PM PEAK HOUR	Hegenberger Road Southbound					Westbound					Hegenberger Road Northbound					I-880 SB Off-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	3	0		3	0	0	0		0	0	5	0		5	8	0	3		11	19
16:45	0	2	0		2	0	0	0		0	0	3	0		3	7	0	4		11	16
17:00	0	6	0		6	0	0	0		0	0	2	0		2	2	0	4		6	14
17:15	0	7	0		7	0	0	0		0	0	0	0		0	3	0	0		3	10
Total Volume	0	18	0		18	0	0	0		0	0	10	0		10	20	0	11		31	59
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			64.5%	0.0%	35.5%			
PHF	.000	.643	.000		.643	.000	.000	.000		.000	.000	.500	.000		.500	.625	.000	.688		.705	.776

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-015 I-880 NB Ramps-98th Avenue.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	I-880 NB Ramps Southbound					98th Avenue Westbound					I-880 NB Ramps Northbound					98th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	0	0	0	0	0	200	101	0	301	183	0	62	0	245	0	72	78	0	150	696	0
07:15	0	0	0	0	0	0	169	87	0	256	216	0	52	0	268	0	88	78	0	166	690	0
07:30	0	0	0	0	0	0	231	108	0	339	179	0	35	0	214	0	78	78	0	156	709	0
07:45	0	0	0	0	0	0	222	98	0	320	215	0	53	0	268	0	128	84	0	212	800	0
Total	0	0	0	0	0	0	822	394	0	1216	793	0	202	0	995	0	366	318	0	684	2895	0
08:00	0	0	0	0	0	0	235	93	0	328	188	0	42	0	230	0	149	79	0	228	786	0
08:15	0	0	0	0	0	0	247	58	0	305	216	0	57	0	273	0	113	61	0	174	752	0
08:30	0	0	0	0	0	0	217	63	0	280	244	0	67	0	311	0	124	106	0	230	821	0
08:45	0	0	0	0	0	0	201	69	0	270	216	0	77	0	293	0	128	111	0	239	802	0
Total	0	0	0	0	0	0	900	283	0	1183	864	0	243	0	1107	0	514	357	0	871	3161	0
16:00	0	0	0	0	0	0	189	76	0	265	118	0	159	0	277	0	171	119	0	290	832	0
16:15	0	0	0	0	0	0	196	68	0	264	107	0	159	0	266	0	199	120	0	319	849	0
16:30	0	0	0	0	0	0	179	80	0	259	175	0	144	0	319	0	195	142	0	337	915	0
16:45	0	0	0	0	0	0	183	59	0	242	159	0	140	0	299	0	177	102	0	279	820	0
Total	0	0	0	0	0	0	747	283	0	1030	559	0	602	0	1161	0	742	483	0	1225	3416	0
17:00	0	0	0	0	0	0	153	66	0	219	127	0	152	0	279	0	186	143	0	329	827	0
17:15	0	0	0	0	0	0	149	65	0	214	150	0	150	0	300	0	185	141	0	326	840	0
17:30	0	0	0	0	0	0	139	82	0	221	178	0	135	0	313	0	189	167	0	356	890	0
17:45	0	0	0	0	0	0	179	74	0	253	176	0	135	0	311	0	173	93	0	266	830	0
Total	0	0	0	0	0	0	620	287	0	907	631	0	572	0	1203	0	733	544	0	1277	3387	0
Grand Total	0	0	0	0	0	0	3089	1247	0	4336	2847	0	1619	0	4466	0	2355	1702	0	4057	12859	0
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	71.2%	28.8%	0.0%		63.7%	0.0%	36.3%	0.0%		0.0%	58.0%	42.0%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.0%	9.7%	0.0%	33.7%	22.1%	0.0%	12.6%	0.0%	34.7%	0.0%	18.3%	13.2%	0.0%	31.5%	100.0%	

AM PEAK HOUR	I-880 NB Ramps Southbound					98th Avenue Westbound					I-880 NB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0	0	0	0	235	93	0	328	188	0	42	0	230	0	149	79	0	228	786
08:15	0	0	0	0	0	0	247	58	0	305	216	0	57	0	273	0	113	61	0	174	752
08:30	0	0	0	0	0	0	217	63	0	280	244	0	67	0	311	0	124	106	0	230	821
08:45	0	0	0	0	0	0	201	69	0	270	216	0	77	0	293	0	128	111	0	239	802
Total Volume	0	0	0	0	0	0	900	283	0	1183	864	0	243	0	1107	0	514	357	0	871	3161
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	76.1%	23.9%	0.0%		78.0%	0.0%	22.0%	0.0%		0.0%	59.0%	41.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.911	.761	.000	.902	.885	.000	.789	.000	.890	.000	.862	.804	.000	.911	.963

PM PEAK HOUR	I-880 NB Ramps Southbound					98th Avenue Westbound					I-880 NB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0	0	0	0	189	76	0	265	118	0	159	0	277	0	171	119	0	290	832
16:15	0	0	0	0	0	0	196	68	0	264	107	0	159	0	266	0	199	120	0	319	849
16:30	0	0	0	0	0	0	179	80	0	259	175	0	144	0	319	0	195	142	0	337	915
16:45	0	0	0	0	0	0	183	59	0	242	159	0	140	0	299	0	177	102	0	279	820
Total Volume	0	0	0	0	0	0	747	283	0	1030	559	0	602	0	1161	0	742	483	0	1225	3416
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	72.5%	27.5%	0.0%		48.1%	0.0%	51.9%	0.0%		0.0%	60.6%	39.4%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.953	.884	.000	.972	.799	.000	.947	.000	.910	.000	.932	.850	.000	.909	.933

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-015 I-880 NB Ramps-98th Avenue.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	I-880 NB Ramps Southbound					98th Avenue Westbound					I-880 NB Ramps Northbound					98th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
07:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
07:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Grand Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	8	0
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	25.0%	0.0%		25.0%	0.0%	0.0%	0.0%		0.0%	0.0%	75.0%	0.0%		75.0%	100.0%	

AM PEAK HOUR	I-880 NB Ramps Southbound					98th Avenue Westbound					I-880 NB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.000		.250	.250

PM PEAK HOUR	I-880 NB Ramps Southbound					98th Avenue Westbound					I-880 NB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0		2	2
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	3	0		3	3
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.375	.000		.375	.375

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-015 I-880 NB Ramps-98th Avenue.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	I-880 NB Ramps Southbound					98th Avenue Westbound					I-880 NB Ramps Northbound					98th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	11	7	0	18	5	0	4	0	9	0	8	9	0	17	44	0
07:15	0	0	0	0	0	0	8	5	0	13	6	0	5	0	11	0	8	10	0	18	42	0
07:30	0	0	0	0	0	0	16	5	0	21	2	0	5	0	7	0	5	12	0	17	45	0
07:45	0	0	0	0	0	0	11	6	0	17	4	0	3	0	7	0	14	6	0	20	44	0
Total	0	0	0	0	0	0	46	23	0	69	17	0	17	0	34	0	35	37	0	72	175	0
08:00	0	0	0	0	0	0	6	5	0	11	14	0	1	0	15	0	10	8	0	18	44	0
08:15	0	0	0	0	0	0	13	2	0	15	8	0	6	0	14	0	10	10	0	20	49	0
08:30	0	0	0	0	0	0	10	1	0	11	12	0	9	0	21	0	12	8	0	20	52	0
08:45	0	0	0	0	0	0	16	9	0	25	7	0	9	0	16	0	16	6	0	22	63	0
Total	0	0	0	0	0	0	45	17	0	62	41	0	25	0	66	0	48	32	0	80	208	0
16:00	0	0	0	0	0	0	14	1	0	15	11	0	3	0	14	0	7	2	0	9	38	0
16:15	0	0	0	0	0	0	11	4	0	15	6	0	6	0	12	0	4	5	0	9	36	0
16:30	0	0	0	0	0	0	12	2	0	14	11	0	5	0	16	0	8	7	0	15	45	0
16:45	0	0	0	0	0	0	6	2	0	8	7	0	0	0	7	0	6	0	0	6	21	0
Total	0	0	0	0	0	0	43	9	0	52	35	0	14	0	49	0	25	14	0	39	140	0
17:00	0	0	0	0	0	0	7	1	0	8	7	0	5	0	12	0	8	4	0	12	32	0
17:15	0	0	0	0	0	0	3	4	0	7	15	0	3	0	18	0	5	3	0	8	33	0
17:30	0	0	0	0	0	0	3	4	0	7	26	0	3	0	29	0	5	4	0	9	45	0
17:45	0	0	0	0	0	0	6	1	0	7	18	0	1	0	19	0	5	2	0	7	33	0
Total	0	0	0	0	0	0	19	10	0	29	66	0	12	0	78	0	23	13	0	36	143	0
Grand Total	0	0	0	0	0	0	153	59	0	212	159	0	68	0	227	0	131	96	0	227	666	0
Apprch %	0.0%	0.0%	0.0%			0.0%	72.2%	27.8%			70.0%	0.0%	30.0%			0.0%	57.7%	42.3%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	23.0%	8.9%		31.8%	23.9%	0.0%	10.2%		34.1%	0.0%	19.7%	14.4%		34.1%	100.0%	

AM PEAK HOUR	I-880 NB Ramps Southbound					98th Avenue Westbound					I-880 NB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	6	5		11	14	0	1		15	0	10	8		18	44
08:15	0	0	0		0	0	13	2		15	8	0	6		14	0	10	10		20	49
08:30	0	0	0		0	0	10	1		11	12	0	9		21	0	12	8		20	52
08:45	0	0	0		0	0	16	9		25	7	0	9		16	0	16	6		22	63
Total Volume	0	0	0		0	0	45	17		62	41	0	25		66	0	48	32		80	208
% App Total	0.0%	0.0%	0.0%			0.0%	72.6%	27.4%			62.1%	0.0%	37.9%			0.0%	60.0%	40.0%			
PHF	.000	.000	.000		.000	.000	.703	.472		.620	.732	.000	.694		.786	.000	.750	.800		.909	.825

PM PEAK HOUR	I-880 NB Ramps Southbound					98th Avenue Westbound					I-880 NB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0		0	0	14	1		15	11	0	3		14	0	7	2		9	38
16:15	0	0	0		0	0	11	4		15	6	0	6		12	0	4	5		9	36
16:30	0	0	0		0	0	12	2		14	11	0	5		16	0	8	7		15	45
16:45	0	0	0		0	0	6	2		8	7	0	0		7	0	6	0		6	21
Total Volume	0	0	0		0	0	43	9		52	35	0	14		49	0	25	14		39	140
% App Total	0.0%	0.0%	0.0%			0.0%	82.7%	17.3%			71.4%	0.0%	28.6%			0.0%	64.1%	35.9%			
PHF	.000	.000	.000		.000	.000	.768	.563		.867	.795	.000	.583		.766	.000	.781	.500		.650	.778

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-016 I-880 SB Ramps-98th Avenue.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	I-880 SB Ramps Southbound					98th Avenue Westbound					I-880 SB Ramps Northbound					98th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	31	0	106	0	137	0	266	103	0	369	0	0	0	0	0	0	114	114	0	228	734	0
07:15	48	0	118	0	166	0	293	98	0	391	0	0	0	0	0	0	123	122	0	245	802	0
07:30	38	0	116	0	154	0	336	101	0	437	0	0	0	0	0	0	128	115	0	243	834	0
07:45	65	0	126	0	191	0	308	99	0	407	0	0	0	0	0	0	137	129	0	266	864	0
Total	182	0	466	0	648	0	1203	401	0	1604	0	0	0	0	0	0	502	480	0	982	3234	0
08:00	66	0	109	0	175	0	344	93	0	437	0	0	0	0	0	0	168	132	0	300	912	0
08:15	83	0	123	0	206	0	311	125	0	436	0	0	0	0	0	0	116	142	0	258	900	0
08:30	73	0	123	0	196	0	368	133	0	501	0	0	0	0	0	0	145	178	0	323	1020	0
08:45	75	0	100	0	175	0	311	110	0	421	0	0	0	0	0	0	156	186	0	342	938	0
Total	297	0	455	0	752	0	1334	461	0	1795	0	0	0	0	0	0	585	638	0	1223	3770	0
16:00	51	0	33	0	84	0	253	69	0	322	0	0	0	0	0	0	251	235	0	486	892	0
16:15	60	0	33	0	93	0	242	45	0	287	0	0	0	0	0	0	254	239	0	493	873	0
16:30	73	0	31	0	104	0	273	71	0	344	0	0	0	0	0	0	253	222	0	475	923	0
16:45	72	0	38	0	110	0	246	84	0	330	0	0	0	0	0	0	231	199	0	430	870	0
Total	256	0	135	0	391	0	1014	269	0	1283	0	0	0	0	0	0	989	895	0	1884	3558	0
17:00	90	0	33	0	123	0	215	59	0	274	0	0	0	0	0	0	229	217	0	446	843	0
17:15	75	0	30	0	105	0	248	61	0	309	0	0	0	0	0	0	246	217	0	463	877	0
17:30	75	0	22	0	97	0	276	50	0	326	0	0	0	0	0	0	289	236	0	525	948	0
17:45	80	0	27	0	107	0	281	65	0	346	0	0	0	0	0	0	194	195	0	389	842	0
Total	320	0	112	0	432	0	1020	235	0	1255	0	0	0	0	0	0	958	865	0	1823	3510	0
Grand Total	1055	0	1168	0	2223	0	4571	1366	0	5937	0	0	0	0	0	0	3034	2878	0	5912	14072	0
Apprch %	47.5%	0.0%	52.5%	0.0%		0.0%	77.0%	23.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	51.3%	48.7%	0.0%			
Total %	7.5%	0.0%	8.3%	0.0%	15.8%	0.0%	32.5%	9.7%	0.0%	42.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.6%	20.5%	0.0%	42.0%	100.0%	

AM PEAK HOUR	I-880 SB Ramps Southbound					98th Avenue Westbound					I-880 SB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	66	0	109	0	175	0	344	93	0	437	0	0	0	0	0	0	168	132	0	300	912
08:15	83	0	123	0	206	0	311	125	0	436	0	0	0	0	0	0	116	142	0	258	900
08:30	73	0	123	0	196	0	368	133	0	501	0	0	0	0	0	0	145	178	0	323	1020
08:45	75	0	100	0	175	0	311	110	0	421	0	0	0	0	0	0	156	186	0	342	938
Total Volume	297	0	455	0	752	0	1334	461	0	1795	0	0	0	0	0	0	585	638	0	1223	3770
% App Total	39.5%	0.0%	60.5%	0.0%		0.0%	74.3%	25.7%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	47.8%	52.2%	0.0%		
PHF	.895	.000	.925	.000	.913	.000	.906	.867	.000	.896	.000	.000	.000	.000	.000	.000	.871	.858	.000	.894	.924

PM PEAK HOUR	I-880 SB Ramps Southbound					98th Avenue Westbound					I-880 SB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	51	0	33	0	84	0	253	69	0	322	0	0	0	0	0	0	251	235	0	486	892
16:15	60	0	33	0	93	0	242	45	0	287	0	0	0	0	0	0	254	239	0	493	873
16:30	73	0	31	0	104	0	273	71	0	344	0	0	0	0	0	0	253	222	0	475	923
16:45	72	0	38	0	110	0	246	84	0	330	0	0	0	0	0	0	231	199	0	430	870
Total Volume	256	0	135	0	391	0	1014	269	0	1283	0	0	0	0	0	0	989	895	0	1884	3558
% App Total	65.5%	0.0%	34.5%	0.0%		0.0%	79.0%	21.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	52.5%	47.5%	0.0%		
PHF	.877	.000	.888	.000	.889	.000	.929	.801	.000	.932	.000	.000	.000	.000	.000	.000	.973	.936	.000	.955	.964

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-016 I-880 SB Ramps-98th Avenue.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	I-880 SB Ramps Southbound					98th Avenue Westbound					I-880 SB Ramps Northbound					98th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	1	2
07:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	1	2
07:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
07:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	4	1	4	4
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	1	1	3
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	1	1	5
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	2	2	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	3	3	2
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	1	1	4
Grand Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	6	0	15	6	9	15
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	33.3%	0.0%		33.3%	0.0%	0.0%	0.0%		0.0%	0.0%	66.7%	0.0%		66.7%	100.0%	

AM PEAK HOUR	I-880 SB Ramps Southbound					98th Avenue Westbound					I-880 SB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.000		.250	.250

PM PEAK HOUR	I-880 SB Ramps Southbound					98th Avenue Westbound					I-880 SB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0		2	2
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	3	0		3	3
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.375	.000		.375	.375

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-016 I-880 SB Ramps-98th Avenue.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	I-880 SB Ramps Southbound					98th Avenue Westbound					I-880 SB Ramps Northbound					98th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	3	0	2	0	5	0	8	9	0	17	0	0	0	0	0	0	14	8	0	22	44	0
07:15	6	0	1	0	7	0	5	8	0	13	0	0	0	0	0	0	13	10	0	23	43	0
07:30	3	0	3	0	6	0	8	12	0	20	0	0	0	0	0	0	16	8	0	24	50	0
07:45	6	0	2	0	8	0	6	7	0	13	0	0	0	0	0	0	15	6	0	21	42	0
Total	18	0	8	0	26	0	27	36	0	63	0	0	0	0	0	0	58	32	0	90	179	0
08:00	1	0	6	0	7	0	17	5	0	22	0	0	0	0	0	0	13	6	0	19	48	0
08:15	8	0	8	0	16	0	10	9	0	19	0	0	0	0	0	0	12	8	0	20	55	0
08:30	6	0	5	0	11	0	11	13	0	24	0	0	0	0	0	0	14	19	0	33	68	0
08:45	7	0	2	0	9	0	15	7	0	22	0	0	0	0	0	0	16	27	0	43	74	0
Total	22	0	21	0	43	0	53	34	0	87	0	0	0	0	0	0	55	60	0	115	245	0
16:00	2	0	9	0	11	0	19	7	0	26	0	0	0	0	0	0	6	6	0	12	49	0
16:15	0	0	5	0	5	0	11	5	0	16	0	0	0	0	0	0	10	5	0	15	36	0
16:30	3	0	4	0	7	0	17	7	0	24	0	0	0	0	0	0	11	6	0	17	48	0
16:45	3	0	6	0	9	0	6	4	0	10	0	0	0	0	0	0	3	2	0	5	24	0
Total	8	0	24	0	32	0	53	23	0	76	0	0	0	0	0	0	30	19	0	49	157	0
17:00	7	0	2	0	9	0	13	3	0	16	0	0	0	0	0	0	6	4	0	10	35	0
17:15	4	0	4	0	8	0	12	4	0	16	0	0	0	0	0	0	5	5	0	10	34	0
17:30	2	0	3	0	5	0	26	2	0	28	0	0	0	0	0	0	5	4	0	9	42	0
17:45	4	0	3	0	7	0	21	5	0	26	0	0	0	0	0	0	3	4	0	7	40	0
Total	17	0	12	0	29	0	72	14	0	86	0	0	0	0	0	0	19	17	0	36	151	0
Grand Total	65	0	65	0	130	0	205	107	0	312	0	0	0	0	0	0	162	128	0	290	732	0
Apprch %	50.0%	0.0%	50.0%			0.0%	65.7%	34.3%			0.0%	0.0%	0.0%			0.0%	55.9%	44.1%				
Total %	8.9%	0.0%	8.9%		17.8%	0.0%	28.0%	14.6%		42.6%	0.0%	0.0%	0.0%		0.0%	0.0%	22.1%	17.5%		39.6%	100.0%	

AM PEAK HOUR	I-880 SB Ramps Southbound					98th Avenue Westbound					I-880 SB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	1	0	6		7	0	17	5		22	0	0	0		0	0	13	6		19	48
08:15	8	0	8		16	0	10	9		19	0	0	0		0	0	12	8		20	55
08:30	6	0	5		11	0	11	13		24	0	0	0		0	0	14	19		33	68
08:45	7	0	2		9	0	15	7		22	0	0	0		0	0	16	27		43	74
Total Volume	22	0	21		43	0	53	34		87	0	0	0		0	0	55	60		115	245
% App Total	51.2%	0.0%	48.8%			0.0%	60.9%	39.1%			0.0%	0.0%	0.0%			0.0%	47.8%	52.2%			
PHF	.688	.000	.656		.672	.000	.779	.654		.906	.000	.000	.000		.000	.000	.859	.556		.669	.828

PM PEAK HOUR	I-880 SB Ramps Southbound					98th Avenue Westbound					I-880 SB Ramps Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	2	0	9		11	0	19	7		26	0	0	0		0	0	6	6		12	49
16:15	0	0	5		5	0	11	5		16	0	0	0		0	0	10	5		15	36
16:30	3	0	4		7	0	17	7		24	0	0	0		0	0	11	6		17	48
16:45	3	0	6		9	0	6	4		10	0	0	0		0	0	3	2		5	24
Total Volume	8	0	24		32	0	53	23		76	0	0	0		0	0	30	19		49	157
% App Total	25.0%	0.0%	75.0%			0.0%	69.7%	30.3%			0.0%	0.0%	0.0%			0.0%	61.2%	38.8%			
PHF	.667	.000	.667		.727	.000	.697	.821		.731	.000	.000	.000		.000	.000	.682	.792		.721	.801

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-075 I-880 NB Off-Ramp-Davis Street.ppd
Date : 6/5/2013

Unshifted Count = All Vehicles

	Southbound					Davis Street Westbound					I-880 NB Off-Ramp Northbound					Davis Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	0	0	0	0	0	234	0	0	234	136	0	43	0	179	0	97	0	0	97	510	0
07:15	0	0	0	0	0	0	194	0	0	194	151	0	52	0	203	0	89	0	0	89	486	0
07:30	0	0	0	0	0	0	214	0	0	214	116	0	51	0	167	0	109	0	0	109	490	0
07:45	0	0	0	0	0	0	255	0	0	255	129	0	34	0	163	0	111	0	0	111	529	0
Total	0	0	0	0	0	0	897	0	0	897	532	0	180	0	712	0	406	0	0	406	2015	0
08:00	0	0	0	0	0	0	228	0	0	228	108	0	53	0	161	0	121	0	0	121	510	0
08:15	0	0	0	0	0	0	225	0	0	225	119	0	68	0	187	0	127	0	0	127	539	0
08:30	0	0	0	0	0	0	245	0	0	245	109	0	52	0	161	0	159	0	0	159	565	0
08:45	0	0	0	0	0	0	196	0	0	196	123	0	75	0	198	0	149	0	0	149	543	0
Total	0	0	0	0	0	0	894	0	0	894	459	0	248	0	707	0	556	0	0	556	2157	0
16:00	0	0	0	0	0	0	193	0	0	193	130	0	116	0	246	0	229	0	0	229	668	0
16:15	0	0	0	0	0	0	185	0	0	185	126	0	129	0	255	0	222	0	0	222	662	0
16:30	0	0	0	0	0	0	194	0	0	194	116	0	140	0	256	0	244	0	0	244	694	0
16:45	0	0	0	0	0	0	243	0	0	243	132	0	133	0	265	0	262	0	0	262	770	0
Total	0	0	0	0	0	0	815	0	0	815	504	0	518	0	1022	0	957	0	0	957	2794	0
17:00	0	0	0	0	0	0	240	0	0	240	116	0	123	0	239	0	256	0	0	256	735	0
17:15	0	0	0	0	0	0	240	0	0	240	121	0	137	0	258	0	282	0	0	282	780	0
17:30	0	0	0	0	0	0	222	0	0	222	130	0	135	0	265	0	229	0	0	229	716	0
17:45	0	0	0	0	0	0	215	0	0	215	111	0	150	0	261	0	223	0	0	223	699	0
Total	0	0	0	0	0	0	917	0	0	917	478	0	545	0	1023	0	990	0	0	990	2930	0
Grand Total	0	0	0	0	0	0	3523	0	0	3523	1973	0	1491	0	3464	0	2909	0	0	2909	9896	0
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		57.0%	0.0%	43.0%	0.0%		0.0%	100.0%	0.0%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.6%	0.0%	0.0%	35.6%	19.9%	0.0%	15.1%	0.0%	35.0%	0.0%	29.4%	0.0%	0.0%	29.4%	100.0%	

AM PEAK HOUR	Southbound					Davis Street Westbound					I-880 NB Off-Ramp Northbound					Davis Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0	0	0	0	228	0	0	228	108	0	53	0	161	0	121	0	0	121	510
08:15	0	0	0	0	0	0	225	0	0	225	119	0	68	0	187	0	127	0	0	127	539
08:30	0	0	0	0	0	0	245	0	0	245	109	0	52	0	161	0	159	0	0	159	565
08:45	0	0	0	0	0	0	196	0	0	196	123	0	75	0	198	0	149	0	0	149	543
Total Volume	0	0	0	0	0	0	894	0	0	894	459	0	248	0	707	0	556	0	0	556	2157
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		64.9%	0.0%	35.1%	0.0%		0.0%	100.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.912	.000	.000	.912	.933	.000	.827	.000	.893	.000	.874	.000	.000	.874	.954

PM PEAK HOUR	Southbound					Davis Street Westbound					I-880 NB Off-Ramp Northbound					Davis Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	243	0	0	243	132	0	133	0	265	0	262	0	0	262	770
17:00	0	0	0	0	0	0	240	0	0	240	116	0	123	0	239	0	256	0	0	256	735
17:15	0	0	0	0	0	0	240	0	0	240	121	0	137	0	258	0	282	0	0	282	780
17:30	0	0	0	0	0	0	222	0	0	222	130	0	135	0	265	0	229	0	0	229	716
Total Volume	0	0	0	0	0	0	945	0	0	945	499	0	528	0	1027	0	1029	0	0	1029	3001
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		48.6%	0.0%	51.4%	0.0%		0.0%	100.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.972	.000	.000	.972	.945	.000	.964	.000	.969	.000	.912	.000	.000	.912	.962

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-075 I-880 NB Off-Ramp-Davis Street.ppd
Date : 6/5/2013

Bank 1 Count = Peds & Bikes

	Southbound					Davis Street Westbound					I-880 NB Off-Ramp Northbound					Davis Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	2	2	1
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	0	1	0	0	1	3	1
Total	0	0	0	0	0	0	6	0	0	6	0	0	0	3	0	0	4	0	0	4	10	3
08:00	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	2	1
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	1	0	0	1	0	0	0	3	0	0	0	0	0	0	1	3
08:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	4	0	0	2	0	0	2	5	4
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
16:15	0	0	0	0	0	0	2	0	0	2	0	0	0	3	0	0	0	0	0	0	2	3
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	5	0	0	3	0	0	3	5	5
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1	1	2
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	5	0	0	1	0	0	1	2	5
Grand Total	0	0	0	0	0	0	12	0	0	12	0	0	0	17	0	0	10	0	0	10	22	17
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	54.5%	0.0%		54.5%	0.0%	0.0%	0.0%		0.0%	0.0%	45.5%	0.0%		45.5%	100.0%	

AM PEAK HOUR	Southbound					Davis Street Westbound					I-880 NB Off-Ramp Northbound					Davis Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	1	0		1	0	0	0		0	0	1	0		1	2
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:30	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
08:45	0	0	0		0	0	1	0		1	0	0	0		0	0	1	0		1	2
Total Volume	0	0	0		0	0	3	0		3	0	0	0		0	0	2	0		2	5
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.750	.000		.750	.000	.000	.000		.000	.000	.500	.000		.500	.625

PM PEAK HOUR	Southbound					Davis Street Westbound					I-880 NB Off-Ramp Northbound					Davis Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.250

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-075 I-880 NB Off-Ramp-Davis Street.ppd
Date : 6/5/2013

Bank 2 Count = Heavy Trucks

	Southbound					Davis Street Westbound					I-880 NB Off-Ramp Northbound					Davis Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	1	0	0	1	12	0	1	0	13	0	1	0	0	1	15	0
07:15	0	0	0	0	0	0	1	0	0	1	20	0	0	0	20	0	2	0	0	2	23	0
07:30	0	0	0	0	0	0	2	0	0	2	7	0	3	0	10	0	5	0	0	5	17	0
07:45	0	0	0	0	0	0	0	0	0	0	12	0	2	0	14	0	0	0	0	0	14	0
Total	0	0	0	0	0	0	4	0	0	4	51	0	6	0	57	0	8	0	0	8	69	0
08:00	0	0	0	0	0	0	0	0	0	0	9	0	2	0	11	0	0	0	0	0	11	0
08:15	0	0	0	0	0	0	4	0	0	4	11	0	1	0	12	0	6	0	0	6	22	0
08:30	0	0	0	0	0	0	5	0	0	5	12	0	0	0	12	0	3	0	0	3	20	0
08:45	0	0	0	0	0	0	4	0	0	4	23	0	0	0	23	0	5	0	0	5	32	0
Total	0	0	0	0	0	0	13	0	0	13	55	0	3	0	58	0	14	0	0	14	85	0
16:00	0	0	0	0	0	0	2	0	0	2	14	0	1	0	15	0	2	0	0	2	19	0
16:15	0	0	0	0	0	0	2	0	0	2	14	0	1	0	15	0	2	0	0	2	19	0
16:30	0	0	0	0	0	0	1	0	0	1	9	0	1	0	10	0	1	0	0	1	12	0
16:45	0	0	0	0	0	0	1	0	0	1	11	0	2	0	13	0	0	0	0	0	14	0
Total	0	0	0	0	0	0	6	0	0	6	48	0	5	0	53	0	5	0	0	5	64	0
17:00	0	0	0	0	0	0	1	0	0	1	9	0	3	0	12	0	2	0	0	2	15	0
17:15	0	0	0	0	0	0	1	0	0	1	5	0	0	0	5	0	1	0	0	1	7	0
17:30	0	0	0	0	0	0	1	0	0	1	12	0	0	0	12	0	1	0	0	1	14	0
17:45	0	0	0	0	0	0	3	0	0	3	3	0	1	0	4	0	1	0	0	1	8	0
Total	0	0	0	0	0	0	6	0	0	6	29	0	4	0	33	0	5	0	0	5	44	0
Grand Total	0	0	0	0	0	0	29	0	0	29	183	0	18	0	201	0	32	0	0	32	262	0
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			91.0%	0.0%	9.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	11.1%	0.0%		11.1%	69.8%	0.0%	6.9%		76.7%	0.0%	12.2%	0.0%		12.2%	100.0%	

AM PEAK HOUR	Southbound					Davis Street Westbound					I-880 NB Off-Ramp Northbound					Davis Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	9	0	2		11	0	0	0		0	11
08:15	0	0	0		0	0	4	0		4	11	0	1		12	0	6	0		6	22
08:30	0	0	0		0	0	5	0		5	12	0	0		12	0	3	0		3	20
08:45	0	0	0		0	0	4	0		4	23	0	0		23	0	5	0		5	32
Total Volume	0	0	0		0	0	13	0		13	55	0	3		58	0	14	0		14	85
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			94.8%	0.0%	5.2%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.650	.000		.650	.598	.000	.375		.630	.000	.583	.000		.583	.664

PM PEAK HOUR	Southbound					Davis Street Westbound					I-880 NB Off-Ramp Northbound					Davis Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	0	1	0		1	11	0	2		13	0	0	0		0	14
17:00	0	0	0		0	0	1	0		1	9	0	3		12	0	2	0		2	15
17:15	0	0	0		0	0	1	0		1	5	0	0		5	0	1	0		1	7
17:30	0	0	0		0	0	1	0		1	12	0	0		12	0	1	0		1	14
Total Volume	0	0	0		0	0	4	0		4	37	0	5		42	0	4	0		4	50
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			88.1%	0.0%	11.9%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	1.000	.000		1.000	.771	.000	.417		.808	.000	.500	.000		.500	.833

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-081 Broadway-Tilden Way.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	Broadway Southbound					Tilden Way Westbound					Broadway Northbound					Tilden Way Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	4	12	2	0	18	24	41	1	0	66	1	61	31	0	93	5	38	0	0	43	220	0
07:15	3	11	3	0	17	24	41	1	0	66	1	72	35	0	108	0	30	0	0	30	221	0
07:30	2	15	6	0	23	41	88	0	0	129	3	86	42	0	131	5	48	0	0	53	336	0
07:45	2	19	5	0	26	49	105	3	0	157	1	88	65	0	154	3	61	0	0	64	401	0
Total	11	57	16	0	84	138	275	5	0	418	6	307	173	0	486	13	177	0	0	190	1178	0
08:00	2	17	4	0	23	53	93	0	0	146	2	117	46	0	165	5	65	1	0	71	405	0
08:15	5	23	2	0	30	55	97	3	0	155	1	121	52	0	174	10	70	1	0	81	440	0
08:30	3	25	9	0	37	44	94	2	0	140	2	117	47	0	166	9	60	1	0	70	413	0
08:45	2	30	9	0	41	48	97	4	0	149	1	86	40	0	127	3	42	0	0	45	362	0
Total	12	95	24	0	131	200	381	9	0	590	6	441	185	0	632	27	237	3	0	267	1620	0
16:00	9	63	9	0	81	66	84	3	0	153	1	59	45	0	105	4	79	0	0	83	422	0
16:15	7	52	7	0	66	69	105	1	0	175	1	57	55	0	113	5	58	1	0	64	418	0
16:30	14	66	16	0	96	73	87	3	0	163	1	49	51	0	101	4	90	3	0	97	457	0
16:45	15	60	6	0	81	48	114	2	0	164	2	48	49	0	99	9	74	1	0	84	428	0
Total	45	241	38	0	324	256	390	9	0	655	5	213	200	0	418	22	301	5	0	328	1725	0
17:00	10	63	11	0	84	82	108	1	0	191	3	50	53	0	106	10	107	0	0	117	498	0
17:15	19	79	14	0	112	75	121	2	0	198	2	68	42	0	112	7	67	0	0	74	496	0
17:30	16	83	8	0	107	78	116	1	0	195	4	56	58	0	118	11	68	0	0	79	499	0
17:45	8	70	14	0	92	99	120	1	0	220	2	64	46	0	112	3	57	0	0	60	484	0
Total	53	295	47	0	395	334	465	5	0	804	11	238	199	0	448	31	299	0	0	330	1977	0
Grand Total	121	688	125	0	934	928	1511	28	0	2467	28	1199	757	0	1984	93	1014	8	0	1115	6500	0
Apprch %	13.0%	73.7%	13.4%	0.0%		37.6%	61.2%	1.1%	0.0%		1.4%	60.4%	38.2%	0.0%		8.3%	90.9%	0.7%	0.0%			
Total %	1.9%	10.6%	1.9%	0.0%	14.4%	14.3%	23.2%	0.4%	0.0%	38.0%	0.4%	18.4%	11.6%	0.0%	30.5%	1.4%	15.6%	0.1%	0.0%	17.2%	100.0%	

AM PEAK HOUR	Broadway Southbound					Tilden Way Westbound					Broadway Northbound					Tilden Way Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	2	19	5	0	26	49	105	3	0	157	1	88	65	0	154	3	61	0	0	64	401
08:00	2	17	4	0	23	53	93	0	0	146	2	117	46	0	165	5	65	1	0	71	405
08:15	5	23	2	0	30	55	97	3	0	155	1	121	52	0	174	10	70	1	0	81	440
08:30	3	25	9	0	37	44	94	2	0	140	2	117	47	0	166	9	60	1	0	70	413
Total Volume	12	84	20	0	116	201	389	8	0	598	6	443	210	0	659	27	256	3	0	286	1659
% App Total	10.3%	72.4%	17.2%	0.0%		33.6%	65.1%	1.3%	0.0%		0.9%	67.2%	31.9%	0.0%		9.4%	89.5%	1.0%	0.0%		
PHF	.600	.840	.556	.000	.784	.914	.926	.667	.000	.952	.750	.915	.808	.000	.947	.675	.914	.750	.000	.883	.943

PM PEAK HOUR	Broadway Southbound					Tilden Way Westbound					Broadway Northbound					Tilden Way Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	10	63	11	0	84	82	108	1	0	191	3	50	53	0	106	10	107	0	0	117	498
17:15	19	79	14	0	112	75	121	2	0	198	2	68	42	0	112	7	67	0	0	74	496
17:30	16	83	8	0	107	78	116	1	0	195	4	56	58	0	118	11	68	0	0	79	499
17:45	8	70	14	0	92	99	120	1	0	220	2	64	46	0	112	3	57	0	0	60	484
Total Volume	53	295	47	0	395	334	465	5	0	804	11	238	199	0	448	31	299	0	0	330	1977
% App Total	13.4%	74.7%	11.9%	0.0%		41.5%	57.8%	0.6%	0.0%		2.5%	53.1%	44.4%	0.0%		9.4%	90.6%	0.0%	0.0%		
PHF	.697	.889	.839	.000	.882	.843	.961	.625	.000	.914	.688	.875	.858	.000	.949	.705	.699	.000	.000	.705	.990

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-081 Broadway-Tilden Way.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	Broadway Southbound					Tilden Way Westbound					Broadway Northbound					Tilden Way Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	0	1	2	0	0	0	2	0	1	5	0	6	0	0	0	2	0	9	2
07:15	0	0	0	1	0	1	0	0	1	1	0	3	1	1	4	0	3	0	2	3	8	5
07:30	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	0	0	0	1	0	3	1
07:45	0	0	0	2	0	0	4	0	1	4	0	0	2	0	2	0	2	0	1	2	8	4
Total	0	1	0	3	1	3	5	0	2	8	0	4	10	1	14	0	5	0	6	5	28	12
08:00	0	0	0	7	0	1	1	0	13	2	0	3	4	0	7	1	1	0	4	2	11	24
08:15	0	0	0	2	0	0	1	0	4	1	0	0	2	0	2	0	0	0	1	0	3	7
08:30	0	1	0	0	1	0	3	0	3	3	0	0	2	0	2	0	1	0	4	1	7	7
08:45	0	1	0	0	1	1	1	0	0	2	0	0	2	0	2	0	4	0	0	4	9	0
Total	0	2	0	9	2	2	6	0	20	8	0	3	10	0	13	1	6	0	9	7	30	38
16:00	0	1	0	0	1	1	1	0	2	2	0	1	0	0	1	0	1	0	1	1	5	3
16:15	0	1	0	0	1	1	2	0	0	3	0	0	0	4	0	0	0	0	2	0	4	6
16:30	0	1	0	0	1	3	1	0	2	4	1	0	0	2	1	0	3	0	1	3	9	5
16:45	0	3	0	1	3	2	0	0	3	2	0	0	0	0	0	0	4	0	1	4	9	5
Total	0	6	0	1	6	7	4	0	7	11	1	1	0	6	2	0	8	0	5	8	27	19
17:00	0	2	0	1	2	4	1	0	2	5	0	0	0	0	0	0	1	0	2	1	8	5
17:15	0	0	0	0	0	3	0	0	0	3	0	4	5	0	9	0	3	0	1	3	15	1
17:30	0	2	0	0	2	0	2	0	0	2	0	1	1	1	2	0	1	0	3	1	7	4
17:45	0	4	0	1	4	0	1	0	1	1	0	2	0	1	2	0	4	0	0	4	11	3
Total	0	8	0	2	8	7	4	0	3	11	0	7	6	2	13	0	9	0	6	9	41	13
Grand Total	0	17	0	15	17	19	19	0	32	38	1	15	26	9	42	1	28	0	26	29	126	82
Apprch %	0.0%	100.0%	0.0%			50.0%	50.0%	0.0%			2.4%	35.7%	61.9%			3.4%	96.6%	0.0%				
Total %	0.0%	13.5%	0.0%		13.5%	15.1%	15.1%	0.0%		30.2%	0.8%	11.9%	20.6%		33.3%	0.8%	22.2%	0.0%		23.0%	100.0%	

AM PEAK HOUR	Broadway Southbound					Tilden Way Westbound					Broadway Northbound					Tilden Way Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	4	0		4	0	0	2		2	0	2	0		2	8
08:00	0	0	0		0	1	1	0		2	0	3	4		7	1	1	0		2	11
08:15	0	0	0		0	0	1	0		1	0	0	2		2	0	0	0		0	3
08:30	0	1	0		1	0	3	0		3	0	0	2		2	0	1	0		1	7
Total Volume	0	1	0		1	1	9	0		10	0	3	10		13	1	4	0		5	29
% App Total	0.0%	100.0%	0.0%			10.0%	90.0%	0.0%			0.0%	23.1%	76.9%			20.0%	80.0%	0.0%			
PHF	.000	.250	.000		.250	.250	.563	.000		.625	.000	.250	.625		.464	.250	.500	.000		.625	.659

PM PEAK HOUR	Broadway Southbound					Tilden Way Westbound					Broadway Northbound					Tilden Way Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	2	0		2	4	1	0		5	0	0	0		0	0	1	0		1	8
17:15	0	0	0		0	3	0	0		3	0	4	5		9	0	3	0		3	15
17:30	0	2	0		2	0	2	0		2	0	1	1		2	0	1	0		1	7
17:45	0	4	0		4	0	1	0		1	0	2	0		2	0	4	0		4	11
Total Volume	0	8	0		8	7	4	0		11	0	7	6		13	0	9	0		9	41
% App Total	0.0%	100.0%	0.0%			63.6%	36.4%	0.0%			0.0%	53.8%	46.2%			0.0%	100.0%	0.0%			
PHF	.000	.500	.000		.500	.438	.500	.000		.550	.000	.438	.300		.361	.000	.563	.000		.563	.683

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-081 Broadway-Tilden Way.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	Broadway Southbound					Tilden Way Westbound					Broadway Northbound					Tilden Way Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	1	3	0	0	4	0	2	1	0	3	0	0	0	0	0	7	0
07:15	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	3	0
07:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
07:45	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0
Total	0	0	1	0	1	2	5	0	0	7	0	3	3	0	6	0	0	0	0	0	14	0
08:00	0	1	0	0	1	1	4	0	0	5	0	2	0	0	2	1	0	0	0	1	9	0
08:15	0	0	0	0	0	4	1	0	0	5	0	0	1	0	1	0	2	0	0	2	8	0
08:30	0	1	0	0	1	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	4	0
08:45	0	0	0	0	0	1	1	1	0	3	0	0	1	0	1	0	1	0	0	1	5	0
Total	0	2	0	0	2	6	7	1	0	14	0	2	4	0	6	1	3	0	0	4	26	0
16:00	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	4	0
16:15	0	1	0	0	1	2	0	0	0	2	0	1	3	0	4	0	0	0	0	0	7	0
16:30	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	0	2	0	0	2	3	0	0	0	3	0	2	3	0	5	0	4	0	0	4	14	0
17:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
17:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:30	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	2	0	0	2	5	0
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	1	0	0	1	3	2	0	0	5	0	0	0	0	0	0	2	0	0	2	8	0
Grand Total	0	5	1	0	6	14	14	1	0	29	0	7	10	0	17	1	9	0	0	10	62	0
Apprch %	0.0%	83.3%	16.7%			48.3%	48.3%	3.4%			0.0%	41.2%	58.8%			10.0%	90.0%	0.0%				
Total %	0.0%	8.1%	1.6%		9.7%	22.6%	22.6%	1.6%		46.8%	0.0%	11.3%	16.1%		27.4%	1.6%	14.5%	0.0%		16.1%	100.0%	

AM PEAK HOUR	Broadway Southbound					Tilden Way Westbound					Broadway Northbound					Tilden Way Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	1		1	1	1	0		2	0	0	0		0	0	0	0		0	3
08:00	0	1	0		1	1	4	0		5	0	2	0		2	1	0	0		1	9
08:15	0	0	0		0	4	1	0		5	0	0	1		1	0	2	0		2	8
08:30	0	1	0		1	0	1	0		1	0	0	2		2	0	0	0		0	4
Total Volume	0	2	1		3	6	7	0		13	0	2	3		5	1	2	0		3	24
% App Total	0.0%	66.7%	33.3%			46.2%	53.8%	0.0%			0.0%	40.0%	60.0%			33.3%	66.7%	0.0%			
PHF	.000	.500	.250		.750	.375	.438	.000		.650	.000	.250	.375		.625	.250	.250	.000		.375	.667

PM PEAK HOUR	Broadway Southbound					Tilden Way Westbound					Broadway Northbound					Tilden Way Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
17:15	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:30	0	0	0		0	2	1	0		3	0	0	0		0	0	2	0		2	5
17:45	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
Total Volume	0	1	0		1	3	2	0		5	0	0	0		0	0	2	0		2	8
% App Total	0.0%	100.0%	0.0%			60.0%	40.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.250	.000		.250	.375	.500	.000		.417	.000	.000	.000		.000	.000	.250	.000		.250	.400

All Traffic Data

(916) 771-8700
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City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- Unshifted

	Park Street Southbound					Tilden Way Westbound					Lincoln Avenue Northwestbound					Park Street Northbound					Tilden Way Eastbound					
Start Time	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Int. Total
07:00	0	1	60	7	68	0	8	20	2	30	0	0	0	1	1	7	102	11	1	121	19	23	3	4	49	269
07:15	0	0	98	6	104	0	13	24	5	42	0	0	0	2	2	4	101	8	1	114	29	15	5	4	53	315
07:30	0	3	102	15	120	0	17	66	6	89	0	0	0	1	1	4	171	11	0	186	38	31	7	4	80	476
07:45	2	3	116	11	132	0	18	73	9	100	0	0	0	5	5	10	142	17	1	170	44	27	18	6	95	502
Total	2	7	376	39	424	0	56	183	22	261	0	0	0	9	9	25	516	47	3	591	130	96	33	18	277	1562
08:00	6	1	118	16	141	0	30	59	2	91	0	0	0	11	11	5	170	9	1	185	40	50	15	4	109	537
08:15	3	2	103	19	127	0	23	61	5	89	0	0	0	4	4	7	176	11	4	198	39	47	7	9	102	520
08:30	0	2	112	10	124	1	27	42	5	75	0	0	0	5	5	11	131	13	0	155	33	30	4	7	74	433
08:45	0	0	116	17	133	0	20	45	8	73	0	0	0	4	4	6	121	6	0	133	30	19	8	4	61	404
Total	9	5	449	62	525	1	100	207	20	328	0	0	0	24	24	29	598	39	5	671	142	146	34	24	346	1894
16:00	2	10	157	12	181	0	27	56	11	94	0	0	0	8	8	11	156	11	1	179	41	44	12	11	108	570
16:15	6	9	143	17	175	0	26	73	11	110	0	0	0	3	3	5	140	11	1	157	30	34	13	17	94	539
16:30	3	8	147	16	174	0	38	64	10	112	0	0	0	4	4	6	142	15	1	164	33	52	18	16	119	573
16:45	2	8	176	22	208	0	28	79	10	117	0	0	0	15	15	14	131	18	6	169	32	38	21	29	120	629
Total	13	35	623	67	738	0	119	272	42	433	0	0	0	30	30	36	569	55	9	669	136	168	64	73	441	2311
17:00	1	11	168	15	195	0	41	75	9	125	0	0	0	9	9	13	155	18	5	191	48	54	19	21	142	662
17:15	4	10	164	18	196	0	37	84	10	131	0	0	0	6	6	8	117	15	1	141	24	39	22	13	98	572
17:30	4	7	169	13	193	0	30	78	12	120	0	0	0	5	5	13	134	6	7	160	31	44	22	19	116	594
17:45	2	4	193	25	224	0	40	83	14	137	0	0	0	3	3	5	123	11	5	144	41	34	18	22	115	623
Total	11	32	694	71	808	0	148	320	45	513	0	0	0	23	23	39	529	50	18	636	144	171	81	75	471	2451
Grand Total	35	79	2142	239	2495	1	423	982	129	1535	0	0	0	86	86	129	2212	191	35	2567	552	581	212	190	1535	8218
Apprch %	1.4	3.2	85.9	9.6		0.1	27.6	64	8.4		0	0	0	100		5	86.2	7.4	1.4		36	37.9	13.8	12.4		
Total %	0.4	1	26.1	2.9	30.4	0	5.1	11.9	1.6	18.7	0	0	0	1	1	1.6	26.9	2.3	0.4	31.2	6.7	7.1	2.6	2.3	18.7	

All Traffic Data

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City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012

	Park Street Southbound					Tilden Way Westbound					Lincoln Avenue Northwestbound					Park Street Northbound					Tilden Way Eastbound					
Start Time	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:30																										
07:30	0	**3**	102	15	120	0	17	66	6	89	0	0	0	1	1	4	171	11	0	186	38	31	7	4	80	476
07:45	2	3	116	11	132	0	18	**73**	**9**	**100**	0	0	0	5	5	**10**	142	**17**	1	170	**44**	27	**18**	6	95	502
08:00	**6**	1	**118**	16	**141**	0	**30**	59	2	91	0	0	0	**11**	**11**	5	170	9	1	185	40	**50**	15	4	**109**	**537**
08:15	3	2	103	**19**	127	0	23	61	5	89	0	0	0	4	4	7	**176**	11	**4**	**198**	39	47	7	**9**	102	520
Total Volume	11	9	439	61	520	0	88	259	22	369	0	0	0	21	21	26	659	48	6	739	161	155	47	23	386	2035
% App. Total	2.1	1.7	84.4	11.7		0	23.8	70.2	6		0	0	0	100		3.5	89.2	6.5	0.8		41.7	40.2	12.2	6		
PHF	.458	.750	.930	.803	.922	.000	.733	.887	.611	.923	.000	.000	.000	.477	.477	.650	.936	.706	.375	.933	.915	.775	.653	.639	.885	.947

All Traffic Data

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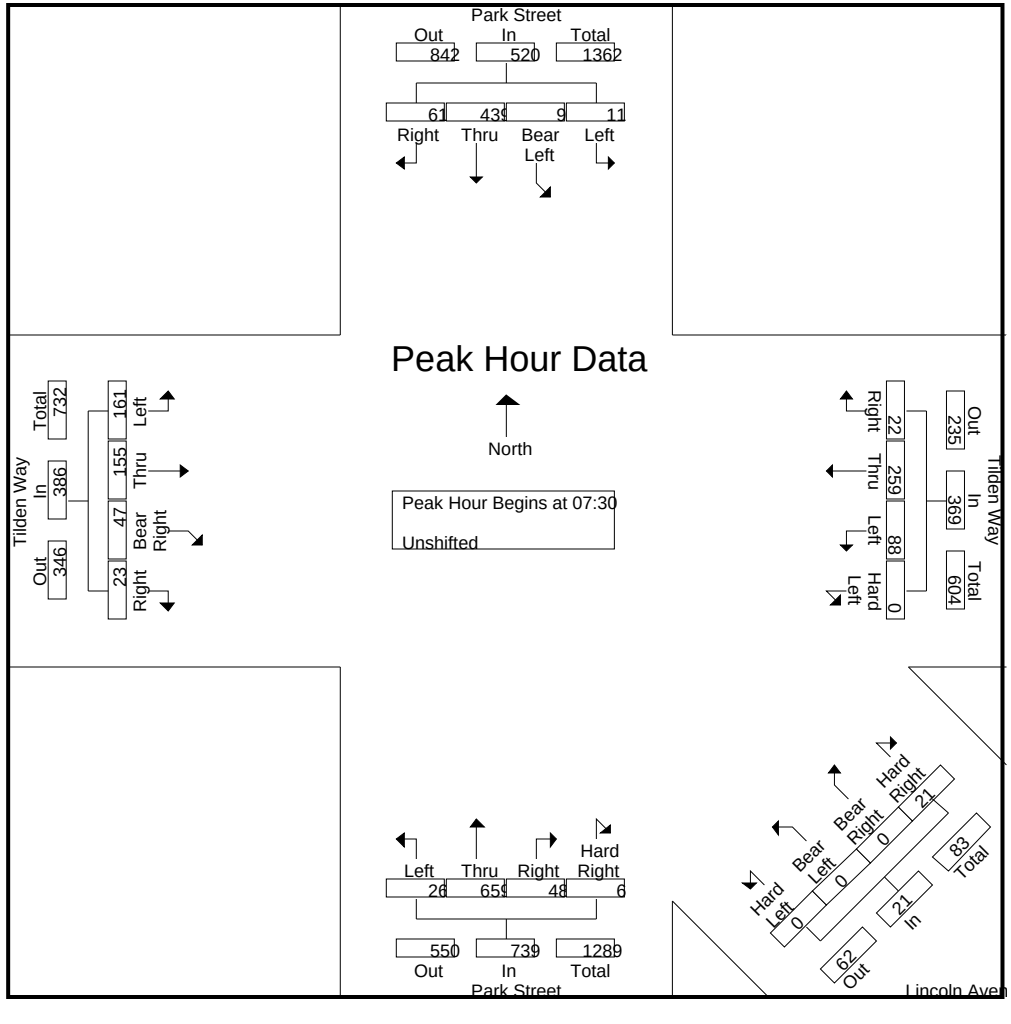
City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012
Page No : 3



All Traffic Data

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City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012
Page No : 4

	Park Street Southbound					Tilden Way Westbound					Lincoln Avenue Northwestbound					Park Street Northbound					Tilden Way Eastbound					
Start Time	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 16:45																										
16:45	2	8	**176**	**22**	**208**	0	28	79	10	117	0	0	0	**15**	**15**	**14**	131	**18**	6	169	32	38	21	**29**	120	629
17:00	1	**11**	168	15	195	0	**41**	75	9	125	0	0	0	9	9	13	**155**	18	5	**191**	**48**	**54**	19	21	**142**	**662**
17:15	**4**	10	164	18	196	0	37	**84**	10	**131**	0	0	0	6	6	8	117	15	1	141	24	39	**22**	13	98	572
17:30	4	7	169	13	193	0	30	78	**12**	120	0	0	0	5	5	13	134	6	**7**	160	31	44	22	19	116	594
Total Volume	11	36	677	68	792	0	136	316	41	493	0	0	0	35	35	48	537	57	19	661	135	175	84	82	476	2457
% App. Total	1.4	4.5	85.5	8.6		0	27.6	64.1	8.3		0	0	0	100		7.3	81.2	8.6	2.9		28.4	36.8	17.6	17.2		
PHF	.688	.818	.962	.773	.952	.000	.829	.940	.854	.941	.000	.000	.000	.583	.583	.857	.866	.792	.679	.865	.703	.810	.955	.707	.838	.928

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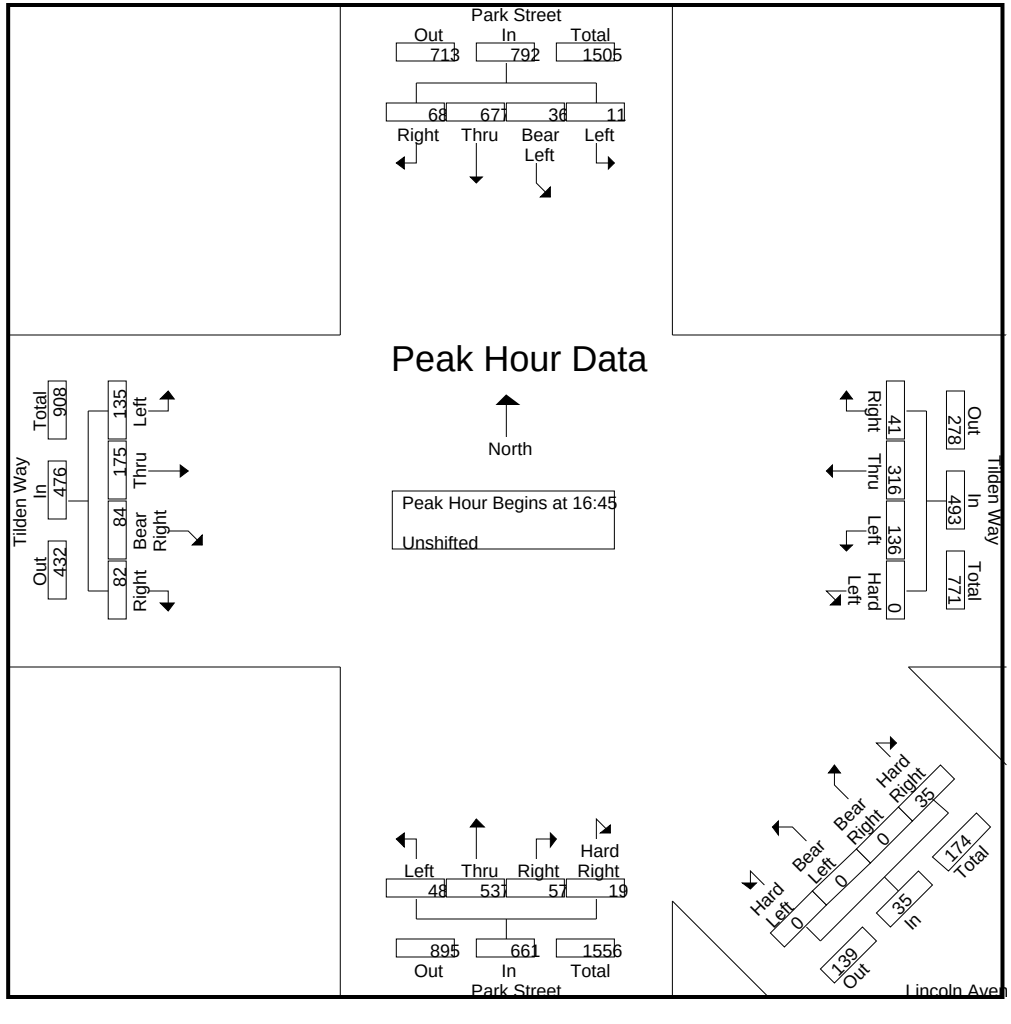
City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012
Page No : 5



All Traffic Data

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City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- Bank 1

	Park Street Southbound						Tilden Way Westbound						Lincoln Avenue Northwestbound						Park Street Northbound						Tilden Way Eastbound								
Start Time	Left	Bear Left	Thru	Right	Peds	App. Total	Hard Left	Left	Thru	Right	Peds	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	Peds	App. Total	Left	Thru	Right	Hard Right	Peds	App. Total	Left	Thru	Bear Right	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00	0	0	1	0	1	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	10	1	11
07:15	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	5	1	1	1	0	0	6	2	12	4	16
07:30	0	0	0	0	0	0	0	1	0	0	7	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	9	2	11
07:45	0	0	1	0	3	1	0	0	1	0	6	1	0	0	0	0	0	0	0	1	0	0	3	1	0	1	0	0	5	1	17	4	21
Total	0	0	2	0	4	2	0	1	2	0	18	3	0	0	0	0	0	0	0	3	0	0	11	3	1	2	0	0	15	3	48	11	59
08:00	0	0	1	0	2	1	0	1	0	0	3	1	0	0	0	0	0	0	0	1	0	0	1	1	0	2	0	0	4	2	10	5	15
08:15	0	0	0	0	3	0	0	1	1	0	6	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	5	0	16	2	18
08:30	0	0	1	0	0	1	0	0	0	0	7	0	0	0	0	0	0	0	0	2	0	0	3	2	0	1	0	0	3	1	13	4	17
08:45	0	0	2	0	3	2	0	0	2	0	4	2	0	0	0	0	0	0	0	2	0	0	2	2	0	2	0	0	5	2	14	8	22
Total	0	0	4	0	8	4	0	2	3	0	20	5	0	0	0	0	0	0	0	5	0	0	8	5	0	5	0	0	17	5	53	19	72
16:00	0	0	1	0	11	1	0	0	0	0	15	0	0	0	0	0	0	0	0	0	1	0	8	1	0	0	1	0	27	1	61	3	64
16:15	0	0	1	0	0	1	0	1	0	0	8	1	0	0	0	0	4	0	1	3	0	0	6	4	0	0	0	2	12	2	30	8	38
16:30	0	0	1	0	1	1	0	0	0	0	12	0	0	0	0	0	0	0	0	4	1	0	5	5	0	0	0	0	16	0	34	6	40
16:45	0	0	0	0	5	0	0	1	3	0	14	4	0	0	0	0	0	0	0	3	0	0	10	3	0	0	0	1	14	1	43	8	51
Total	0	0	3	0	17	3	0	2	3	0	49	5	0	0	0	0	4	0	1	10	2	0	29	13	0	0	1	3	69	4	168	25	193
17:00	0	0	7	3	1	10	0	1	0	0	10	1	0	0	0	0	0	0	0	3	0	0	5	3	0	2	0	0	8	2	24	16	40
17:15	0	0	2	1	6	3	0	0	0	0	13	0	0	0	0	0	1	0	0	2	1	0	3	3	0	1	0	1	14	2	37	8	45
17:30	0	0	2	1	2	3	0	0	1	0	7	1	0	0	0	0	0	0	0	3	2	0	3	5	0	2	0	0	14	2	26	11	37
17:45	0	0	2	0	0	2	0	2	0	0	8	2	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	11	1	21	5	26
Total	0	0	13	5	9	18	0	3	1	0	38	4	0	0	0	0	1	0	0	8	3	0	13	11	0	6	0	1	47	7	108	40	148
Grand Total	0	0	22	5	38	27	0	8	9	0	125	17	0	0	0	0	5	0	1	26	5	0	61	32	1	13	1	4	148	19	377	95	472
Apprch %	0	0	81.5	18.5			0	47.1	52.9	0			0	0	0	0			3.1	81.2	15.6	0			5.3	68.4	5.3	21.1					
Total %	0	0	23.2	5.3		28.4	0	8.4	9.5	0		17.9	0	0	0	0		0	1.1	27.4	5.3	0		33.7	1.1	13.7	1.1	4.2		20	79.9	20.1	

	Park Street Southbound					Tilden Way Westbound					Lincoln Avenue Northwestbound					Park Street Northbound					Tilden Way Eastbound					
Start Time	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 08:00																										
08:00	0	0	1	0	1	0	1															2			2	
08:15	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	4
08:45	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	8
Total Volume	0	0	4	0	4	0	2	3	0	5	0	0	0	0	0	0	5	0	0	5	0	5	0	0	5	19
% App. Total	0	0	100	0		0	40	60	0		0	0	0	0		0	100	0	0		0	100	0	0		
PHF	.000	.000	.500	.000	.500	.000	.500	.375	.000	.625	.000	.000	.000	.000	.000	.000	.625	.000	.000	.625	.000	.625	.000	.000	.625	.594

All Traffic Data

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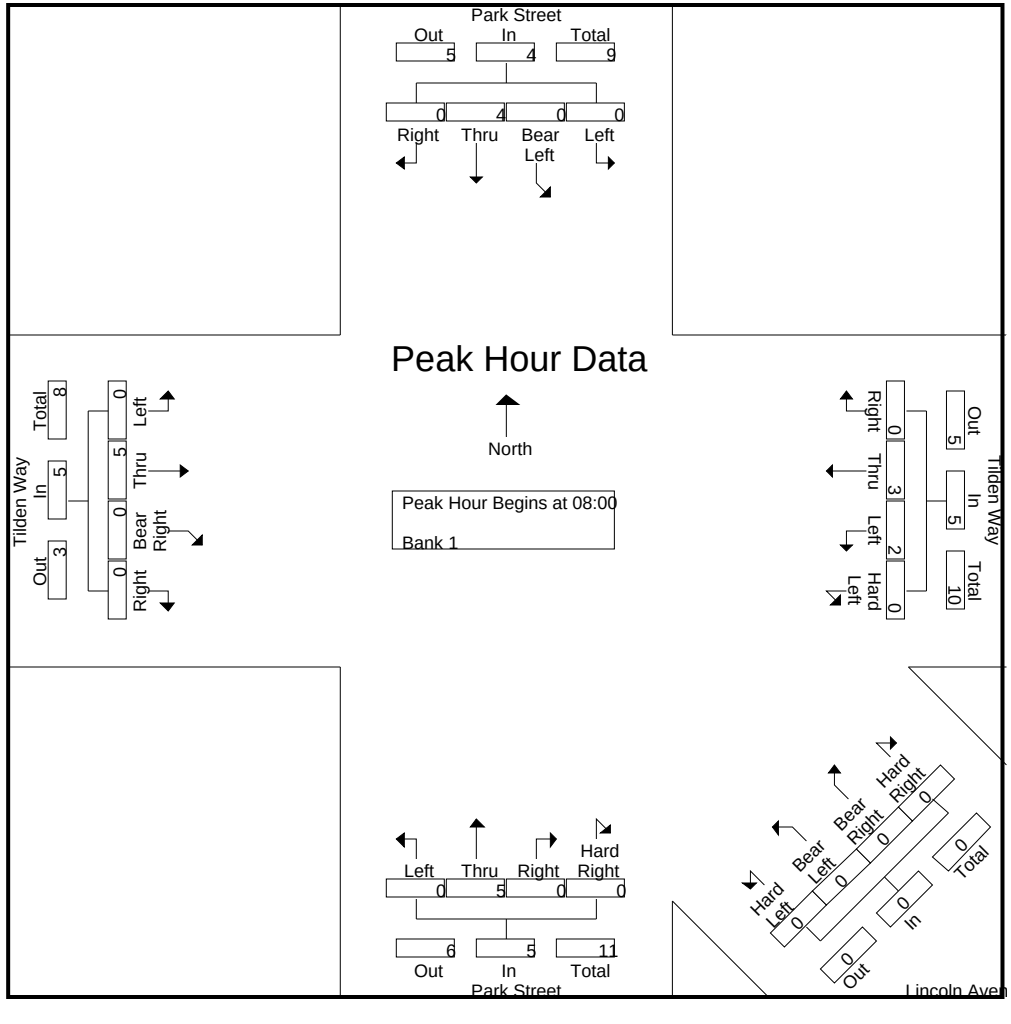
City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012



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City of Oakland
All Vehicles on Unshifted Tab
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Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012
Page No : 3

	Park Street Southbound					Tilden Way Westbound					Lincoln Avenue Northwestbound					Park Street Northbound					Tilden Way Eastbound					
Start Time	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 16:45																									
16:45	0	0	0	0	0	0	**1**	**3**	0	**4**	0	0	0	0	0	0	**3**	0	0	3	0	0	0	**1**	1	8
17:00	0	0	**7**	**3**	**10**	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	**2**	0	0	**2**	**16**
17:15	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	1	0	1	2	8
17:30	0	0	2	1	3	0	0	1	0	1	0	0	0	0	0	0	3	**2**	0	**5**	0	2	0	0	2	11
Total Volume	0	0	11	5	16	0	2	4	0	6	0	0	0	0	0	0	11	3	0	14	0	5	0	2	7	43
% App. Total	0	0	68.8	31.2		0	33.3	66.7	0		0	0	0	0		0	78.6	21.4	0		0	71.4	0	28.6		
PHF	.000	.000	.393	.417	.400	.000	.500	.333	.000	.375	.000	.000	.000	.000	.000	.000	.917	.375	.000	.700	.000	.625	.000	.500	.875	.672

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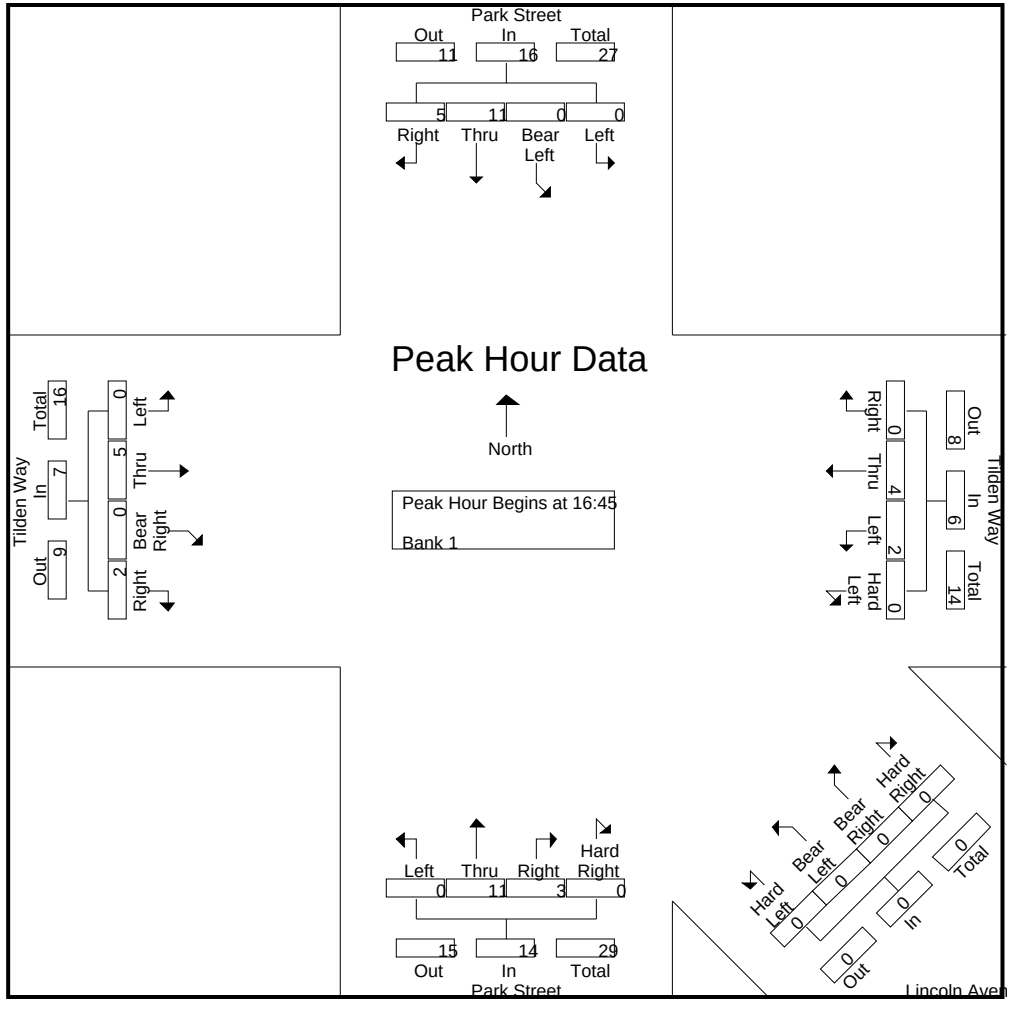
City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012



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City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- Bank 2

	Park Street Southbound					Tilden Way Westbound					Lincoln Avenue Northwestbound					Park Street Northbound					Tilden Way Eastbound					
Start Time	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Int. Total
07:00	0	0	1	1	2	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
07:15	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	8
07:30	0	0	4	2	6	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
07:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	5
Total	0	0	8	4	12	0	2	2	0	4	0	0	0	0	0	0	7	0	0	7	0	1	1	0	2	25
08:00	0	0	2	2	4	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	0	0	1	1	2	10
08:15	1	0	2	1	4	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	1	1	0	0	2	9
08:30	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	2	5
08:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	3
Total	1	0	7	3	11	0	1	1	0	2	0	0	0	0	0	0	7	0	0	7	3	2	1	1	7	27
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	3
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	1	1	0	0	2	6
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	1	4	4
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2	0	1	4	5
Grand Total	1	0	15	7	23	0	4	3	0	7	0	0	0	0	0	0	18	0	0	18	5	6	2	2	15	63
Apprch %	4.3	0	65.2	30.4		0	57.1	42.9	0		0	0	0	0		0	100	0	0		33.3	40	13.3	13.3		
Total %	1.6	0	23.8	11.1	36.5	0	6.3	4.8	0	11.1	0	0	0	0	0	0	28.6	0	0	28.6	7.9	9.5	3.2	3.2	23.8	

All Traffic Data

(916) 771-8700
orders@atdtraffic.com

City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012

	Park Street Southbound					Tilden Way Westbound					Lincoln Avenue Northwestbound					Park Street Northbound					Tilden Way Eastbound					
Start Time	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:30																										
07:30	0	0	**4**	**2**	**6**	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
07:45	0	0	0	0	0	0	**2**	0	0	**2**	0	0	0	0	0	0	2	0	0	2	0	0	**1**	0	1	5
08:00	0	0	2	2	4	0	1	**1**	0	2	0	0	0	0	0	0	2	0	0	2	0	0	1	**1**	**2**	**10**
08:15	**1**	0	2	1	4	0	0	0	0	0	0	0	0	0	0	0	**3**	0	0	**3**	**1**	**1**	0	0	2	9
Total Volume	1	0	8	5	14	0	3	1	0	4	0	0	0	0	0	0	8	0	0	8	1	1	2	1	5	31
% App. Total	7.1	0	57.1	35.7		0	75	25	0		0	0	0	0		0	100	0	0		20	20	40	20		
PHF	.250	.000	.500	.625	.583	.000	.375	.250	.000	.500	.000	.000	.000	.000	.000	.000	.667	.000	.000	.667	.250	.250	.500	.250	.625	.775

All Traffic Data

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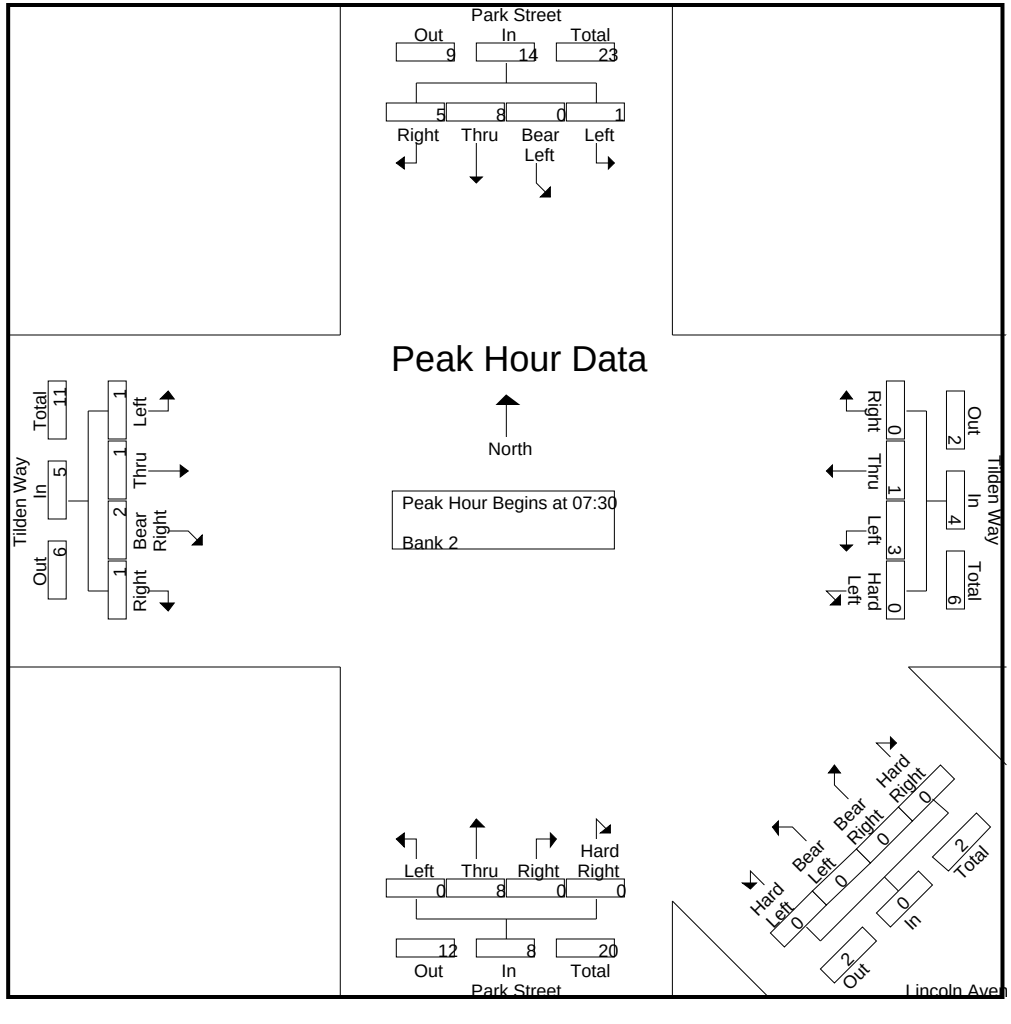
City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012



All Traffic Data

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City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012

	Park Street Southbound					Tilden Way Westbound					Lincoln Avenue Northwestbound					Park Street Northbound					Tilden Way Eastbound					
Start Time	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 16:00																										
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	**2**	0	0	0	0	0	2
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	**1**	0	0	0	**1**	**3**
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	1	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	1	1	0	0	2	6
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	100	0	0		50	50	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.250	.250	.000	.000	.500	.500

All Traffic Data

(916) 771-8700
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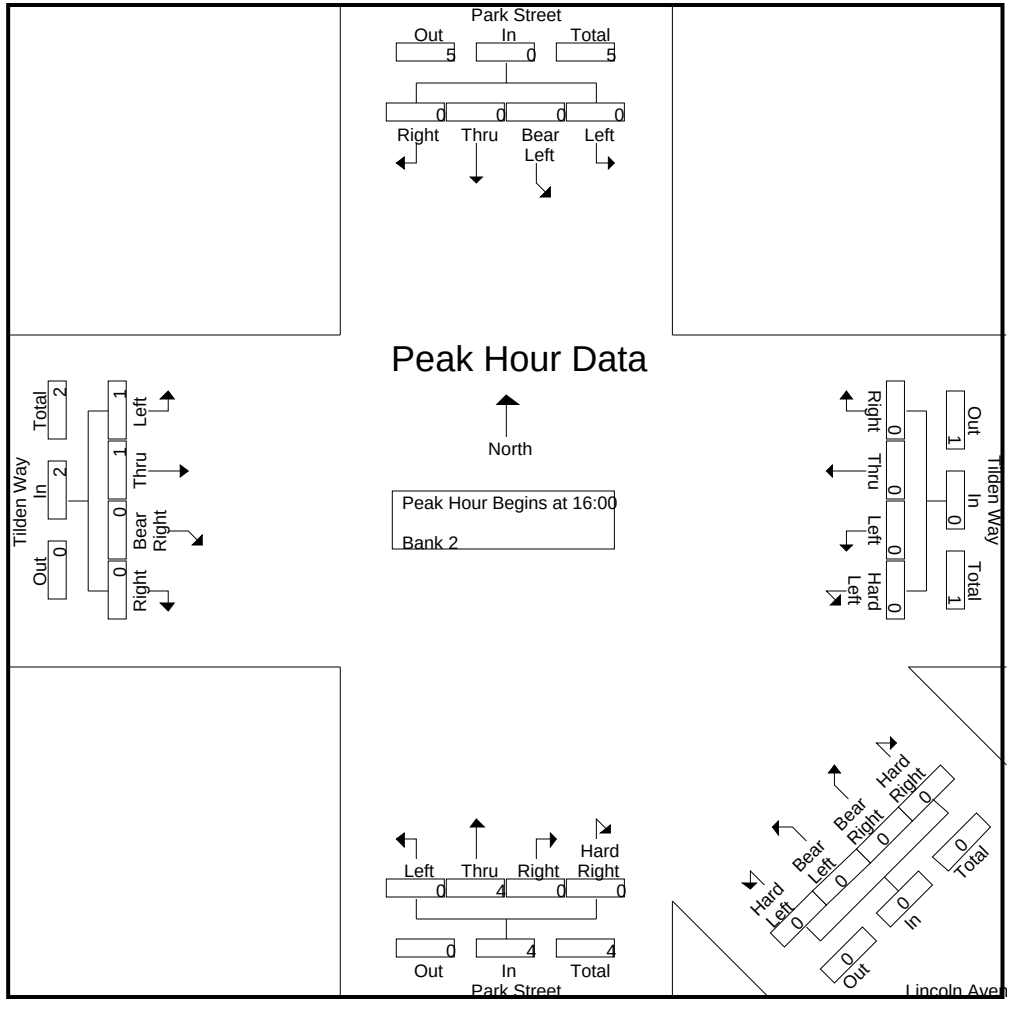
City of Oakland
All Vehicles on Unshifted Tab
Peds & Bikes on Bank 1 Tab
Heavy Trucks on Bank 2 Tab

File Name : 13-7347-080 Park Street-Tilden Way-Lincoln Avenue
Site Code : 00000000
Start Date : 6/6/2012
Page No : 5



ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-079 Otis Drive-Fernside Boulevard.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	Otis Drive Southbound					Fernside Boulevard Westbound					Otis Drive Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	1	120	0	0	121	66	0	0	0	66	0	132	156	0	288	0	0	0	0	0	475	0
07:15	3	169	0	0	172	79	0	0	0	79	0	215	191	0	406	0	0	0	0	0	657	0
07:30	8	190	0	1	199	96	0	3	0	99	0	351	210	0	561	0	0	0	0	0	859	1
07:45	12	291	0	3	306	144	0	6	0	150	0	385	233	0	618	0	0	0	0	0	1074	3
Total	24	770	0	4	798	385	0	9	0	394	0	1083	790	0	1873	0	0	0	0	0	3065	4
08:00	13	318	0	2	333	176	0	12	0	188	0	343	210	0	553	0	0	0	0	0	1074	2
08:15	9	255	0	3	267	175	0	8	0	183	0	297	208	0	505	0	0	0	0	0	955	3
08:30	8	177	0	6	191	107	0	2	0	109	0	287	180	0	467	0	0	0	0	0	767	6
08:45	4	199	0	1	204	147	0	1	0	148	0	277	158	0	435	0	0	0	0	0	787	1
Total	34	949	0	12	995	605	0	23	0	628	0	1204	756	0	1960	0	0	0	0	0	3583	12
16:00	3	294	0	0	297	153	0	4	0	157	0	225	162	0	387	0	0	0	0	0	841	0
16:15	7	260	0	0	267	164	0	4	0	168	0	239	165	0	404	0	0	0	0	0	839	0
16:30	5	291	0	1	297	167	0	8	0	175	0	261	190	0	451	0	0	0	0	0	923	1
16:45	8	294	0	0	302	210	0	7	0	217	0	278	183	0	461	0	0	0	0	0	980	0
Total	23	1139	0	1	1163	694	0	23	0	717	0	1003	700	0	1703	0	0	0	0	0	3583	1
17:00	12	298	0	3	313	213	0	4	0	217	0	275	205	0	480	0	0	0	0	0	1010	3
17:15	8	291	0	2	301	183	0	4	0	187	0	324	224	0	548	0	0	0	0	0	1036	2
17:30	11	315	0	3	329	210	0	4	0	214	0	310	195	0	505	0	0	0	0	0	1048	3
17:45	6	304	0	2	312	183	0	8	0	191	0	244	185	0	429	0	0	0	0	0	932	2
Total	37	1208	0	10	1255	789	0	20	0	809	0	1153	809	0	1962	0	0	0	0	0	4026	10
Grand Total	118	4066	0	27	4211	2473	0	75	0	2548	0	4443	3055	0	7498	0	0	0	0	0	14257	27
Apprch %	2.8%	96.6%	0.0%	0.6%		97.1%	0.0%	2.9%	0.0%		0.0%	59.3%	40.7%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.8%	28.5%	0.0%	0.2%	29.5%	17.3%	0.0%	0.5%	0.0%	17.9%	0.0%	31.2%	21.4%	0.0%	52.6%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Otis Drive Southbound					Fernside Boulevard Westbound					Otis Drive Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	8	190	0	1	199	96	0	3	0	99	0	351	210	0	561	0	0	0	0	0	859
07:45	12	291	0	3	306	144	0	6	0	150	0	385	233	0	618	0	0	0	0	0	1074
08:00	13	318	0	2	333	176	0	12	0	188	0	343	210	0	553	0	0	0	0	0	1074
08:15	9	255	0	3	267	175	0	8	0	183	0	297	208	0	505	0	0	0	0	0	955
Total Volume	42	1054	0	9	1105	591	0	29	0	620	0	1376	861	0	2237	0	0	0	0	0	3962
% App Total	3.8%	95.4%	0.0%	0.8%		95.3%	0.0%	4.7%	0.0%		0.0%	61.5%	38.5%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.808	.829	.000	.750	.830	.839	.000	.604	.000	.824	.000	.894	.924	.000	.905	.000	.000	.000	.000	.000	.922

PM PEAK HOUR	Otis Drive Southbound					Fernside Boulevard Westbound					Otis Drive Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	8	294	0	0	302	210	0	7	0	217	0	278	183	0	461	0	0	0	0	0	980
17:00	12	298	0	3	313	213	0	4	0	217	0	275	205	0	480	0	0	0	0	0	1010
17:15	8	291	0	2	301	183	0	4	0	187	0	324	224	0	548	0	0	0	0	0	1036
17:30	11	315	0	3	329	210	0	4	0	214	0	310	195	0	505	0	0	0	0	0	1048
Total Volume	39	1198	0	8	1245	816	0	19	0	835	0	1187	807	0	1994	0	0	0	0	0	4074
% App Total	3.1%	96.2%	0.0%	0.6%		97.7%	0.0%	2.3%	0.0%		0.0%	59.5%	40.5%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.813	.951	.000	.667	.946	.958	.000	.679	.000	.962	.000	.916	.901	.000	.910	.000	.000	.000	.000	.000	.972

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-079 Otis Drive-Fernside Boulevard.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	Otis Drive Southbound					Fernside Boulevard Westbound					Otis Drive Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
07:15	1	0	0	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	2	2
07:30	0	2	0	1	2	1	0	1	0	2	0	1	0	0	1	0	0	0	3	0	5	4
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total	1	2	0	2	3	1	0	1	0	2	0	2	0	0	2	0	0	0	8	0	7	10
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:15	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2	0
08:30	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1
08:45	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	1	0	1	0	2	0	3	0	1	0	0	1	0	0	0	2	0	4	3
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
16:30	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	2
Total	0	0	0	5	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	6
17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	10	0	1	10
17:15	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	1	0	2	1
17:30	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	0	0	2	0	2	0	0	2	0	0	0	11	0	4	11
Grand Total	1	2	0	8	3	5	0	3	0	8	0	5	0	0	5	0	0	0	22	0	16	30
Apprch %	33.3%	66.7%	0.0%			62.5%	0.0%	37.5%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	6.3%	12.5%	0.0%		18.8%	31.3%	0.0%	18.8%		50.0%	0.0%	31.3%	0.0%		31.3%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Otis Drive Southbound					Fernside Boulevard Westbound					Otis Drive Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	0	2	0		2	1	0	1		2	0	1	0		1	0	0	0		0	5
07:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	2		2	0	0	0		0	0	0	0		0	2
Total Volume	0	2	0		2	1	0	3		4	0	1	0		1	0	0	0		0	7
% App Total	0.0%	100.0%	0.0%			25.0%	0.0%	75.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.250	.000	.375		.500	.000	.250	.000		.250	.000	.000	.000		.000	.350

PM PEAK HOUR	Otis Drive Southbound					Fernside Boulevard Westbound					Otis Drive Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
17:00	0	0	0		0	0	0	0		0	0	1	0		1	0	0	0		0	1
17:15	0	0	0		0	1	0	0		1	0	1	0		1	0	0	0		0	2
17:30	0	0	0		0	1	0	0		1	0	0	0		0	0	0	0		0	1
Total Volume	0	0	0		0	3	0	0		3	0	2	0		2	0	0	0		0	5
% App Total	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.750	.000	.000		.750	.000	.500	.000		.500	.000	.000	.000		.000	.625

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-079 Otis Drive-Fernside Boulevard.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	Otis Drive Southbound					Fernside Boulevard Westbound					Otis Drive Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3	0
07:15	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6	0
07:30	1	3	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5	0
07:45	0	1	0	0	1	4	0	1	0	5	0	3	0	0	3	0	0	0	0	0	9	0
Total	1	6	0	0	7	4	0	1	0	5	0	11	0	0	11	0	0	0	0	0	23	0
08:00	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	7	0
08:15	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8	0
08:30	0	3	0	0	3	1	0	0	0	1	0	2	1	0	3	0	0	0	0	0	7	0
08:45	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	12	0
Total	0	15	0	0	15	2	0	0	0	2	0	16	1	0	17	0	0	0	0	0	34	0
16:00	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	4	0
16:15	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	4	0
16:30	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	0
16:45	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3	0
Total	0	5	0	0	5	2	0	0	0	2	0	6	1	0	7	0	0	0	0	0	14	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3	0
Grand Total	1	27	0	0	28	9	0	1	0	10	0	34	2	0	36	0	0	0	0	0	74	0
Apprch %	3.6%	96.4%	0.0%			90.0%	0.0%	10.0%			0.0%	94.4%	5.6%			0.0%	0.0%	0.0%				
Total %	1.4%	36.5%	0.0%		37.8%	12.2%	0.0%	1.4%		13.5%	0.0%	45.9%	2.7%		48.6%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Otis Drive Southbound					Fernside Boulevard Westbound					Otis Drive Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	1	3	0		4	0	0	0		0	0	1	0		1	0	0	0		0	5
07:45	0	1	0		1	4	0	1		5	0	3	0		3	0	0	0		0	9
08:00	0	3	0		3	1	0	0		1	0	3	0		3	0	0	0		0	7
08:15	0	3	0		3	0	0	0		0	0	5	0		5	0	0	0		0	8
Total Volume	1	10	0		11	5	0	1		6	0	12	0		12	0	0	0		0	29
% App Total	9.1%	90.9%	0.0%			83.3%	0.0%	16.7%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.250	.833	.000		.688	.313	.000	.250		.300	.000	.600	.000		.600	.000	.000	.000		.000	.806

PM PEAK HOUR	Otis Drive Southbound					Fernside Boulevard Westbound					Otis Drive Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	1	0		1	0	0	0		0	0	1	1		2	0	0	0		0	3
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	1	0		1	0	0	0		0	0	1	0		1	0	0	0		0	2
17:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	2	0		2	0	0	0		0	0	2	1		3	0	0	0		0	5
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	66.7%	33.3%			0.0%	0.0%	0.0%			
PHF	.000	.500	.000		.500	.000	.000	.000		.000	.000	.500	.250		.375	.000	.000	.000		.000	.417

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-010 Edgewater Drive-Oakport Street.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	Edgewater Drive Southbound					Oakport Street Westbound					Edgewater Drive Northbound					Oakport Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	5	0	0	0	5	0	46	21	4	71	0	0	0	0	0	1	26	0	0	27	103	4
07:15	15	0	1	0	16	0	58	28	5	91	0	0	0	0	0	1	23	0	0	24	131	5
07:30	11	0	4	0	15	0	66	16	4	86	0	0	1	0	1	5	20	0	0	25	127	4
07:45	16	0	0	0	16	0	90	21	5	116	0	0	0	0	0	0	23	0	0	23	155	5
Total	47	0	5	0	52	0	260	86	18	364	0	0	1	0	1	7	92	0	0	99	516	18
08:00	26	0	3	0	29	0	91	28	2	121	0	0	0	0	0	0	27	0	0	27	177	2
08:15	28	0	3	0	31	0	86	20	8	114	0	0	2	0	2	3	42	0	0	45	192	8
08:30	25	0	8	0	33	0	95	39	8	142	0	0	3	0	3	3	29	0	0	32	210	8
08:45	18	0	7	0	25	0	98	33	22	153	0	0	0	0	0	2	42	0	0	44	222	22
Total	97	0	21	0	118	0	370	120	40	530	0	0	5	0	5	8	140	0	0	148	801	40
16:00	162	0	4	0	166	0	35	25	9	69	0	0	3	0	3	5	97	0	1	103	341	10
16:15	100	0	4	0	104	0	32	26	8	66	0	2	11	0	13	3	92	0	0	95	278	8
16:30	96	0	7	0	103	0	29	29	8	66	2	0	6	0	8	5	116	0	1	122	299	9
16:45	74	0	2	0	76	0	31	27	8	66	2	3	5	0	10	6	66	0	0	72	224	8
Total	432	0	17	0	449	0	127	107	33	267	4	5	25	0	34	19	371	0	2	392	1142	35
17:00	75	0	3	0	78	0	22	42	5	69	1	3	6	0	10	4	120	0	1	125	282	6
17:15	63	0	0	0	63	0	26	26	5	57	1	2	6	0	9	4	69	0	1	74	203	6
17:30	114	0	3	0	117	0	23	24	3	50	2	1	12	0	15	3	82	0	0	85	267	3
17:45	102	0	2	0	104	0	24	26	4	54	0	1	2	0	3	6	74	0	0	80	241	4
Total	354	0	8	0	362	0	95	118	17	230	4	7	26	0	37	17	345	0	2	364	993	19
Grand Total	930	0	51	0	981	0	852	431	108	1391	8	12	57	0	77	51	948	0	4	1003	3452	112
Apprch %	94.8%	0.0%	5.2%	0.0%		0.0%	61.3%	31.0%	7.8%		10.4%	15.6%	74.0%	0.0%		5.1%	94.5%	0.0%	0.4%			
Total %	26.9%	0.0%	1.5%	0.0%	28.4%	0.0%	24.7%	12.5%	3.1%	40.3%	0.2%	0.3%	1.7%	0.0%	2.2%	1.5%	27.5%	0.0%	0.1%	29.1%	100.0%	

AM PEAK HOUR	Edgewater Drive Southbound					Oakport Street Westbound					Edgewater Drive Northbound					Oakport Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	26	0	3	0	29	0	91	28	2	121	0	0	0	0	0	0	27	0	0	27	177
08:15	28	0	3	0	31	0	86	20	8	114	0	0	2	0	2	3	42	0	0	45	192
08:30	25	0	8	0	33	0	95	39	8	142	0	0	3	0	3	3	29	0	0	32	210
08:45	18	0	7	0	25	0	98	33	22	153	0	0	0	0	0	2	42	0	0	44	222
Total Volume	97	0	21	0	118	0	370	120	40	530	0	0	5	0	5	8	140	0	0	148	801
% App Total	82.2%	0.0%	17.8%	0.0%		0.0%	69.8%	22.6%	7.5%		0.0%	0.0%	100.0%	0.0%		5.4%	94.6%	0.0%	0.0%		
PHF	.866	.000	.656	.000	.894	.000	.944	.769	.455	.866	.000	.000	.417	.000	.417	.667	.833	.000	.000	.822	.902

PM PEAK HOUR	Edgewater Drive Southbound					Oakport Street Westbound					Edgewater Drive Northbound					Oakport Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	162	0	4	0	166	0	35	25	9	69	0	0	3	0	3	5	97	0	1	103	341
16:15	100	0	4	0	104	0	32	26	8	66	0	2	11	0	13	3	92	0	0	95	278
16:30	96	0	7	0	103	0	29	29	8	66	2	0	6	0	8	5	116	0	1	122	299
16:45	74	0	2	0	76	0	31	27	8	66	2	3	5	0	10	6	66	0	0	72	224
Total Volume	432	0	17	0	449	0	127	107	33	267	4	5	25	0	34	19	371	0	2	392	1142
% App Total	96.2%	0.0%	3.8%	0.0%		0.0%	47.6%	40.1%	12.4%		11.8%	14.7%	73.5%	0.0%		4.8%	94.6%	0.0%	0.5%		
PHF	.667	.000	.607	.000	.676	.000	.907	.922	.917	.967	.500	.417	.568	.000	.654	.792	.800	.000	.500	.803	.837

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-010 Edgewater Drive-Oakport Street.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Edgewater Drive Southbound					Oakport Street Westbound					Edgewater Drive Northbound					Oakport Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:00	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1	2
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
08:45	0	0	0	6	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	6
Total	0	0	0	7	0	0	1	1	1	2	0	0	0	0	0	0	3	0	0	3	5	8
16:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
16:15	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
16:30	0	0	0	4	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	5
16:45	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
Total	1	0	0	9	1	0	2	0	1	2	0	0	0	0	0	0	1	0	0	1	4	10
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	4	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	5
Grand Total	1	0	0	23	1	0	4	1	3	5	0	0	0	0	0	0	4	0	0	4	10	26
Apprch %	100.0%	0.0%	0.0%			0.0%	80.0%	20.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
Total %	10.0%	0.0%	0.0%		10.0%	0.0%	40.0%	10.0%		50.0%	0.0%	0.0%	0.0%		0.0%	0.0%	40.0%	0.0%		40.0%	100.0%	

AM PEAK HOUR	Edgewater Drive Southbound					Oakport Street Westbound					Edgewater Drive Northbound					Oakport Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
08:45	0	0	0		0	0	1	1		2	0	0	0		0	0	0	0		0	2
Total Volume	0	0	0		0	0	1	1		2	0	0	0		0	0	3	0		3	5
% App Total	0.0%	0.0%	0.0%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.250		.250	.000	.000	.000		.000	.000	.750	.000		.750	.625

PM PEAK HOUR	Edgewater Drive Southbound					Oakport Street Westbound					Edgewater Drive Northbound					Oakport Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
16:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:30	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
16:45	1	0	0		1	0	1	0		1	0	0	0		0	0	0	0		0	2
Total Volume	1	0	0		1	0	2	0		2	0	0	0		0	0	1	0		1	4
% App Total	100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.000	.000		.250	.000	.500	.000		.500	.000	.000	.000		.000	.000	.250	.000		.250	.500

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-010 Edgewater Drive-Oakport Street.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Edgewater Drive Southbound					Oakport Street Westbound					Edgewater Drive Northbound					Oakport Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	1	0	0	0	1	0	2	1	0	3	0	0	0	0	0	0	6	0	0	6	10	0
07:15	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	11	0
07:30	3	0	0	0	3	0	4	0	0	4	0	0	0	0	0	1	8	0	0	9	16	0
07:45	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	12	0
Total	5	0	0	0	5	0	14	2	0	16	0	0	0	0	0	1	27	0	0	28	49	0
08:00	1	0	1	0	2	0	4	1	0	5	0	0	0	0	0	0	4	0	0	4	11	0
08:15	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	5	0
08:30	1	0	1	0	2	0	7	3	0	10	0	0	0	0	0	0	3	0	0	3	15	0
08:45	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	0	4	0	0	4	15	0
Total	3	0	2	0	5	0	23	5	0	28	0	0	0	0	0	0	13	0	0	13	46	0
16:00	4	0	0	0	4	0	2	1	0	3	0	0	0	0	0	0	6	0	0	6	13	0
16:15	4	0	0	0	4	0	0	0	0	0	0	0	1	0	1	1	4	0	0	5	10	0
16:30	2	0	0	0	2	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	7	0
16:45	2	0	0	0	2	0	1	2	0	3	0	0	1	0	1	0	2	0	0	2	8	0
Total	12	0	0	0	12	0	6	3	0	9	0	0	2	0	2	1	14	0	0	15	38	0
17:00	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	5	0
17:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	0
17:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4	0
17:45	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	5	0
Total	3	0	0	0	3	0	5	0	0	5	0	0	0	0	0	0	9	0	0	9	17	0
Grand Total	23	0	2	0	25	0	48	10	0	58	0	0	2	0	2	2	63	0	0	65	150	0
Apprch %	92.0%	0.0%	8.0%			0.0%	82.8%	17.2%			0.0%	0.0%	100.0%			3.1%	96.9%	0.0%				
Total %	15.3%	0.0%	1.3%		16.7%	0.0%	32.0%	6.7%		38.7%	0.0%	0.0%	1.3%		1.3%	1.3%	42.0%	0.0%		43.3%	100.0%	

AM PEAK HOUR	Edgewater Drive Southbound					Oakport Street Westbound					Edgewater Drive Northbound					Oakport Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	1	0	1		2	0	4	1		5	0	0	0		0	0	4	0		4	11
08:15	1	0	0		1	0	2	0		2	0	0	0		0	0	2	0		2	5
08:30	1	0	1		2	0	7	3		10	0	0	0		0	0	3	0		3	15
08:45	0	0	0		0	0	10	1		11	0	0	0		0	0	4	0		4	15
Total Volume	3	0	2		5	0	23	5		28	0	0	0		0	0	13	0		13	46
% App Total	60.0%	0.0%	40.0%			0.0%	82.1%	17.9%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.750	.000	.500		.625	.000	.575	.417		.636	.000	.000	.000		.000	.000	.813	.000		.813	.767

PM PEAK HOUR	Edgewater Drive Southbound					Oakport Street Westbound					Edgewater Drive Northbound					Oakport Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	4	0	0		4	0	2	1		3	0	0	0		0	0	6	0		6	13
16:15	4	0	0		4	0	0	0		0	0	0	1		1	1	4	0		5	10
16:30	2	0	0		2	0	3	0		3	0	0	0		0	0	2	0		2	7
16:45	2	0	0		2	0	1	2		3	0	0	1		1	0	2	0		2	8
Total Volume	12	0	0		12	0	6	3		9	0	0	2		2	1	14	0		15	38
% App Total	100.0%	0.0%	0.0%			0.0%	66.7%	33.3%			0.0%	0.0%	100.0%			6.7%	93.3%	0.0%			
PHF	.750	.000	.000		.750	.000	.500	.375		.750	.000	.000	.500		.500	.250	.583	.000		.625	.731

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-011 Hegenberger Road-Edgewater Drive.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	20	236	104	4	364	1	13	23	0	37	19	91	3	0	113	61	3	16	0	80	594	4
07:15	19	232	123	3	377	3	4	25	0	32	19	120	1	2	142	56	7	20	1	84	635	6
07:30	43	222	121	3	389	2	7	35	0	44	28	126	5	2	161	59	5	16	1	81	675	6
07:45	47	254	133	2	436	7	9	28	0	44	35	124	3	5	167	63	13	9	1	86	733	8
Total	129	944	481	12	1566	13	33	111	0	157	101	461	12	9	583	239	28	61	3	331	2637	24
08:00	53	260	160	1	474	1	21	39	0	61	74	137	5	5	221	68	45	8	2	123	879	8
08:15	52	291	210	7	560	4	13	45	0	62	50	189	6	3	248	67	67	18	0	152	1022	10
08:30	26	240	183	4	453	7	19	41	0	67	63	226	8	6	303	88	28	21	0	137	960	10
08:45	23	252	203	4	482	4	16	21	0	41	63	219	3	8	293	75	9	22	1	107	923	13
Total	154	1043	756	16	1969	16	69	146	0	231	250	771	22	22	1065	298	149	69	3	519	3784	41
Grand Total	283	1987	1237	28	3535	29	102	257	0	388	351	1232	34	31	1648	537	177	130	6	850	6421	65
Apprch %	8.0%	56.2%	35.0%	0.8%		7.5%	26.3%	66.2%	0.0%		21.3%	74.8%	2.1%	1.9%		63.2%	20.8%	15.3%	0.7%			
Total %	4.4%	30.9%	19.3%	0.4%	55.1%	0.5%	1.6%	4.0%	0.0%	6.0%	5.5%	19.2%	0.5%	0.5%	25.7%	8.4%	2.8%	2.0%	0.1%	13.2%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	53	260	160	1	474	1	21	39	0	61	74	137	5	5	221	68	45	8	2	123	879
08:15	52	291	210	7	560	4	13	45	0	62	50	189	6	3	248	67	67	18	0	152	1022
08:30	26	240	183	4	453	7	19	41	0	67	63	226	8	6	303	88	28	21	0	137	960
08:45	23	252	203	4	482	4	16	21	0	41	63	219	3	8	293	75	9	22	1	107	923
Total Volume	154	1043	756	16	1969	16	69	146	0	231	250	771	22	22	1065	298	149	69	3	519	3784
% App Total	7.8%	53.0%	38.4%	0.8%		6.9%	29.9%	63.2%	0.0%		23.5%	72.4%	2.1%	2.1%		57.4%	28.7%	13.3%	0.6%		
PHF	.726	.896	.900	.571	.879	.571	.821	.811	.000	.862	.845	.853	.688	.688	.879	.847	.556	.784	.375	.854	.926

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-011 Hegenberger Road-Edgewater Drive.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	4	0	1	9
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3
07:30	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	0	1	0	0	6
07:45	0	0	0	0	0	0	0	0	1	0	0	1	0	6	1	0	0	0	1	0	1	8
Total	0	1	0	0	1	0	0	0	3	0	0	1	0	16	1	0	0	0	7	0	2	26
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	29	0	0	0	0	0	0	0	29
08:15	0	0	0	0	0	0	0	0	1	0	1	0	0	9	1	0	0	0	2	0	1	12
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	1	0	6	1	1	29
08:45	0	0	0	0	0	0	1	0	0	1	0	0	0	3	0	0	0	0	4	0	1	7
Total	0	0	0	0	0	0	1	0	1	1	1	0	0	64	1	0	1	0	12	1	3	77
Grand Total	0	1	0	0	1	0	1	0	4	1	1	1	0	80	2	0	1	0	19	1	5	103
Apprch %	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			50.0%	50.0%	0.0%			0.0%	100.0%	0.0%				
Total %	0.0%	20.0%	0.0%		20.0%	0.0%	20.0%	0.0%		20.0%	20.0%	20.0%	0.0%		40.0%	0.0%	20.0%	0.0%		20.0%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	0		0	1	0	0		1	0	0	0		0	1
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
08:45	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
Total Volume	0	0	0		0	0	1	0		1	1	0	0		1	0	1	0		1	3
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.250	.000	.000		.250	.000	.250	.000		.250	.750

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-011 Hegenberger Road-Edgewater Drive.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	3	2	0	5	1	1	0	0	2	4	17	0	0	21	3	1	0	0	4	32	0
07:15	0	7	4	0	11	0	0	2	0	2	0	15	0	0	15	10	1	2	0	13	41	0
07:30	1	5	2	0	8	0	1	2	0	3	1	17	0	0	18	11	1	1	0	13	42	0
07:45	2	8	4	0	14	0	1	1	0	2	0	8	0	0	8	15	1	1	0	17	41	0
Total	3	23	12	0	38	1	3	5	0	9	5	57	0	0	62	39	4	4	0	47	156	0
08:00	0	5	3	0	8	0	1	0	0	1	1	12	0	0	13	8	1	0	0	9	31	0
08:15	0	10	5	0	15	0	0	2	0	2	2	12	0	0	14	5	0	2	0	7	38	0
08:30	2	4	4	0	10	0	1	2	0	3	3	40	1	0	44	5	1	0	0	6	63	0
08:45	2	9	8	0	19	0	1	0	0	1	5	46	0	0	51	2	2	1	0	5	76	0
Total	4	28	20	0	52	0	3	4	0	7	11	110	1	0	122	20	4	3	0	27	208	0
Grand Total	7	51	32	0	90	1	6	9	0	16	16	167	1	0	184	59	8	7	0	74	364	0
Apprch %	7.8%	56.7%	35.6%			6.3%	37.5%	56.3%			8.7%	90.8%	0.5%			79.7%	10.8%	9.5%				
Total %	1.9%	14.0%	8.8%		24.7%	0.3%	1.6%	2.5%		4.4%	4.4%	45.9%	0.3%		50.5%	16.2%	2.2%	1.9%		20.3%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	5	3		8	0	1	0		1	1	12	0		13	8	1	0		9	31
08:15	0	10	5		15	0	0	2		2	2	12	0		14	5	0	2		7	38
08:30	2	4	4		10	0	1	2		3	3	40	1		44	5	1	0		6	63
08:45	2	9	8		19	0	1	0		1	5	46	0		51	2	2	1		5	76
Total Volume	4	28	20		52	0	3	4		7	11	110	1		122	20	4	3		27	208
% App Total	7.7%	53.8%	38.5%			0.0%	42.9%	57.1%			9.0%	90.2%	0.8%			74.1%	14.8%	11.1%			
PHF	.500	.700	.625		.684	.000	.750	.500		.583	.550	.598	.250		.598	.625	.500	.375		.750	.684

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-095 Hegenberger Road-Edgewater Drive.ppd
Date : 6/6/2013

Unshifted Count = All Vehicles

	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	33	221	127	9	390	4	10	55	0	69	29	202	3	4	238	187	26	35	0	248	945	13
16:15	36	215	121	20	392	3	13	34	0	50	35	186	2	1	224	195	20	40	1	256	922	22
16:30	23	225	114	3	365	7	11	39	0	57	24	203	3	1	231	202	28	32	0	262	915	4
16:45	39	210	122	10	381	4	15	33	0	52	24	236	3	0	263	195	24	39	1	259	955	11
Total	131	871	484	42	1528	18	49	161	0	228	112	827	11	6	956	779	98	146	2	1025	3737	50
17:00	29	225	107	17	378	4	14	43	0	61	28	221	3	1	253	226	23	39	0	288	980	18
17:15	26	211	127	11	375	4	11	37	0	52	23	268	4	1	296	215	14	39	0	268	991	12
17:30	32	194	91	11	328	4	14	21	0	39	22	183	0	5	210	194	18	43	0	255	832	16
17:45	35	232	112	6	385	6	7	31	0	44	28	198	3	3	232	185	24	34	2	245	906	11
Total	122	862	437	45	1466	18	46	132	0	196	101	870	10	10	991	820	79	155	2	1056	3709	57
Grand Total	253	1733	921	87	2994	36	95	293	0	424	213	1697	21	16	1947	1599	177	301	4	2081	7446	107
Apprch %	8.5%	57.9%	30.8%	2.9%		8.5%	22.4%	69.1%	0.0%		10.9%	87.2%	1.1%	0.8%		76.8%	8.5%	14.5%	0.2%			
Total %	3.4%	23.3%	12.4%	1.2%	40.2%	0.5%	1.3%	3.9%	0.0%	5.7%	2.9%	22.8%	0.3%	0.2%	26.1%	21.5%	2.4%	4.0%	0.1%	27.9%	100.0%	

PM PEAK HOUR	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	23	225	114	3	365	7	11	39	0	57	24	203	3	1	231	202	28	32	0	262	915
16:45	39	210	122	10	381	4	15	33	0	52	24	236	3	0	263	195	24	39	1	259	955
17:00	29	225	107	17	378	4	14	43	0	61	28	221	3	1	253	226	23	39	0	288	980
17:15	26	211	127	11	375	4	11	37	0	52	23	268	4	1	296	215	14	39	0	268	991
Total Volume	117	871	470	41	1499	19	51	152	0	222	99	928	13	3	1043	838	89	149	1	1077	3841
% App Total	7.8%	58.1%	31.4%	2.7%		8.6%	23.0%	68.5%	0.0%		9.5%	89.0%	1.2%	0.3%		77.8%	8.3%	13.8%	0.1%		
PHF	.750	.968	.925	.603	.984	.679	.850	.884	.000	.910	.884	.866	.813	.750	.881	.927	.795	.955	.250	.935	.969

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-095 Hegenberger Road-Edgewater Drive.ppd
Date : 6/6/2013

Bank 1 Count = Peds & Bikes

	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	0	0	0	0	0	0	1	0	2	1	0	1	0	5	1	0	0	0	7	0	2	14
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	1	0	14	1	1	21
16:30	0	1	0	0	1	0	1	0	0	1	0	0	0	10	0	1	0	0	4	1	3	14
16:45	1	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	12	0	1	17
Total	1	1	0	0	2	0	2	0	2	2	0	1	0	27	1	1	1	0	37	2	7	66
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	8	0	0	18
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	11	0	0	15
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	2	0	0	9
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	13	0	0	20
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0	0	0	0	34	0	0	62
Grand Total	1	1	0	0	2	0	2	0	2	2	0	1	0	55	1	1	1	0	71	2	7	128
Apprch %	50.0%	50.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			50.0%	50.0%	0.0%				
Total %	14.3%	14.3%	0.0%		28.6%	0.0%	28.6%	0.0%		28.6%	0.0%	14.3%	0.0%		14.3%	14.3%	14.3%	0.0%		28.6%	100.0%	

PM PEAK HOUR	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	1	0		1	0	1	0		1	0	0	0		0	1	0	0		1	3
16:45	1	0	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	1	1	0		2	0	1	0		1	0	0	0		0	1	0	0		1	4
% App Total	50.0%	50.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			
PHF	.250	.250	.000		.500	.000	.250	.000		.250	.000	.000	.000		.000	.250	.000	.000		.250	.333

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7347-095 Hegenberger Road-Edgewater Drive.ppd
Date : 6/6/2013

Bank 2 Count = Heavy Trucks

	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
16:00	2	2	3	0	7	0	0	1	0	1	0	6	0	0	6	1	0	3	0	4	18	0
16:15	0	4	0	0	4	0	0	0	0	0	1	3	0	0	4	3	1	0	0	4	12	0
16:30	0	6	1	0	7	0	0	0	0	0	0	7	0	0	7	2	0	0	0	2	16	0
16:45	0	5	1	0	6	0	0	0	0	0	0	4	0	0	4	2	0	1	0	3	13	0
Total	2	17	5	0	24	0	0	1	0	1	1	20	0	0	21	8	1	4	0	13	59	0
17:00	0	8	0	0	8	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	10	0
17:15	0	5	4	0	9	0	0	0	0	0	0	3	0	0	3	1	0	1	0	2	14	0
17:30	1	5	0	0	6	0	0	0	0	0	0	1	0	0	1	2	0	1	0	3	10	0
17:45	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	7	0
Total	1	21	5	0	27	0	0	0	0	0	0	8	0	0	8	4	0	2	0	6	41	0
Grand Total	3	38	10	0	51	0	0	1	0	1	1	28	0	0	29	12	1	6	0	19	100	0
Apprch %	5.9%	74.5%	19.6%			0.0%	0.0%	100.0%			3.4%	96.6%	0.0%			63.2%	5.3%	31.6%				
Total %	3.0%	38.0%	10.0%		51.0%	0.0%	0.0%	1.0%		1.0%	1.0%	28.0%	0.0%		29.0%	12.0%	1.0%	6.0%		19.0%	100.0%	

PM PEAK HOUR	Hegenberger Road Southbound					Hegenberger Court Westbound					Hegenberger Road Northbound					Edgewater Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	6	1		7	0	0	0		0	0	7	0		7	2	0	0		2	16
16:45	0	5	1		6	0	0	0		0	0	4	0		4	2	0	1		3	13
17:00	0	8	0		8	0	0	0		0	0	2	0		2	0	0	0		0	10
17:15	0	5	4		9	0	0	0		0	0	3	0		3	1	0	1		2	14
Total Volume	0	24	6		30	0	0	0		0	0	16	0		16	5	0	2		7	53
% App Total	0.0%	80.0%	20.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			71.4%	0.0%	28.6%			
PHF	.000	.750	.375		.833	.000	.000	.000		.000	.000	.571	.000		.571	.625	.000	.500		.583	.828

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-012 Hegenberger Road-Pardee Drive-Airport Acce
Date : 5/15/2013

Unshifted Count = All Vehicles

	Hegenberger Road Southbound					Airport Access Road Westbound					Hegenberger Road Northbound					Pardee Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	14	177	27	0	218	31	23	44	0	98	1	62	4	1	68	21	5	3	0	29	413	1
07:15	9	193	42	1	245	31	43	38	0	112	2	55	7	0	64	40	4	3	0	47	468	1
07:30	15	164	29	0	208	41	33	42	2	118	0	77	4	0	81	31	3	2	0	36	443	2
07:45	26	184	54	0	264	30	53	76	1	160	0	77	4	0	81	23	5	1	0	29	534	1
Total	64	718	152	1	935	133	152	200	3	488	3	271	19	1	294	115	17	9	0	141	1858	5
08:00	11	180	33	1	225	31	43	45	0	119	1	82	7	1	91	23	13	1	0	37	472	2
08:15	19	207	46	0	272	40	58	73	0	171	1	86	3	0	90	43	6	2	0	51	584	0
08:30	8	205	42	2	257	28	39	64	0	131	1	87	2	1	91	113	37	11	0	161	640	3
08:45	13	198	47	0	258	34	31	52	1	118	3	100	9	2	114	129	89	12	0	230	720	3
Total	51	790	168	3	1012	133	171	234	1	539	6	355	21	4	386	308	145	26	0	479	2416	8
16:00	58	261	53	0	372	44	16	56	0	116	4	111	24	3	142	63	17	6	0	86	716	3
16:15	45	187	41	1	274	37	30	53	1	121	2	119	15	0	136	64	19	10	0	93	624	2
16:30	45	230	42	1	318	23	35	69	0	127	2	123	6	0	131	49	13	1	0	63	639	1
16:45	22	232	53	0	307	40	36	52	1	129	4	104	8	0	116	65	19	10	0	94	646	1
Total	170	910	189	2	1271	144	117	230	2	493	12	457	53	3	525	241	68	27	0	336	2625	7
17:00	32	187	55	1	275	31	26	79	1	137	2	105	5	1	113	58	23	7	0	88	613	3
17:15	24	192	41	2	259	31	66	53	0	150	3	82	5	3	93	46	11	4	0	61	563	5
17:30	39	167	46	0	252	32	59	69	2	162	2	115	6	1	124	37	11	5	0	53	591	3
17:45	38	150	66	0	254	39	60	43	0	142	3	84	5	0	92	51	15	3	0	69	557	0
Total	133	696	208	3	1040	133	211	244	3	591	10	386	21	5	422	192	60	19	0	271	2324	11
Grand Total	418	3114	717	9	4258	543	651	908	9	2111	31	1469	114	13	1627	856	290	81	0	1227	9223	31
Apprch %	9.8%	73.1%	16.8%	0.2%		25.7%	30.8%	43.0%	0.4%		1.9%	90.3%	7.0%	0.8%		69.8%	23.6%	6.6%	0.0%			
Total %	4.5%	33.8%	7.8%	0.1%	46.2%	5.9%	7.1%	9.8%	0.1%	22.9%	0.3%	15.9%	1.2%	0.1%	17.6%	9.3%	3.1%	0.9%	0.0%	13.3%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Airport Access Road Westbound					Hegenberger Road Northbound					Pardee Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	11	180	33	1	225	31	43	45	0	119	1	82	7	1	91	23	13	1	0	37	472
08:15	19	207	46	0	272	40	58	73	0	171	1	86	3	0	90	43	6	2	0	51	584
08:30	8	205	42	2	257	28	39	64	0	131	1	87	2	1	91	113	37	11	0	161	640
08:45	13	198	47	0	258	34	31	52	1	118	3	100	9	2	114	129	89	12	0	230	720
Total Volume	51	790	168	3	1012	133	171	234	1	539	6	355	21	4	386	308	145	26	0	479	2416
% App Total	5.0%	78.1%	16.6%	0.3%		24.7%	31.7%	43.4%	0.2%		1.6%	92.0%	5.4%	1.0%		64.3%	30.3%	5.4%	0.0%		
PHF	.671	.954	.894	.375	.930	.831	.737	.801	.250	.788	.500	.888	.583	.500	.846	.597	.407	.542	.000	.521	.839

PM PEAK HOUR	Hegenberger Road Southbound					Airport Access Road Westbound					Hegenberger Road Northbound					Pardee Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	58	261	53	0	372	44	16	56	0	116	4	111	24	3	142	63	17	6	0	86	716
16:15	45	187	41	1	274	37	30	53	1	121	2	119	15	0	136	64	19	10	0	93	624
16:30	45	230	42	1	318	23	35	69	0	127	2	123	6	0	131	49	13	1	0	63	639
16:45	22	232	53	0	307	40	36	52	1	129	4	104	8	0	116	65	19	10	0	94	646
Total Volume	170	910	189	2	1271	144	117	230	2	493	12	457	53	3	525	241	68	27	0	336	2625
% App Total	13.4%	71.6%	14.9%	0.2%		29.2%	23.7%	46.7%	0.4%		2.3%	87.0%	10.1%	0.6%		71.7%	20.2%	8.0%	0.0%		
PHF	.733	.872	.892	.500	.854	.818	.813	.833	.500	.955	.750	.929	.552	.250	.924	.927	.895	.675	.000	.894	.917

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-012 Hegenberger Road-Pardee Drive-Airport Acce
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Hegenberger Road Southbound					Airport Access Road Westbound					Hegenberger Road Northbound					Pardee Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	1	0	0	1	0	0	0	3	0	0	0	1	1	1	0	0	0	1	0	2	5
07:15	0	1	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	3
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	2	0	0	7
07:45	0	0	0	0	0	0	0	0	3	0	0	1	0	3	1	0	1	0	1	1	2	7
Total	0	2	0	0	2	0	0	0	9	0	0	1	1	9	2	0	1	0	4	1	5	22
08:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	4
08:15	0	0	0	0	0	0	0	1	2	1	0	0	0	1	0	0	0	0	0	0	1	3
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	0	5
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
Total	0	0	0	0	0	0	0	1	4	1	0	0	0	4	0	0	0	0	6	0	1	14
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	4	0	0	8
16:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	4
Total	0	1	0	0	1	0	0	0	2	0	0	0	0	2	0	0	0	0	8	0	1	12
17:00	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	2	0	0	5
17:15	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	3
17:30	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	1	2
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total	0	0	0	0	0	0	0	0	3	0	0	1	0	4	1	0	0	0	5	0	1	12
Grand Total	0	3	0	0	3	0	0	1	18	1	0	2	1	19	3	0	1	0	23	1	8	60
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			0.0%	66.7%	33.3%			0.0%	100.0%	0.0%				
Total %	0.0%	37.5%	0.0%		37.5%	0.0%	0.0%	12.5%		12.5%	0.0%	25.0%	12.5%		37.5%	0.0%	12.5%	0.0%		12.5%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Airport Access Road Westbound					Hegenberger Road Northbound					Pardee Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	1		1	0	0	0		0	0	0	0		0	1
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	1		1	0	0	0		0	0	0	0		0	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.250		.250	.000	.000	.000		.000	.000	.000	.000		.000	.250

PM PEAK HOUR	Hegenberger Road Southbound					Airport Access Road Westbound					Hegenberger Road Northbound					Pardee Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:45	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
Total Volume	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.250

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-012 Hegenberger Road-Pardee Drive-Airport Acce
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Hegenberger Road Southbound					Airport Access Road Westbound					Hegenberger Road Northbound					Pardee Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	5	0	0	5	1	1	1	0	3	0	14	0	0	14	2	1	1	0	4	26	0
07:15	1	6	1	0	8	0	0	1	0	1	1	3	0	0	4	12	2	1	0	15	28	0
07:30	0	5	1	0	6	0	2	2	0	4	0	11	1	0	12	6	2	0	0	8	30	0
07:45	0	5	1	0	6	3	0	0	0	3	0	5	0	0	5	3	0	0	0	3	17	0
Total	1	21	3	0	25	4	3	4	0	11	1	33	1	0	35	23	5	2	0	30	101	0
08:00	0	5	1	0	6	0	3	0	0	3	0	8	0	0	8	3	1	0	0	4	21	0
08:15	3	4	3	0	10	2	5	3	0	10	0	4	0	0	4	11	0	0	0	11	35	0
08:30	0	4	3	0	7	0	3	5	0	8	0	10	0	0	10	34	11	4	0	49	74	0
08:45	0	9	0	0	9	2	3	0	0	5	1	11	1	0	13	40	38	6	0	84	111	0
Total	3	22	7	0	32	4	14	8	0	26	1	33	1	0	35	88	50	10	0	148	241	0
16:00	6	21	5	0	32	0	1	0	0	1	0	7	1	0	8	0	0	0	0	0	41	0
16:15	2	6	0	0	8	0	1	0	0	1	0	7	0	0	7	6	5	0	0	11	27	0
16:30	3	10	1	0	14	0	3	0	0	3	0	5	0	0	5	1	3	0	0	4	26	0
16:45	1	12	3	0	16	0	6	1	0	7	0	6	1	0	7	0	2	0	0	2	32	0
Total	12	49	9	0	70	0	11	1	0	12	0	25	2	0	27	7	10	0	0	17	126	0
17:00	0	3	3	0	6	1	2	2	0	5	1	6	0	0	7	0	1	0	0	1	19	0
17:15	0	7	2	0	9	1	15	0	0	16	0	3	0	0	3	1	2	0	0	3	31	0
17:30	2	2	0	0	4	0	16	0	0	16	0	4	0	0	4	1	2	0	0	3	27	0
17:45	0	7	9	0	16	1	16	1	0	18	0	3	0	0	3	1	0	0	0	1	38	0
Total	2	19	14	0	35	3	49	3	0	55	1	16	0	0	17	3	5	0	0	8	115	0
Grand Total	18	111	33	0	162	11	77	16	0	104	3	107	4	0	114	121	70	12	0	203	583	0
Apprch %	11.1%	68.5%	20.4%			10.6%	74.0%	15.4%			2.6%	93.9%	3.5%			59.6%	34.5%	5.9%				
Total %	3.1%	19.0%	5.7%		27.8%	1.9%	13.2%	2.7%		17.8%	0.5%	18.4%	0.7%		19.6%	20.8%	12.0%	2.1%		34.8%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Airport Access Road Westbound					Hegenberger Road Northbound					Pardee Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	5	1		6	0	3	0		3	0	8	0		8	3	1	0		4	21
08:15	3	4	3		10	2	5	3		10	0	4	0		4	11	0	0		11	35
08:30	0	4	3		7	0	3	5		8	0	10	0		10	34	11	4		49	74
08:45	0	9	0		9	2	3	0		5	1	11	1		13	40	38	6		84	111
Total Volume	3	22	7		32	4	14	8		26	1	33	1		35	88	50	10		148	241
% App Total	9.4%	68.8%	21.9%			15.4%	53.8%	30.8%			2.9%	94.3%	2.9%			59.5%	33.8%	6.8%			
PHF	.250	.611	.583		.800	.500	.700	.400		.650	.250	.750	.250		.673	.550	.329	.417		.440	.543

PM PEAK HOUR	Hegenberger Road Southbound					Airport Access Road Westbound					Hegenberger Road Northbound					Pardee Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	6	21	5		32	0	1	0		1	0	7	1		8	0	0	0		0	41
16:15	2	6	0		8	0	1	0		1	0	7	0		7	6	5	0		11	27
16:30	3	10	1		14	0	3	0		3	0	5	0		5	1	3	0		4	26
16:45	1	12	3		16	0	6	1		7	0	6	1		7	0	2	0		2	32
Total Volume	12	49	9		70	0	11	1		12	0	25	2		27	7	10	0		17	126
% App Total	17.1%	70.0%	12.9%			0.0%	91.7%	8.3%			0.0%	92.6%	7.4%			41.2%	58.8%	0.0%			
PHF	.500	.583	.450		.547	.000	.458	.250		.429	.000	.893	.500		.844	.292	.500	.000		.386	.768

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-018 Airport Access Road-98th Avenue.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	Airport Access Road Southbound					98th Avenue Westbound					Airport Access Road Northbound					98th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	13	9	5	0	27	12	192	63	0	267	2	19	16	0	37	20	187	2	0	209	540	0
07:15	12	6	2	0	20	11	187	80	0	278	3	13	13	0	29	15	152	3	0	170	497	0
07:30	9	12	2	0	23	22	220	78	0	320	5	29	21	0	55	19	162	2	0	183	581	0
07:45	18	10	6	0	34	17	236	80	0	333	7	53	19	0	79	24	185	1	0	210	656	0
Total	52	37	15	0	104	62	835	301	0	1198	17	114	69	0	200	78	686	8	0	772	2274	0
08:00	21	8	3	0	32	23	220	85	0	328	13	38	25	0	76	13	197	2	0	212	648	0
08:15	16	8	1	0	25	17	220	87	0	324	9	49	20	0	78	19	180	6	0	205	632	0
08:30	37	11	2	0	50	20	256	88	0	364	6	44	39	0	89	17	206	1	0	224	727	0
08:45	74	25	4	0	103	25	280	64	0	369	4	30	38	0	72	19	227	2	0	248	792	0
Total	148	52	10	0	210	85	976	324	0	1385	32	161	122	0	315	68	810	11	0	889	2799	0
16:00	22	74	5	0	101	43	92	71	0	206	2	32	47	0	81	19	253	1	0	273	661	0
16:15	39	37	1	0	77	43	90	68	0	201	7	26	50	0	83	19	228	1	0	248	609	0
16:30	20	39	6	0	65	43	115	72	0	230	5	28	46	0	79	25	273	2	0	300	674	0
16:45	24	24	4	0	52	50	127	80	0	257	3	32	33	0	68	26	224	2	0	252	629	0
Total	105	174	16	0	295	179	424	291	0	894	17	118	176	0	311	89	978	6	0	1073	2573	0
17:00	26	29	3	0	58	44	100	72	0	216	6	28	43	0	77	30	303	2	0	335	686	0
17:15	16	24	3	0	43	37	111	98	0	246	6	41	30	0	77	21	295	3	0	319	685	0
17:30	27	25	2	0	54	27	114	91	0	232	2	35	26	0	63	29	283	1	0	313	662	0
17:45	19	43	3	0	65	25	134	110	0	269	1	17	20	0	38	24	213	0	0	237	609	0
Total	88	121	11	0	220	133	459	371	0	963	15	121	119	0	255	104	1094	6	0	1204	2642	0
Grand Total	393	384	52	0	829	459	2694	1287	0	4440	81	514	486	0	1081	339	3568	31	0	3938	10288	0
Apprch %	47.4%	46.3%	6.3%	0.0%		10.3%	60.7%	29.0%	0.0%		7.5%	47.5%	45.0%	0.0%		8.6%	90.6%	0.8%	0.0%			
Total %	3.8%	3.7%	0.5%	0.0%	8.1%	4.5%	26.2%	12.5%	0.0%	43.2%	0.8%	5.0%	4.7%	0.0%	10.5%	3.3%	34.7%	0.3%	0.0%	38.3%	100.0%	

AM PEAK HOUR	Airport Access Road Southbound					98th Avenue Westbound					Airport Access Road Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	21	8	3	0	32	23	220	85	0	328	13	38	25	0	76	13	197	2	0	212	648
08:15	16	8	1	0	25	17	220	87	0	324	9	49	20	0	78	19	180	6	0	205	632
08:30	37	11	2	0	50	20	256	88	0	364	6	44	39	0	89	17	206	1	0	224	727
08:45	74	25	4	0	103	25	280	64	0	369	4	30	38	0	72	19	227	2	0	248	792
Total Volume	148	52	10	0	210	85	976	324	0	1385	32	161	122	0	315	68	810	11	0	889	2799
% App Total	70.5%	24.8%	4.8%	0.0%		6.1%	70.5%	23.4%	0.0%		10.2%	51.1%	38.7%	0.0%		7.6%	91.1%	1.2%	0.0%		
PHF	.500	.520	.625	.000	.510	.850	.871	.920	.000	.938	.615	.821	.782	.000	.885	.895	.892	.458	.000	.896	.884

PM PEAK HOUR	Airport Access Road Southbound					98th Avenue Westbound					Airport Access Road Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	20	39	6	0	65	43	115	72	0	230	5	28	46	0	79	25	273	2	0	300	674
16:45	24	24	4	0	52	50	127	80	0	257	3	32	33	0	68	26	224	2	0	252	629
17:00	26	29	3	0	58	44	100	72	0	216	6	28	43	0	77	30	303	2	0	335	686
17:15	16	24	3	0	43	37	111	98	0	246	6	41	30	0	77	21	295	3	0	319	685
Total Volume	86	116	16	0	218	174	453	322	0	949	20	129	152	0	301	102	1095	9	0	1206	2674
% App Total	39.4%	53.2%	7.3%	0.0%		18.3%	47.7%	33.9%	0.0%		6.6%	42.9%	50.5%	0.0%		8.5%	90.8%	0.7%	0.0%		
PHF	.827	.744	.667	.000	.838	.870	.892	.821	.000	.923	.833	.787	.826	.000	.953	.850	.903	.750	.000	.900	.974

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-018 Airport Access Road-98th Avenue.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Airport Access Road Southbound					98th Avenue Westbound					Airport Access Road Northbound					98th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:45	0	0	0	0	0	0	1	1	0	2	0	0	0	4	0	0	0	0	0	0	2	4
Total	0	1	0	0	1	0	1	1	0	2	0	0	0	4	0	1	0	0	0	1	4	4
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Grand Total	0	1	1	2	2	0	2	1	0	3	0	0	0	4	0	1	0	0	0	1	6	6
Apprch %	0.0%	50.0%	50.0%			0.0%	66.7%	33.3%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%				
Total %	0.0%	16.7%	16.7%		33.3%	0.0%	33.3%	16.7%		50.0%	0.0%	0.0%	0.0%		0.0%	16.7%	0.0%	0.0%		16.7%	100.0%	

AM PEAK HOUR	Airport Access Road Southbound					98th Avenue Westbound					Airport Access Road Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.250

PM PEAK HOUR	Airport Access Road Southbound					98th Avenue Westbound					Airport Access Road Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
17:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-018 Airport Access Road-98th Avenue.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Airport Access Road Southbound					98th Avenue Westbound					Airport Access Road Northbound					98th Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	1	0	0	0	1	1	5	3	0	9	0	1	4	0	5	0	8	0	0	8	23	0
07:15	1	1	0	0	2	1	5	0	0	6	0	1	2	0	3	0	8	0	0	8	19	0
07:30	2	2	0	0	4	1	4	3	0	8	0	0	3	0	3	1	8	0	0	9	24	0
07:45	0	0	0	0	0	0	1	1	0	2	0	1	1	0	2	0	5	0	0	5	9	0
Total	4	3	0	0	7	3	15	7	0	25	0	3	10	0	13	1	29	0	0	30	75	0
08:00	1	0	0	0	1	1	3	3	0	7	0	0	1	0	1	0	3	0	0	3	12	0
08:15	1	0	0	0	1	1	2	7	0	10	0	3	2	0	5	0	2	1	0	3	19	0
08:30	9	1	0	0	10	2	1	5	0	8	0	3	7	0	10	0	6	0	0	6	34	0
08:45	30	5	0	0	35	2	6	3	0	11	0	3	5	0	8	0	2	0	0	2	56	0
Total	41	6	0	0	47	6	12	18	0	36	0	9	15	0	24	0	13	1	0	14	121	0
16:00	0	8	0	0	8	4	7	2	0	13	0	0	2	0	2	0	3	0	0	3	26	0
16:15	4	1	0	0	5	0	5	1	0	6	0	1	5	0	6	0	3	0	0	3	20	0
16:30	4	4	0	0	8	2	3	3	0	8	0	1	1	0	2	0	9	0	0	9	27	0
16:45	2	0	0	0	2	2	4	3	0	9	0	2	1	0	3	1	1	0	0	2	16	0
Total	10	13	0	0	23	8	19	9	0	36	0	4	9	0	13	1	16	0	0	17	89	0
17:00	1	1	0	0	2	2	2	4	0	8	0	0	0	0	0	0	7	0	0	7	17	0
17:15	0	0	0	0	0	0	2	13	0	15	0	5	2	0	7	0	3	0	0	3	25	0
17:30	2	1	0	0	3	2	4	12	0	18	0	2	1	0	3	0	4	0	0	4	28	0
17:45	0	2	0	0	2	0	5	18	0	23	0	0	0	0	0	0	2	0	0	2	27	0
Total	3	4	0	0	7	4	13	47	0	64	0	7	3	0	10	0	16	0	0	16	97	0
Grand Total	58	26	0	0	84	21	59	81	0	161	0	23	37	0	60	2	74	1	0	77	382	0
Apprch %	69.0%	31.0%	0.0%			13.0%	36.6%	50.3%			0.0%	38.3%	61.7%			2.6%	96.1%	1.3%				
Total %	15.2%	6.8%	0.0%		22.0%	5.5%	15.4%	21.2%		42.1%	0.0%	6.0%	9.7%		15.7%	0.5%	19.4%	0.3%		20.2%	100.0%	

AM PEAK HOUR	Airport Access Road Southbound					98th Avenue Westbound					Airport Access Road Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	1	0	0		1	1	3	3		7	0	0	1		1	0	3	0		3	12
08:15	1	0	0		1	1	2	7		10	0	3	2		5	0	2	1		3	19
08:30	9	1	0		10	2	1	5		8	0	3	7		10	0	6	0		6	34
08:45	30	5	0		35	2	6	3		11	0	3	5		8	0	2	0		2	56
Total Volume	41	6	0		47	6	12	18		36	0	9	15		24	0	13	1		14	121
% App Total	87.2%	12.8%	0.0%			16.7%	33.3%	50.0%			0.0%	37.5%	62.5%			0.0%	92.9%	7.1%			
PHF	.342	.300	.000		.336	.750	.500	.643		.818	.000	.750	.536		.600	.000	.542	.250		.583	.540

PM PEAK HOUR	Airport Access Road Southbound					98th Avenue Westbound					Airport Access Road Northbound					98th Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	4	4	0		8	2	3	3		8	0	1	1		2	0	9	0		9	27
16:45	2	0	0		2	2	4	3		9	0	2	1		3	1	1	0		2	16
17:00	1	1	0		2	2	2	4		8	0	0	0		0	0	7	0		7	17
17:15	0	0	0		0	0	2	13		15	0	5	2		7	0	3	0		3	25
Total Volume	7	5	0		12	6	11	23		40	0	8	4		12	1	20	0		21	85
% App Total	58.3%	41.7%	0.0%			15.0%	27.5%	57.5%			0.0%	66.7%	33.3%			4.8%	95.2%	0.0%			
PHF	.438	.313	.000		.375	.750	.688	.442		.667	.000	.400	.500		.429	.250	.556	.000		.583	.787

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-013 Hegenberger Road-Doolittle Drive.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	Hegenberger Road Southbound					Doolittle Drive Westbound					Hegenberger Road Northbound					Doolittle Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	14	112	68	1	195	41	87	29	0	157	0	0	0	0	0	27	75	12	0	114	466	1
07:15	23	134	69	3	229	71	117	29	1	218	0	0	0	0	0	29	82	10	0	121	568	4
07:30	26	122	76	2	226	73	161	27	0	261	0	0	0	0	0	45	130	19	0	194	681	2
07:45	19	119	61	1	200	104	163	28	0	295	0	0	0	0	0	44	110	15	0	169	664	1
Total	82	487	274	7	850	289	528	113	1	931	0	0	0	0	0	145	397	56	0	598	2379	8
08:00	20	122	73	4	219	121	150	29	0	300	0	0	0	0	0	46	135	15	0	196	715	4
08:15	23	119	78	1	221	107	180	28	0	315	0	0	0	0	0	50	141	34	0	225	761	1
08:30	21	148	69	5	243	112	170	34	0	316	0	0	0	0	0	47	100	54	0	201	760	5
08:45	21	118	69	0	208	74	134	44	0	252	0	0	0	0	0	55	149	38	0	242	702	0
Total	85	507	289	10	891	414	634	135	0	1183	0	0	0	0	0	198	525	141	0	864	2938	10
16:00	99	79	113	3	294	34	113	53	0	200	0	0	0	0	0	54	200	26	0	280	774	3
16:15	75	57	90	0	222	40	142	43	0	225	0	0	0	0	0	58	179	15	0	252	699	0
16:30	74	96	79	0	249	43	138	32	2	215	0	0	0	0	0	85	180	21	0	286	750	2
16:45	63	87	99	1	250	48	159	49	0	256	0	0	0	0	0	69	192	27	0	288	794	1
Total	311	319	381	4	1015	165	552	177	2	896	0	0	0	0	0	266	751	89	0	1106	3017	6
17:00	49	88	82	4	223	43	170	51	0	264	0	0	0	0	0	48	215	19	0	282	769	4
17:15	50	95	79	4	228	42	155	26	1	224	0	0	0	0	0	64	198	25	0	287	739	5
17:30	39	72	85	2	198	40	142	40	0	222	0	0	0	0	0	71	188	23	0	282	702	2
17:45	39	73	78	2	192	30	114	29	0	173	0	0	0	0	0	46	189	19	0	254	619	2
Total	177	328	324	12	841	155	581	146	1	883	0	0	0	0	0	229	790	86	0	1105	2829	13
Grand Total	655	1641	1268	33	3597	1023	2295	571	4	3893	0	0	0	0	0	838	2463	372	0	3673	11163	37
Apprch %	18.2%	45.6%	35.3%	0.9%		26.3%	59.0%	14.7%	0.1%		0.0%	0.0%	0.0%	0.0%		22.8%	67.1%	10.1%	0.0%			
Total %	5.9%	14.7%	11.4%	0.3%	32.2%	9.2%	20.6%	5.1%	0.0%	34.9%	0.0%	0.0%	0.0%	0.0%	0.0%	7.5%	22.1%	3.3%	0.0%	32.9%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Doolittle Drive Westbound					Hegenberger Road Northbound					Doolittle Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	20	122	73	4	219	121	150	29	0	300	0	0	0	0	0	46	135	15	0	196	715
08:15	23	119	78	1	221	107	180	28	0	315	0	0	0	0	0	50	141	34	0	225	761
08:30	21	148	69	5	243	112	170	34	0	316	0	0	0	0	0	47	100	54	0	201	760
08:45	21	118	69	0	208	74	134	44	0	252	0	0	0	0	0	55	149	38	0	242	702
Total Volume	85	507	289	10	891	414	634	135	0	1183	0	0	0	0	0	198	525	141	0	864	2938
% App Total	9.5%	56.9%	32.4%	1.1%		35.0%	53.6%	11.4%	0.0%		0.0%	0.0%	0.0%	0.0%		22.9%	60.8%	16.3%	0.0%		
PHF	.924	.856	.926	.500	.917	.855	.881	.767	.000	.936	.000	.000	.000	.000	.000	.900	.881	.653	.000	.893	.965

PM PEAK HOUR	Hegenberger Road Southbound					Doolittle Drive Westbound					Hegenberger Road Northbound					Doolittle Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	74	96	79	0	249	43	138	32	2	215	0	0	0	0	0	85	180	21	0	286	750
16:45	63	87	99	1	250	48	159	49	0	256	0	0	0	0	0	69	192	27	0	288	794
17:00	49	88	82	4	223	43	170	51	0	264	0	0	0	0	0	48	215	19	0	282	769
17:15	50	95	79	4	228	42	155	26	1	224	0	0	0	0	0	64	198	25	0	287	739
Total Volume	236	366	339	9	950	176	622	158	3	959	0	0	0	0	0	266	785	92	0	1143	3052
% App Total	24.8%	38.5%	35.7%	0.9%		18.4%	64.9%	16.5%	0.3%		0.0%	0.0%	0.0%	0.0%		23.3%	68.7%	8.0%	0.0%		
PHF	.797	.953	.856	.563	.950	.917	.915	.775	.375	.908	.000	.000	.000	.000	.000	.782	.913	.852	.000	.992	.961

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-013 Hegenberger Road-Doolittle Drive.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Hegenberger Road Southbound					Doolittle Drive Westbound					Hegenberger Road Northbound					Doolittle Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	5	1	1	6
07:15	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	3	1
07:30	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3	0
07:45	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	4	1	4	4
Total	1	1	0	0	2	0	5	0	0	5	0	0	0	1	0	0	4	0	10	4	11	11
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	3	3	1
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	1	0	0	0	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	3	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
17:15	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	2	1	2	3	6	2
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	7	1	2	8	11	2
Grand Total	2	2	0	0	4	0	8	0	0	8	1	0	0	1	1	0	14	1	13	15	28	14
Apprch %	50.0%	50.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	93.3%	6.7%				
Total %	7.1%	7.1%	0.0%		14.3%	0.0%	28.6%	0.0%		28.6%	3.6%	0.0%	0.0%		3.6%	0.0%	50.0%	3.6%		53.6%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Doolittle Drive Westbound					Hegenberger Road Northbound					Doolittle Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
08:15	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0		2	2
08:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	0	0		0	0	0	0		0	0	0	0		0	0	3	0		3	3
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.375	.000		.375	.375

PM PEAK HOUR	Hegenberger Road Southbound					Doolittle Drive Westbound					Hegenberger Road Northbound					Doolittle Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:45	1	0	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
17:00	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
17:15	0	1	0		1	0	2	0		2	0	0	0		0	0	2	1		3	6
Total Volume	1	1	0		2	0	2	0		2	0	0	0		0	0	3	1		4	8
% App Total	50.0%	50.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	75.0%	25.0%			
PHF	.250	.250	.000		.500	.000	.250	.000		.250	.000	.000	.000		.000	.000	.375	.250		.333	.333

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-013 Hegenberger Road-Doolittle Drive.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Hegenberger Road Southbound					Doolittle Drive Westbound					Hegenberger Road Northbound					Doolittle Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	2	3	2	0	7	1	5	5	0	11	0	0	0	0	0	3	1	1	0	5	23	0
07:15	1	5	1	0	7	1	7	3	0	11	0	0	0	0	0	1	3	1	0	5	23	0
07:30	0	0	0	0	0	1	4	3	0	8	0	0	0	0	0	2	1	4	0	7	15	0
07:45	1	5	1	0	7	0	8	1	0	9	0	0	0	0	0	0	3	2	0	5	21	0
Total	4	13	4	0	21	3	24	12	0	39	0	0	0	0	0	6	8	8	0	22	82	0
08:00	1	2	1	0	4	7	10	2	0	19	0	0	0	0	0	1	1	2	0	4	27	0
08:15	1	2	1	0	4	1	8	3	0	12	0	0	0	0	0	0	2	3	0	5	21	0
08:30	2	3	1	0	6	5	4	5	0	14	0	0	0	0	0	3	2	3	0	8	28	0
08:45	0	3	2	0	5	3	9	4	0	16	0	0	0	0	0	2	6	5	0	13	34	0
Total	4	10	5	0	19	16	31	14	0	61	0	0	0	0	0	6	11	13	0	30	110	0
16:00	10	5	0	0	15	4	4	5	0	13	0	0	0	0	0	0	4	2	0	6	34	0
16:15	3	2	0	0	5	1	3	2	0	6	0	0	0	0	0	0	4	4	0	8	19	0
16:30	5	9	0	0	14	3	3	3	0	9	0	0	0	0	0	3	2	1	0	6	29	0
16:45	5	2	0	0	7	1	8	2	0	11	0	0	0	0	0	2	5	6	0	13	31	0
Total	23	18	0	0	41	9	18	12	0	39	0	0	0	0	0	5	15	13	0	33	113	0
17:00	1	2	1	0	4	3	4	5	0	12	0	0	0	0	0	1	4	2	0	7	23	0
17:15	2	5	1	0	8	1	5	5	0	11	0	0	0	0	0	0	2	2	0	4	23	0
17:30	0	2	0	0	2	0	4	3	0	7	0	0	0	0	0	2	3	2	0	7	16	0
17:45	3	4	1	0	8	1	5	2	0	8	0	0	0	0	0	1	2	2	0	5	21	0
Total	6	13	3	0	22	5	18	15	0	38	0	0	0	0	0	4	11	8	0	23	83	0
Grand Total	37	54	12	0	103	33	91	53	0	177	0	0	0	0	0	21	45	42	0	108	388	0
Apprch %	35.9%	52.4%	11.7%			18.6%	51.4%	29.9%			0.0%	0.0%	0.0%			19.4%	41.7%	38.9%				
Total %	9.5%	13.9%	3.1%		26.5%	8.5%	23.5%	13.7%		45.6%	0.0%	0.0%	0.0%		0.0%	5.4%	11.6%	10.8%		27.8%	100.0%	

AM PEAK HOUR	Hegenberger Road Southbound					Doolittle Drive Westbound					Hegenberger Road Northbound					Doolittle Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	1	2	1		4	7	10	2		19	0	0	0		0	1	1	2		4	27
08:15	1	2	1		4	1	8	3		12	0	0	0		0	0	2	3		5	21
08:30	2	3	1		6	5	4	5		14	0	0	0		0	3	2	3		8	28
08:45	0	3	2		5	3	9	4		16	0	0	0		0	2	6	5		13	34
Total Volume	4	10	5		19	16	31	14		61	0	0	0		0	6	11	13		30	110
% App Total	21.1%	52.6%	26.3%			26.2%	50.8%	23.0%			0.0%	0.0%	0.0%			20.0%	36.7%	43.3%			
PHF	.500	.833	.625		.792	.571	.775	.700		.803	.000	.000	.000		.000	.500	.458	.650		.577	.809

PM PEAK HOUR	Hegenberger Road Southbound					Doolittle Drive Westbound					Hegenberger Road Northbound					Doolittle Drive Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	5	9	0		14	3	3	3		9	0	0	0		0	3	2	1		6	29
16:45	5	2	0		7	1	8	2		11	0	0	0		0	2	5	6		13	31
17:00	1	2	1		4	3	4	5		12	0	0	0		0	1	4	2		7	23
17:15	2	5	1		8	1	5	5		11	0	0	0		0	0	2	2		4	23
Total Volume	13	18	2		33	8	20	15		43	0	0	0		0	6	13	11		30	106
% App Total	39.4%	54.5%	6.1%			18.6%	46.5%	34.9%			0.0%	0.0%	0.0%			20.0%	43.3%	36.7%			
PHF	.650	.500	.500		.589	.667	.625	.750		.896	.000	.000	.000		.000	.500	.650	.458		.577	.855

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-017 Doolittle Drive-Davis Street.ppd
Date : 5/15/2013

Unshifted Count = All Vehicles

	Doolittle Drive Southbound					Davis Street Westbound					Doolittle Drive Northbound					Davis Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	56	50	3	0	109	48	32	143	0	223	5	87	45	0	137	2	18	8	0	28	497	0
07:15	68	53	8	0	129	53	20	178	0	251	4	102	39	0	145	4	34	7	0	45	570	0
07:30	87	71	13	0	171	45	25	144	0	214	4	186	51	0	241	9	28	7	0	44	670	0
07:45	66	86	3	0	155	60	21	209	0	290	12	196	60	0	268	12	23	2	0	37	750	0
Total	277	260	27	0	564	206	98	674	0	978	25	571	195	0	791	27	103	24	0	154	2487	0
08:00	79	85	15	0	179	76	48	196	0	320	8	203	80	0	291	12	44	7	0	63	853	0
08:15	100	92	8	0	200	65	31	171	0	267	17	175	55	0	247	13	42	11	0	66	780	0
08:30	110	80	9	0	199	52	26	156	0	234	12	179	46	0	237	16	30	10	0	56	726	0
08:45	86	91	19	0	196	60	47	133	0	240	16	133	64	0	213	18	32	15	0	65	714	0
Total	375	348	51	0	774	253	152	656	0	1061	53	690	245	0	988	59	148	43	0	250	3073	0
16:00	173	299	27	0	499	42	22	100	0	164	10	105	70	0	185	30	27	12	0	69	917	0
16:15	167	249	17	0	433	57	14	90	0	161	7	94	60	0	161	21	24	10	0	55	810	0
16:30	165	259	7	0	431	43	22	131	0	196	7	95	49	0	151	16	26	7	0	49	827	0
16:45	163	238	17	0	418	45	24	97	0	166	4	100	64	0	168	17	13	7	0	37	789	0
Total	668	1045	68	0	1781	187	82	418	0	687	28	394	243	0	665	84	90	36	0	210	3343	0
17:00	189	266	3	0	458	41	21	121	0	183	8	108	67	0	183	38	19	10	0	67	891	0
17:15	193	221	7	0	421	27	24	97	0	148	3	84	58	0	145	15	10	6	0	31	745	0
17:30	139	211	1	0	351	46	15	81	0	142	5	70	51	0	126	7	17	6	0	30	649	0
17:45	166	201	6	0	373	30	12	95	0	137	2	65	38	0	105	7	9	13	0	29	644	0
Total	687	899	17	0	1603	144	72	394	0	610	18	327	214	0	559	67	55	35	0	157	2929	0
Grand Total	2007	2552	163	0	4722	790	404	2142	0	3336	124	1982	897	0	3003	237	396	138	0	771	11832	0
Apprch %	42.5%	54.0%	3.5%	0.0%		23.7%	12.1%	64.2%	0.0%		4.1%	66.0%	29.9%	0.0%		30.7%	51.4%	17.9%	0.0%			
Total %	17.0%	21.6%	1.4%	0.0%	39.9%	6.7%	3.4%	18.1%	0.0%	28.2%	1.0%	16.8%	7.6%	0.0%	25.4%	2.0%	3.3%	1.2%	0.0%	6.5%	100.0%	

AM PEAK HOUR	Doolittle Drive Southbound					Davis Street Westbound					Doolittle Drive Northbound					Davis Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	66	86	3	0	155	60	21	209	0	290	12	196	60	0	268	12	23	2	0	37	750
08:00	79	85	15	0	179	76	48	196	0	320	8	203	80	0	291	12	44	7	0	63	853
08:15	100	92	8	0	200	65	31	171	0	267	17	175	55	0	247	13	42	11	0	66	780
08:30	110	80	9	0	199	52	26	156	0	234	12	179	46	0	237	16	30	10	0	56	726
Total Volume	355	343	35	0	733	253	126	732	0	1111	49	753	241	0	1043	53	139	30	0	222	3109
% App Total	48.4%	46.8%	4.8%	0.0%		22.8%	11.3%	65.9%	0.0%		4.7%	72.2%	23.1%	0.0%		23.9%	62.6%	13.5%	0.0%		
PHF	.807	.932	.583	.000	.916	.832	.656	.876	.000	.868	.721	.927	.753	.000	.896	.828	.790	.682	.000	.841	.911

PM PEAK HOUR	Doolittle Drive Southbound					Davis Street Westbound					Doolittle Drive Northbound					Davis Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	173	299	27	0	499	42	22	100	0	164	10	105	70	0	185	30	27	12	0	69	917
16:15	167	249	17	0	433	57	14	90	0	161	7	94	60	0	161	21	24	10	0	55	810
16:30	165	259	7	0	431	43	22	131	0	196	7	95	49	0	151	16	26	7	0	49	827
16:45	163	238	17	0	418	45	24	97	0	166	4	100	64	0	168	17	13	7	0	37	789
Total Volume	668	1045	68	0	1781	187	82	418	0	687	28	394	243	0	665	84	90	36	0	210	3343
% App Total	37.5%	58.7%	3.8%	0.0%		27.2%	11.9%	60.8%	0.0%		4.2%	59.2%	36.5%	0.0%		40.0%	42.9%	17.1%	0.0%		
PHF	.965	.874	.630	.000	.892	.820	.854	.798	.000	.876	.700	.938	.868	.000	.899	.700	.833	.750	.000	.761	.911

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-017 Doolittle Drive-Davis Street.ppd
Date : 5/15/2013

Bank 1 Count = Peds & Bikes

	Doolittle Drive Southbound					Davis Street Westbound					Doolittle Drive Northbound					Davis Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
07:15	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	3	0
07:30	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	1	0	0	0	1	4	0
07:45	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3	0
Total	0	0	0	0	0	0	0	1	0	1	1	8	0	0	9	1	0	0	0	1	11	0
08:00	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
08:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0
08:30	0	0	0	0	0	0	1	0	2	1	0	0	0	1	0	0	0	0	0	0	1	3
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1
Total	0	0	0	0	0	0	1	0	3	1	1	0	0	3	1	0	1	0	0	1	3	6
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	3
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0	0	2	0	2	2	3	4
17:00	0	2	0	0	2	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	4	1
17:15	1	1	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1
17:30	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:45	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Total	3	6	0	0	9	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	11	2
Grand Total	3	7	0	0	10	0	1	1	6	2	2	10	0	4	12	1	3	0	2	4	28	12
Apprch %	30.0%	70.0%	0.0%			0.0%	50.0%	50.0%			16.7%	83.3%	0.0%			25.0%	75.0%	0.0%				
Total %	10.7%	25.0%	0.0%		35.7%	0.0%	3.6%	3.6%		7.1%	7.1%	35.7%	0.0%		42.9%	3.6%	10.7%	0.0%		14.3%	100.0%	

AM PEAK HOUR	Doolittle Drive Southbound					Davis Street Westbound					Doolittle Drive Northbound					Davis Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0		0	0	0	0		0	0	3	0		3	0	0	0		0	3
08:00	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
08:15	0	0	0		0	0	0	0		0	1	0	0		1	0	0	0		0	1
08:30	0	0	0		0	0	1	0		1	0	0	0		0	0	0	0		0	1
Total Volume	0	0	0		0	0	1	0		1	1	3	0		4	0	0	0		0	5
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			25.0%	75.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.250	.250	.000		.333	.000	.000	.000		.000	.417

PM PEAK HOUR	Doolittle Drive Southbound					Davis Street Westbound					Doolittle Drive Northbound					Davis Street Eastbound					
START TIME	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	LEFT	THRU	RIGHT		APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	1	0		1	0	0	0		0	0	0	0		0	0	2	0		2	3
16:15	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:30	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
16:45	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0
Total Volume	0	1	0		1	0	0	0		0	0	0	0		0	0	2	0		2	3
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.000		.250	.250

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Heavy Trucks on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7310-017 Doolittle Drive-Davis Street.ppd
Date : 5/15/2013

Bank 2 Count = Heavy Trucks

	Doolittle Drive Southbound					Davis Street Westbound					Doolittle Drive Northbound					Davis Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	3	4	1	0	8	0	11	5	0	16	2	7	7	0	16	1	12	1	0	14	54	0
07:15	4	3	3	0	10	1	8	6	0	15	0	4	4	0	8	0	22	2	0	24	57	0
07:30	3	7	5	0	15	4	14	4	0	22	0	4	11	0	15	5	16	2	0	23	75	0
07:45	6	2	1	0	9	2	12	4	0	18	1	11	9	0	21	5	16	1	0	22	70	0
Total	16	16	10	0	42	7	45	19	0	71	3	26	31	0	60	11	66	6	0	83	256	0
08:00	2	3	2	0	7	5	13	8	0	26	1	9	16	0	26	4	16	2	0	22	81	0
08:15	5	4	0	0	9	4	6	9	0	19	3	8	7	0	18	4	16	3	0	23	69	0
08:30	2	8	2	0	12	4	8	9	0	21	2	6	11	0	19	5	11	3	0	19	71	0
08:45	6	11	8	0	25	4	11	4	0	19	4	10	9	0	23	6	10	3	0	19	86	0
Total	15	26	12	0	53	17	38	30	0	85	10	33	43	0	86	19	53	11	0	83	307	0
16:00	3	17	10	0	30	4	7	3	0	14	5	7	5	0	17	12	1	2	0	15	76	0
16:15	7	11	6	0	24	8	5	1	0	14	1	5	8	0	14	7	3	2	0	12	64	0
16:30	4	6	2	0	12	5	7	4	0	16	2	1	2	0	5	3	3	0	0	6	39	0
16:45	6	7	6	0	19	3	7	2	0	12	1	11	3	0	15	7	1	1	0	9	55	0
Total	20	41	24	0	85	20	26	10	0	56	9	24	18	0	51	29	8	5	0	42	234	0
17:00	3	8	1	0	12	7	6	2	0	15	3	3	3	0	9	17	1	3	0	21	57	0
17:15	3	2	2	0	7	1	10	1	0	12	0	2	1	0	3	4	0	1	0	5	27	0
17:30	3	6	0	0	9	4	6	1	0	11	2	7	3	0	12	2	1	2	0	5	37	0
17:45	2	3	2	0	7	5	3	3	0	11	1	3	1	0	5	2	0	2	0	4	27	0
Total	11	19	5	0	35	17	25	7	0	49	6	15	8	0	29	25	2	8	0	35	148	0
Grand Total	62	102	51	0	215	61	134	66	0	261	28	98	100	0	226	84	129	30	0	243	945	0
Apprch %	28.8%	47.4%	23.7%			23.4%	51.3%	25.3%			12.4%	43.4%	44.2%			34.6%	53.1%	12.3%				
Total %	6.6%	10.8%	5.4%		22.8%	6.5%	14.2%	7.0%		27.6%	3.0%	10.4%	10.6%		23.9%	8.9%	13.7%	3.2%		25.7%	100.0%	

AM PEAK HOUR	Doolittle Drive Southbound				Davis Street Westbound				Doolittle Drive Northbound				Davis Street Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																	
Peak Hour For Entire Intersection Begins at 07:45																	
07:45	6	2	1	9	2	12	4	18	1	11	9	21	5	16	1	22	70
08:00	2	3	2	7	5	13	8	26	1	9	16	26	4	16	2	22	81
08:15	5	4	0	9	4	6	9	19	3	8	7	18	4	16	3	23	69
08:30	2	8	2	12	4	8	9	21	2	6	11	19	5	11	3	19	71
Total Volume	15	17	5	37	15	39	30	84	7	34	43	84	18	59	9	86	291
% App Total	40.5%	45.9%	13.5%		17.9%	46.4%	35.7%		8.3%	40.5%	51.2%		20.9%	68.6%	10.5%		
PHF	.625	.531	.625	.771	.750	.750	.833	.808	.583	.773	.672	.808	.900	.922	.750	.935	.898

PM PEAK HOUR	Doolittle Drive Southbound				Davis Street Westbound				Doolittle Drive Northbound				Davis Street Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																	
Peak Hour For Entire Intersection Begins at 16:00																	
16:00	3	17	10	30	4	7	3	14	5	7	5	17	12	1	2	15	76
16:15	7	11	6	24	8	5	1	14	1	5	8	14	7	3	2	12	64
16:30	4	6	2	12	5	7	4	16	2	1	2	5	3	3	0	6	39
16:45	6	7	6	19	3	7	2	12	1	11	3	15	7	1	1	9	55
Total Volume	20	41	24	85	20	26	10	56	9	24	18	51	29	8	5	42	234
% App Total	23.5%	48.2%	28.2%		35.7%	46.4%	17.9%		17.6%	47.1%	35.3%		69.0%	19.0%	11.9%		
PHF	.714	.603	.600	.708	.625	.929	.625	.875	.450	.545	.563	.750	.604	.667	.625	.700	.770

Appendix E
Intersection LOS Summary

FEHR PEERS

APPENDIX E - INTERSECTION LEVEL OF SERVICE SUMMARY (WEEKDAY)

				Existing		Existing Plus Project		Existing Plus Project Plus Mitigations		2035 No Project		2035 Plus Coliseum Site Conditions		2035 Plus Coliseum Site Conditions Plus Mitigations		2035 Plus Specific Plan Buildout Conditions		2035 Plus Specific Plan Buildout Conditions Plus Mitigations	
Int No	Study Intersection	Traffic Control	Peak Hour	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Frontage Road/SR 13 NB On-Ramp/Mountain Boulevard	AWSC/Signal	AM	14.7	B	15.1	C	15.1	C	23.7	C	25	C	13.1	B	26.3	D	13.3	B
1	Frontage Road/SR 13 NB On-Ramp/Mountain Boulevard	AWSC/Signal	PM	18.7	C	19.8	C	19.8	C	45.8	E	49.8	E	11.9	B	54.4	F	11.5	B
2	Frontage Road/I-580 WB On-Ramp/Frontage Road/Rusting Ave	SSSC	AM	0.6 (14.5)	A (B)	0.5 (14.8)	A (B)	0.5 (14.8)	A (B)	1 (18.4)	A (C)	1 (18.8)	A (C)	1 (18.8)	A (C)	1 (19)	A (C)	1 (19)	A (C)
2	Frontage Road/I-580 WB On-Ramp/Frontage Road/Rusting Ave	SSSC	PM	0.4 (13.6)	A (B)	0.4 (13.9)	A (B)	0.4 (13.9)	A (B)	0.7 (21.5)	A (C)	0.7 (22.2)	A (C)	0.7 (22.2)	A (C)	0.7 (22.5)	A (C)	0.7 (22.5)	A (C)
3	Kuhnle Ave/Mountain Blvd/I-580 WB Off Ramp	SSSC/Signal	AM	170.1 (774.2)	F (F)	1783.8 (8198.8)	F (F)	22.5	C	Err (999)	F (F)	Err (999)	F (F)	34.4	C	Err (999)	F (F)	38.2	D
3	Kuhnle Ave/Mountain Blvd/I-580 WB Off Ramp	SSSC/Signal	PM	1905.1 (8673.3)	F (F)	1862.7 (8673.4)	F (F)	29.3	C	1623.5 (8016.4)	F (F)	1603.3 (8019.1)	F (F)	37.5	D	1650.2 (8074.1)	F (F)	38.6	D
4	Sunnymere Ave/Kuhnle Ave/Seminary Ave/I-580 EB On-Ramp	AWSC/Signal	AM	67.2	F	71.8	F	12	B	150.6	F	156.4	F	18.1	B	161.4	F	22.5	C
4	Sunnymere Ave/Kuhnle Ave/Seminary Ave/I-580 EB On-Ramp	AWSC/Signal	PM	82.7	F	91.6	F	24.3	C	175.6	F	187	F	28	C	190	F	28.8	C
5	Overdale Ave/I-580/SR 13 EB Off Ramp/Seminary Ave	SSSC/Signal	AM	5 (22.7)	A (C)	5.2 (24.1)	A (C)	18	B	296.2 (999)	F (F)	293.7 (999)	F (F)	22.1	C	291.3 (999)	F (F)	24	C
5	Overdale Ave/I-580/SR 13 EB Off Ramp/Seminary Ave	SSSC/Signal	PM	28 (67.3)	D (F)	33.3 (79.6)	D (F)	22.8	C	Err (999)	F (F)	Err (999)	F (F)	27.2	C	Err (999)	F (F)	27.8	C
6	Mountain Blvd/I-580 WB On Ramp/Edwards Ave	Signal	AM	20.3	C	21.2	C	21.2	C	21.5	C	22.7	C	22.7	C	25.2	C	25.2	C
6	Mountain Blvd/I-580 WB On Ramp/Edwards Ave	Signal	PM	11.6	B	12.7	B	12.7	B	13.8	B	15	B	15	B	16.5	B	16.5	B
7	Edwards Ave/I-580 EB Off Ramp	Signal	AM	12.5	B	12.7	B	12.7	B	13.6	B	14.3	B	14.3	B	17.3	B	17.3	B
7	Edwards Ave/I-580 EB Off Ramp	Signal	PM	11.3	B	11.6	B	11.6	B	13.2	B	13.7	B	13.7	B	15	B	15	B
8	98th Ave/Golf Links Rd	Signal	AM	31.6	C	31.7	C	31.7	C	36.4	D	36.6	D	36.6	D	37.3	D	37.3	D
8	98th Ave/Golf Links Rd	Signal	PM	27.2	C	27.6	C	27.6	C	31.3	C	31.6	C	31.6	C	32.2	C	32.2	C
9	Golf Links Rd/I-580 WB On Ramp	Signal	AM	29.2	C	29.4	C	29.4	C	33.8	C	34.1	C	34.1	C	37.1	D	37.1	D
9	Golf Links Rd/I-580 WB On Ramp	Signal	PM	31.6	C	33.3	C	33.3	C	34.3	C	35.4	D	35.4	D	37.5	D	37.5	D
10	98th Ave/EB I-580 On Ramp	SSSC	AM	1.3 (2.5)	A (A)	1.3 (2.5)	A (A)	1.3 (2.5)	A (A)	1.7 (3.1)	A (A)	1.7 (3.1)	A (A)	1.7 (3.1)	A (A)	1.8 (3.2)	A (A)	1.8 (3.2)	A (A)
10	98th Ave/EB I-580 On Ramp	SSSC	PM	1.2 (2.3)	A (A)	1.2 (2.3)	A (A)	1.2 (2.3)	A (A)	1.2 (2.3)	A (A)	1.3 (2.3)	A (A)	1.3 (2.3)	A (A)	1.3 (2.3)	A (A)	1.3 (2.3)	A (A)
11	S MacArthur Blvd/Seminary Ave	Signal	AM	10.4	B	11	B	11	B	12.1	B	12.2	B	12.2	B	13.8	B	13.8	B
11	S MacArthur Blvd/Seminary Ave	Signal	PM	10.9	B	11.2	B	11.2	B	13.8	B	14.2	B	14.2	B	14.3	B	14.3	B
12	Camden Street/N MacArthur Blvd/Seminary Ave	Signal	AM	27.6	C	29.3	C	29.3	C	50.1	D	54.1	D	19.5	B	54.5	D	26.3	C
12	Camden Street/N MacArthur Blvd/Seminary Ave	Signal	PM	33.3	C	35.9	D	35.9	D	84.3 (v/c=1.02)	F	98 (v/c=1.06)	F	37.5	D	104.1 (v/c=1.08)	F	39.5	D
13	MacArthur Blvd/Foothill Blvd/73rd Ave	Signal	AM	33.3	C	34.1	C	34.1	C	65.1	E	68.1	E	59.1	E	85.8 (v/c=1.04)	F	73	E
13	MacArthur Blvd/Foothill Blvd/73rd Ave	Signal	PM	29.3	C	31.3	C	31.3	C	78.2	E	86.6 (v/c=1.03)	F	80.6 (v/c=1.01)	F	106.7 (v/c=1.12)	F	98.3 (v/c=1.09)	F
14	Ygnacio Ave/Courtland Ave/High St	Signal	AM	7.3	A	7.4	A	7.4	A	8.8	A	9	A	9	A	9.9	A	9.9	A
14	Ygnacio Ave/Courtland Ave/High St	Signal	PM	8.5	A	8.6	A	8.6	A	10.1	B	10.3	B	10.3	B	10.5	B	10.5	B
15	Foothill Blvd/14th Ave	Signal	AM	12.2	B	12.1	B	12.1	B	33.6	C	34.5	C	34.5	C	62.7	E	62.7	E
15	Foothill Blvd/14th Ave	Signal	PM	14.5	B	14.3	B	14.3	B	40.5	D	41.4	D	41.4	D	45.5	D	45.5	D
16	Foothill Blvd/23rd Ave	Signal	AM	19.3	B	19.7	B	19.7	B	32.7	C	34.2	C	34.2	C	40.5	D	40.5	D
16	Foothill Blvd/23rd Ave	Signal	PM	12.5	B	12.6	B	12.6	B	186.7 (v/c=1.12)	F	196.1 (v/c=1.13)	F	196.1 (v/c=1.13)	F	195.4 (v/c=1.13)	F	195.4 (v/c=1.13)	F
17	Foothill Blvd/Fruitvale Ave	Signal	AM	34.1	C	36	D	36	D	135.1 (v/c=1.4)	F	146.3 (v/c=1.44)	F	146.5 (v/c=1.44)	F	161.3 (v/c=1.49)	F	161.5 (v/c=1.49)	F
17	Foothill Blvd/Fruitvale Ave	Signal	PM	25.4	C	26.2	C	26.2	C	126.6 (v/c=1.3)	F	139.5 (v/c=1.36)	F	139.3 (v/c=1.36)	F	146.6 (v/c=1.39)	F	146.4 (v/c=1.39)	F
18	Foothill Blvd/Coolidge Ave	Signal	AM	18.4	B	18.6	B	18.6	B	45.2	D	52.7	D	48.7	D	71.9	E	67.6	E
18	Foothill Blvd/Coolidge Ave	Signal	PM	20.4	C	20.8	C	20.8	C	59	E	69.9	E	65.7	E	71.6	E	67.8	E
19	Foothill Blvd/35th Street /35th Street	Signal	AM	21.2	C	21.7	C	21.7	C	125.9 (v/c=1.45)	F	144.6 (v/c=1.48)	F	79.7	E	192.9 (v/c=1.64)	F	106.5 (v/c=1.26)	F
19	Foothill Blvd/35th Street /35th Street	Signal	PM	22.5	C	23.3	C	23.3	C	310 (v/c=1.79)	F	318.1 (v/c=1.82)	F	148.5 (v/c=1.24)	F	323.1 (v/c=1.85)	F	153.7 (v/c=1.26)	F
20	Foothill Blvd/38th Ave	Signal	AM	15	B	14.9	B	14.9	B	22.4	C	23.4	C	23.4	C	29.7	C	29.7	C
20	Foothill Blvd/38th Ave	Signal	PM	13.1	B	13.3	B	13.3	B	46.6	D	46.1	D	46.1	D	46.1	D	46.1	D
21	Foothill Blvd/42nd Ave/Courtland Ave	Signal	AM	26.2	C	26.9	C	26.9	C	68.1	E	70	E	70	E	69.3	E	69.3	E
21	Foothill Blvd/42nd Ave/Courtland Ave	Signal	PM	30.7	C	31.5	C	31.5	C	48.4	D	51.5	D	51.5	D	54.7	D	54.7	D
22	Foothill Blvd/High St	Signal	AM	18.9	B	19.1	B	19.1	B	34	C	37.7	D	25.8	C	50.4	D	26.4	C
22	Foothill Blvd/High St	Signal	PM	19.1	B	19.8	B	19.8	B	92.4 (v/c=1.16)	F	109.1 (v/c=1.23)	F	57.9	E	140 (v/c=1.3)	F	79.4	E
23	Foothill Blvd/Seminary Ave & Walnut St	Signal	AM	14.1	B	14.8	B	14.8	B	34.6	C	40.3	D	33.7	C	51.9	D	36.8	D
23	Foothill Blvd/Seminary Ave & Walnut St	Signal	PM	15.6	B	16	B	16	B	70.3	E	82.7 (v/c=1.12)	F	70.7	E	81.9 (v/c=1.12)	F	67	E
24	Foothill Blvd/Havenscourt Blvd	Signal	AM	14.1	B	14.6	B	14.6	B	17.4	B	17.8	B	17.8	B	18.5	B	18.5	B
24	Foothill Blvd/Havenscourt Blvd	Signal	PM	19.7	B	19.6	B	19.6	B	23.5	C	24.2	C	24.2	C	24.5	C	24.5	C
25	Bond St/42nd Ave	Signal	AM	9.3	A	9.1	A	9.1	A	8.2	A	8.3	A	8.3	A	8.3	A	8.3	A
25	Bond St/42nd Ave	Signal	PM	7.4	A	7.2	A	7.2	A	7.4	A	7.3	A	7.3	A	7.3	A	7.3	A
26	Bond St/High St	Signal	AM	10.4	B	10.6	B	10.6	B	10.7	B	11	B	11	B	11	B	11	B
26	Bond St/High St	Signal	PM	8	A	8.2	A	8.2	A	8.7	A	9.2	A	9.2	A	9.6	A	9.6	A
27	Bancroft Ave/42nd Ave	Signal	AM	2.2	A	2.3	A	2.3	A	2.6	A	2.6	A	2.6	A	3	A	3	A
27	Bancroft Ave/42nd Ave	Signal	PM	4.5	A	4.6	A	4.6	A	4.6	A	4.6	A	4.6	A	5	A	5	A
28	Bancroft Ave/High St	Signal	AM	4.5	A	4.4	A	4.4	A	5	A	5.2	A	5.2	A	5.7	A	5.7	A
28	Bancroft Ave/High St	Signal	PM	7.2	A	7.4	A	7.4	A	8.5	A	9	A	9	A	9.7	A	9.7	A
29	Bancroft Ave/Seminary Ave	Signal	AM	15.5	B	15.7	B	15.7	B	18.4	B	17.9	B	22.6	C	19.2	B	23.6	C
29	Bancroft Ave/Seminary Ave	Signal	PM	15.9	B	16.2	B	16.2	B	32.6	C	38.1	D	42	D	45.6	D	45.8	D
30	Bancroft Ave/Havenscourt Blvd	Signal	AM	18.7	B	19.5	B	19.5	B	27.4	C	28.5	C	28.5	C	28.5	C	28.5	C
30	Bancroft Ave/Havenscourt Blvd	Signal	PM	22.3	C	23.2	C	23.2	C	40.4	D	47.7	D	47.7	D	59.8	E	59.8	E
31	Bancroft Ave/73rd Ave	Signal	AM	34.2	C	34.4	C	34.4	C	38.4	D	39.2	D	39.2	D	45.2	D	38.8	D
31	Bancroft Ave/73rd Ave	Signal	PM	39.2	D	40.6	D	40.6	D	47.9	D	51.7	D	51.7	D	60.9	E	51.7	D
32	International Blvd/23rd Ave	Signal	AM	10.1	B	10.6	B	10.6	B	22.9	C	22.5	C	22.5	C	22.8	C	22.8	C
32	International Blvd/23rd Ave	Signal	PM	10.2	B	10.7	B	10.7	B	22.4	C	22.7	C	22.7	C	23	C	23	C
33	International Blvd/Fruitvale Ave	Signal	AM	20	B	20.4	C	20.4	C	35.4	D	41.8	D	41.8	D	60.1	E	60.1	E
33	International Blvd/Fruitvale Ave	Signal	PM	19.6	B	19.5	B	19.5	B	61.3	E	62	E	62	E	64.1	E	64.1	E
34	International Blvd/42nd Ave	Signal	AM	34.5	C	34.8	C	34.8	C	43.4	D	44.6	D	44.6	D	51.3	D	51.3	D
34	International Blvd/42nd Ave	Signal	PM	34.4	C	34.7	C	34.7	C	56.9	E	58.3	E	58.3	E	60.7	E	60.7	E
35	International Blvd/High St	Signal	AM	21.4	C	22.4	C	22.4	C	27.2	C	30.2	C	30.2	C	48.9	D	48.9	D
35	International Blvd/High St	Signal	PM	23.1	C	23.8	C	23.8	C	60.2	E	69.8	E	69.8	E	118.4 (v/c=1.7)	F	118.4 (v/c=1.7)	F
36	International Blvd/Seminary Ave	Signal	AM	11.5	B	12.5	B	12.5	B	29.6	C	33.5	C	33.5	C	34	C	34	C
36	International Blvd/Seminary Ave	Signal	PM	12.9	B	13.9	B	13.9	B	45.4	D	51.2	D	51.2	D	51.5	D	51.5	D
37	International Blvd/66th Ave	Signal	AM	6.9	A	7.5	A	7.5	A	19	B	20	B	20	B	20.9	C	20.9	C
37	International Blvd/66th Ave	Signal	PM	8.8	A	10.3	B	10.3	B	20.6	C	21.7	C	21.7	C	23.3	C	23.3	C
38	International Blvd/Havenscourt Blvd	Signal	AM	8.1	A	8.5	A	8.5	A	45.6	D	51.1	D	51.1	D	51.9	D	51.9	D
38	International Blvd/Havenscourt Blvd	Signal	PM	8	A	9.4	A	9.4	A	65.4	E	74.2	E	74.2	E	81.6 (v/c=1.06)	F	81.6 (v/c=1.06)	F
39	International Blvd/Hegenberger Expy/73rd Ave	Signal	AM	24.3	C	26	C	26	C	37.1	D	41.7	D	41.7	D	51.6	D	51.6	D
39	International Blvd/Hegenberger Expy/73rd Ave	Signal	PM	32.1	C	33.7	C	33.7	C	39.9	D	43.1	D	43.1	D	53.7	D	53.7	D
40	International Blvd/98th Ave	Signal	AM	34.7	C	35.7	D	35.7	D	51.2	D	52.2	D	52.2	D	53.4	D	53.4	D
40	International Blvd/98th Ave	Signal	PM	41.9	D	43.4	D	43.4	D	86.3 (v/c=1.1)	F	91.2 (v/c=1.12)	F	91.2 (v/c=1.12)	F	93 (v/c=1.12)	F	93 (v/c=1.12)	F

APPENDIX E - INTERSECTION LEVEL OF SERVICE SUMMARY (WEEKDAY)

				Existing		Existing Plus Project		Existing Plus Project Plus Mitigations		2035 No Project		2035 Plus Coliseum Site Conditions		2035 Plus Coliseum Site Conditions Plus Mitigations		2035 Plus Specific Plan Buildout Conditions		2035 Plus Specific Plan Buildout Conditions Plus Mitigations	
Int No	Study Intersection	Traffic Control	Peak Hour	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
41	E 14th St/Davis St/Callan Ave	Signal	AM	14	B	14.1	B	14.1	B	31.9	C	33.9	C	33.9	C	44.3	D	44.3	D
41	E 14th St/Davis St/Callan Ave	Signal	PM	17.1	B	17.1	B	17.1	B	50.1	D	51.5	D	51.5	D	54.3	D	54.3	D
42	E 14th St/Washington Ave/Estudillo Ave	Signal	AM	6.2	A	6.2	A	6.2	A	8.1	A	8.1	A	8.1	A	8.7	A	8.7	A
42	E 14th St/Washington Ave/Estudillo Ave	Signal	PM	8.4	A	8.5	A	8.5	A	31.8	C	33.2	C	33.2	C	35.6	D	35.6	D
43	E 14th St/San Leandro Blvd	Signal	AM	12.8	B	12.8	B	12.8	B	31.8	C	31.8	C	31.8	C	47.1	D	47.1	D
43	E 14th St/San Leandro Blvd	Signal	PM	9.5	A	9.5	A	9.5	A	16.8	B	16.8	B	16.8	B	17.7	B	17.7	B
44	E 12th St/5th Ave	Signal	AM	12.1	B	12.1	B	12.1	B	39.8	D	39.8	D	39.8	D	40	D	40	D
44	E 12th St/5th Ave	Signal	PM	11	B	11	B	11	B	14.5	B	14.5	B	14.5	B	14.9	B	14.9	B
45	E 12th St/14th Ave	Signal	AM	8.4	A	8.4	A	8.4	A	13	B	13.1	B	13.1	B	13.6	B	13.6	B
45	E 12th St/14th Ave	Signal	PM	12.9	B	13.6	B	13.6	B	14.2	B	14.4	B	14.4	B	14.4	B	14.4	B
46	E 12th St/22nd Ave	Signal	AM	32.1	C	32	C	32	C	64.6	E	65.4	E	65.4	E	66.1	E	66.1	E
46	E 12th St/22nd Ave	Signal	PM	32.8	C	33.1	C	33.1	C	47.1	D	48.6	D	48.6	D	51.6	D	51.6	D
47	E 12th St/23rd Ave	Signal	AM	11.5	B	11.9	B	11.9	B	32.4	C	33.6	C	33.6	C	43.6	D	43.6	D
47	E 12th St/23rd Ave	Signal	PM	7	A	7.7	A	7.7	A	31.3	C	34.1	C	34.1	C	36.5	D	36.5	D
48	E 12th St/29th Ave	Signal	AM	17.5	B	17.8	B	17.8	B	22	C	22.6	C	22.6	C	27	C	27	C
48	E 12th St/29th Ave	Signal	PM	18.6	B	19.1	B	19.1	B	31.2	C	33.3	C	33.3	C	40.8	D	40.8	D
49	E 12th St/Fruitvale Ave	Signal	AM	35.9	D	40.7	D	40.7	D	100.3 (v/c=0.99)	F	107.7 (v/c=1.02)	F	107.7 (v/c=1.02)	F	125.8 (v/c=1.08)	F	125.8 (v/c=1.08)	F
49	E 12th St/Fruitvale Ave	Signal	PM	27.8	C	29.1	C	29.1	C	84.2 (v/c=1.16)	F	88 (v/c=1.18)	F	88 (v/c=1.18)	F	97.6 (v/c=1.23)	F	97.6 (v/c=1.23)	F
50	E 12th St/High St	Signal	AM	22.3	C	22.6	C	22.6	C	28.3	C	28.8	C	28.8	C	43.1	D	43.1	D
50	E 12th St/High St	Signal	PM	22.3	C	22.5	C	22.5	C	25.1	C	25.4	C	25.4	C	26.7	C	26.7	C
51	E 10th St/5th Ave	Signal	AM	15.4	B	15.4	B	15.4	B	27	C	27	C	27	C	68.7	E	68.7	E
51	E 10th St/5th Ave	Signal	PM	16.6	B	16.6	B	16.6	B	27.4	C	27.4	C	27.4	C	28.9	C	28.9	C
52	8th Ave/5th Ave	Signal	AM	12.2	B	12.2	B	12.2	B	27.5	C	27.5	C	27.5	C	30.2	C	30.2	C
52	8th Ave/5th Ave	Signal	PM	14.1	B	14.1	B	14.1	B	33.8	C	33.8	C	33.8	C	33.8	C	33.8	C
53	E 8t h St/E 12th St/14th Ave & E 8th St	Signal	AM	16.8	B	16.8	B	16.8	B	16.6	B	17.3	B	17.3	B	17.3	B	17.3	B
53	E 8t h St/E 12th St/14th Ave & E 8th St	Signal	PM	14.8	B	14.9	B	14.9	B	13.3	B	13.4	B	13.4	B	13.4	B	13.4	B
54	San Leandro St/E 10th St/Fruitvale Ave	Signal	AM	24	C	24.9	C	24.9	C	37.1	D	47.4	D	47.4	D	64.2	E	64.2	E
54	San Leandro St/E 10th St/Fruitvale Ave	Signal	PM	26.6	C	26.9	C	26.9	C	95.8 (v/c=1.2)	F	108.6 (v/c=1.23)	F	108.6 (v/c=1.23)	F	161.9 (v/c=1.31)	F	161.9 (v/c=1.31)	F
55	San Leandro St/High St	Signal	AM	16.3	B	17.4	B	17.4	B	28.5	C	35	C	35	C	72.7	E	72.7	E
55	San Leandro St/High St	Signal	PM	16	B	16.8	B	16.8	B	38.1	D	44.9	D	44.9	D	61.7	E	61.7	E
56	San Leandro St/50th Ave	Signal	AM	9.5	A	11	B	11	B	17.5	B	20.6	C	20.6	C	21.8	C	21.8	C
56	San Leandro St/50th Ave	Signal	PM	12.8	B	15.9	B	15.9	B	29	C	48.4	D	48.4	D	40.3	D	40.3	D
57	San Leandro St/Seminary Ave	Signal	AM	14.3	B	15.3	B	15.3	B	26.5	C	35.6	D	35.6	D	38.9	D	38.9	D
57	San Leandro St/Seminary Ave	Signal	PM	10.3	B	11.4	B	11.4	B	24	C	29.9	C	29.9	C	37.5	D	37.5	D
58	San Leandro St/66th Ave	Signal	AM	25.7	C	31.2	C	38.1	D	71.6	E	139.5 (v/c=1.29)	F	94.3 (v/c=1.1)	F	159.8 (v/c=1.38)	F	118.3 (v/c=1.25)	F
58	San Leandro St/66th Ave	Signal	PM	101.9 (v/c=1.19)	F	315.2 (v/c=2.19)	F	39.8	D	165.3 (v/c=1.5)	F	262.4 (v/c=2.07)	F	158.4 (v/c=1.57)	F	479.6 (v/c=3.18)	F	257.9 (v/c=2.31)	F
59	San Leandro St/69th Ave	Signal	AM	9.5	A	13	B	13	B	24.9	C	36.2	D	36.2	D	50.5	D	50.5	D
59	San Leandro St/69th Ave	Signal	PM	5.3	A	17.2	B	17.2	B	10	A	25.3	C	25.3	C	38.5	D	38.5	D
60	San Leandro St/Hegenberger Rd On-Ramp	Signal	AM	2.2	A	2.5	A	2.5	A	2.5	A	2.8	A	2.8	A	3.7	A	3.7	A
60	San Leandro St/Hegenberger Rd On-Ramp	Signal	PM	2.9	A	3.2	A	3.2	A	5	A	5.8	A	5.8	A	7.1	A	7.1	A
61	San Leandro St/Hegenberger Rd Off-Ramp/75th Ave	Signal	AM	11.9	B	12.6	B	12.6	B	31.4	C	36.6	D	49.2	D	69.2	E	79.6	E
61	San Leandro St/Hegenberger Rd Off-Ramp/75th Ave	Signal	PM	20.6	C	29.8	C	29.8	C	84.3 (v/c=1.73)	F	125.9 (v/c=2.04)	F	102.9 (v/c=1.17)	F	184.8 (v/c=2.22)	F	157.8 (v/c=1.32)	F
62	San Leandro St/81st Ave	Signal	AM	25.8	C	27.4	C	27.4	C	20.7	C	21.9	C	21.9	C	26.3	C	26.3	C
62	San Leandro St/81st Ave	Signal	PM	22.3	C	23.2	C	23.2	C	21.7	C	24.5	C	24.5	C	43.2	D	43.2	D
63	San Leandro St/85th Ave	Signal	AM	12.8	B	12.9	B	12.9	B	15.7	B	17.1	B	17.1	B	26.7	C	26.7	C
63	San Leandro St/85th Ave	Signal	PM	34.6	C	43.5	D	43.5	D	47.6	D	54.2	D	54.2	D	67.7	E	67.7	E
64	San Leandro St/98th Ave	Signal	AM	41.7	D	43.8	D	43.8	D	42.2	D	44.6	D	44.6	D	47.5	D	47.5	D
64	San Leandro St/98th Ave	Signal	PM	46.5	D	47.9	D	47.9	D	53.3	D	55.9	E	55.9	E	59.2	E	59.2	E
65	San Leandro Blvd/W Broadmoor Blvd/Apricot Street/Park Street	SSSC/Signal	AM	3 (16.5)	A (C)	3 (17.1)	A (C)	3 (17.1)	A (C)	10.5 (92.5)	B (F)	11.5 (103.9)	B (F)	5.9	A	18.7 (191.4)	C (F)	6.1	A
65	San Leandro Blvd/W Broadmoor Blvd/Apricot Street/Park Street	SSSC/Signal	PM	2.4 (19.1)	A (C)	2.4 (19.7)	A (C)	2.4 (19.7)	A (C)	31.7 (325.2)	D (F)	33.4 (347.6)	D (F)	8.5	A	36.5 (373)	E (F)	8.7	A
66	San Leandro Blvd/Best Ave/Park Street	SSSC/Signal	AM	23 (97.8)	C (F)	24.6 (107.6)	C (F)	6.9	A	1667.6 (999)	F (F)	1643.4 (999)	F (F)	9.7	A	1473.1 (999)	F (F)	11.1	B
66	San Leandro Blvd/Best Ave/Park Street	SSSC/Signal	PM	17.6 (83)	C (F)	19 (92.3)	C (F)	7.5	A	1457.4 (999)	F (F)	1435.5 (999)	F (F)	12.9	B	1414.3 (999)	F (F)	13.9	B
67	San Leandro Blvd/Davis St	Signal	AM	25.2	C	25.7	C	25.7	C	40.9	D	41.6	D	41.6	D	51.9	D	51.9	D
67	San Leandro Blvd/Davis St	Signal	PM	32.7	C	33.7	C	33.7	C	60	E	64.2	E	64.2	E	69.2	E	69.2	E
68	San Leandro Blvd/Williams St	Signal	AM	11.3	B	11.3	B	11.3	B	15.9	B	15.9	B	15.9	B	17	B	17	B
68	San Leandro Blvd/Williams St	Signal	PM	14.3	B	14.4	B	14.4	B	22.1	C	22.1	C	22.1	C	22.8	C	22.8	C
69	San Leandro Blvd/Marina Blvd	Signal	AM	65.1	E	65.1	E	40.7	D	64.3	E	64.3	E	64.3	E	71.6	E	55	D
69	San Leandro Blvd/Marina Blvd	Signal	PM	53.4	D	58.6	E	52.9	D	51.9	D	54.1	D	54.1	D	57.2	E	48.8	D
70	San Leandro Blvd/Washington Ave	Signal	AM	22.2	C	22.2	C	22.2	C	30.6	C	30.6	C	30.6	C	35	C	35	C
70	San Leandro Blvd/Washington Ave	Signal	PM	30.1	C	30.1	C	30.1	C	44.7	D	44.7	D	44.7	D	45.1	D	45.1	D
71	Coliseum Way/50th Ave	SSSC	AM	6.3 (13.2)	A (B)	7 (17.3)	A (C)	7 (17.3)	A (C)	19.2 (47.5)	C (E)	46.7 (130.1)	E (F)	46.7 (130.1)	E (F)	54.8 (158.4)	F (F)	54.8 (158.4)	F (F)
71	Coliseum Way/50th Ave	SSSC	PM	7 (15)	A (B)	8.7 (24.8)	A (C)	8.7 (24.8)	A (C)	6.9 (23)	A (C)	14.9 (65.1)	B (F)	14.9 (65.1)	B (F)	40.9 (212.2)	E (F)	40.9 (212.2)	E (F)
72	Coliseum Way/66th Ave	Signal	AM	12.5	B	20.6	C	20.6	C	17.1	B	27.1	C	27.1	C	28.2	C	28.2	C
72	Coliseum Way/66th Ave	Signal	PM	13.6	B	23	C	23	C	18.1	B	30.7	C	30.7	C	34.8	C	34.8	C
73	Baldwin St/Coliseum Parking Lot/Hegenberger Rd	Signal	AM	9	A	12.1	B	12.1	B	12.5	B	15.2	B	15.2	B	14.7	B	14.7	B
73	Baldwin St/Coliseum Parking Lot/Hegenberger Rd	Signal	PM	19.8	B	37.7	D	37.7	D	13	B	15.1	B	15.1	B	13.4	B	13.4	B
74	Edes Avenue/Coliseum Way/Hegenberger Rd	Signal	AM	21.3	C	28.2	C	28.2	C	20.2	C	30.6	C	30.6	C	37.9	D	37.9	D
74	Edes Avenue/Coliseum Way/Hegenberger Rd	Signal	PM	23.8	C	33	C	33	C	33.3	C	54.4	D	54.4	D	53.7	D	53.7	D
75	Edes Ave/98th Ave	Signal	AM	38.2	D	38.2	D	38.2	D	44.5	D	43.5	D	43.5	D	54.5	D	54.5	D
75	Edes Ave/98th Ave	Signal	PM	29.1	C	30.5	C	30.5	C	32.1	C	34.5	C	34.5	C	41	D	41	D
76	Coliseum Way/I-880 NB Ramps/42nd Ave	Signal	AM	13.8	B	15.5	B	15.5	B	69	E	82.3 (v/c=1.13)	F	82.3 (v/c=1.13)	F	92.1 (v/c=1.15)	F	92.1 (v/c=1.15)	F
76	Coliseum Way/I-880 NB Ramps/42nd Ave	Signal	PM	19.3	B	20.2	C	20.2	C	33.8	C	37.8	D	37.8	D	40	D	40	D
77	I-880 SB Off-Ramp/I-880 SB Ramps/42nd Ave	Signal	AM	29	C	36	D	36	D	37.3	D	41.1	D	41.1	D	48	D	48	D
77	I-880 SB Off-Ramp/I-880 SB Ramps/42nd Ave	Signal	PM	16.8	B	16.6	B	16.6	B	28.6	C	31.9	C	31.9	C	37.5	D	37.5	D
78	Coliseum Way/High St	Signal	AM	52.3	D	64.9	E	23.2	C	57	E	70.5	E	35.2	D	98.6 (v/c=1.22)	F	45.6	D
78	Coliseum Way/High St	Signal	PM	122.7 (v/c=1.21)	F	142.6 (v/c=1.29)	F	69.7	E	174.2 (v/c=1.4)	F	184.6 (v/c=1.47)	F	76.7	E	240.3 (v/c=1.53)	F	91 (v/c=1.22)	F
79	Oakport St/I-880 SB Off-Ramp/High St & Alameda Ave	Signal	AM	51.4	D	54	D	54.8	D	50.2	D	55	D	45.9	D	62.3	E	49.4	D
79	Oakport St/I-880 SB Off-Ramp/High St & Alameda Ave	Signal	PM	48.7	D	52.7	D	53	D	51.8	D	59.5	E	54.8	D	81.8 (v/c=1.43)	F	71.2	E
80	Coliseum Way/Zhone Way/66th Ave	Signal	AM	7	A	8.1	A	8.1	A	8.3	A	10	A	10	A	10.3	B	10.3	B
80	Coliseum Way/Zhone Way/66th Ave	Signal	PM	8.4	A	13.3	B	13.3	B	13.6	B	26.6	C	26.6	C	41.5	D	41.5	D

APPENDIX E - INTERSECTION LEVEL OF SERVICE SUMMARY (WEEKDAY)

				Existing		Existing Plus Project		Existing Plus Project Plus Mitigations		2035 No Project		2035 Plus Coliseum Site Conditions		2035 Plus Coliseum Site Conditions Plus Mitigations		2035 Plus Specific Plan Buildout Conditions		2035 Plus Specific Plan Buildout Conditions Plus Mitigations	
Int No	Study Intersection	Traffic Control	Peak Hour	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
81	Zhone Way/I-880 SB Off-Ramp	Signal	AM	5.8	A	6.4	A	6.4	A	6.4	A	7.2	A	7.2	A	11	B	11	B
81	Zhone Way/I-880 SB Off-Ramp	Signal	PM	6.2	A	7.2	A	7.2	A	6.2	A	7.3	A	7.3	A	10.8	B	10.8	B
82	Oakport St/Zhone Way	Signal	AM	6.6	A	7.4	A	7.4	A	7.8	A	8.7	A	8.7	A	45.3	D	14.3	B
82	Oakport St/Zhone Way	Signal	PM	8.1	A	14.2	B	14.2	B	18	B	30.5	C	30.5	C	322.8 (v/c=3.28)	F	14.6	B
83	Edes Ave/I-880 Off-Ramp	Signal	AM	19.2	B	22.1	C	22.1	C	24.1	C	27.9	C	27.9	C	32.8	C	32.8	C
83	Edes Ave/I-880 Off-Ramp	Signal	PM	17	B	19.3	B	19.3	B	21.3	C	24.7	C	24.7	C	27.3	C	27.3	C
84	Hegenberger Rd/I-880 SB Off-Ramp	Signal	AM	11.1	B	11.1	B	11.1	B	43.6	D	43.3	D	43.3	D	86.3 (v/c=1.36)	F	43.6	D
84	Hegenberger Rd/I-880 SB Off-Ramp	Signal	PM	7.9	A	8.2	A	8.2	A	22.1	C	23.3	C	23.3	C	30.6	C	20.1	C
85	I-880 NB Off-Ramp/I-880 NB On-Ramp/98th Ave	Signal	AM	18.4	B	18.6	B	18.6	B	19.7	B	20	B	20	B	20.2	C	20.2	C
85	I-880 NB Off-Ramp/I-880 NB On-Ramp/98th Ave	Signal	PM	21.8	C	23	C	23	C	29.8	C	31.6	C	31.6	C	32.3	C	32.3	C
86	98th Ave/I-880 SB Off-Ramp	Signal	AM	13.5	B	14.7	B	14.7	B	29.8	C	32	C	32	C	42	D	42	D
86	98th Ave/I-880 SB Off-Ramp	Signal	PM	6.3	A	6.6	A	6.6	A	10.2	B	10.8	B	10.8	B	11.1	B	11.1	B
87	I-880 NB Off-Ramp/Davis St	Signal	AM	7.7	A	7.7	A	7.7	A	8.4	A	8.6	A	8.6	A	9.1	A	9.1	A
87	I-880 NB Off-Ramp/Davis St	Signal	PM	9.4	A	9.6	A	9.6	A	11.6	B	12	B	12	B	12.7	B	12.7	B
88	Davis St/I-880 SB Off-Ramp	Signal	AM	8.5	A	8.7	A	8.7	A	9.6	A	9.9	A	9.9	A	10.5	B	10.5	B
88	Davis St/I-880 SB Off-Ramp	Signal	PM	10.7	B	11	B	11	B	11.1	B	11.5	B	11.5	B	12.3	B	12.3	B
89	Alameda Ave/Fruitvale Ave	Signal	AM	8.3	A	8.4	A	8.4	A	17.8	B	18.2	B	18.2	B	18.3	B	18.3	B
89	Alameda Ave/Fruitvale Ave	Signal	PM	7.7	A	7.7	A	7.7	A	17.3	B	17.6	B	17.6	B	17.8	B	17.8	B
90	Blanding Ave/Park St	Signal	AM	49.6	D	49.6	D	49.6	D	164.8 (v/c=1.72)	F	164.8 (v/c=1.72)	F	164.8 (v/c=1.72)	F	164.8 (v/c=1.72)	F	164.8 (v/c=1.72)	F
90	Blanding Ave/Park St	Signal	PM	16.1	B	16.1	B	16.1	B	34.4	C	34.4	C	34.4	C	34.4	C	34.4	C
91	Fernside Blvd/Blanding Ave/Tilden Way	Signal	AM	24	C	24.5	C	24.5	C	153.5 (v/c=1.29)	F	156.9 (v/c=1.3)	F	156.9 (v/c=1.3)	F	163.7 (v/c=1.33)	F	65.3	E
91	Fernside Blvd/Blanding Ave/Tilden Way	Signal	PM	32	C	32.6	C	32.6	C	198.1 (v/c=1.51)	F	199.8 (v/c=1.51)	F	199.8 (v/c=1.51)	F	205.5 (v/c=1.52)	F	74.8	E
92	Fernside Blvd/High St & Gibbons Dr	Signal	AM	90.9 (v/c=1.03)	F	104.9 (v/c=1.06)	F	104.9 (v/c=1.06)	F	179.2 (v/c=1.78)	F	190.8 (v/c=1.85)	F	190.8 (v/c=1.85)	F	190.2 (v/c=1.85)	F	98.3 (v/c=1.57)	F
92	Fernside Blvd/High St & Gibbons Dr	Signal	PM	20.3	C	21	C	21	C	72.9	E	81.3 (v/c=1.43)	F	81.3 (v/c=1.43)	F	101 (v/c=1.55)	F	62.5	E
93	Broadway/Tilden Way	Signal	AM	18.9	B	19.1	B	19.1	B	29	C	29.4	C	29.4	C	30.9	C	30.9	C
93	Broadway/Tilden Way	Signal	PM	17.7	B	18.1	B	18.1	B	25.1	C	25.7	C	25.7	C	26.4	C	26.4	C
94	Tilden Way/Park St	Signal	AM	13	B	13	B	13	B	16.7	B	16.7	B	16.7	B	17.5	B	17.5	B
94	Tilden Way/Park St	Signal	PM	13.7	B	13.7	B	13.7	B	15.6	B	15.6	B	15.6	B	15.7	B	15.7	B
95	Otis Dr/Park St	Signal	AM	19.3	B	19.3	B	19.3	B	33.1	C	33.3	C	33.3	C	33.7	C	33.7	C
95	Otis Dr/Park St	Signal	PM	31.2	C	31.4	C	31.4	C	37	D	37.2	D	37.2	D	37.7	D	37.7	D
96	Otis Dr/Broadway	Signal	AM	18.8	B	19.1	B	19.1	B	30.1	C	31.1	C	31.1	C	34.4	C	34.4	C
96	Otis Dr/Broadway	Signal	PM	21.3	C	22.1	C	22.1	C	45.9	D	48.8	D	48.8	D	53.5	D	53.5	D
97	Otis Dr/High St	Signal	AM	22.6	C	22.7	C	22.7	C	42.9	D	43.1	D	43.1	D	46.2	D	46.2	D
97	Otis Dr/High St	Signal	PM	19.9	B	20.6	C	20.6	C	34.9	C	37.3	D	37.3	D	38	D	38	D
98	Otis Dr/Fernside Blvd	Signal	AM	38.8	D	41.8	D	41.8	D	67	E	70.7	E	70.7	E	73	E	73	E
98	Otis Dr/Fernside Blvd	Signal	PM	63.9	E	68.1	E	68.1	E	146.9 (v/c=1.23)	F	151.7 (v/c=1.24)	F	151.7 (v/c=1.24)	F	157.8 (v/c=1.25)	F	157.8 (v/c=1.25)	F
99	Edgewater Dr/Oakport St	Signal	AM	13.6	B	13.6	B	13.6	B	15.5	B	15.5	B	15.5	B	13.6	B	13.6	B
99	Edgewater Dr/Oakport St	Signal	PM	14.7	B	17.5	B	17.5	B	20	B	20	B	20	B	45	D	45	D
100	Hegenberger Ct/Edgewater Dr/Hegenberger Rd	Signal	AM	35.3	D	35.3	D	35.3	D	64.1	E	64.8	E	64.8	E	210.3 (v/c=1.51)	F	180.2 (v/c=1.35)	F
100	Hegenberger Ct/Edgewater Dr/Hegenberger Rd	Signal	PM	42.3	D	46	D	46	D	49.8	D	52.7	D	52.7	D	147.8 (v/c=1.25)	F	165.6 (v/c=1.32)	F
101	Airport Access Rd/Pardee Dr/Hegenberger Rd	Signal	AM	24.2	C	25	C	25	C	31.3	C	32.3	C	32.3	C	52.8	D	51.4	D
101	Airport Access Rd/Pardee Dr/Hegenberger Rd	Signal	PM	25.4	C	26.3	C	26.3	C	41.4	D	43.4	D	43.4	D	65.3	E	50.1	D
102	Airport Access Rd/98th Ave	Signal	AM	21.3	C	22	C	22	C	25.5	C	26.5	C	26.5	C	36.6	D	36.6	D
102	Airport Access Rd/98th Ave	Signal	PM	25.5	C	26.7	C	26.7	C	44.2	D	43	D	43	D	57	E	57	E
103	Island Dr/Otis Dr/Otis Dr/Doolittle Dr	Signal	AM	123.7 (v/c=1.16)	F	126.9 (v/c=1.17)	F	126.9 (v/c=1.17)	F	192.7 (v/c=1.41)	F	195.9 (v/c=1.42)	F	195.9 (v/c=1.42)	F	202.3 (v/c=1.44)	F	202.3 (v/c=1.44)	F
103	Island Dr/Otis Dr/Otis Dr/Doolittle Dr	Signal	PM	77.4	E	78.5	E	78.5	E	161.5 (v/c=1.36)	F	162.3 (v/c=1.36)	F	162.3 (v/c=1.36)	F	168.7 (v/c=1.38)	F	168.7 (v/c=1.38)	F
104	Harbor Bay Pkwy/Doolittle Dr	Signal	AM	9.5	A	9.6	A	9.6	A	11.8	B	11.8	B	11.8	B	11.9	B	11.9	B
104	Harbor Bay Pkwy/Doolittle Dr	Signal	PM	10.7	B	10.7	B	10.7	B	15.7	B	15.8	B	15.8	B	15.9	B	15.9	B
105	Doolittle Dr/Swan Way	Signal	AM	10.1	B	10.1	B	10.1	B	14	B	14.3	B	14.3	B	16.9	B	16.9	B
105	Doolittle Dr/Swan Way	Signal	PM	10.6	B	10.7	B	10.7	B	21.2	C	22	C	22	C	23.5	C	23.5	C
106	Doolittle Dr/Hegenberger Rd	Signal	AM	29.3	C	29.5	C	29.5	C	38.8	D	39.1	D	39.1	D	45.6	D	45.6	D
106	Doolittle Dr/Hegenberger Rd	Signal	PM	26.6	C	27.9	C	27.9	C	47.9	D	50.8	D	50.8	D	55	D	55	D
107	Doolittle Dr/Airport Access Rd	Signal	AM	17.7	B	17.9	B	17.9	B	16.5	B	16.9	B	16.9	B	18.2	B	18.2	B
107	Doolittle Dr/Airport Access Rd	Signal	PM	27.9	C	28	C	28	C	26.6	C	26.9	C	26.9	C	29.6	C	29.6	C
108	Doolittle Dr/Davis St	Signal	AM	24.4	C	24.8	C	24.8	C	39.1	D	41.4	D	41.4	D	50.9	D	50.9	D
108	Doolittle Dr/Davis St	Signal	PM	24.6	C	25.4	C	25.4	C	39.3	D	41.1	D	41.1	D	53.1	D	53.1	D

APPENDIX 4.13

Traffic Appendices

B: Level-Of-Service Worksheets under Existing Traffic Conditions

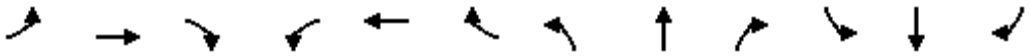
Appendix F

LOS Calculation Worksheets
Existing Conditions

FEHR PEERS

HCM Unsignalized Intersection Capacity Analysis
1: Frontage Road/SR 13 NB On-Ramp & Mountain Boulevard

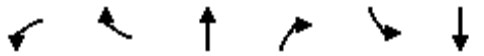
1/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	225	27	42	35	19	18	17	419	45	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	225	27	42	35	19	18	17	419	45	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	294	72	481
Volume Left (vph)	225	35	17
Volume Right (vph)	42	18	45
Hadj (s)	0.10	-0.02	-0.02
Departure Headway (s)	5.4	5.7	4.9
Degree Utilization, x	0.44	0.11	0.66
Capacity (veh/h)	628	571	705
Control Delay (s)	12.6	9.4	16.8
Approach Delay (s)	12.6	9.4	16.8
Approach LOS	B	A	C

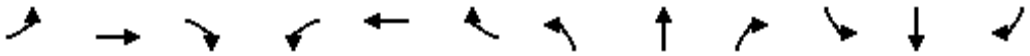
Intersection Summary				
Delay	14.7			
Level of Service	B			
Intersection Capacity Utilization	55.6%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	20	702	6	3	74
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	9	20	702	6	3	74
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	786	708			709	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	786	708			709	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	95			100	
cM capacity (veh/h)	359	434			889	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	29	708	77
Volume Left	9	0	3
Volume Right	20	6	0
cSH	408	1700	889
Volume to Capacity	0.07	0.42	0.00
Queue Length 95th (ft)	6	0	0
Control Delay (s)	14.5	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	14.5	0.0	0.4
Approach LOS	B		

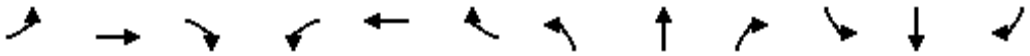
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	98	166	37	2	654	4	0	0	5	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	0	98	166	37	2	654	4	0	0	5	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1338	1320	8	1418	1322	2	10			4		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1338	1320	8	1418	1322	2	10			4		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	98	100	91	0	58	100	59			100		
cM capacity (veh/h)	53	94	1076	60	88	1088	1608			1631		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1
Volume Total	99	166	39	654	2	2	10
Volume Left	1	166	0	654	0	0	0
Volume Right	98	0	2	0	0	0	5
cSH	901	60	92	1608	1700	1700	1700
Volume to Capacity	0.11	2.76	0.42	0.41	0.00	0.00	0.01
Queue Length 95th (ft)	9	423	44	51	0	0	0
Control Delay (s)	9.5	939.6	70.4	8.8	0.0	0.0	0.0
Lane LOS	A	F	F	A			
Approach Delay (s)	9.5	774.2		8.7			0.0
Approach LOS	A	F					

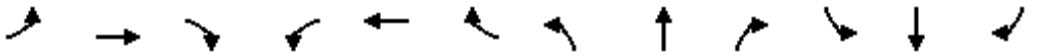
Intersection Summary				
Average Delay	170.1			
Intersection Capacity Utilization	65.4%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	514	312	17	0	0	0	24	140	27	74	20	163
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	514	312	17	0	0	0	24	140	27	74	20	163

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	670	173	191	74	183
Volume Left (vph)	514	0	24	74	0
Volume Right (vph)	0	17	27	0	163
Hadj (s)	0.41	-0.05	-0.04	0.52	-0.59
Departure Headway (s)	6.3	5.9	6.8	7.5	6.4
Degree Utilization, x	1.0	0.28	0.36	0.15	0.32
Capacity (veh/h)	560	603	521	470	555
Control Delay (s)	118.8	9.9	13.6	10.6	11.2
Approach Delay (s)	96.5		13.6	11.0	
Approach LOS	F		B	B	

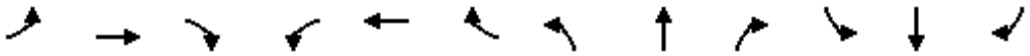
Intersection Summary				
Delay	67.2			
Level of Service	F			
Intersection Capacity Utilization	60.3%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	800	3	8	188	0	3	0	20	30	39	393
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	800	3	8	188	0	3	0	20	30	39	393
Pedestrians								2				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	188			805			1420	1008	404	624	1009	188
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	188			805			1420	1008	404	624	1009	188
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			99			93	100	97	91	83	51
cM capacity (veh/h)	1398			827			44	240	601	352	234	810

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	533	270	8	188	23	69	393
Volume Left	0	0	8	0	3	30	0
Volume Right	0	3	0	0	20	0	393
cSH	1700	1700	827	1700	226	274	810
Volume to Capacity	0.31	0.16	0.01	0.11	0.10	0.25	0.49
Queue Length 95th (ft)	0	0	1	0	8	24	67
Control Delay (s)	0.0	0.0	9.4	0.0	22.7	22.5	13.6
Lane LOS			A		C	C	B
Approach Delay (s)	0.0		0.4		22.7	14.9	
Approach LOS					C	B	

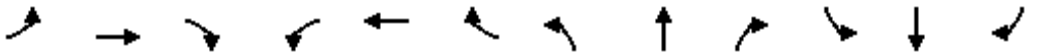
Intersection Summary				
Average Delay	5.0			
Intersection Capacity Utilization	47.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	556	26	130	22	11	67	234	372	7	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	3.5			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.88			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1752	1500			1773	1568	1752	1863	1385			
Flt Permitted	0.95	1.00			0.72	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1752	1500			1323	1568	1752	1863	1385			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	556	26	130	22	11	67	234	372	7	0	0	0
RTOR Reduction (vph)	0	54	0	0	0	59	0	0	5	0	0	0
Lane Group Flow (vph)	556	102	0	0	33	8	234	372	2	0	0	0
Confl. Peds. (#/hr)			4	4								
Confl. Bikes (#/hr)			1						2			
Heavy Vehicles (%)	3%	0%	10%	5%	0%	3%	3%	2%	14%	2%	2%	2%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	24.3	34.7			6.9	6.9	17.2	17.2	17.2			
Effective Green, g (s)	23.3	34.7			7.4	7.4	16.7	16.7	17.2			
Actuated g/C Ratio	0.39	0.58			0.12	0.12	0.28	0.28	0.29			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	687	876			164	195	492	523	401			
v/s Ratio Prot	c0.32	0.07						c0.20				
v/s Ratio Perm					c0.02	0.01	0.13		0.00			
v/c Ratio	0.81	0.12			0.20	0.04	0.48	0.71	0.01			
Uniform Delay, d1	16.1	5.5			23.3	22.9	17.7	19.2	15.0			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	7.0	0.1			0.2	0.0	0.3	3.8	0.0			
Delay (s)	23.1	5.6			23.6	22.9	18.0	23.0	15.0			
Level of Service	C	A			C	C	B	C	B			
Approach Delay (s)		19.2			23.1			21.0			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

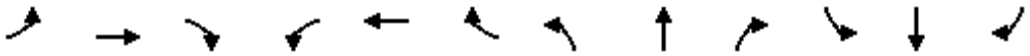
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	679	1	0	247	0	1	0	0	34	0	543
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			1.00			1.00	0.85
Flt Protected		1.00			1.00			0.95			0.95	1.00
Satd. Flow (prot)		1827			1863			1805			1656	1565
Flt Permitted		1.00			1.00			0.95			0.95	1.00
Satd. Flow (perm)		1827			1863			1805			1656	1565
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	679	1	0	247	0	1	0	0	34	0	543
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	444
Lane Group Flow (vph)	0	680	0	0	247	0	0	1	0	0	34	99
Confl. Peds. (#/hr)			3	3								1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	4%	0%	0%	2%	0%	0%	0%	2%	9%	0%	1%
Turn Type		NA			NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		23.4			23.4			1.7			8.3	8.3
Effective Green, g (s)		23.4			23.4			1.7			8.3	8.3
Actuated g/C Ratio		0.52			0.52			0.04			0.18	0.18
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		941			960			67			302	286
v/s Ratio Prot		c0.37			0.13			c0.00			0.02	
v/s Ratio Perm												c0.06
v/c Ratio		0.72			0.26			0.01			0.11	0.35
Uniform Delay, d1		8.5			6.1			21.0			15.5	16.2
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		3.0			0.2			0.1			0.1	0.3
Delay (s)		11.5			6.3			21.1			15.5	16.5
Level of Service		B			A			C			B	B
Approach Delay (s)		11.5			6.3			21.1			16.4	
Approach LOS		B			A			C			B	

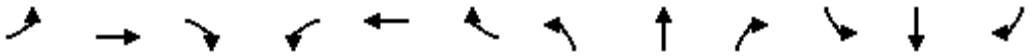
Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	45.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



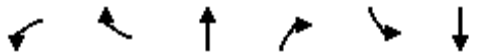
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	58	184	474	152	0	60	0	758	147	696	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.99	1.00	1.00		1.00		1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		1.00	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1900	1575	3433	1881		1736		2760		3496	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1900	1575	3433	1881		1736		2760		3496	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	58	184	474	152	0	60	0	758	147	696	14
RTOR Reduction (vph)	0	0	171	0	0	0	0	0	389	0	1	0
Lane Group Flow (vph)	0	58	13	474	152	0	60	0	369	0	856	0
Confl. Peds. (#/hr)	2		1			2						3
Heavy Vehicles (%)	0%	0%	1%	2%	1%	0%	4%	0%	2%	2%	2%	7%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		8.4	8.4	47.7	61.1		6.7		59.4		38.2	
Effective Green, g (s)		8.4	8.4	47.7	61.1		5.7		58.4		38.2	
Actuated g/C Ratio		0.07	0.07	0.40	0.51		0.05		0.49		0.32	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		133	110	1364	957		82		1343		1112	
v/s Ratio Prot		c0.03		c0.14	0.08		c0.03		0.13		c0.24	
v/s Ratio Perm			0.01									
v/c Ratio		0.44	0.12	0.35	0.16		0.73		0.27		0.77	
Uniform Delay, d1		53.5	52.3	25.3	15.7		56.4		18.3		36.9	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		0.8	0.2	0.7	0.4		24.8		0.0		2.9	
Delay (s)		54.4	52.5	26.0	16.1		81.2		18.3		39.9	
Level of Service		D	D	C	B		F		B		D	
Approach Delay (s)		52.9			23.6			22.9			39.9	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	460	520	0	0	321	123	339	2	332	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3433	1827			1845	1555		1792	1545			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3433	1827			1845	1555		1792	1545			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	460	520	0	0	321	123	339	2	332	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	95	0	0	166	0	0	0
Lane Group Flow (vph)	460	520	0	0	321	28	0	341	166	0	0	0
Confl. Peds. (#/hr)			8			5			2			
Heavy Vehicles (%)	2%	4%	0%	0%	3%	2%	1%	0%	2%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	20.3	47.6			22.8	22.8		43.4	43.4			
Effective Green, g (s)	20.3	47.6			22.8	22.8		43.4	43.4			
Actuated g/C Ratio	0.20	0.48			0.23	0.23		0.43	0.43			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	696	869			420	354		777	670			
v/s Ratio Prot	c0.13	0.28			c0.17							
v/s Ratio Perm						0.02		0.19	0.11			
v/c Ratio	0.66	0.60			0.76	0.08		0.44	0.25			
Uniform Delay, d1	36.7	19.2			36.1	30.3		19.8	17.9			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	3.1	1.7			9.4	0.2		1.8	0.9			
Delay (s)	39.8	20.9			45.5	30.5		21.6	18.8			
Level of Service	D	C			D	C		C	B			
Approach Delay (s)		29.8			41.4			20.2			0.0	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	812	361	277	1018
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	812	361	277	1018
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.84					
vC, conflicting volume	2056	586			812	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1870	586			812	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			66	
cM capacity (veh/h)	36	458			817	

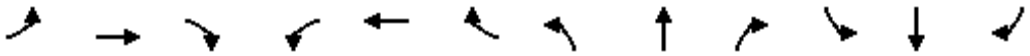
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	541	632	277	509	509
Volume Left	0	0	277	0	0
Volume Right	0	361	0	0	0
cSH	1700	1700	817	1700	1700
Volume to Capacity	0.32	0.37	0.34	0.30	0.30
Queue Length 95th (ft)	0	0	38	0	0
Control Delay (s)	0.0	0.0	11.7	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.5		
Approach LOS					

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	376	61	6	179	329	156	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.94	
Flt Protected	1.00	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3539	1583		1770	3539	1685	
Flt Permitted	1.00	1.00		0.42	1.00	0.97	
Satd. Flow (perm)	3539	1583		786	3539	1685	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	376	61	6	179	329	156	144
RTOR Reduction (vph)	0	16	0	0	0	36	0
Lane Group Flow (vph)	376	45	0	185	329	264	0
Confl. Peds. (#/hr)							6
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	11.9	30.1		21.6	21.6	12.7	
Effective Green, g (s)	11.9	30.1		21.6	21.6	12.7	
Actuated g/C Ratio	0.27	0.68		0.49	0.49	0.29	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	950	1075		532	1725	483	
v/s Ratio Prot	0.11	0.03		c0.05	0.09	c0.16	
v/s Ratio Perm				c0.12			
v/c Ratio	0.40	0.04		0.35	0.19	0.55	
Uniform Delay, d1	13.3	2.3		6.6	6.4	13.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.0		0.4	0.1	1.3	
Delay (s)	13.5	2.4		7.0	6.5	14.6	
Level of Service	B	A		A	A	B	
Approach Delay (s)	12.0				6.7	14.6	
Approach LOS	B				A	B	

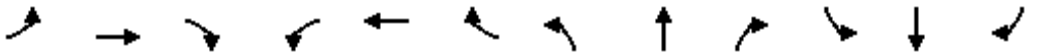
Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	44.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	227	4	64	187	235	1	218	56	158	285	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		1.00			1.00	0.85		0.97		1.00	0.97	
Flt Protected		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1832			3495	1583		3400		1770	1807	
Flt Permitted		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1832			3495	1583		3400		1770	1807	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	94	227	4	64	187	235	1	218	56	158	285	60
RTOR Reduction (vph)	0	0	0	0	0	159	0	22	0	0	6	0
Lane Group Flow (vph)	0	325	0	0	251	76	0	253	0	158	339	0
Confl. Peds. (#/hr)	13		14	14		13	8		27	27		8
Confl. Bikes (#/hr)			1			1						
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		20.2			11.6	21.6		11.8		21.6	21.6	
Effective Green, g (s)		20.2			11.6	21.6		11.8		21.6	21.6	
Actuated g/C Ratio		0.26			0.15	0.28		0.15		0.28	0.28	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		479			525	442		519		495	505	
v/s Ratio Prot		c0.18			c0.07	0.05		c0.07		0.09	c0.19	
v/s Ratio Perm												
v/c Ratio		0.68			0.48	0.17		0.49		0.32	0.67	
Uniform Delay, d1		25.6			30.0	21.0		29.9		22.0	24.6	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		3.8			0.7	0.2		0.7		0.4	3.5	
Delay (s)		29.4			30.7	21.2		30.7		22.4	28.1	
Level of Service		C			C	C		C		C	C	
Approach Delay (s)		29.4			26.1			30.7			26.3	
Approach LOS		C			C			C			C	

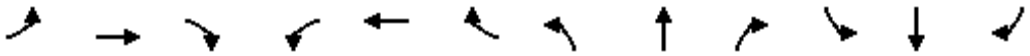
Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	136	412	66	22	530	30	136	244	27	44	128	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (prot)	1687	1845	1587	1719	1848			3418			3338	1436
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (perm)	1687	1845	1587	1719	1848			3418			3338	1436
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	136	412	66	22	530	30	136	244	27	44	128	99
RTOR Reduction (vph)	0	0	36	0	1	0	0	3	0	0	0	0
Lane Group Flow (vph)	136	412	30	22	559	0	0	404	0	0	172	99
Confl. Peds. (#/hr)			3						10			32
Confl. Bikes (#/hr)						2			1			1
Heavy Vehicles (%)	7%	3%	0%	5%	2%	0%	3%	2%	4%	12%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	15.1	49.1	49.1	9.2	43.2			19.1			14.7	111.6
Effective Green, g (s)	15.1	50.6	50.6	9.2	44.7			20.1			15.7	111.6
Actuated g/C Ratio	0.14	0.45	0.45	0.08	0.40			0.18			0.14	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	228	836	719	141	740			615			469	1436
v/s Ratio Prot	c0.08	0.22		0.01	c0.30			c0.12			c0.05	
v/s Ratio Perm			0.02									0.07
v/c Ratio	0.60	0.49	0.04	0.16	0.76			0.66			0.37	0.07
Uniform Delay, d1	45.4	21.5	17.0	47.6	28.7			42.5			43.4	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	4.2	0.5	0.0	0.5	4.4			2.5			0.5	0.1
Delay (s)	49.5	21.9	17.0	48.1	33.1			45.1			43.9	0.1
Level of Service	D	C	B	D	C			D			D	A
Approach Delay (s)		27.5			33.7			45.1			27.9	
Approach LOS		C			C			D			C	

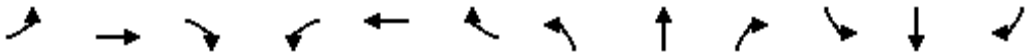
Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	111.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	396	18	36	463	316	5	35	13	122	28	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			0.98	
Frt		0.99			0.94			0.97			0.95	
Flt Protected		1.00			1.00			1.00			0.97	
Satd. Flow (prot)		3502			3321			1764			3163	
Flt Permitted		0.95			0.93			0.96			0.71	
Satd. Flow (perm)		3335			3081			1703			2322	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	396	18	36	463	316	5	35	13	122	28	66
RTOR Reduction (vph)	0	3	0	0	85	0	0	11	0	0	56	0
Lane Group Flow (vph)	0	414	0	0	730	0	0	42	0	0	160	0
Confl. Peds. (#/hr)			81	81			21		40	40		21
Confl. Bikes (#/hr)			6						1			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)		47.6			47.6			9.4			9.4	
Effective Green, g (s)		47.6			47.6			9.4			9.4	
Actuated g/C Ratio		0.73			0.73			0.14			0.14	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		2442			2256			246			335	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.24			0.02			c0.07	
v/c Ratio		0.17			0.32			0.17			0.48	
Uniform Delay, d1		2.7			3.1			24.4			25.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			0.4			0.3			1.1	
Delay (s)		2.8			3.4			24.7			26.6	
Level of Service		A			A			C			C	
Approach Delay (s)		2.8			3.4			24.7			26.6	
Approach LOS		A			A			C			C	

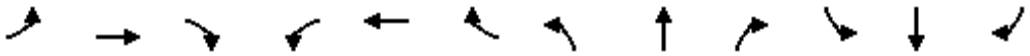
Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	372	131	68	801	161	47	231	1	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			1.00				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.98			1.00				
Flt Protected		1.00	1.00		1.00			0.99				
Satd. Flow (prot)		3539	1573		3438			3507				
Flt Permitted		1.00	1.00		0.90			0.99				
Satd. Flow (perm)		3539	1573		3115			3507				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	372	131	68	801	161	47	231	1	0	0	0
RTOR Reduction (vph)	0	0	0	0	28	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	372	131	0	1002	0	0	278	0	0	0	0
Confl. Peds. (#/hr)									22	22		
Confl. Bikes (#/hr)			2			3			12			1
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		30.1	57.5		30.1			27.4				
Effective Green, g (s)		30.1	57.5		30.1			27.4				
Actuated g/C Ratio		0.46	0.88		0.46			0.42				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		1638	1500		1442			1478				
v/s Ratio Prot		0.11	0.04									
v/s Ratio Perm			0.05		c0.32			0.08				
v/c Ratio		0.23	0.09		0.69			0.19				
Uniform Delay, d1		10.5	0.5		13.8			11.8				
Progression Factor		0.75	1.34		1.00			1.00				
Incremental Delay, d2		0.1	0.0		1.5			0.3				
Delay (s)		7.9	0.7		15.3			12.1				
Level of Service		A	A		B			B				
Approach Delay (s)		6.0			15.3			12.1			0.0	
Approach LOS		A			B			B			A	

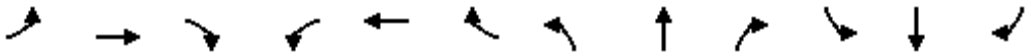
Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



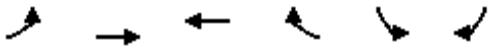
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	214	47	33	446	18	49	157	18	22	242	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			0.99			0.97	
Flpb, ped/bikes		1.00			1.00			0.98			0.99	
Frt		0.98			1.00			0.99			0.97	
Flt Protected		1.00			1.00			0.99			1.00	
Satd. Flow (prot)		1794			1838			3356			3283	
Flt Permitted		0.95			0.96			0.83			0.93	
Satd. Flow (perm)		1716			1778			2817			3057	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	214	47	33	446	18	49	157	18	22	242	71
RTOR Reduction (vph)	0	11	0	0	2	0	0	8	0	0	32	0
Lane Group Flow (vph)	0	274	0	0	495	0	0	216	0	0	303	0
Confl. Peds. (#/hr)	63		40	40		63	54		55	55		54
Confl. Bikes (#/hr)			3			17			4			7
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		38.3			24.2			25.1			25.1	
Effective Green, g (s)		34.3			24.2			25.1			25.1	
Actuated g/C Ratio		0.47			0.33			0.35			0.35	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		812			594			976			1059	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			c0.28			0.08			c0.10	
v/c Ratio		0.34			0.83			0.22			0.29	
Uniform Delay, d1		11.9			22.2			16.7			17.2	
Progression Factor		0.09			1.00			1.00			1.00	
Incremental Delay, d2		0.1			9.3			0.5			0.7	
Delay (s)		1.2			31.6			17.3			17.8	
Level of Service		A			C			B			B	
Approach Delay (s)		1.2			31.6			17.3			17.8	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	72.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



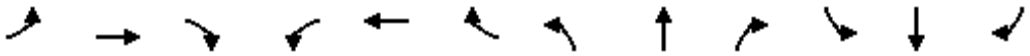
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	347	62	59	490	77	110	346	26	48	282	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.96			0.94		1.00	0.98		1.00	0.97	
Flpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3309			1698		1770	1805		1770	1758	
Flt Permitted		0.92			0.92		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3055			1566		1770	1805		1770	1758	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	17	347	62	59	490	77	110	346	26	48	282	54
RTOR Reduction (vph)	0	11	0	0	4	0	0	3	0	0	10	0
Lane Group Flow (vph)	0	415	0	0	622	0	110	369	0	48	326	0
Confl. Peds. (#/hr)	143		88	88		143			156			60
Confl. Bikes (#/hr)			1									
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		45.2			45.2		15.4	32.3		7.0	23.9	
Effective Green, g (s)		45.2			45.2		15.4	32.3		7.0	23.9	
Actuated g/C Ratio		0.45			0.45		0.15	0.32		0.07	0.24	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1380			707		272	583		123	420	
v/s Ratio Prot							c0.06	c0.20		0.03	c0.19	
v/s Ratio Perm		0.14			c0.40							
v/c Ratio		0.30			0.88		0.40	0.63		0.39	0.78	
Uniform Delay, d1		17.4			24.9		38.2	28.8		44.5	35.6	
Progression Factor		1.00			1.00		1.18	1.00		1.00	1.00	
Incremental Delay, d2		0.6			14.7		0.3	1.5		0.7	8.0	
Delay (s)		17.9			39.6		45.4	30.2		45.2	43.6	
Level of Service		B			D		D	C		D	D	
Approach Delay (s)		17.9			39.6			33.6			43.8	
Approach LOS		B			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



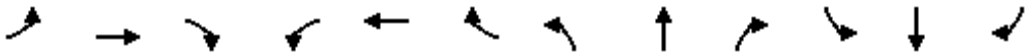
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	64	342	363	97	183	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1770	1863	1778		1695	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1770	1863	1778		1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	64	342	363	97	183	102
RTOR Reduction (vph)	0	0	5	0	23	0
Lane Group Flow (vph)	64	342	455	0	262	0
Confl. Peds. (#/hr)	67			67		
Confl. Bikes (#/hr)				14		9
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	7.5	70.9	58.9		20.6	
Effective Green, g (s)	7.5	70.9	58.9		20.6	
Actuated g/C Ratio	0.08	0.71	0.59		0.21	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	132	1320	1047		349	
v/s Ratio Prot	c0.04	0.18	c0.26		c0.15	
v/s Ratio Perm						
v/c Ratio	0.48	0.26	0.43		0.75	
Uniform Delay, d1	44.4	5.2	11.4		37.3	
Progression Factor	0.66	2.12	0.31		1.00	
Incremental Delay, d2	2.5	0.4	1.1		8.8	
Delay (s)	32.0	11.4	4.6		46.1	
Level of Service	C	B	A		D	
Approach Delay (s)		14.7	4.6		46.1	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



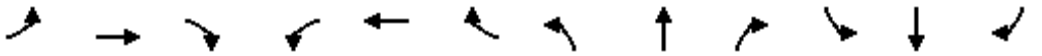
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	455	92	69	382	92	79	487	104	53	254	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.98			0.98			0.98		1.00	0.99	
Flt Protected		1.00			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1817			1809			3437		1770	3497	
Flt Permitted		0.94			0.87			0.86		0.23	1.00	
Satd. Flow (perm)		1709			1583			2972		429	3497	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	455	92	69	382	92	79	487	104	53	254	22
RTOR Reduction (vph)	0	5	0	0	6	0	0	18	0	0	8	0
Lane Group Flow (vph)	0	584	0	0	537	0	0	652	0	53	268	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		60.8			60.8			29.2		29.2	29.2	
Effective Green, g (s)		60.8			60.8			29.2		29.2	29.2	
Actuated g/C Ratio		0.61			0.61			0.29		0.29	0.29	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		1039			962			867		125	1021	
v/s Ratio Prot											0.08	
v/s Ratio Perm		c0.34			0.34			c0.22		0.12		
v/c Ratio		0.56			0.56			0.75		0.42	0.26	
Uniform Delay, d1		11.7			11.6			32.1		28.6	27.1	
Progression Factor		1.00			1.00			1.00		0.59	0.59	
Incremental Delay, d2		2.2			2.3			3.7		2.2	0.1	
Delay (s)		13.9			14.0			35.8		19.1	16.2	
Level of Service		B			B			D		B	B	
Approach Delay (s)		13.9			14.0			35.8			16.7	
Approach LOS		B			B			D			B	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



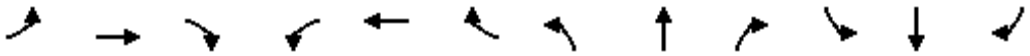
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	111	25	44	286	90	23	436	52	39	375	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00		0.91	1.00		0.97	1.00		0.98	1.00	
Frt		0.98		1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1758		1607	1751		1720	1819		1728	1812	
Flt Permitted		0.79		0.63	1.00		0.47	1.00		0.42	1.00	
Satd. Flow (perm)		1400		1061	1751		842	1819		766	1812	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	111	25	44	286	90	23	436	52	39	375	52
RTOR Reduction (vph)	0	10	0	0	18	0	0	7	0	0	8	0
Lane Group Flow (vph)	0	150	0	44	358	0	23	481	0	39	419	0
Confl. Peds. (#/hr)	38		68	68		38	65		61	61		65
Confl. Bikes (#/hr)			4			10			9			6
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		366		277	457		518	1119		471	1115	
v/s Ratio Prot					c0.20			c0.26			0.23	
v/s Ratio Perm		0.11		0.04			0.03			0.05		
v/c Ratio		0.41		0.16	0.78		0.04	0.43		0.08	0.38	
Uniform Delay, d1		19.8		18.5	22.3		4.9	6.5		5.1	6.3	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.4		0.3	8.6		0.2	1.2		0.3	1.0	
Delay (s)		23.2		18.8	30.9		5.1	7.7		5.4	7.2	
Level of Service		C		B	C		A	A		A	A	
Approach Delay (s)		23.2			29.6			7.6			7.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	122	19	3	265	76	77	316	17	61	306	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99			0.97		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1809			3302		1770	1847		1770	1863	1547
Flt Permitted	0.95	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1809			3150		1770	1847		1770	1863	1547
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	122	19	3	265	76	77	316	17	61	306	168
RTOR Reduction (vph)	0	7	0	0	30	0	0	2	0	0	0	111
Lane Group Flow (vph)	160	134	0	0	314	0	77	331	0	61	306	57
Confl. Peds. (#/hr)	67		42	42		67	9		8	8		9
Confl. Bikes (#/hr)			10			8			1			4
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	11.2	37.7			21.5		5.3	26.2		4.6	27.5	27.5
Effective Green, g (s)	11.2	37.7			21.5		5.3	26.2		4.6	27.5	27.5
Actuated g/C Ratio	0.14	0.47			0.27		0.07	0.33		0.06	0.34	0.34
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	246	847			841		116	601		101	636	528
v/s Ratio Prot	c0.09	0.07					c0.04	c0.18		0.03	0.16	
v/s Ratio Perm					c0.10							0.04
v/c Ratio	0.65	0.16			0.37		0.66	0.55		0.60	0.48	0.11
Uniform Delay, d1	32.8	12.3			24.0		36.7	22.3		37.1	20.9	18.1
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.6	0.4			1.3		10.5	3.6		6.8	2.6	0.4
Delay (s)	37.4	12.7			25.3		47.3	25.9		43.9	23.5	18.5
Level of Service	D	B			C		D	C		D	C	B
Approach Delay (s)		25.8			25.3			29.9			24.2	
Approach LOS		C			C			C			C	

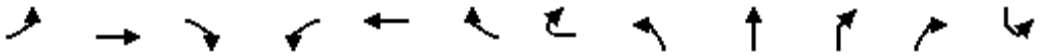
Intersection Summary			
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.5	Sum of lost time (s)	17.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	318	29	60	420	28	50	275	55	19	269	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3455			3471			3404			3401	
Flt Permitted		0.78			0.85			0.86			0.93	
Satd. Flow (perm)		2711			2966			2950			3169	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	68	318	29	60	420	28	50	275	55	19	269	57
RTOR Reduction (vph)	0	7	0	0	5	0	0	17	0	0	20	0
Lane Group Flow (vph)	0	408	0	0	503	0	0	363	0	0	325	0
Confl. Peds. (#/hr)	51		16	16		51	11		46	46		44
Confl. Bikes (#/hr)			6			4			3			7
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1223			1001			995			1398	
v/s Ratio Prot		c0.02									c0.01	
v/s Ratio Perm		0.13			c0.17			c0.12			0.09	
v/c Ratio		0.33			0.50			0.36			0.23	
Uniform Delay, d1		14.8			21.1			20.0			14.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			1.8			1.0			0.4	
Delay (s)		15.6			22.9			21.1			14.5	
Level of Service		B			C			C			B	
Approach Delay (s)		15.6			22.9			21.1			14.5	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

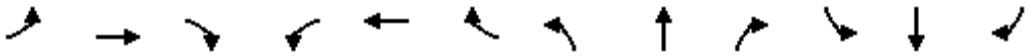


Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	21	291	20	23	282	25	4	14	178	7	25	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	4.0	4.0		
Lane Util. Factor		1.00			1.00			1.00	1.00	1.00		
Frpb, ped/bikes		1.00			1.00			1.00	1.00	0.94		
Flpb, ped/bikes		1.00			1.00			0.98	1.00	1.00		
Frt		0.99			0.99			1.00	1.00	0.85		
Flt Protected		1.00			1.00			0.95	1.00	1.00		
Satd. Flow (prot)		1837			1827			1737	1863	1483		
Flt Permitted		0.97			0.97			0.53	1.00	1.00		
Satd. Flow (perm)		1793			1779			969	1863	1483		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	291	20	23	282	25	4	14	178	7	25	1
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	26	0	0
Lane Group Flow (vph)	0	329	0	0	334	0	0	14	178	6	0	0
Confl. Peds. (#/hr)			23	23		10		13		23		
Confl. Bikes (#/hr)						4						
Turn Type	Perm	NA		Perm	NA			Perm	NA	Perm		Perm
Protected Phases		2			6				8			
Permitted Phases	2			6				8		8		4
Actuated Green, G (s)		40.3			40.3			11.5	11.5	11.5		
Effective Green, g (s)		40.3			40.3			11.5	11.5	11.5		
Actuated g/C Ratio		0.62			0.62			0.18	0.18	0.18		
Clearance Time (s)		4.0			4.0			4.0	4.0	4.0		
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0		
Lane Grp Cap (vph)		1111			1102			171	329	262		
v/s Ratio Prot									c0.10			
v/s Ratio Perm		0.18			c0.19			0.01		0.00		
v/c Ratio		0.30			0.30			0.08	0.54	0.02		
Uniform Delay, d1		5.7			5.8			22.3	24.3	22.1		
Progression Factor		0.94			1.00			1.00	1.00	1.00		
Incremental Delay, d2		0.7			0.7			0.2	1.8	0.0		
Delay (s)		6.1			6.5			22.5	26.2	22.1		
Level of Service		A			A			C	C	C		
Approach Delay (s)		6.1			6.5				25.4			
Approach LOS		A			A				C			

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations							
Volume (vph)	31	161	21	1	4	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		
Lane Util. Factor	1.00	1.00			1.00		
Frpb, ped/bikes	1.00	0.99			1.00		
Flpb, ped/bikes	0.97	1.00			1.00		
Frt	1.00	0.98			0.93		
Flt Protected	0.95	1.00			0.98		
Satd. Flow (prot)	1712	1820			1687		
Flt Permitted	0.54	1.00			1.00		
Satd. Flow (perm)	973	1820			1726		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	161	21	1	4	1	5
RTOR Reduction (vph)	0	8	0	0	0	0	0
Lane Group Flow (vph)	32	174	0	0	11	0	0
Confl. Peds. (#/hr)	23		13				
Confl. Bikes (#/hr)			2				
Turn Type	Perm	NA		Perm	Prot		
Protected Phases		4			9		
Permitted Phases	4			9			
Actuated Green, G (s)	11.5	11.5			1.2		
Effective Green, g (s)	11.5	11.5			1.2		
Actuated g/C Ratio	0.18	0.18			0.02		
Clearance Time (s)	4.0	4.0			4.0		
Vehicle Extension (s)	3.0	3.0			3.0		
Lane Grp Cap (vph)	172	322			31		
v/s Ratio Prot		0.10					
v/s Ratio Perm	0.03				c0.01		
v/c Ratio	0.19	0.54			0.35		
Uniform Delay, d1	22.8	24.3			31.5		
Progression Factor	1.00	1.00			1.00		
Incremental Delay, d2	0.5	1.7			6.9		
Delay (s)	23.3	26.1			38.4		
Level of Service	C	C			D		
Approach Delay (s)		25.7			38.4		
Approach LOS		C			D		

Intersection Summary

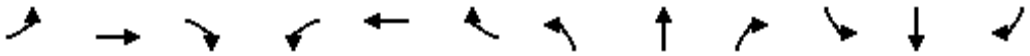


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	273	10	96	256	17	31	195	114	7	166	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00			1.00		0.99	1.00			1.00	
Frt	1.00	0.99			0.99		1.00	0.94			0.97	
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1850			3446		1749	1720			1799	
Flt Permitted	0.53	1.00			0.81		0.54	1.00			0.98	
Satd. Flow (perm)	991	1850			2816		986	1720			1775	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	273	10	96	256	17	31	195	114	7	166	43
RTOR Reduction (vph)	0	1	0	0	3	0	0	47	0	0	20	0
Lane Group Flow (vph)	26	282	0	0	366	0	31	262	0	0	196	0
Confl. Peds. (#/hr)			18	18		26	28		37			28
Confl. Bikes (#/hr)			1			1			2			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	39.6	39.6			39.6		15.4	15.4			15.4	
Effective Green, g (s)	39.6	39.6			39.6		15.4	15.4			15.4	
Actuated g/C Ratio	0.61	0.61			0.61		0.24	0.24			0.24	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	603	1127			1715		233	407			420	
v/s Ratio Prot		c0.15						c0.15				
v/s Ratio Perm	0.03				0.13		0.03				0.11	
v/c Ratio	0.04	0.25			0.21		0.13	0.64			0.47	
Uniform Delay, d1	5.1	5.9			5.7		19.5	22.3			21.3	
Progression Factor	0.96	0.98			1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.1	0.5			0.3		0.3	3.5			0.8	
Delay (s)	5.0	6.2			6.0		19.8	25.8			22.1	
Level of Service	A	A			A		B	C			C	
Approach Delay (s)		6.1			6.0			25.2			22.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	167	0	0	518	152	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.93	
Flt Protected	1.00			1.00	0.97	
Satd. Flow (prot)	3539			3539	3237	
Flt Permitted	1.00			1.00	0.97	
Satd. Flow (perm)	3539			3539	3237	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	167	0	0	518	152	134
RTOR Reduction (vph)	0	0	0	0	115	0
Lane Group Flow (vph)	167	0	0	518	171	0
Confl. Peds. (#/hr)						1
Confl. Bikes (#/hr)						1
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	42.1			42.1	8.4	
Effective Green, g (s)	42.1			42.1	8.4	
Actuated g/C Ratio	0.70			0.70	0.14	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2483			2483	453	
v/s Ratio Prot	0.05			c0.15	c0.05	
v/s Ratio Perm						
v/c Ratio	0.07			0.21	0.38	
Uniform Delay, d1	2.8			3.1	23.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.2	0.5	
Delay (s)	2.9			3.3	24.0	
Level of Service	A			A	C	
Approach Delay (s)	2.9			3.3	24.0	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



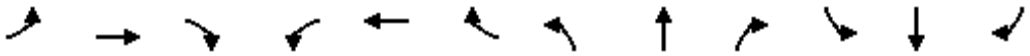
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	357	0	0	534	8	82	258	53	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			0.99				
Frt		1.00			1.00			0.98				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3527			3530			3381				
Flt Permitted		0.91			1.00			0.99				
Satd. Flow (perm)		3219			3530			3381				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	357	0	0	534	8	82	258	53	0	0	0
RTOR Reduction (vph)	0	0	0	0	1	0	0	23	0	0	0	0
Lane Group Flow (vph)	0	382	0	0	541	0	0	370	0	0	0	0
Confl. Peds. (#/hr)	15		7	7		15	36		44	44		36
Confl. Bikes (#/hr)						2			2			7
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		43.4			43.4			11.6				
Effective Green, g (s)		43.4			43.4			11.6				
Actuated g/C Ratio		0.67			0.67			0.18				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		2149			2356			603				
v/s Ratio Prot					c0.15							
v/s Ratio Perm		0.12						0.11				
v/c Ratio		0.18			0.23			0.61				
Uniform Delay, d1		4.1			4.2			24.6				
Progression Factor		0.69			1.00			1.00				
Incremental Delay, d2		0.2			0.2			1.3				
Delay (s)		3.0			4.5			25.9				
Level of Service		A			A			C				
Approach Delay (s)		3.0			4.5			25.9			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	166	60	48	614	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.96		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3398		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3398		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	166	60	48	614	0	0
RTOR Reduction (vph)	33	0	0	0	0	0
Lane Group Flow (vph)	193	0	48	614	0	0
Confl. Peds. (#/hr)						1
Confl. Bikes (#/hr)						1
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1529		663	3539		
v/s Ratio Prot	0.06		0.03	c0.17		
v/s Ratio Perm						
v/c Ratio	0.13		0.07	0.17		
Uniform Delay, d1	6.4		8.0	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.2		0.2	0.1		
Delay (s)	6.6		8.2	0.1		
Level of Service	A		A	A		
Approach Delay (s)	6.6			0.7	0.0	
Approach LOS	A			A	A	

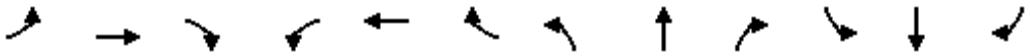
Intersection Summary			
HCM 2000 Control Delay	2.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



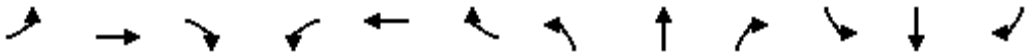
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	394	41	61	570	0	0	0	0	13	78	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		1.00			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.99			1.00						0.98	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		3483			3521						3390	
Flt Permitted		1.00			0.88						0.99	
Satd. Flow (perm)		3483			3100						3390	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	394	41	61	570	0	0	0	0	13	78	14
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	427	0	0	631	0	0	0	0	0	92	0
Confl. Peds. (#/hr)	6		13	13		6	33		39	39		33
Confl. Bikes (#/hr)			1			3			3			5
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		48.9			48.9						6.1	
Effective Green, g (s)		48.9			48.9						6.1	
Actuated g/C Ratio		0.75			0.75						0.09	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2620			2332						318	
v/s Ratio Prot		0.12										
v/s Ratio Perm					c0.20						0.03	
v/c Ratio		0.16			0.27						0.29	
Uniform Delay, d1		2.3			2.5						27.4	
Progression Factor		1.00			0.72						1.00	
Incremental Delay, d2		0.1			0.3						0.5	
Delay (s)		2.4			2.1						27.9	
Level of Service		A			A						C	
Approach Delay (s)		2.4			2.1			0.0			27.9	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



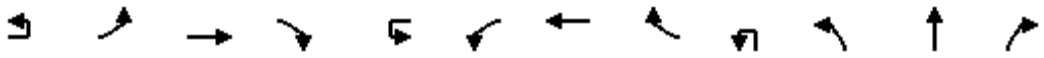
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	248	39	12	258	33	31	299	4	36	187	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.98			0.99		1.00	1.00		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1818			1824		1749	1858		1766	1850	
Flt Permitted		0.99			0.99		0.56	1.00		0.37	1.00	
Satd. Flow (perm)		1807			1802		1033	1858		682	1850	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	248	39	12	258	33	31	299	4	36	187	7
RTOR Reduction (vph)	0	6	0	0	4	0	0	1	0	0	3	0
Lane Group Flow (vph)	0	288	0	0	299	0	31	302	0	36	191	0
Confl. Peds. (#/hr)	11		14	14		11	14		3	3		14
Confl. Bikes (#/hr)			2			2			2			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		39.3			39.3		16.2	16.2		16.2	16.2	
Effective Green, g (s)		39.3			39.3		16.2	16.2		16.2	16.2	
Actuated g/C Ratio		0.60			0.60		0.25	0.25		0.25	0.25	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1092			1089		257	463		169	461	
v/s Ratio Prot								c0.16			0.10	
v/s Ratio Perm		0.16			c0.17		0.03			0.05		
v/c Ratio		0.26			0.27		0.12	0.65		0.21	0.41	
Uniform Delay, d1		6.0			6.1		18.9	21.9		19.3	20.4	
Progression Factor		1.00			1.55		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6			0.6		0.2	3.3		0.6	0.6	
Delay (s)		6.6			10.0		19.1	25.2		20.0	21.0	
Level of Service		A			B		B	C		B	C	
Approach Delay (s)		6.6			10.0			24.6			20.9	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



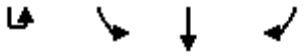
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	223	76	154	166	12	56	297	83	9	246	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00	1.00	0.95	0.95			1.00			0.95	
Frpb, ped/bikes		1.00	0.97	1.00	0.99			0.99			0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	
Frt		1.00	0.85	1.00	0.99			0.97			0.98	
Flt Protected		1.00	1.00	0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1854	1542	1681	1737			1787			3449	
Flt Permitted		1.00	1.00	0.95	1.00			0.92			0.94	
Satd. Flow (perm)		1854	1542	1681	1737			1659			3252	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	23	223	76	154	166	12	56	297	83	9	246	35
RTOR Reduction (vph)	0	0	61	0	4	0	0	11	0	0	14	0
Lane Group Flow (vph)	0	246	15	139	189	0	0	425	0	0	276	0
Confl. Peds. (#/hr)	30		8	8		30	14		25	25		14
Confl. Bikes (#/hr)			4			5			1			
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases			2				4			8		
Actuated Green, G (s)		13.2	13.2	12.0	12.0			28.8			28.8	
Effective Green, g (s)		13.2	13.2	12.0	12.0			28.8			28.8	
Actuated g/C Ratio		0.20	0.20	0.18	0.18			0.44			0.44	
Clearance Time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		376	313	310	320			735			1440	
v/s Ratio Prot		c0.13		0.08	c0.11							
v/s Ratio Perm			0.01					c0.26			0.08	
v/c Ratio		0.65	0.05	0.45	0.59			0.58			0.19	
Uniform Delay, d1		23.8	20.8	23.6	24.3			13.6			11.0	
Progression Factor		1.00	1.00	0.76	0.76			1.00			1.00	
Incremental Delay, d2		4.1	0.1	1.0	2.9			3.3			0.3	
Delay (s)		27.9	20.9	19.0	21.3			16.8			11.3	
Level of Service		C	C	B	C			B			B	
Approach Delay (s)		26.2			20.3			16.8			11.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



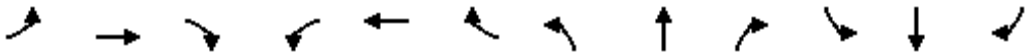
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	9	157	526	130	1	70	616	53	1	197	451	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00		1.00	0.95	
Frpb, ped/bikes		1.00	1.00	0.98		1.00	1.00	0.91		1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	0.97	
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	3539	1545		1770	3539	1445		1770	3403	
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		1770	3539	1545		1770	3539	1445		1770	3403	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	9	157	526	130	1	70	616	53	1	197	451	135
RTOR Reduction (vph)	0	0	0	73	0	0	0	34	0	0	23	0
Lane Group Flow (vph)	0	166	526	57	0	71	616	19	0	198	563	0
Confl. Peds. (#/hr)		66		10		10		66		17		4
Confl. Bikes (#/hr)				2				3				1
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	
Protected Phases	5	5	2		1	1	6		7	7	4	
Permitted Phases				2				6				
Actuated Green, G (s)		15.8	48.6	48.6		7.5	40.3	40.3		18.0	30.9	
Effective Green, g (s)		15.8	48.6	48.6		7.5	40.3	40.3		18.0	30.9	
Actuated g/C Ratio		0.14	0.44	0.44		0.07	0.37	0.37		0.16	0.28	
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		254	1563	682		120	1296	529		289	955	
v/s Ratio Prot		c0.09	0.15			c0.04	c0.17			c0.11	0.17	
v/s Ratio Perm				0.04				0.01				
v/c Ratio		0.65	0.34	0.08		0.59	0.48	0.04		0.69	0.59	
Uniform Delay, d1		44.5	20.1	17.8		49.8	26.7	22.4		43.3	34.1	
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		4.5	0.0	0.0		5.1	1.3	0.1		5.3	0.6	
Delay (s)		49.1	20.2	17.8		54.9	28.0	22.5		48.6	34.7	
Level of Service		D	C	B		D	C	C		D	C	
Approach Delay (s)			25.6				30.2				38.2	
Approach LOS			C				C				D	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



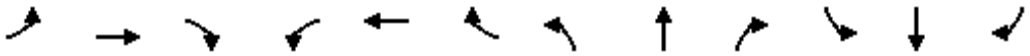
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	2	39	286	194
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	
Lane Util. Factor		1.00	0.95	
Frpb, ped/bikes		1.00	0.99	
Flpb, ped/bikes		1.00	1.00	
Frt		1.00	0.94	
Flt Protected		0.95	1.00	
Satd. Flow (prot)		1770	3281	
Flt Permitted		0.95	1.00	
Satd. Flow (perm)		1770	3281	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	39	286	194
RTOR Reduction (vph)	0	0	109	0
Lane Group Flow (vph)	0	41	371	0
Confl. Peds. (#/hr)		4		17
Confl. Bikes (#/hr)				
Turn Type	Prot	Prot	NA	
Protected Phases	3	3	8	
Permitted Phases				
Actuated Green, G (s)		5.0	17.9	
Effective Green, g (s)		5.0	17.9	
Actuated g/C Ratio		0.05	0.16	
Clearance Time (s)		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	
Lane Grp Cap (vph)		80	533	
v/s Ratio Prot		0.02	c0.11	
v/s Ratio Perm				
v/c Ratio		0.51	0.70	
Uniform Delay, d1		51.3	43.5	
Progression Factor		1.00	1.00	
Incremental Delay, d2		2.3	3.2	
Delay (s)		53.6	46.7	
Level of Service		D	D	
Approach Delay (s)			47.2	
Approach LOS			D	

Intersection Summary



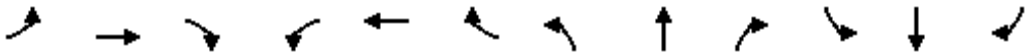
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	89	8	35	153	57	15	657	42	22	329	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.99			0.97			0.99			1.00	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1652			1612			3154			3160	
Flt Permitted		0.97			0.95			0.95			0.91	
Satd. Flow (perm)		1618			1540			2989			2879	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	89	8	35	153	57	15	657	42	22	329	12
RTOR Reduction (vph)	0	5	0	0	19	0	0	6	0	0	3	0
Lane Group Flow (vph)	0	102	0	0	226	0	0	708	0	0	360	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		14.2			14.2			43.8			43.8	
Effective Green, g (s)		14.2			14.2			43.8			43.8	
Actuated g/C Ratio		0.22			0.22			0.67			0.67	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		353			336			2014			1940	
v/s Ratio Prot												
v/s Ratio Perm		0.06			c0.15			c0.24			0.13	
v/c Ratio		0.29			0.67			0.35			0.19	
Uniform Delay, d1		21.2			23.3			4.5			4.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			5.2			0.5			0.2	
Delay (s)		21.7			28.5			5.0			4.2	
Level of Service		C			C			A			A	
Approach Delay (s)		21.7			28.5			5.0			4.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



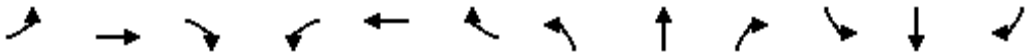
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	314	61	47	425	61	119	760	96	49	354	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.98			0.99		1.00	0.97		1.00	0.99	
Flpb, ped/bikes		1.00			0.99		0.93	1.00		0.94	1.00	
Frt		0.98			0.98		1.00	0.98		1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3376			1800		1654	3376		1667	3429	
Flt Permitted		0.87			0.93		0.51	1.00		0.27	1.00	
Satd. Flow (perm)		2954			1683		888	3376		467	3429	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	34	314	61	47	425	61	119	760	96	49	354	45
RTOR Reduction (vph)	0	18	0	0	6	0	0	9	0	0	9	0
Lane Group Flow (vph)	0	391	0	0	527	0	119	847	0	49	390	0
Confl. Peds. (#/hr)	55		93	93		55	77		171	171		77
Confl. Bikes (#/hr)			11			10			6			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.2			33.2		47.3	47.3		47.3	47.3	
Effective Green, g (s)		33.2			33.2		47.3	47.3		47.3	47.3	
Actuated g/C Ratio		0.37			0.37		0.53	0.53		0.53	0.53	
Clearance Time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1089			620		466	1774		245	1802	
v/s Ratio Prot								c0.25			0.11	
v/s Ratio Perm		0.13			c0.31		0.13			0.11		
v/c Ratio		0.36			0.85		0.26	0.48		0.20	0.22	
Uniform Delay, d1		20.7			26.1		11.7	13.5		11.3	11.4	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			10.4		1.3	0.9		1.8	0.3	
Delay (s)		20.7			36.6		13.0	14.4		13.1	11.7	
Level of Service		C			D		B	B		B	B	
Approach Delay (s)		20.7			36.6			14.3			11.9	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



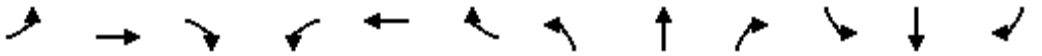
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	145	62	30	353	328	165	862	22	101	455	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.93		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3380		1770	3284		1770	3526		1770	3455	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3380		1770	3284		1770	3526		1770	3455	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	124	145	62	30	353	328	165	862	22	101	455	86
RTOR Reduction (vph)	0	46	0	0	170	0	0	2	0	0	15	0
Lane Group Flow (vph)	124	161	0	30	511	0	165	882	0	101	526	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	7.0	24.3		4.0	21.3		11.5	46.8		8.4	43.7	
Effective Green, g (s)	7.0	24.3		4.0	21.3		11.5	46.8		8.4	43.7	
Actuated g/C Ratio	0.07	0.24		0.04	0.21		0.12	0.47		0.08	0.44	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.5		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	123	821		70	699		203	1650		148	1509	
v/s Ratio Prot	c0.07	c0.05		0.02	c0.16		c0.09	c0.25		0.06	0.15	
v/s Ratio Perm												
v/c Ratio	1.01	0.20		0.43	0.73		0.81	0.53		0.68	0.35	
Uniform Delay, d1	46.5	30.1		46.9	36.7		43.2	18.9		44.5	18.7	
Progression Factor	1.00	1.00		1.00	1.00		0.94	0.95		1.00	1.00	
Incremental Delay, d2	83.3	0.0		1.5	4.1		18.9	1.1		9.9	0.6	
Delay (s)	129.8	30.1		48.4	40.8		59.7	19.1		54.4	19.3	
Level of Service	F	C		D	D		E	B		D	B	
Approach Delay (s)		67.5			41.1			25.5			24.8	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



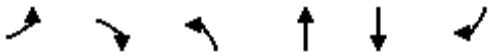
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	355	32	49	429	103	103	878	88	51	458	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.97		1.00	0.99		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3480			3431		1770	3491		1770	3505	
Flt Permitted		0.70			0.81		0.47	1.00		0.26	1.00	
Satd. Flow (perm)		2440			2789		871	3491		487	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	355	32	49	429	103	103	878	88	51	458	32
RTOR Reduction (vph)	0	6	0	0	20	0	0	6	0	0	4	0
Lane Group Flow (vph)	0	431	0	0	561	0	103	960	0	51	486	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.3			23.3		68.2	68.2		68.2	68.2	
Effective Green, g (s)		23.3			23.3		68.2	68.2		68.2	68.2	
Actuated g/C Ratio		0.23			0.23		0.68	0.68		0.68	0.68	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		2.0			2.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		568			649		594	2380		332	2390	
v/s Ratio Prot								c0.27			0.14	
v/s Ratio Perm		0.18			c0.20		0.12			0.10		
v/c Ratio		0.76			0.86		0.17	0.40		0.15	0.20	
Uniform Delay, d1		35.7			36.8		5.7	7.0		5.6	5.9	
Progression Factor		1.00			1.00		1.00	1.00		0.73	0.75	
Incremental Delay, d2		5.1			11.2		0.6	0.5		0.9	0.2	
Delay (s)		40.9			48.0		6.4	7.5		5.0	4.6	
Level of Service		D			D		A	A		A	A	
Approach Delay (s)		40.9			48.0			7.4			4.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	122	6	62	197	70	24	619	97	43	426	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		1.00			0.97		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1828			1792		1770	3467		1770	3473	
Flt Permitted		0.78			0.91		0.47	1.00		0.36	1.00	
Satd. Flow (perm)		1441			1653		884	3467		671	3473	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	52	122	6	62	197	70	24	619	97	43	426	61
RTOR Reduction (vph)	0	2	0	0	16	0	0	15	0	0	13	0
Lane Group Flow (vph)	0	178	0	0	313	0	24	701	0	43	474	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		15.7			15.7		35.3	35.3		35.3	35.3	
Effective Green, g (s)		15.7			15.7		35.3	35.3		35.3	35.3	
Actuated g/C Ratio		0.26			0.26		0.58	0.58		0.58	0.58	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		370			425		511	2006		388	2009	
v/s Ratio Prot								c0.20			0.14	
v/s Ratio Perm		0.12			c0.19		0.03			0.06		
v/c Ratio		0.48			0.74		0.05	0.35		0.11	0.24	
Uniform Delay, d1		19.2			20.7		5.6	6.8		5.8	6.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4			5.6		0.0	0.0		0.0	0.0	
Delay (s)		19.6			26.4		5.6	6.8		5.8	6.3	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.6			26.4			6.8			6.3	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

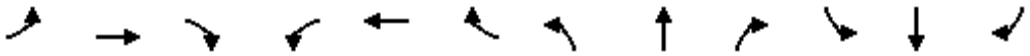


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	123	167	216	671	402	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3367	
Flt Permitted	0.95	1.00	0.43	1.00	1.00	
Satd. Flow (perm)	1770	1583	798	3539	3367	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	123	167	216	671	402	88
RTOR Reduction (vph)	0	61	0	0	16	0
Lane Group Flow (vph)	123	106	216	671	474	0
Confl. Peds. (#/hr)	33					101
Confl. Bikes (#/hr)						8
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	6.6	14.8	35.2	27.0	25.6	
Effective Green, g (s)	6.6	14.8	35.2	27.0	25.6	
Actuated g/C Ratio	0.13	0.29	0.70	0.54	0.51	
Clearance Time (s)	4.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	3.0	3.0	2.0	2.0	
Lane Grp Cap (vph)	231	464	715	1895	1710	
v/s Ratio Prot	c0.07	0.04	c0.05	c0.19	0.14	
v/s Ratio Perm		0.03	0.16			
v/c Ratio	0.53	0.23	0.30	0.35	0.28	
Uniform Delay, d1	20.5	13.5	2.7	6.7	7.1	
Progression Factor	1.00	1.00	0.80	0.55	1.00	
Incremental Delay, d2	1.2	0.3	0.2	0.0	0.0	
Delay (s)	21.6	13.7	2.4	3.8	7.1	
Level of Service	C	B	A	A	A	
Approach Delay (s)	17.1			3.4	7.1	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

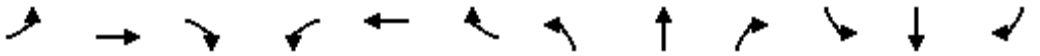
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	118	227	660	55	123	446
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0		3.0	3.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3468		1770	3539
Flt Permitted	0.95	1.00	1.00		0.35	1.00
Satd. Flow (perm)	1770	1583	3468		658	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	118	227	660	55	123	446
RTOR Reduction (vph)	0	69	6	0	0	0
Lane Group Flow (vph)	118	158	709	0	123	446
Confl. Peds. (#/hr)	75			93		
Confl. Bikes (#/hr)				2		
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	6.6	13.4	27.0		32.4	25.6
Effective Green, g (s)	6.6	13.4	27.0		32.4	25.6
Actuated g/C Ratio	0.13	0.27	0.54		0.64	0.51
Clearance Time (s)	4.0	3.0	3.0		3.0	3.0
Vehicle Extension (s)	2.0	3.0	2.0		3.0	2.0
Lane Grp Cap (vph)	231	420	1857		573	1797
v/s Ratio Prot	c0.07	c0.05	c0.20		0.03	0.13
v/s Ratio Perm		0.05			0.11	
v/c Ratio	0.51	0.38	0.38		0.21	0.25
Uniform Delay, d1	20.4	15.1	6.8		3.5	7.0
Progression Factor	1.00	1.00	1.00		0.78	0.61
Incremental Delay, d2	0.8	0.6	0.0		0.2	0.0
Delay (s)	21.2	15.7	6.9		2.9	4.3
Level of Service	C	B	A		A	A
Approach Delay (s)	17.6		6.9			4.0
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



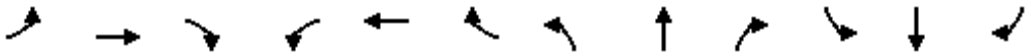
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	473	46	161	653	114	133	476	133	65	285	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.93	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1467	1770	4922		1770	3405		1770	3342	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1467	1770	4922		1770	3405		1770	3342	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	88	473	46	161	653	114	133	476	133	65	285	109
RTOR Reduction (vph)	0	0	36	0	18	0	0	19	0	0	35	0
Lane Group Flow (vph)	88	473	10	161	749	0	133	590	0	65	359	0
Confl. Peds. (#/hr)			61			55			17			51
Confl. Bikes (#/hr)			4			5			2			9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8									
Actuated Green, G (s)	7.9	16.4	16.4	13.1	22.1		11.8	22.5		7.0	17.7	
Effective Green, g (s)	7.9	16.4	16.4	13.1	22.1		11.8	22.5		7.0	17.7	
Actuated g/C Ratio	0.11	0.22	0.22	0.18	0.30		0.16	0.30		0.09	0.24	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	188	1126	325	313	1469		282	1035		167	799	
v/s Ratio Prot	0.05	0.09		c0.09	c0.15		c0.08	c0.17		0.04	0.11	
v/s Ratio Perm			0.01									
v/c Ratio	0.47	0.42	0.03	0.51	0.51		0.47	0.57		0.39	0.45	
Uniform Delay, d1	31.1	24.7	22.6	27.6	21.5		28.3	21.7		31.5	24.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	0.3	0.0	1.4	0.3		1.2	0.7		1.5	0.4	
Delay (s)	32.9	25.0	22.6	29.0	21.8		29.5	22.4		33.0	24.4	
Level of Service	C	C	C	C	C		C	C		C	C	
Approach Delay (s)		25.9			23.0			23.7			25.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



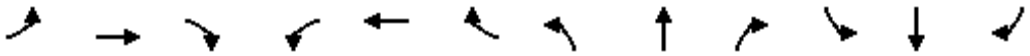
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	262	632	60	62	543	119	106	430	44	292	365	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.94	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3489		1770	3539	1544	1770	3539	1492	1770	3353	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3489		1770	3539	1544	1770	3539	1492	1770	3353	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	262	632	60	62	543	119	106	430	44	292	365	165
RTOR Reduction (vph)	0	5	0	0	0	78	0	0	36	0	38	0
Lane Group Flow (vph)	262	687	0	62	543	41	106	430	8	292	492	0
Confl. Peds. (#/hr)	7					7			20	20		
Confl. Bikes (#/hr)			5						9			10
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	19.7	35.0		7.5	22.8	22.8	11.5	18.3	18.3	20.6	27.4	
Effective Green, g (s)	19.7	35.0		7.5	22.8	22.8	11.5	18.3	18.3	20.6	27.4	
Actuated g/C Ratio	0.20	0.36		0.08	0.23	0.23	0.12	0.19	0.19	0.21	0.28	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	357	1253		136	828	361	208	664	280	374	943	
v/s Ratio Prot	c0.15	0.20		0.04	c0.15		0.06	c0.12		c0.17	0.15	
v/s Ratio Perm						0.03			0.01			
v/c Ratio	0.73	0.55		0.46	0.66	0.11	0.51	0.65	0.03	0.78	0.52	
Uniform Delay, d1	36.4	24.9		43.0	33.7	29.3	40.3	36.6	32.3	36.3	29.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.6	0.5		2.4	1.9	0.1	2.0	2.2	0.0	10.1	0.5	
Delay (s)	44.0	25.4		45.4	35.6	29.5	42.3	38.8	32.3	46.4	30.0	
Level of Service	D	C		D	D	C	D	D	C	D	C	
Approach Delay (s)		30.5			35.5			38.9			35.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	97.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



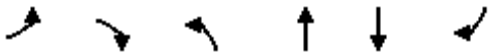
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	257	130	45	383	45	265	375	21	27	283	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1766	3539	1523	1754	3478		1770	3506		1770	3472	
Flt Permitted	0.45	1.00	1.00	0.59	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	842	3539	1523	1094	3478		1770	3506		1770	3472	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	257	130	45	383	45	265	375	21	27	283	34
RTOR Reduction (vph)	0	0	99	0	13	0	0	4	0	0	13	0
Lane Group Flow (vph)	38	257	31	45	415	0	265	392	0	27	304	0
Confl. Peds. (#/hr)	6		23	23		6			15			20
Confl. Bikes (#/hr)			15						16			4
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	11.3	11.3	11.3	11.3	11.3		14.5	22.5		1.3	9.3	
Effective Green, g (s)	11.3	11.3	11.3	11.3	11.3		14.5	22.5		1.3	9.3	
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.24		0.31	0.48		0.03	0.20	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	202	849	365	262	834		544	1674		48	685	
v/s Ratio Prot		0.07			c0.12		c0.15	0.11		0.02	c0.09	
v/s Ratio Perm	0.05		0.02	0.04								
v/c Ratio	0.19	0.30	0.09	0.17	0.50		0.49	0.23		0.56	0.44	
Uniform Delay, d1	14.2	14.7	13.9	14.2	15.5		13.3	7.2		22.6	16.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.2	0.1	0.3	0.5		0.7	0.1		14.2	0.5	
Delay (s)	14.7	14.9	14.0	14.5	15.9		14.0	7.3		36.8	17.1	
Level of Service	B	B	B	B	B		B	A		D	B	
Approach Delay (s)		14.6			15.8			10.0			18.6	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	47.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	74	22	109	55	145	22	480	77	109	327	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.89		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1753	1793		1768	1629		1760	3453		1765	3486	
Flt Permitted	0.63	1.00		0.69	1.00		0.54	1.00		0.44	1.00	
Satd. Flow (perm)	1167	1793		1293	1629		997	3453		824	3486	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	74	22	109	55	145	22	480	77	109	327	30
RTOR Reduction (vph)	0	12	0	0	105	0	0	21	0	0	11	0
Lane Group Flow (vph)	25	84	0	109	96	0	22	536	0	109	346	0
Confl. Peds. (#/hr)	35		3	3		35	16		9	9		16
Confl. Bikes (#/hr)						2			2			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	8.1	8.1		8.1	8.1		12.9	12.9		12.9	12.9	
Effective Green, g (s)	8.1	8.1		8.1	8.1		12.9	12.9		12.9	12.9	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.44	0.44		0.44	0.44	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	325	500		361	454		443	1535		366	1550	
v/s Ratio Prot		0.05			0.06			c0.16			0.10	
v/s Ratio Perm	0.02			c0.08			0.02			0.13		
v/c Ratio	0.08	0.17		0.30	0.21		0.05	0.35		0.30	0.22	
Uniform Delay, d1	7.7	7.9		8.2	8.0		4.6	5.3		5.2	5.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.5	0.2		0.0	0.1		0.5	0.1	
Delay (s)	7.8	8.1		8.7	8.2		4.6	5.4		5.6	5.0	
Level of Service	A	A		A	A		A	A		A	A	
Approach Delay (s)		8.0			8.4			5.4			5.2	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	29.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	96	315	515	381	337	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3385	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3385	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	96	315	515	381	337	118
RTOR Reduction (vph)	0	110	0	0	43	0
Lane Group Flow (vph)	96	205	515	381	412	0
Confl. Peds. (#/hr)	41					11
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	8.7	38.9	26.2	43.0	12.8	
Effective Green, g (s)	8.7	38.9	26.2	43.0	12.8	
Actuated g/C Ratio	0.15	0.65	0.44	0.72	0.21	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	257	1815	776	2549	725	
v/s Ratio Prot	c0.05	0.07	c0.29	0.11	c0.12	
v/s Ratio Perm						
v/c Ratio	0.37	0.11	0.66	0.15	0.57	
Uniform Delay, d1	23.0	3.9	13.3	2.6	21.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0	2.1	0.0	1.0	
Delay (s)	24.0	3.9	15.4	2.6	22.0	
Level of Service	C	A	B	A	C	
Approach Delay (s)	8.6			10.0	22.0	
Approach LOS	A			A	C	

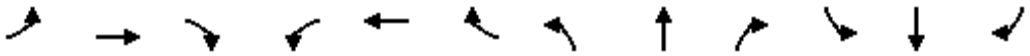
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	153	29	27	298	14	34	428	30	7	200	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.99			0.98	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1799			1841			3479			3434	
Flt Permitted		0.87			0.97			0.93			0.94	
Satd. Flow (perm)		1582			1788			3230			3248	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	63	153	29	27	298	14	34	428	30	7	200	33
RTOR Reduction (vph)	0	7	0	0	2	0	0	7	0	0	16	0
Lane Group Flow (vph)	0	238	0	0	337	0	0	485	0	0	224	0
Confl. Peds. (#/hr)	26		17	17		26	32		23	23		32
Confl. Bikes (#/hr)			6			6			7			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			33.0			33.0	
Effective Green, g (s)		25.0			25.0			33.0			33.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Lane Grp Cap (vph)		608			687			1639			1648	
v/s Ratio Prot												
v/s Ratio Perm		0.15			c0.19			c0.15			0.07	
v/c Ratio		0.39			0.49			0.30			0.14	
Uniform Delay, d1		14.5			15.2			9.3			8.5	
Progression Factor		0.73			1.00			1.00			1.00	
Incremental Delay, d2		1.9			2.5			0.5			0.2	
Delay (s)		12.4			17.7			9.7			8.6	
Level of Service		B			B			A			A	
Approach Delay (s)		12.4			17.7			9.7			8.6	
Approach LOS		B			B			A			A	

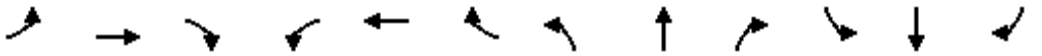
Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	137	0	0	595	55	299	475	104	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.91		0.91	0.91				
Frpb, ped/bikes		1.00			1.00		1.00	1.00				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.99		1.00	0.97				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5085			5021		1610	3286				
Flt Permitted		1.00			1.00		0.95	1.00				
Satd. Flow (perm)		5085			5021		1610	3286				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	137	0	0	595	55	299	475	104	0	0	0
RTOR Reduction (vph)	0	0	0	0	22	0	0	16	0	0	0	0
Lane Group Flow (vph)	0	137	0	0	628	0	269	593	0	0	0	0
Confl. Peds. (#/hr)									5			
Confl. Bikes (#/hr)									2			
Turn Type		NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		14.8			14.8		42.7	42.7				
Effective Green, g (s)		14.8			14.8		42.7	42.7				
Actuated g/C Ratio		0.23			0.23		0.66	0.66				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		1157			1143		1057	2158				
v/s Ratio Prot		0.03			c0.13							
v/s Ratio Perm							0.17	0.18				
v/c Ratio		0.12			0.55		0.25	0.27				
Uniform Delay, d1		19.9			22.2		4.6	4.7				
Progression Factor		0.89			0.48		1.00	1.00				
Incremental Delay, d2		0.0			0.5		0.6	0.3				
Delay (s)		17.8			11.0		5.2	5.0				
Level of Service		B			B		A	A				
Approach Delay (s)		17.8			11.0			5.0			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	250	28	17	506	26	167	785	46	0	423	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.91	1.00
Frt	1.00	0.98			0.99		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1835			3509		1770	5043			5085	1583
Flt Permitted	0.28	1.00			0.94		0.95	1.00			1.00	1.00
Satd. Flow (perm)	520	1835			3300		1770	5043			5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	250	28	17	506	26	167	785	46	0	423	355
RTOR Reduction (vph)	0	3	0	0	3	0	0	5	0	0	0	250
Lane Group Flow (vph)	310	275	0	0	546	0	167	826	0	0	423	105
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Effective Green, g (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Actuated g/C Ratio	0.45	0.45			0.30		0.13	0.46			0.30	0.30
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	392	828			974		224	2298			1501	467
v/s Ratio Prot	c0.10	0.15					c0.09	c0.16			0.08	
v/s Ratio Perm	c0.26				0.17							0.07
v/c Ratio	0.79	0.33			0.56		0.75	0.36			0.28	0.22
Uniform Delay, d1	23.0	21.0			35.3		49.9	21.0			32.1	31.5
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	15.0	1.1			2.3		20.0	0.4			0.5	1.1
Delay (s)	38.0	22.0			37.6		69.9	21.4			32.6	32.6
Level of Service	D	C			D		E	C			C	C
Approach Delay (s)		30.5			37.6			29.5			32.6	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	18.5
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

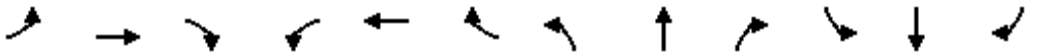
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	0	0	2	94	5	126	11	0	843	97	12	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		0.97			0.99				0.99			1.00
Flpb, ped/bikes		1.00			0.99				1.00			1.00
Frt		0.86			0.92				0.98			1.00
Flt Protected		1.00			0.98				1.00			0.95
Satd. Flow (prot)		1562			1650				4970			1766
Flt Permitted		1.00			0.86				0.94			0.25
Satd. Flow (perm)		1562			1455				4651			465
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	2	94	5	126	11	0	843	97	12	55
RTOR Reduction (vph)	0	2	0	0	57	0	0	0	10	0	0	0
Lane Group Flow (vph)	0	0	0	0	168	0	0	0	941	0	0	67
Confl. Peds. (#/hr)			13	13				4		15		15
Confl. Bikes (#/hr)						9				2		
Turn Type		NA		Perm	NA		Perm		NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		13.6			13.6				52.3			61.4
Effective Green, g (s)		13.6			13.6				52.3			61.4
Actuated g/C Ratio		0.16			0.16				0.62			0.73
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		252			235				2895			411
v/s Ratio Prot		0.00										c0.01
v/s Ratio Perm					c0.12				c0.20			0.11
v/c Ratio		0.00			0.71				0.33			0.16
Uniform Delay, d1		29.5			33.4				7.5			3.6
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			8.3				0.3			0.1
Delay (s)		29.5			41.7				7.8			3.6
Level of Service		C			D				A			A
Approach Delay (s)		29.5			41.7				7.8			
Approach LOS		C			D				A			

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	84.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

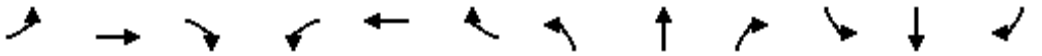
Movement	SBT	SBR
Lane Configurations		
Volume (vph)	341	2
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	5080	
Flt Permitted	1.00	
Satd. Flow (perm)	5080	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	341	2
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	342	0
Confl. Peds. (#/hr)		4
Confl. Bikes (#/hr)		3
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	61.4	
Effective Green, g (s)	61.4	
Actuated g/C Ratio	0.73	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	3713	
v/s Ratio Prot	0.07	
v/s Ratio Perm		
v/c Ratio	0.09	
Uniform Delay, d1	3.3	
Progression Factor	1.00	
Incremental Delay, d2	0.0	
Delay (s)	3.3	
Level of Service	A	
Approach Delay (s)	3.4	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	183	138	47	259	73	96	649	65	23	371	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.94			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1743			3416		1770	3491		1770	3539	1583
Flt Permitted	0.52	1.00			0.88		0.44	1.00		0.38	1.00	1.00
Satd. Flow (perm)	962	1743			3017		825	3491		708	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	154	183	138	47	259	73	96	649	65	23	371	70
RTOR Reduction (vph)	0	32	0	0	24	0	0	9	0	0	0	45
Lane Group Flow (vph)	154	289	0	0	355	0	96	705	0	23	371	25
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	27.1	27.1			27.1		27.9	27.9		27.3	25.3	25.3
Effective Green, g (s)	27.1	27.1			27.1		27.9	27.9		27.3	25.3	25.3
Actuated g/C Ratio	0.38	0.38			0.38		0.39	0.39		0.38	0.35	0.35
Clearance Time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	364	660			1143		402	1362		322	1252	560
v/s Ratio Prot		c0.17					0.02	c0.20		0.00	c0.10	
v/s Ratio Perm	0.16				0.12		0.07			0.02		0.02
v/c Ratio	0.42	0.44			0.31		0.24	0.52		0.07	0.30	0.04
Uniform Delay, d1	16.4	16.5			15.6		14.2	16.7		14.1	16.7	15.2
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.6	2.1			0.7		0.1	1.4		0.0	0.6	0.1
Delay (s)	20.0	18.6			16.3		14.3	18.1		14.2	17.3	15.3
Level of Service	B	B			B		B	B		B	B	B
Approach Delay (s)		19.1			16.3			17.6			16.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



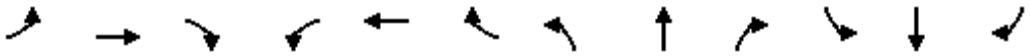
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	480	337	88	21	462	91	66	296	18	67	164	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	1.00			0.98		1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.99			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3255			3368		1770	3478		1770	1863	2787
Flt Permitted	0.95	0.60			0.92		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	1973			3113		1770	3478		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	480	337	88	21	462	91	66	296	18	67	164	192
RTOR Reduction (vph)	0	10	0	0	14	0	0	6	0	0	0	160
Lane Group Flow (vph)	298	597	0	0	560	0	66	308	0	67	164	32
Confl. Peds. (#/hr)			15			155			140			
Confl. Bikes (#/hr)			3			12			8			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	11.2	40.6			25.4		6.7	12.0		6.7	12.0	12.0
Effective Green, g (s)	11.2	40.6			25.4		6.7	12.0		6.7	12.0	12.0
Actuated g/C Ratio	0.16	0.57			0.36		0.09	0.17		0.09	0.17	0.17
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	252	1324			1108		166	585		166	313	469
v/s Ratio Prot	c0.19	0.07					0.04	c0.09		c0.04	0.09	
v/s Ratio Perm		0.19			c0.18							0.01
v/c Ratio	1.18	0.45			0.51		0.40	0.53		0.40	0.52	0.07
Uniform Delay, d1	30.0	8.9			18.0		30.4	27.1		30.4	27.0	24.9
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	115.2	0.2			0.4		1.6	0.9		1.6	1.6	0.1
Delay (s)	145.2	9.1			18.4		32.0	27.9		32.0	28.6	25.0
Level of Service	F	A			B		C	C		C	C	C
Approach Delay (s)		53.9			18.4			28.6			27.5	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	71.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	393	36	3	639	9	39	7	6	49	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.99			1.00		0.98		0.87		0.85
Flt Protected	1.00			1.00		0.99		0.99		1.00
Satd. Flow (prot)	3495			3538		4948		1604		1504
Flt Permitted	1.00			0.95		0.99		0.99		1.00
Satd. Flow (perm)	3495			3375		4948		1604		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	393	36	3	639	9	39	7	6	49	35
RTOR Reduction (vph)	7	0	0	0	0	0	0	47	0	25
Lane Group Flow (vph)	422	0	0	642	0	55	0	12	0	6
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1398			1350		1510		287		269
v/s Ratio Prot	0.12							c0.01		
v/s Ratio Perm				c0.19		0.01				0.00
v/c Ratio	0.30			0.48		0.04		0.04		0.02
Uniform Delay, d1	19.4			21.1		23.2		32.3		32.1
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	0.6			1.2		0.0		0.3		0.1
Delay (s)	20.0			22.3		23.2		32.5		32.3
Level of Service	C			C		C		C		C
Approach Delay (s)	20.0			22.3		23.2		32.5		
Approach LOS	C			C		C		C		

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

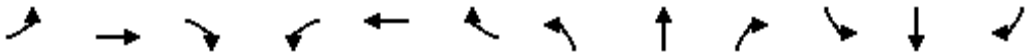
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	95	67	10	250	10	47	122	13	6	251	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.98			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.99			0.99			0.97	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1729			1845			1814			1790	
Flt Permitted		0.89			0.99			0.87			1.00	
Satd. Flow (perm)		1563			1827			1595			1785	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	95	67	10	250	10	47	122	13	6	251	73
RTOR Reduction (vph)	0	27	0	0	2	0	0	4	0	0	16	0
Lane Group Flow (vph)	0	178	0	0	268	0	0	178	0	0	314	0
Confl. Peds. (#/hr)	21		14	14		21	12		4	4		12
Confl. Bikes (#/hr)			7			11			9			9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		553			646			809			906	
v/s Ratio Prot												
v/s Ratio Perm		0.11			c0.15			0.11			c0.18	
v/c Ratio		0.32			0.41			0.22			0.35	
Uniform Delay, d1		15.3			15.9			8.9			9.6	
Progression Factor		1.01			1.39			1.00			1.00	
Incremental Delay, d2		1.5			1.8			0.6			1.1	
Delay (s)		17.0			23.9			9.5			10.6	
Level of Service		B			C			A			B	
Approach Delay (s)		17.0			23.9			9.5			10.6	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



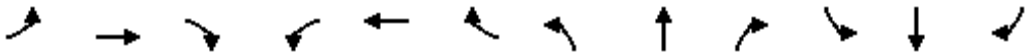
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	158	36	17	260	103	108	544	6	76	255	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.96		1.00	1.00		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1807			1791		1770	5077		1770	5030	
Flt Permitted		0.88			0.98		0.58	1.00		0.42	1.00	
Satd. Flow (perm)		1607			1767		1073	5077		784	5030	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	158	36	17	260	103	108	544	6	76	255	20
RTOR Reduction (vph)	0	9	0	0	20	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	235	0	0	360	0	108	548	0	76	263	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		766			842		429	2030		313	2012	
v/s Ratio Prot								c0.11			0.05	
v/s Ratio Perm		0.15			c0.20		0.10			0.10		
v/c Ratio		0.31			0.43		0.25	0.27		0.24	0.13	
Uniform Delay, d1		10.4			11.2		13.0	13.1		13.0	12.3	
Progression Factor		1.00			0.73		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0			1.5		1.4	0.3		1.8	0.1	
Delay (s)		11.4			9.6		14.4	13.4		14.8	12.5	
Level of Service		B			A		B	B		B	B	
Approach Delay (s)		11.4			9.6			13.6			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

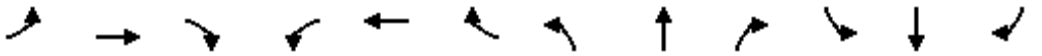
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	270	589	85	177	0	0	0	66	257	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Frt	1.00	0.85	1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3535	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3535	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	589	85	177	0	0	0	66	257	2
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	270	589	85	177	0	0	0	66	258	0
Confl. Peds. (#/hr)										12
Confl. Bikes (#/hr)										5
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	15.0	25.9	5.9	65.0				29.1	29.1	
Effective Green, g (s)	15.0	25.9	5.9	65.0				29.1	29.1	
Actuated g/C Ratio	0.23	0.40	0.09	1.00				0.45	0.45	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	408	1438	311	1583				792	1582	
v/s Ratio Prot	c0.15	c0.16						0.04	c0.07	
v/s Ratio Perm			0.02	0.11						
v/c Ratio	0.66	0.41	0.27	0.11				0.08	0.16	
Uniform Delay, d1	22.7	14.1	27.6	0.0				10.3	10.7	
Progression Factor	1.64	0.86	1.00	1.00				1.00	1.00	
Incremental Delay, d2	3.9	0.2	0.5	0.1				0.2	0.2	
Delay (s)	41.0	12.3	28.0	0.1				10.5	10.9	
Level of Service	D	B	C	A				B	B	
Approach Delay (s)	21.3		9.2			0.0			10.8	
Approach LOS	C		A			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	423	154	242	416	2	250	0	474	0	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Lane Util. Factor		0.95		0.91	0.91			1.00	1.00		1.00	
Frt		0.96		1.00	1.00			1.00	0.85		0.86	
Flt Protected		1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)		3395		1610	3377			1770	1583		1611	
Flt Permitted		0.89		0.95	0.91			0.75	1.00		1.00	
Satd. Flow (perm)		3025		1610	3094			1402	1583		1611	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	423	154	242	416	2	250	0	474	0	0	8
RTOR Reduction (vph)	0	32	0	0	0	0	0	0	360	0	6	0
Lane Group Flow (vph)	0	591	0	213	447	0	0	250	114	0	2	0
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		41.0		14.8	59.8			21.7	21.7		21.7	
Effective Green, g (s)		41.0		14.8	59.8			21.7	21.7		21.7	
Actuated g/C Ratio		0.46		0.16	0.66			0.24	0.24		0.24	
Clearance Time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1378		264	2102			338	381		388	
v/s Ratio Prot				c0.13	0.03						0.00	
v/s Ratio Perm		c0.20			0.11			c0.18	0.07			
v/c Ratio		0.43		0.81	0.21			0.74	0.30		0.00	
Uniform Delay, d1		16.6		36.2	5.9			31.5	27.9		25.9	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.0		16.3	0.1			8.2	0.4		0.0	
Delay (s)		17.6		52.5	6.0			39.8	28.4		26.0	
Level of Service		B		D	A			D	C		C	
Approach Delay (s)		17.6			21.0			32.3			26.0	
Approach LOS		B			C			C			C	

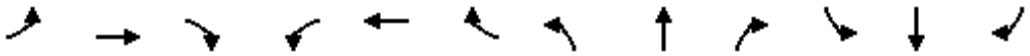
Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	335	58	53	475	56	112	711	40	18	282	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frt		0.98			0.99			0.99			1.00	0.85
Flt Protected		0.99			1.00			0.99			1.00	1.00
Satd. Flow (prot)		3442			3473			3492			3529	1583
Flt Permitted		0.72			0.87			0.85			0.89	1.00
Satd. Flow (perm)		2504			3026			2979			3159	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	335	58	53	475	56	112	711	40	18	282	116
RTOR Reduction (vph)	0	15	0	0	11	0	0	5	0	0	0	64
Lane Group Flow (vph)	0	478	0	0	573	0	0	858	0	0	300	52
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		30.0			30.0			32.0			32.0	32.0
Effective Green, g (s)		30.0			30.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42			0.42			0.44			0.44	0.44
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)		1043			1260			1324			1404	703
v/s Ratio Prot												
v/s Ratio Perm		c0.19			0.19			c0.29			0.09	0.03
v/c Ratio		0.46			0.45			0.65			0.21	0.07
Uniform Delay, d1		15.1			15.1			15.6			12.3	11.5
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		1.5			1.2			2.5			0.3	0.2
Delay (s)		16.6			16.3			18.1			12.6	11.7
Level of Service		B			B			B			B	B
Approach Delay (s)		16.6			16.3			18.1			12.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

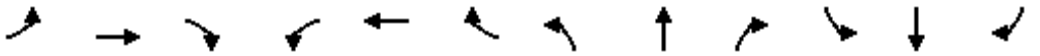
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	77	17	58	121	29	36	854	24	15	363	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.99			0.98		1.00	1.00			0.97	
Flt Protected		0.98			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1779			1780		1751	3488			3391	
Flt Permitted		0.70			0.88		0.49	1.00			0.93	
Satd. Flow (perm)		1278			1592		897	3488			3148	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	77	17	58	121	29	36	854	24	15	363	83
RTOR Reduction (vph)	0	8	0	0	10	0	0	2	0	0	17	0
Lane Group Flow (vph)	0	146	0	0	198	0	36	876	0	0	444	0
Confl. Peds. (#/hr)	3		1	1		3	2		7	7		2
Confl. Bikes (#/hr)			1			3			4			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		9.8			10.8		41.2	41.2			41.2	
Effective Green, g (s)		9.8			10.8		41.2	41.2			41.2	
Actuated g/C Ratio		0.16			0.18		0.69	0.69			0.69	
Clearance Time (s)		5.0			4.0		4.0	4.0			4.0	
Vehicle Extension (s)		1.0			1.0		1.0	1.0			1.0	
Lane Grp Cap (vph)		208			286		615	2395			2161	
v/s Ratio Prot								c0.25				
v/s Ratio Perm		0.11			c0.12		0.04				0.14	
v/c Ratio		0.70			0.69		0.06	0.37			0.21	
Uniform Delay, d1		23.7			23.0		3.1	3.9			3.4	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		8.5			5.8		0.2	0.4			0.2	
Delay (s)		32.2			28.8		3.3	4.4			3.6	
Level of Service		C			C		A	A			A	
Approach Delay (s)		32.2			28.8			4.3			3.6	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

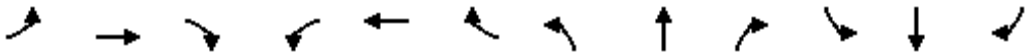
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	17	266	1	111	18	872	121	65	423	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.86			0.96		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1166			1720		1750	3432		1752	3496	
Flt Permitted		1.00			0.78		0.50	1.00		0.23	1.00	
Satd. Flow (perm)		1166			1389		921	3432		428	3496	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	17	266	1	111	18	872	121	65	423	6
RTOR Reduction (vph)	0	12	0	0	22	0	0	12	0	0	1	0
Lane Group Flow (vph)	0	5	0	0	356	0	18	981	0	65	428	0
Confl. Peds. (#/hr)	2					2	2					2
Confl. Bikes (#/hr)						2			1			
Heavy Vehicles (%)	41%	41%	41%	2%	2%	2%	3%	3%	3%	3%	3%	3%
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		21.1			21.1		40.3	40.3		40.3	40.3	
Effective Green, g (s)		21.1			21.1		40.3	40.3		40.3	40.3	
Actuated g/C Ratio		0.30			0.30		0.58	0.58		0.58	0.58	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		354			422		534	1992		248	2030	
v/s Ratio Prot		0.00						c0.29			0.12	
v/s Ratio Perm					c0.26		0.02			0.15		
v/c Ratio		0.01			0.84		0.03	0.49		0.26	0.21	
Uniform Delay, d1		16.9			22.6		6.2	8.5		7.2	7.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			13.8		0.1	0.9		2.6	0.2	
Delay (s)		16.9			36.4		6.3	9.4		9.8	7.2	
Level of Service		B			D		A	A		A	A	
Approach Delay (s)		16.9			36.4			9.4			7.5	
Approach LOS		B			D			A			A	

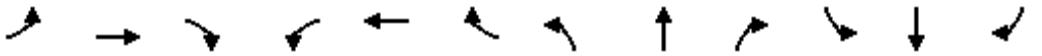
Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



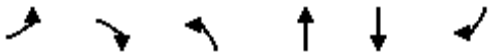
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	176	113	31	293	33	197	477	30	240	297	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frt		0.96			0.99		1.00	0.99		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3342			1832		1770	3508		1770	3496	
Flt Permitted		0.69			0.94		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2323			1724		1770	3508		1770	3496	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	176	113	31	293	33	197	477	30	240	297	26
RTOR Reduction (vph)	0	38	0	0	3	0	0	4	0	0	6	0
Lane Group Flow (vph)	0	351	0	0	354	0	197	503	0	240	317	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		26.1			26.1		13.4	21.3		15.2	23.1	
Effective Green, g (s)		26.1			26.1		13.4	21.3		15.2	23.1	
Actuated g/C Ratio		0.33			0.33		0.17	0.27		0.19	0.29	
Clearance Time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)		1.0			1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		766			568		299	944		340	1020	
v/s Ratio Prot							0.11	c0.14		c0.14	0.09	
v/s Ratio Perm		0.15			c0.21							
v/c Ratio		0.46			0.62		0.66	0.53		0.71	0.31	
Uniform Delay, d1		20.9			22.3		30.7	24.7		29.9	21.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.5		4.0	0.3		5.4	0.1	
Delay (s)		21.1			23.9		34.7	24.9		35.2	21.9	
Level of Service		C			C		C	C		D	C	
Approach Delay (s)		21.1			23.9			27.7			27.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	79.1	Sum of lost time (s)	16.5
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



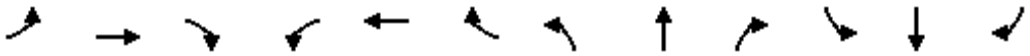
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	33	0	111	10	537	65	40	380	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frt					0.90		1.00	0.98		1.00	1.00	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1650		1770	3482		1770	3539	
Flt Permitted					0.92		0.95	1.00		0.95	1.00	
Satd. Flow (perm)					1536		1770	3482		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	33	0	111	10	537	65	40	380	0
RTOR Reduction (vph)	0	0	0	0	94	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	50	0	10	593	0	40	380	0
Turn Type				Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)					5.4		0.8	15.8		1.0	16.0	
Effective Green, g (s)					5.4		0.8	15.8		1.0	16.0	
Actuated g/C Ratio					0.15		0.02	0.45		0.03	0.45	
Clearance Time (s)					4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)					2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)					235		40	1562		50	1608	
v/s Ratio Prot							0.01	c0.17		c0.02	0.11	
v/s Ratio Perm					c0.03							
v/c Ratio					0.21		0.25	0.38		0.80	0.24	
Uniform Delay, d1					13.0		16.9	6.4		17.0	5.9	
Progression Factor					1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2					0.2		1.2	0.1		56.6	0.0	
Delay (s)					13.2		18.1	6.5		73.6	5.9	
Level of Service					B		B	A		E	A	
Approach Delay (s)		0.0			13.2			6.7			12.3	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	35.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



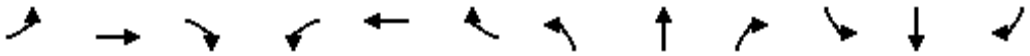
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	126	651	276	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.95	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3367	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3367	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	126	651	276	132
RTOR Reduction (vph)	0	0	0	0	55	0
Lane Group Flow (vph)	0	0	126	651	353	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			3.9	28.8	16.9	
Effective Green, g (s)			3.9	28.8	16.9	
Actuated g/C Ratio			0.14	1.00	0.59	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			464	3539	1975	
v/s Ratio Prot			0.04	c0.18	0.10	
v/s Ratio Perm						
v/c Ratio			0.27	0.18	0.18	
Uniform Delay, d1			11.2	0.0	2.7	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			0.3	0.0	0.0	
Delay (s)			11.5	0.0	2.8	
Level of Service			B	A	A	
Approach Delay (s)	0.0			1.9	2.8	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	2.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	28.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	22.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



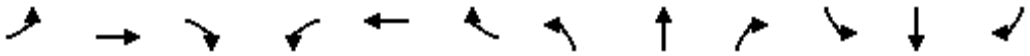
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	89	81	54	0	157	0	494	100	26	267	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.90			0.97		1.00	1.00	
Flt Protected	0.95	0.99	1.00		0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1761	1583		1654			3450		1770	3539	
Flt Permitted	0.95	0.99	1.00		0.99			1.00		0.38	1.00	
Satd. Flow (perm)	1681	1761	1583		1654			3450		716	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	89	81	54	0	157	0	494	100	26	267	0
RTOR Reduction (vph)	0	0	68	0	124	0	0	19	0	0	0	0
Lane Group Flow (vph)	87	99	13	0	87	0	0	575	0	26	267	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	6.8	6.8	6.8		7.8			15.7		15.7	15.7	
Effective Green, g (s)	6.8	6.8	6.8		7.8			15.7		15.7	15.7	
Actuated g/C Ratio	0.16	0.16	0.16		0.18			0.37		0.37	0.37	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	270	283	254		304			1280		265	1313	
v/s Ratio Prot	0.05	c0.06			c0.05			c0.17			0.08	
v/s Ratio Perm			0.01							0.04		
v/c Ratio	0.32	0.35	0.05		0.29			0.45		0.10	0.20	
Uniform Delay, d1	15.7	15.8	15.0		14.9			10.0		8.7	9.0	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.8	0.1		0.5			0.3		0.2	0.1	
Delay (s)	16.4	16.5	15.1		15.4			10.3		8.8	9.1	
Level of Service	B	B	B		B			B		A	A	
Approach Delay (s)		16.1			15.4			10.3			9.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	42.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	0	67	0	149	0	886	92	96	452	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		1.00			0.91			0.99		1.00	1.00	
Flt Protected		0.95			0.98			1.00		0.95	1.00	
Satd. Flow (prot)		1699			1584			3349		1703	3402	
Flt Permitted		0.57			0.91			1.00		0.95	1.00	
Satd. Flow (perm)		1022			1468			3349		1703	3402	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	0	0	67	0	149	0	886	92	96	452	3
RTOR Reduction (vph)	0	0	0	0	103	0	0	10	0	0	1	0
Lane Group Flow (vph)	0	2	0	0	113	0	0	968	0	96	454	0
Confl. Peds. (#/hr)	3					3			2	2		
Confl. Bikes (#/hr)									3			5
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		23.0			23.0			26.0		14.0	26.0	
Effective Green, g (s)		23.0			23.0			26.0		14.0	26.0	
Actuated g/C Ratio		0.31			0.31			0.35		0.19	0.35	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)		313			450			1160		317	1179	
v/s Ratio Prot								c0.29		c0.06	0.13	
v/s Ratio Perm		0.00			c0.08							
v/c Ratio		0.01			0.25			0.83		0.30	0.39	
Uniform Delay, d1		18.1			19.5			22.5		26.3	18.5	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		0.0			1.3			7.1		2.4	1.0	
Delay (s)		18.1			20.9			29.6		28.7	19.4	
Level of Service		B			C			C		C	B	
Approach Delay (s)		18.1			20.9			29.6			21.1	
Approach LOS		B			C			C			C	

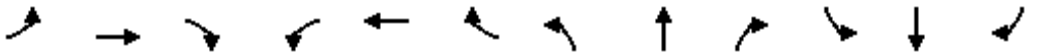
Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	109	28	29	206	136	84	776	51	100	326	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.95		1.00	0.99		1.00	0.97	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1727			1687		1696	3369		1702	3280	
Flt Permitted		0.68			0.96		0.51	1.00		0.30	1.00	
Satd. Flow (perm)		1187			1629		912	3369		545	3280	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	71	109	28	29	206	136	84	776	51	100	326	85
RTOR Reduction (vph)	0	11	0	0	40	0	0	7	0	0	32	0
Lane Group Flow (vph)	0	197	0	0	331	0	84	820	0	100	379	0
Confl. Peds. (#/hr)	2		3	3		2	3		1	1		3
Confl. Bikes (#/hr)						3			4			3
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.7			16.7		33.3	33.3		33.3	33.3	
Effective Green, g (s)		16.7			16.7		33.3	33.3		33.3	33.3	
Actuated g/C Ratio		0.28			0.28		0.55	0.55		0.55	0.55	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		330			453		506	1869		302	1820	
v/s Ratio Prot								c0.24			0.12	
v/s Ratio Perm		0.17			c0.20		0.09			0.18		
v/c Ratio		0.60			0.73		0.17	0.44		0.33	0.21	
Uniform Delay, d1		18.7			19.6		6.5	7.9		7.3	6.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.9			6.0		0.7	0.8		2.9	0.3	
Delay (s)		21.6			25.6		7.3	8.6		10.2	7.0	
Level of Service		C			C		A	A		B	A	
Approach Delay (s)		21.6			25.6			8.5			7.6	
Approach LOS		C			C			A			A	

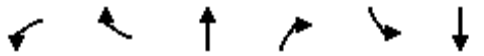
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	142	442	94	32	668	125	154	429	57	73	206	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1561	1770	3444		1770	3477		1770	3539	1555
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1561	1770	3444		1770	3477		1770	3539	1555
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	142	442	94	32	668	125	154	429	57	73	206	149
RTOR Reduction (vph)	0	0	63	0	15	0	0	8	0	0	0	96
Lane Group Flow (vph)	142	442	31	32	778	0	154	478	0	73	206	53
Confl. Peds. (#/hr)			2			8						1
Confl. Bikes (#/hr)						2						8
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	7.0	35.8	35.8	5.1	33.9		11.7	44.7		6.4	39.4	39.4
Effective Green, g (s)	7.0	35.8	35.8	5.1	33.9		11.7	44.7		6.4	39.4	39.4
Actuated g/C Ratio	0.06	0.33	0.33	0.05	0.31		0.11	0.41		0.06	0.36	0.36
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	112	1151	508	82	1061		188	1412		102	1267	556
v/s Ratio Prot	c0.08	0.12		0.02	c0.23		c0.09	c0.14		0.04	0.06	
v/s Ratio Perm			0.02									0.03
v/c Ratio	1.27	0.38	0.06	0.39	0.73		0.82	0.34		0.72	0.16	0.10
Uniform Delay, d1	51.5	28.6	25.5	50.9	34.0		48.1	22.5		50.9	24.1	23.5
Progression Factor	1.31	0.50	0.12	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	169.3	0.2	0.0	3.1	2.7		23.4	0.7		21.1	0.3	0.3
Delay (s)	236.9	14.4	3.0	54.0	36.7		71.5	23.1		72.0	24.3	23.8
Level of Service	F	B	A	D	D		E	C		E	C	C
Approach Delay (s)		59.4			37.3			34.8			32.3	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	65	108	594	22	29	222
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	65	108	594	22	29	222
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	774	308			616	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	774	308			616	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	80	84			97	
cM capacity (veh/h)	325	688			960	

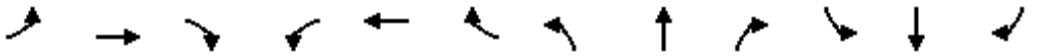
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	173	396	220	103	148
Volume Left	65	0	0	29	0
Volume Right	108	0	22	0	0
cSH	485	1700	1700	960	1700
Volume to Capacity	0.36	0.23	0.13	0.03	0.09
Queue Length 95th (ft)	40	0	0	2	0
Control Delay (s)	16.5	0.0	0.0	2.7	0.0
Lane LOS	C			A	
Approach Delay (s)	16.5	0.0		1.1	
Approach LOS	C				

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	219	61	567	111	106	173
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	219	61	567	111	106	173
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	921	339			678	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	921	339			678	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	8	91			88	
cM capacity (veh/h)	238	657			910	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	280	378	300	164	115
Volume Left	219	0	0	106	0
Volume Right	61	0	111	0	0
cSH	277	1700	1700	910	1700
Volume to Capacity	1.01	0.22	0.18	0.12	0.07
Queue Length 95th (ft)	262	0	0	10	0
Control Delay (s)	97.8	0.0	0.0	6.5	0.0
Lane LOS	F			A	
Approach Delay (s)	97.8	0.0		3.8	
Approach LOS	F				

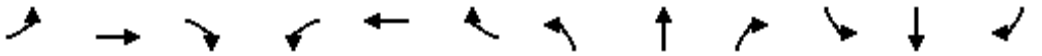
Intersection Summary			
Average Delay	23.0		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	254	400	108	130	644	122	306	433	111	48	299	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1547	3433	3539	1556	3433	3412		3433	3276	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1547	3433	3539	1556	3433	3412		3433	3276	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	254	400	108	130	644	122	306	433	111	48	299	215
RTOR Reduction (vph)	0	0	75	0	0	88	0	20	0	0	130	0
Lane Group Flow (vph)	254	400	33	130	644	34	306	524	0	48	384	0
Confl. Peds. (#/hr)			14			7			16			11
Confl. Bikes (#/hr)			1						6			10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.4	22.9	22.9	8.4	20.9	20.9	11.2	23.6		4.0	16.4	
Effective Green, g (s)	10.4	22.9	22.9	8.4	20.9	20.9	11.2	23.6		4.0	16.4	
Actuated g/C Ratio	0.14	0.31	0.31	0.11	0.28	0.28	0.15	0.32		0.05	0.22	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	476	1082	472	385	987	434	513	1075		183	717	
v/s Ratio Prot	c0.07	0.11		0.04	c0.18		c0.09	c0.15		0.01	0.12	
v/s Ratio Perm			0.02			0.02						
v/c Ratio	0.53	0.37	0.07	0.34	0.65	0.08	0.60	0.49		0.26	0.54	
Uniform Delay, d1	30.0	20.4	18.4	30.7	23.8	19.9	29.7	20.8		34.0	25.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	0.2	0.1	0.5	1.6	0.1	1.9	0.3		0.8	0.8	
Delay (s)	31.1	20.6	18.5	31.2	25.4	20.0	31.6	21.1		34.8	26.7	
Level of Service	C	C	B	C	C	B	C	C		C	C	
Approach Delay (s)		23.8			25.5			24.9			27.4	
Approach LOS		C			C			C			C	

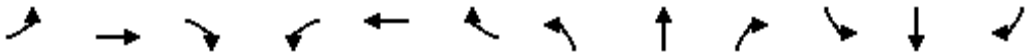
Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	74.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	90	70	11	106	9	97	765	13	15	292	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93			0.99		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1757	1726			1832		1770	3527		1770	3539	1534
Flt Permitted	0.77	1.00			0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1431	1726			1786		1770	3527		1770	3539	1534
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	134	90	70	11	106	9	97	765	13	15	292	205
RTOR Reduction (vph)	0	23	0	0	2	0	0	1	0	0	0	134
Lane Group Flow (vph)	134	137	0	0	124	0	97	777	0	15	292	71
Confl. Peds. (#/hr)	20		9	9		20	3		23	23		3
Confl. Bikes (#/hr)			3			10			5			7
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	11.5	11.5			11.5		6.7	21.6		1.0	15.9	15.9
Effective Green, g (s)	11.5	11.5			11.5		6.7	21.6		1.0	15.9	15.9
Actuated g/C Ratio	0.25	0.25			0.25		0.15	0.47		0.02	0.34	0.34
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	356	430			445		257	1652		38	1220	529
v/s Ratio Prot		0.08					c0.05	c0.22		0.01	0.08	
v/s Ratio Perm	c0.09				0.07							0.05
v/c Ratio	0.38	0.32			0.28		0.38	0.47		0.39	0.24	0.13
Uniform Delay, d1	14.3	14.1			14.0		17.8	8.4		22.3	10.8	10.4
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.4			0.3		0.9	0.2		6.6	0.1	0.1
Delay (s)	15.0	14.5			14.3		18.7	8.6		28.9	10.9	10.5
Level of Service	B	B			B		B	A		C	B	B
Approach Delay (s)		14.7			14.3			9.7			11.3	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	281	361	2	313	15	348	701	7	37	508	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1862	1583	1770	3534		1770	3397	
Flt Permitted	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1859	1583	1770	3534		1770	3397	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	290	281	361	2	313	15	348	701	7	37	508	185
RTOR Reduction (vph)	0	0	213	0	0	12	0	1	0	0	39	0
Lane Group Flow (vph)	290	281	148	0	315	3	348	707	0	37	654	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	12.2	36.5	36.5		19.3	19.3	12.2	32.6		4.7	25.1	
Effective Green, g (s)	12.2	36.5	36.5		19.3	19.3	12.2	32.6		4.7	25.1	
Actuated g/C Ratio	0.14	0.41	0.41		0.22	0.22	0.14	0.37		0.05	0.28	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	243	765	650		404	344	243	1297		93	960	
v/s Ratio Prot	c0.16	0.15					c0.20	0.20		0.02	c0.19	
v/s Ratio Perm			0.09		c0.17	0.00						
v/c Ratio	1.19	0.37	0.23		0.78	0.01	1.43	0.55		0.40	0.68	
Uniform Delay, d1	38.3	18.1	17.0		32.7	27.3	38.3	22.2		40.7	28.3	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	120.1	0.3	0.2		9.2	0.0	216.5	0.5		2.8	2.0	
Delay (s)	158.4	18.4	17.2		42.0	27.3	254.8	22.7		43.5	30.3	
Level of Service	F	B	B		D	C	F	C		D	C	
Approach Delay (s)		61.5			41.3			99.2			31.0	
Approach LOS		E			D			F			C	

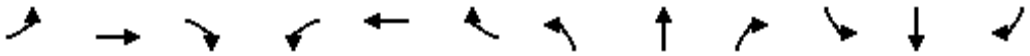
Intersection Summary			
HCM 2000 Control Delay	65.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	88.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	431	265	115	55	177	17	7	72	382	58	6	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.95		1.00	0.99			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3363		1770	3489			1770	3460			1764
Flt Permitted	0.95	1.00		0.95	1.00			0.36	1.00			1.00
Satd. Flow (perm)	3433	3363		1770	3489			671	3460			1857
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	431	265	115	55	177	17	7	72	382	58	6	17
RTOR Reduction (vph)	0	52	0	0	8	0	0	0	11	0	0	0
Lane Group Flow (vph)	431	328	0	55	186	0	0	79	429	0	0	23
Confl. Peds. (#/hr)			2	2						10		10
Confl. Bikes (#/hr)			2			1				4		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	11.1	17.5		4.8	11.2			11.1	24.1			1.8
Effective Green, g (s)	11.1	17.5		4.8	11.2			11.1	24.1			1.8
Actuated g/C Ratio	0.17	0.27		0.07	0.17			0.17	0.38			0.03
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	593	916		132	608			116	1298			52
v/s Ratio Prot	c0.13	c0.10		0.03	0.05				c0.12			
v/s Ratio Perm								c0.12				0.01
v/c Ratio	0.73	0.36		0.42	0.31			0.68	0.33			0.44
Uniform Delay, d1	25.1	18.8		28.4	23.1			24.9	14.3			30.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	4.4	0.2		2.1	0.3			15.2	0.2			5.9
Delay (s)	29.5	19.1		30.5	23.4			40.1	14.4			36.6
Level of Service	C	B		C	C			D	B			D
Approach Delay (s)		24.6			25.0				18.4			
Approach LOS		C			C				B			

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	64.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	289	248
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1563
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1563
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	289	248
RTOR Reduction (vph)	0	191
Lane Group Flow (vph)	289	57
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		1
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	14.8	14.8
Effective Green, g (s)	14.8	14.8
Actuated g/C Ratio	0.23	0.23
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	815	360
v/s Ratio Prot	0.08	
v/s Ratio Perm		0.04
v/c Ratio	0.35	0.16
Uniform Delay, d1	20.7	19.7
Progression Factor	1.00	1.00
Incremental Delay, d2	0.3	0.2
Delay (s)	21.0	19.9
Level of Service	C	B
Approach Delay (s)	21.2	
Approach LOS	C	

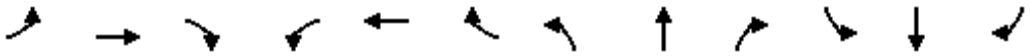
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	3	2	178	5	78	5	109	115	43	79	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	3	2	178	5	78	5	109	115	43	79	4
Pedestrians					2							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					4.0							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	366	403	81	292	290	111	83			226		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	366	403	81	292	290	111	83			226		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	100	72	99	92	100			97		
cM capacity (veh/h)	519	513	973	633	594	935	1501			1328		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	9	261	114	115	126
Volume Left	4	178	5	0	43
Volume Right	2	78	0	115	4
cSH	576	700	1501	1700	1328
Volume to Capacity	0.02	0.37	0.00	0.07	0.03
Queue Length 95th (ft)	1	43	0	0	3
Control Delay (s)	11.3	13.2	0.4	0.0	2.8
Lane LOS	B	B	A		A
Approach Delay (s)	11.3	13.2	0.2		2.8
Approach LOS	B	B			

Intersection Summary				
Average Delay	6.3			
Intersection Capacity Utilization	41.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	283	396	70	9	527	88	5	0	4	42	2	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.91		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.99	
Satd. Flow (prot)	1687	3046	2564	1703	4776		1643	3285	1462		2638	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.99	
Satd. Flow (perm)	1687	3046	2564	1703	4776		1643	3285	1462		2638	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	283	396	70	9	527	88	5	0	4	42	2	134
RTOR Reduction (vph)	0	0	26	0	18	0	0	0	4	0	115	0
Lane Group Flow (vph)	283	403	37	9	597	0	2	3	0	0	63	0
Confl. Peds. (#/hr)	8					8			8	8		
Confl. Bikes (#/hr)			1			3			7			
Heavy Vehicles (%)	7%	7%	7%	6%	6%	6%	0%	0%	0%	20%	20%	20%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	14.7	30.2	30.2	0.9	16.4		0.8	0.8	0.8		7.1	
Effective Green, g (s)	14.7	30.2	30.2	0.9	16.4		0.8	0.8	0.8		7.1	
Actuated g/C Ratio	0.29	0.59	0.59	0.02	0.32		0.02	0.02	0.02		0.14	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	486	1803	1518	30	1535		25	51	22		367	
v/s Ratio Prot	c0.17	0.13		0.01	c0.12		c0.00	0.00			c0.02	
v/s Ratio Perm			0.01						0.00			
v/c Ratio	0.58	0.22	0.02	0.30	0.39		0.08	0.06	0.00		0.17	
Uniform Delay, d1	15.5	4.9	4.3	24.7	13.4		24.7	24.7	24.7		19.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	1.8	0.1	0.0	5.6	0.2		1.4	0.5	0.1		0.2	
Delay (s)	17.3	5.0	4.3	30.3	13.6		26.1	25.2	24.8		19.6	
Level of Service	B	A	A	C	B		C	C	C		B	
Approach Delay (s)		9.6			13.8			25.2			19.6	
Approach LOS		A			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	51.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

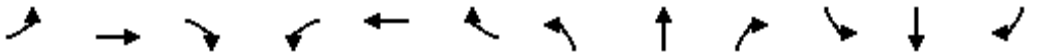
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	31	0	991	77	73	1238	0	78	0	54	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Lane Util. Factor		1.00	0.86		1.00	0.86			1.00	1.00		
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00		
Flpb, ped/bikes		1.00	1.00		1.00	1.00			0.99	1.00		
Frt		1.00	0.99		1.00	1.00			1.00	0.85		
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1679	6033		1687	6108			1667	1509		
Flt Permitted		0.63	1.00		0.95	1.00			0.76	1.00		
Satd. Flow (perm)		1122	6033		1687	6108			1328	1509		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	0	991	77	73	1238	0	78	0	54	0	0
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	0	49	0	0
Lane Group Flow (vph)	0	31	1062	0	73	1238	0	0	78	5	0	0
Confl. Peds. (#/hr)		10					10	11				
Confl. Bikes (#/hr)				2			3					
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type	custom	Prot	NA		Prot	NA		Perm	NA	Perm		
Protected Phases		5	2		1	6			3			3
Permitted Phases	5							3	3	3	3	3
Actuated Green, G (s)		6.3	76.8		7.6	78.1			9.6	9.6		
Effective Green, g (s)		6.3	76.8		7.6	78.1			9.6	9.6		
Actuated g/C Ratio		0.06	0.72		0.07	0.74			0.09	0.09		
Clearance Time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Vehicle Extension (s)		2.0	2.0		2.0	2.0			2.0	2.0		
Lane Grp Cap (vph)		66	4371		120	4500			120	136		
v/s Ratio Prot			0.18		c0.04	c0.20						
v/s Ratio Perm		0.03							c0.06	0.00		
v/c Ratio		0.47	0.24		0.61	0.28			0.65	0.04		
Uniform Delay, d1		48.2	4.9		47.8	4.6			46.6	44.0		
Progression Factor		1.01	0.89		1.00	1.00			1.00	1.00		
Incremental Delay, d2		1.9	0.1		5.9	0.2			9.2	0.0		
Delay (s)		50.8	4.5		53.6	4.8			55.8	44.0		
Level of Service		D	A		D	A			E	D		
Approach Delay (s)			5.8			7.5			51.0			0.0
Approach LOS			A			A			D			A

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

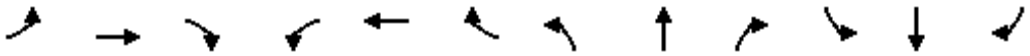
Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	11
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	7%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	448	135	66	706	49	438	25	241	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.97		1.00	0.99		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98			0.98	1.00
Satd. Flow (prot)	3433	4909		1770	6345		1610	3059			1726	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.98			0.98	1.00
Satd. Flow (perm)	3433	4909		1770	6345		1610	3059			1726	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	29	448	135	66	706	49	438	25	241	1	1	1
RTOR Reduction (vph)	0	27	0	0	5	0	0	192	0	0	0	1
Lane Group Flow (vph)	29	556	0	66	750	0	245	267	0	0	2	0
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	3.5	59.0		7.4	62.9		21.6	21.6			1.0	1.0
Effective Green, g (s)	3.5	59.0		7.4	62.9		21.6	21.6			1.0	1.0
Actuated g/C Ratio	0.03	0.56		0.07	0.59		0.20	0.20			0.01	0.01
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	113	2732		123	3765		328	623			16	14
v/s Ratio Prot	0.01	0.11		c0.04	c0.12		c0.15	0.09			c0.00	
v/s Ratio Perm												0.00
v/c Ratio	0.26	0.20		0.54	0.20		0.75	0.43			0.12	0.00
Uniform Delay, d1	50.0	11.7		47.6	9.9		39.6	36.8			52.1	52.0
Progression Factor	1.00	1.00		1.12	0.63		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.4	0.2		2.2	0.1		7.9	0.2			1.3	0.0
Delay (s)	50.4	11.9		55.4	6.4		47.5	37.0			53.3	52.0
Level of Service	D	B		E	A		D	D			D	D
Approach Delay (s)		13.7			10.3			40.7			52.9	
Approach LOS		B			B			D			D	

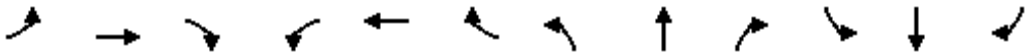
Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	599	119	49	932	132	194	172	83	71	80	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3310		1719	3362		1719	1706		1719	1665	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	3310		1719	3362		1719	1706		1719	1665	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	62	599	119	49	932	132	194	172	83	71	80	74
RTOR Reduction (vph)	0	13	0	0	7	0	0	19	0	0	37	0
Lane Group Flow (vph)	62	705	0	49	1057	0	194	236	0	71	117	0
Confl. Peds. (#/hr)	3		18	18		3	2		14	14		2
Confl. Bikes (#/hr)			4			1						2
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	4.8	50.1		12.5	57.8		14.3	21.9		5.5	13.1	
Effective Green, g (s)	4.8	50.1		12.5	57.8		14.3	21.9		5.5	13.1	
Actuated g/C Ratio	0.04	0.46		0.11	0.53		0.13	0.20		0.05	0.12	
Clearance Time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	75	1507		195	1766		223	339		85	198	
v/s Ratio Prot	c0.04	0.21		0.03	c0.31		c0.11	c0.14		0.04	c0.07	
v/s Ratio Perm												
v/c Ratio	0.83	0.47		0.25	0.60		0.87	0.70		0.84	0.59	
Uniform Delay, d1	52.2	20.7		44.5	18.1		46.9	41.0		51.8	45.9	
Progression Factor	1.00	1.00		1.18	1.68		1.00	1.00		1.00	1.00	
Incremental Delay, d2	47.9	0.1		0.2	1.3		27.5	4.9		46.0	3.1	
Delay (s)	100.1	20.8		52.7	31.7		74.4	45.9		97.8	49.0	
Level of Service	F	C		D	C		E	D		F	D	
Approach Delay (s)		27.1			32.6			58.2			64.4	
Approach LOS		C			C			E			E	

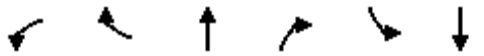
Intersection Summary			
HCM 2000 Control Delay	38.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	334	0	0	722	525	1	879	212	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	4.0			
Lane Util. Factor		0.95			0.95			0.95	1.00			
Frt		1.00			0.94			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3539			3316			3539	1583			
Flt Permitted		1.00			1.00			1.00	1.00			
Satd. Flow (perm)		3539			3316			3539	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	334	0	0	722	525	1	879	212	0	0	0
RTOR Reduction (vph)	0	0	0	0	111	0	0	0	126	0	0	0
Lane Group Flow (vph)	0	334	0	0	1136	0	0	880	86	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)		26.3			26.3			23.3	23.3			
Effective Green, g (s)		26.3			26.3			23.3	23.3			
Actuated g/C Ratio		0.46			0.46			0.40	0.40			
Clearance Time (s)		4.0			4.0			4.0	4.0			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		1615			1514			1431	640			
v/s Ratio Prot		0.09			c0.34							
v/s Ratio Perm								0.25	0.05			
v/c Ratio		0.21			0.75			0.61	0.13			
Uniform Delay, d1		9.4			12.9			13.6	10.8			
Progression Factor		1.00			1.00			1.00	1.00			
Incremental Delay, d2		0.1			2.1			0.8	0.1			
Delay (s)		9.5			15.1			14.4	10.9			
Level of Service		A			B			B	B			
Approach Delay (s)		9.5			15.1			13.7			0.0	
Approach LOS		A			B			B			A	

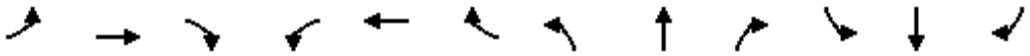
Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	57.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	805	0	0	0	405	1052
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0
Lane Util. Factor	0.97					0.91
Frt	1.00					1.00
Flt Protected	0.95					0.99
Satd. Flow (prot)	3433					5016
Flt Permitted	0.95					0.99
Satd. Flow (perm)	3433					5016
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	805	0	0	0	405	1052
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	805	0	0	0	0	1457
Turn Type	Prot				Split	NA
Protected Phases	8				6	6
Permitted Phases						
Actuated Green, G (s)	11.0					31.0
Effective Green, g (s)	11.0					31.0
Actuated g/C Ratio	0.22					0.62
Clearance Time (s)	4.0					4.0
Lane Grp Cap (vph)	755					3109
v/s Ratio Prot	c0.23					c0.29
v/s Ratio Perm						
v/c Ratio	1.07					0.47
Uniform Delay, d1	19.5					5.1
Progression Factor	1.00					1.00
Incremental Delay, d2	51.9					0.5
Delay (s)	71.4					5.6
Level of Service	E					A
Approach Delay (s)	71.4		0.0			5.6
Approach LOS	E		A			A

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	139	368	392	16	611	82	206	289	438	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00				
Frt	1.00	0.92			0.98		1.00	0.91				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1770	3265			3474		1770	1694				
Flt Permitted	0.95	1.00			0.93		0.95	1.00				
Satd. Flow (perm)	1770	3265			3239		1770	1694				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	139	368	392	16	611	82	206	289	438	0	0	0
RTOR Reduction (vph)	0	169	0	0	11	0	0	68	0	0	0	0
Lane Group Flow (vph)	139	591	0	0	698	0	206	659	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	12.5	45.5			28.5		25.5	25.5				
Effective Green, g (s)	12.5	45.5			28.5		25.5	25.5				
Actuated g/C Ratio	0.16	0.57			0.36		0.32	0.32				
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0			2.0		2.0	2.0				
Lane Grp Cap (vph)	276	1856			1153		564	539				
v/s Ratio Prot	c0.08	0.18						c0.39				
v/s Ratio Perm					c0.22		0.12					
v/c Ratio	0.50	0.32			0.61		0.37	1.22				
Uniform Delay, d1	30.9	9.1			21.1		21.0	27.2				
Progression Factor	1.43	0.20			1.00		1.00	1.00				
Incremental Delay, d2	1.2	0.3			2.4		0.1	115.9				
Delay (s)	45.2	2.1			23.5		21.2	143.2				
Level of Service	D	A			C		C	F				
Approach Delay (s)		8.8			23.5			116.2			0.0	
Approach LOS		A			C			F			A	

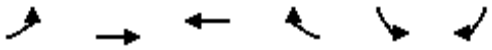
Intersection Summary			
HCM 2000 Control Delay	52.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	670	613	377	357	449	6	28	90	104	706	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Lane Util. Factor	0.95		1.00	0.95			1.00	1.00		0.91	
Frt	0.93		1.00	0.92			1.00	0.85		0.97	
Flt Protected	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	3286		1770	3243			1770	1583		4888	
Flt Permitted	1.00		0.95	1.00			0.18	1.00		1.00	
Satd. Flow (perm)	3286		1770	3243			328	1583		4888	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	670	613	377	357	449	6	28	90	104	706	237
RTOR Reduction (vph)	28	0	0	0	0	0	0	64	0	0	0
Lane Group Flow (vph)	1255	0	377	806	0	0	34	26	0	1047	0
Turn Type	NA		Prot	NA		Perm	Perm	Perm	Perm	NA	
Protected Phases	2		1	6						4	
Permitted Phases						8	8	8	4		
Actuated Green, G (s)	33.3		11.5	48.3			22.7	22.7		22.7	
Effective Green, g (s)	33.3		11.5	48.3			22.7	22.7		22.7	
Actuated g/C Ratio	0.42		0.14	0.60			0.28	0.28		0.28	
Clearance Time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Vehicle Extension (s)	2.0		2.0	2.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	1367		254	1957			93	449		1386	
v/s Ratio Prot	c0.38		c0.21	0.25							
v/s Ratio Perm							0.10	0.02		0.21	
v/c Ratio	0.92		1.48	0.41			0.37	0.06		0.76	
Uniform Delay, d1	22.1		34.2	8.4			22.9	20.9		26.1	
Progression Factor	1.00		0.98	1.42			1.00	1.00		1.00	
Incremental Delay, d2	11.3		236.8	0.6			0.9	0.0		2.1	
Delay (s)	33.4		270.3	12.4			23.8	20.9		28.2	
Level of Service	C		F	B			C	C		C	
Approach Delay (s)	33.4			94.6						28.2	
Approach LOS	C			F						C	

Intersection Summary			
HCM 2000 Control Delay	51.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

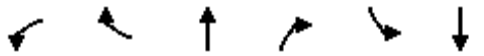
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	322	0	0	395	164	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	322	0	0	395	164	300
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	322	0	0	395	164	300
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	10.4			10.4	10.8	10.8
Effective Green, g (s)	10.4			10.4	10.8	10.8
Actuated g/C Ratio	0.36			0.36	0.37	0.37
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1811			1260	654	585
v/s Ratio Prot	0.06			c0.11	0.09	c0.19
v/s Ratio Perm						
v/c Ratio	0.18			0.31	0.25	0.51
Uniform Delay, d1	6.5			6.8	6.4	7.2
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.0			0.1	0.2	0.8
Delay (s)	6.5			7.0	6.6	7.9
Level of Service	A			A	A	A
Approach Delay (s)	6.5			7.0	7.4	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	29.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



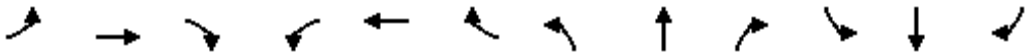
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	125	276	0	259	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.92	
Flt Protected		1.00	1.00		0.98	
Satd. Flow (prot)		3539	3539		3254	
Flt Permitted		1.00	1.00		0.98	
Satd. Flow (perm)		3539	3539		3254	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	125	276	0	259	280
RTOR Reduction (vph)	0	0	0	0	187	0
Lane Group Flow (vph)	0	125	276	0	352	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		7.2	7.2		7.5	
Effective Green, g (s)		7.2	7.2		7.5	
Actuated g/C Ratio		0.32	0.32		0.33	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1122	1122		1075	
v/s Ratio Prot		0.04	c0.08		c0.11	
v/s Ratio Perm						
v/c Ratio		0.11	0.25		0.33	
Uniform Delay, d1		5.5	5.7		5.7	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.0	0.1		0.2	
Delay (s)		5.5	5.9		5.9	
Level of Service		A	A		A	
Approach Delay (s)		5.5	5.9		5.9	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	22.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	462	118	69	179	86	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		4.0			4.0
Lane Util. Factor	0.97		1.00			1.00
Frpb, ped/bikes	1.00		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.97		0.90			1.00
Flt Protected	0.96		1.00			0.97
Satd. Flow (prot)	3304		1544			1668
Flt Permitted	0.96		1.00			0.74
Satd. Flow (perm)	3304		1544			1268
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	462	118	69	179	86	79
RTOR Reduction (vph)	26	0	90	0	0	0
Lane Group Flow (vph)	554	0	158	0	0	165
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	4%	4%	10%	10%	11%	11%
Turn Type	Prot		NA		Perm	NA
Protected Phases	6		8			4
Permitted Phases					4	
Actuated Green, G (s)	10.4		9.8			9.8
Effective Green, g (s)	10.4		9.8			9.8
Actuated g/C Ratio	0.38		0.35			0.35
Clearance Time (s)	3.5		4.0			4.0
Vehicle Extension (s)	2.2		2.0			2.0
Lane Grp Cap (vph)	1240		546			448
v/s Ratio Prot	c0.17		0.10			
v/s Ratio Perm						c0.13
v/c Ratio	0.45		0.29			0.37
Uniform Delay, d1	6.5		6.4			6.7
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		0.1			0.2
Delay (s)	6.6		6.6			6.8
Level of Service	A		A			A
Approach Delay (s)	6.6		6.6			6.8
Approach LOS	A		A			A

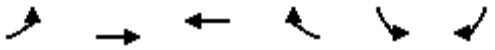
Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	27.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	741	0	112	0	0	0	134	159	0	0	143	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.99	
Flt Protected	0.95		1.00					0.98			1.00	
Satd. Flow (prot)	3273		1509					3208			1789	
Flt Permitted	0.95		1.00					0.98			1.00	
Satd. Flow (perm)	3273		1509					3208			1789	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	741	0	112	0	0	0	134	159	0	0	143	11
RTOR Reduction (vph)	0	0	73	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	741	0	39	0	0	0	0	293	0	0	152	0
Confl. Peds. (#/hr)	1						2					2
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	10%	10%	10%	5%	5%	5%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4						2	2			6	
Permitted Phases			4									
Actuated Green, G (s)	21.3		21.3					12.2			11.7	
Effective Green, g (s)	21.3		21.3					12.2			11.7	
Actuated g/C Ratio	0.35		0.35					0.20			0.19	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1139		525					639			342	
v/s Ratio Prot	c0.23							c0.09			c0.08	
v/s Ratio Perm			0.03									
v/c Ratio	0.65		0.07					0.46			0.44	
Uniform Delay, d1	16.8		13.4					21.6			21.9	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	1.3		0.1					0.5			0.9	
Delay (s)	18.2		13.4					22.1			22.8	
Level of Service	B		B					C			C	
Approach Delay (s)		17.5			0.0			22.1			22.8	
Approach LOS		B			A			C			C	

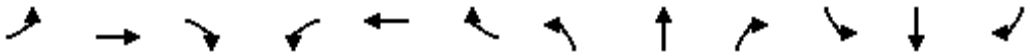
Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	61.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↑		↰↰	↱↱
Volume (vph)	0	892	1054	0	346	919
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5711	5711		3060	2484
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5711	5711		3060	2484
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	892	1054	0	346	919
RTOR Reduction (vph)	0	0	0	0	0	37
Lane Group Flow (vph)	0	892	1054	0	346	882
Confl. Bikes (#/hr)				2		2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		32.0	18.1		11.1	25.0
Effective Green, g (s)		32.0	18.1		11.1	25.0
Actuated g/C Ratio		0.63	0.35		0.22	0.49
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		3576	2022		664	1215
v/s Ratio Prot		0.16	c0.18		0.11	c0.36
v/s Ratio Perm						
v/c Ratio		0.25	0.52		0.52	0.73
Uniform Delay, d1		4.2	13.1		17.7	10.3
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.0	0.2		0.7	2.2
Delay (s)		4.3	13.3		18.4	12.5
Level of Service		A	B		B	B
Approach Delay (s)		4.3	13.3		14.1	
Approach LOS		A	B		B	

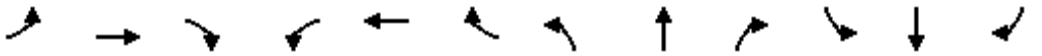
Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	51.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	514	357	0	900	283	864	0	243	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frpb, ped/bikes		1.00	0.99		1.00		1.00		1.00			
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00			
Frt		0.98	0.85		0.96		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3151	1357		4674		3273		1509			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3151	1357		4674		3273		1509			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	514	357	0	900	283	864	0	243	0	0	0
RTOR Reduction (vph)	0	13	0	0	54	0	0	0	148	0	0	0
Lane Group Flow (vph)	0	594	264	0	1129	0	864	0	95	0	0	0
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		56.0	105.0		56.0		41.0		41.0			
Effective Green, g (s)		56.0	105.0		56.0		41.0		41.0			
Actuated g/C Ratio		0.53	1.00		0.53		0.39		0.39			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1680	1357		2492		1278		589			
v/s Ratio Prot		0.19			c0.24		c0.26					
v/s Ratio Perm			0.19						0.06			
v/c Ratio		0.35	0.19		0.45		0.68		0.16			
Uniform Delay, d1		14.1	0.0		15.1		26.5		20.8			
Progression Factor		1.00	1.00		1.00		1.00		1.00			
Incremental Delay, d2		0.6	0.3		0.6		2.9		0.6			
Delay (s)		14.7	0.3		15.7		29.4		21.4			
Level of Service		B	A		B		C		C			
Approach Delay (s)		10.3			15.7			27.6			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	585	638	0	1334	0	0	0	0	297	0	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.95	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4360	1310		4893					3303		1500
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4360	1310		4893					3303		1500
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	585	638	0	1334	0	0	0	0	297	0	455
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	40
Lane Group Flow (vph)	0	904	319	0	1334	0	0	0	0	297	0	415
Confl. Peds. (#/hr)							5					5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		27.9	27.9		27.9					26.6		26.6
Effective Green, g (s)		27.9	27.9		27.9					26.6		26.6
Actuated g/C Ratio		0.45	0.45		0.45					0.43		0.43
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		1946	584		2184					1405		638
v/s Ratio Prot		0.21	0.24		c0.27							
v/s Ratio Perm										0.09		c0.28
v/c Ratio		0.46	0.55		0.61					0.21		0.65
Uniform Delay, d1		12.1	12.7		13.2					11.3		14.3
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.2	1.0		0.5					0.1		2.4
Delay (s)		12.3	13.7		13.7					11.4		16.6
Level of Service		B	B		B					B		B
Approach Delay (s)		12.6			13.7			0.0			14.6	
Approach LOS		B			B			A			B	

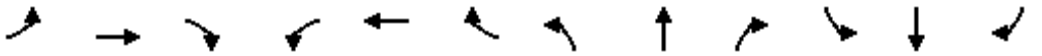
Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	556	120	0	894	459	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.99	0.85
Flt Protected	1.00	1.00		1.00	0.96	1.00
Satd. Flow (prot)	3471	1518		3471	3354	1413
Flt Permitted	1.00	1.00		1.00	0.96	1.00
Satd. Flow (perm)	3471	1518		3471	3354	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	556	120	0	894	459	248
RTOR Reduction (vph)	0	0	0	0	5	152
Lane Group Flow (vph)	556	120	0	894	484	66
Confl. Peds. (#/hr)		4	4			
Confl. Bikes (#/hr)		2				
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	18.8	38.5		18.8	11.7	11.7
Effective Green, g (s)	18.8	38.5		18.8	11.7	11.7
Actuated g/C Ratio	0.49	1.00		0.49	0.30	0.30
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1694	1518		1694	1019	429
v/s Ratio Prot	0.16			c0.26	c0.14	
v/s Ratio Perm		0.08				0.05
v/c Ratio	0.33	0.08		0.53	0.48	0.15
Uniform Delay, d1	6.0	0.0		6.8	10.9	9.8
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.3	0.4	0.2
Delay (s)	6.1	0.1		7.1	11.3	10.0
Level of Service	A	A		A	B	A
Approach Delay (s)	5.0			7.1	10.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	38.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

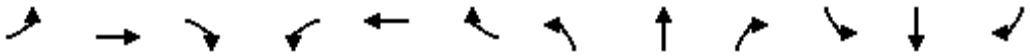


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	535	1000	0	1127	390	0	0	0	159	0	348
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00		0.95					0.95	0.91	0.95
Frt		1.00	0.85		0.96					1.00	0.86	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		3539	1583		3403					1681	1457	1504
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		3539	1583		3403					1681	1457	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	535	1000	0	1127	390	0	0	0	159	0	348
RTOR Reduction (vph)	0	0	362	0	32	0	0	0	0	0	79	79
Lane Group Flow (vph)	0	535	638	0	1485	0	0	0	0	143	104	102
Turn Type		NA	Perm		NA					Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4							6		6
Actuated Green, G (s)		35.3	35.3		35.3					12.0	12.0	12.0
Effective Green, g (s)		35.3	35.3		35.3					12.0	12.0	12.0
Actuated g/C Ratio		0.64	0.64		0.64					0.22	0.22	0.22
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2259	1010		2172					364	316	326
v/s Ratio Prot		0.15			c0.44							
v/s Ratio Perm			0.40							c0.09	0.07	0.07
v/c Ratio		0.24	0.63		0.68					0.39	0.33	0.31
Uniform Delay, d1		4.3	6.1		6.4					18.5	18.3	18.2
Progression Factor		1.00	1.00		1.00					1.00	1.00	1.00
Incremental Delay, d2		0.1	1.3		0.9					0.7	0.6	0.6
Delay (s)		4.3	7.4		7.3					19.2	18.9	18.7
Level of Service		A	A		A					B	B	B
Approach Delay (s)		6.3			7.3			0.0			18.9	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	55.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

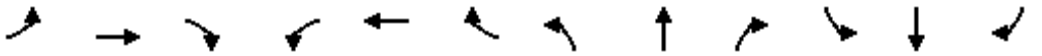
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	713	169	46	522	304	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3437		1770	3539	3392	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3437		1770	3539	3392	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	713	169	46	522	304	50
RTOR Reduction (vph)	21	0	0	0	14	0
Lane Group Flow (vph)	861	0	46	522	340	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	17.4		2.1	23.5	10.1	
Effective Green, g (s)	17.4		2.1	23.5	10.1	
Actuated g/C Ratio	0.44		0.05	0.59	0.26	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1510		93	2100	865	
v/s Ratio Prot	c0.25		c0.03	0.15	c0.10	
v/s Ratio Perm						
v/c Ratio	0.57		0.49	0.25	0.39	
Uniform Delay, d1	8.3		18.2	3.8	12.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.3		1.5	0.0	0.1	
Delay (s)	8.6		19.7	3.9	12.3	
Level of Service	A		B	A	B	
Approach Delay (s)	8.6			5.1	12.3	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	39.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



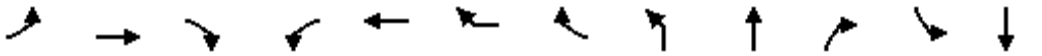
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	1243	26	6	637	221	15	100	375	225	26	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.96			0.90			1.00	
Flt Protected		1.00			1.00			1.00			0.96	
Satd. Flow (prot)		3524			3402			1668			1777	
Flt Permitted		0.92			0.95			0.99			0.26	
Satd. Flow (perm)		3236			3221			1650			487	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	33	1243	26	6	637	221	15	100	375	225	26	9
RTOR Reduction (vph)	0	2	0	0	43	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1300	0	0	821	0	0	490	0	0	259	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		36.1			36.1			21.5			21.5	
Effective Green, g (s)		36.1			36.1			21.5			21.5	
Actuated g/C Ratio		0.51			0.51			0.30			0.30	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1654			1646			502			148	
v/s Ratio Prot												
v/s Ratio Perm		c0.40			0.26			0.30			c0.53	
v/c Ratio		0.79			0.50			0.98			1.75	
Uniform Delay, d1		14.1			11.3			24.3			24.5	
Progression Factor		1.00			1.00			0.15			1.00	
Incremental Delay, d2		2.5			0.2			21.8			362.7	
Delay (s)		16.6			11.6			25.3			387.2	
Level of Service		B			B			C			F	
Approach Delay (s)		16.6			11.6			25.3			387.2	
Approach LOS		B			B			C			F	

Intersection Summary			
HCM 2000 Control Delay	49.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	445	95	134	482	186	57	312	360	54	71	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.97		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1770	3446		1770	3391			1848	1583		1823	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (perm)	1770	3446		1770	3391			1848	1583		1823	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	445	95	134	482	186	57	312	360	54	71	7
RTOR Reduction (vph)	0	20	0	0	39	0	0	0	141	0	0	6
Lane Group Flow (vph)	15	520	0	134	629	0	0	369	219	0	125	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	1.2	19.2		8.2	26.2			17.7	17.7		8.2	8.2
Effective Green, g (s)	1.2	19.2		8.2	26.2			17.7	17.7		8.2	8.2
Actuated g/C Ratio	0.02	0.28		0.12	0.38			0.26	0.26		0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	30	954		209	1282			472	404		215	187
v/s Ratio Prot	0.01	0.15		c0.08	c0.19			c0.20			c0.07	
v/s Ratio Perm									0.14			0.00
v/c Ratio	0.50	0.54		0.64	0.49			0.78	0.54		0.58	0.00
Uniform Delay, d1	33.8	21.3		29.1	16.5			24.0	22.3		28.9	26.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	12.5	0.6		6.6	0.3			8.2	1.5		4.0	0.0
Delay (s)	46.3	22.0		35.7	16.8			32.2	23.8		32.9	27.0
Level of Service	D	C		D	B			C	C		C	C
Approach Delay (s)		22.6			19.9			28.0			32.6	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

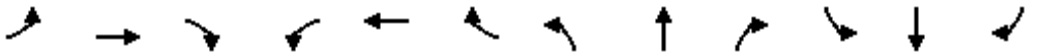


Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	110	653	6	210	387	0	64	1	441	207	110	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.95		1.00	0.98
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1848		1770	1863	1583			3370		1770	1818
Flt Permitted		0.88		0.95	1.00	1.00			0.95		0.28	1.00
Satd. Flow (perm)		1634		1770	1863	1583			3218		527	1818
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	653	6	210	387	0	64	1	441	207	110	158
RTOR Reduction (vph)	0	0	0	0	0	28	0	0	57	0	0	0
Lane Group Flow (vph)	0	769	0	210	387	36	0	0	592	0	110	188
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.2		12.7	39.9	39.9			23.9		23.9	23.9
Effective Green, g (s)		23.2		12.7	39.9	39.9			23.9		23.9	23.9
Actuated g/C Ratio		0.32		0.18	0.56	0.56			0.33		0.33	0.33
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		527		313	1035	879			1071		175	605
v/s Ratio Prot				c0.12	0.21							0.10
v/s Ratio Perm		c0.47				0.02			0.18		c0.21	
v/c Ratio		1.46		0.67	0.37	0.04			0.55		0.63	0.31
Uniform Delay, d1		24.3		27.6	8.9	7.2			19.6		20.2	17.8
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		217.0		5.6	0.2	0.0			0.6		6.9	0.3
Delay (s)		241.3		33.2	9.2	7.3			20.2		27.1	18.1
Level of Service		F		C	A	A			C		C	B
Approach Delay (s)		241.3			16.6				20.2			21.4
Approach LOS		F			B				C			C

Intersection Summary			
HCM 2000 Control Delay	90.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	71.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

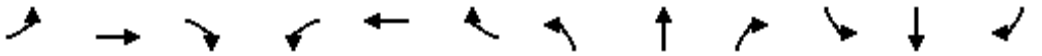
Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	30	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	30	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	327	2	199	405	8	9	436	235	15	74	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3526		1770	3529			1861	1583		1847	1583
Flt Permitted		1.00		0.95	1.00			1.00	1.00		0.92	1.00
Satd. Flow (perm)		3526		1770	3529			1855	1583		1713	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	327	2	199	405	8	9	436	235	15	74	21
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	104	0	0	13
Lane Group Flow (vph)	0	349	0	199	411	0	0	445	131	0	89	8
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		12.2		14.3	14.3			21.7	21.7		21.7	21.7
Effective Green, g (s)		12.2		14.3	14.3			21.7	21.7		21.7	21.7
Actuated g/C Ratio		0.20		0.24	0.24			0.36	0.36		0.36	0.36
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		714		420	838			668	570		617	570
v/s Ratio Prot		c0.10		0.11	c0.12							
v/s Ratio Perm								c0.24	0.08		0.05	0.00
v/c Ratio		0.49		0.47	0.49			0.67	0.23		0.14	0.01
Uniform Delay, d1		21.2		19.7	19.8			16.2	13.4		13.0	12.4
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5		0.8	0.5			2.5	0.2		0.1	0.0
Delay (s)		21.8		20.6	20.3			18.7	13.6		13.1	12.4
Level of Service		C		C	C			B	B		B	B
Approach Delay (s)		21.8			20.4			17.0			13.0	
Approach LOS		C			C			B			B	

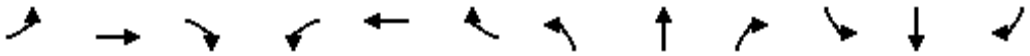
Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	659	54	20	439	61	88	259	43	161	202	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.99			0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3489			3462		1752	3448		1747	3539	1542
Flt Permitted		0.93			0.92		0.62	1.00		0.56	1.00	1.00
Satd. Flow (perm)		3246			3191		1153	3448		1034	3539	1542
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	659	54	20	439	61	88	259	43	161	202	23
RTOR Reduction (vph)	0	8	0	0	15	0	0	19	0	0	0	14
Lane Group Flow (vph)	0	731	0	0	505	0	88	283	0	161	202	9
Confl. Peds. (#/hr)	8		7	7		8	15		22	22		15
Confl. Bikes (#/hr)			3			5			3			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51			0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1669			1641		428	1280		384	1314	572
v/s Ratio Prot								0.08			0.06	
v/s Ratio Perm		c0.23			0.16		0.08			c0.16		0.01
v/c Ratio		0.44			0.31		0.21	0.22		0.42	0.15	0.01
Uniform Delay, d1		10.7			9.8		15.0	15.1		16.4	14.7	13.9
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8			0.5		1.1	0.4		3.3	0.2	0.0
Delay (s)		11.5			10.3		16.1	15.5		19.7	14.9	14.0
Level of Service		B			B		B	B		B	B	B
Approach Delay (s)		11.5			10.3			15.6			16.9	
Approach LOS		B			B			B			B	

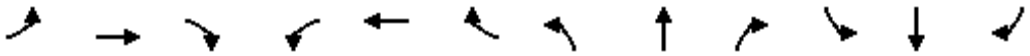
Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



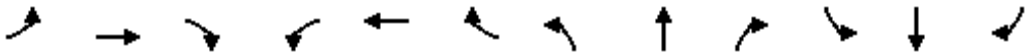
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	123	48	114	153	88	121	473	102	147	375	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3527	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3527	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	123	48	114	153	88	121	473	102	147	375	9
RTOR Reduction (vph)	0	0	0	0	0	63	0	0	75	0	2	0
Lane Group Flow (vph)	6	123	48	114	153	25	121	473	27	147	382	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.0	9.9	9.9	7.3	16.2	16.2	6.6	15.0	15.0	9.1	17.5	
Effective Green, g (s)	1.0	9.9	9.9	7.3	16.2	16.2	6.6	15.0	15.0	9.1	17.5	
Actuated g/C Ratio	0.02	0.17	0.17	0.13	0.28	0.28	0.12	0.26	0.26	0.16	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	30	321	273	225	526	447	203	926	414	281	1077	
v/s Ratio Prot	0.00	c0.07		c0.06	0.08		0.07	c0.13		c0.08	0.11	
v/s Ratio Perm			0.03			0.02			0.02			
v/c Ratio	0.20	0.38	0.18	0.51	0.29	0.06	0.60	0.51	0.06	0.52	0.35	
Uniform Delay, d1	27.8	21.0	20.2	23.3	16.1	15.0	24.1	18.0	15.9	22.1	15.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.3	0.8	0.3	1.8	0.3	0.1	4.6	0.5	0.1	1.8	0.2	
Delay (s)	31.0	21.8	20.5	25.1	16.4	15.0	28.7	18.5	15.9	23.9	15.7	
Level of Service	C	C	C	C	B	B	C	B	B	C	B	
Approach Delay (s)		21.7			18.8			19.9			18.0	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	116	127	241	73	60	91	601	499	64	537	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1733		1770	1737		1770	1863	1583	1770	3530	
Flt Permitted		0.99		0.53	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1717		992	1737		1770	1863	1583	1770	3530	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	11	116	127	241	73	60	91	601	499	64	537	10
RTOR Reduction (vph)	0	56	0	0	41	0	0	0	294	0	2	0
Lane Group Flow (vph)	0	198	0	241	92	0	91	601	205	64	545	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		18.5		18.5	18.5		3.5	23.8	23.8	3.5	23.8	
Effective Green, g (s)		18.5		18.5	18.5		3.5	23.8	23.8	3.5	23.8	
Actuated g/C Ratio		0.32		0.32	0.32		0.06	0.41	0.41	0.06	0.41	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		549		317	555		107	767	651	107	1453	
v/s Ratio Prot					0.05		c0.05	c0.32		0.04	0.15	
v/s Ratio Perm		0.12		c0.24					0.13			
v/c Ratio		0.36		0.76	0.17		0.85	0.78	0.32	0.60	0.38	
Uniform Delay, d1		15.1		17.7	14.1		26.9	14.8	11.5	26.5	11.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.4		10.3	0.1		44.0	5.3	0.3	8.7	0.2	
Delay (s)		15.5		27.9	14.3		70.9	20.0	11.8	35.2	12.0	
Level of Service		B		C	B		E	C	B	D	B	
Approach Delay (s)		15.5			23.1			20.4			14.4	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	57.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	35	124	236	37	84	86	1061	159	75	712	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.90			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1673			1746		1770	3470		1770	3530	
Flt Permitted		0.97			0.69		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1636			1238		1770	3470		1770	3530	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	35	124	236	37	84	86	1061	159	75	712	12
RTOR Reduction (vph)	0	86	0	0	15	0	0	17	0	0	2	0
Lane Group Flow (vph)	0	83	0	0	342	0	86	1203	0	75	722	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		20.5			20.5		5.9	28.0		5.8	27.9	
Effective Green, g (s)		20.5			20.5		5.9	28.0		5.8	27.9	
Actuated g/C Ratio		0.31			0.31		0.09	0.42		0.09	0.42	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		505			382		157	1465		154	1485	
v/s Ratio Prot							c0.05	c0.35		0.04	0.20	
v/s Ratio Perm		0.05			c0.28							
v/c Ratio		0.17			0.89		0.55	0.82		0.49	0.49	
Uniform Delay, d1		16.7			21.9		28.9	16.9		28.8	14.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			22.4		3.9	3.8		2.4	0.3	
Delay (s)		16.8			44.3		32.8	20.8		31.2	14.2	
Level of Service		B			D		C	C		C	B	
Approach Delay (s)		16.8			44.3			21.6			15.8	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	612	31	1270	671	45	1003
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.99		0.95		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	3425		3356		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	3425		3356		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	612	31	1270	671	45	1003
RTOR Reduction (vph)	5	0	60	0	0	0
Lane Group Flow (vph)	638	0	1881	0	45	1003
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	18.0		36.7		3.3	44.0
Effective Green, g (s)	18.0		36.7		3.3	44.0
Actuated g/C Ratio	0.26		0.52		0.05	0.63
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	880		1759		83	2224
v/s Ratio Prot	c0.19		c0.56		0.03	c0.28
v/s Ratio Perm						
v/c Ratio	0.72		1.07		0.54	0.45
Uniform Delay, d1	23.7		16.6		32.6	6.7
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	3.0		42.6		7.1	0.1
Delay (s)	26.7		59.3		39.7	6.9
Level of Service	C		E		D	A
Approach Delay (s)	26.7		59.3			8.3
Approach LOS	C		E			A

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	5	21	0	97	40	0	370	120	8	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95		1.00	0.95
Frpb, ped/bikes		0.99		1.00	0.98			1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt		0.86		1.00	0.85			1.00	0.96		1.00	1.00
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)		1591		1618	1426			1703	3256		1696	3406
Flt Permitted		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)		1591		1618	1426			1703	3256		1696	3406
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	5	21	0	97	40	0	370	120	8	140
RTOR Reduction (vph)	0	5	0	0	86	0	0	0	30	0	0	0
Lane Group Flow (vph)	0	0	0	19	13	0	0	40	460	0	8	140
Confl. Peds. (#/hr)			1			1				7	7	
Confl. Bikes (#/hr)						2				2		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type		NA		Split	NA		Prot	Prot	NA		Prot	NA
Protected Phases	4	4		8	8		5	5	2		1	6
Permitted Phases												
Actuated Green, G (s)		0.7		5.2	5.2			1.1	17.6		0.8	17.3
Effective Green, g (s)		0.7		5.2	5.2			1.1	17.6		0.8	17.3
Actuated g/C Ratio		0.02		0.13	0.13			0.03	0.44		0.02	0.43
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		27		208	184			46	1421		33	1462
v/s Ratio Prot		c0.00		c0.01	0.01			c0.02	c0.14		0.00	0.04
v/s Ratio Perm												
v/c Ratio		0.00		0.09	0.07			0.87	0.32		0.24	0.10
Uniform Delay, d1		19.5		15.5	15.4			19.5	7.4		19.5	6.8
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.0		0.2	0.2			83.5	0.1		3.8	0.0
Delay (s)		19.5		15.7	15.6			103.1	7.6		23.2	6.9
Level of Service		B		B	B			F	A		C	A
Approach Delay (s)		19.5			15.6				14.8			7.8
Approach LOS		B			B				B			A

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	40.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	3
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	22	250	771	22	16	154	1043	756	16	69	146	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	0.99	0.97		1.00	0.99	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.96	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1719	6195			1752	5691	1231		1696	1435	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1719	6195			1752	5691	1231		1696	1435	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	250	771	22	16	154	1043	756	16	69	146	3
RTOR Reduction (vph)	0	0	2	0	0	0	41	250	0	0	129	0
Lane Group Flow (vph)	0	272	791	0	0	170	1380	128	0	85	17	0
Confl. Peds. (#/hr)		12		1		1		12	64			
Confl. Bikes (#/hr)				1							1	
Heavy Vehicles (%)	5%	5%	5%	5%	3%	3%	3%	3%	11%	11%	11%	3%
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		20.3	41.4			15.2	36.3	36.3		12.7	12.7	
Effective Green, g (s)		20.3	41.4			15.2	36.3	36.3		12.7	12.7	
Actuated g/C Ratio		0.19	0.39			0.14	0.34	0.34		0.12	0.12	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		324	2385			247	1921	415		200	169	
v/s Ratio Prot		c0.16	0.13			0.10	c0.24			c0.05		
v/s Ratio Perm								0.10			0.01	
v/c Ratio		0.84	0.33			0.69	0.72	0.31		0.42	0.10	
Uniform Delay, d1		42.0	23.3			43.9	31.1	26.3		44.0	42.3	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		16.4	0.0			6.2	1.1	0.2		0.5	0.1	
Delay (s)		58.5	23.3			50.1	32.2	26.5		44.5	42.4	
Level of Service		E	C			D	C	C		D	D	
Approach Delay (s)			32.3				32.7			43.2		
Approach LOS			C				C			D		

Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	107.5	Sum of lost time (s)	21.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	298	149	69
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.96	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.95	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3400	1684	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3400	1684	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	298	149	69
RTOR Reduction (vph)	0	10	0
Lane Group Flow (vph)	301	208	0
Confl. Peds. (#/hr)	1		64
Confl. Bikes (#/hr)			1
Heavy Vehicles (%)	3%	3%	3%
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	17.2	17.2	
Effective Green, g (s)	17.2	17.2	
Actuated g/C Ratio	0.16	0.16	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	544	269	
v/s Ratio Prot	0.09	c0.12	
v/s Ratio Perm			
v/c Ratio	0.55	0.77	
Uniform Delay, d1	41.6	43.3	
Progression Factor	1.00	1.00	
Incremental Delay, d2	0.7	11.8	
Delay (s)	42.3	55.1	
Level of Service	D	E	
Approach Delay (s)		47.7	
Approach LOS		D	

Intersection Summary

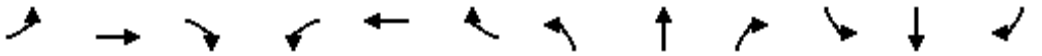
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	4	4	355	21	3	51	790	168	1	133	171	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00		1.00	0.91	1.00		1.00	1.00	0.88
Frpb, ped/bikes		1.00	1.00	0.98		1.00	1.00	0.98		1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1375	2756	1213		1719	4940	1510		1652	1743	2574
Flt Permitted		0.34	1.00	1.00		0.95	1.00	1.00		0.65	1.00	1.00
Satd. Flow (perm)		493	2756	1213		1719	4940	1510		1129	1743	2574
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	4	355	21	3	51	790	168	1	133	171	234
RTOR Reduction (vph)	0	0	0	16	0	0	0	108	0	0	0	185
Lane Group Flow (vph)	0	8	355	5	0	54	790	60	0	134	171	49
Confl. Peds. (#/hr)		6		4		4		6		4		
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	31%	31%	31%	31%	5%	5%	5%	5%	9%	9%	9%	9%
Turn Type	Perm	Perm	NA	Perm	Prot	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases			6		5	5	2				4	
Permitted Phases	6	6		6				2	4	4		4
Actuated Green, G (s)		19.1	19.1	19.1		6.8	29.9	29.9		17.3	17.3	17.3
Effective Green, g (s)		19.1	19.1	19.1		6.8	29.9	29.9		17.3	17.3	17.3
Actuated g/C Ratio		0.23	0.23	0.23		0.08	0.36	0.36		0.21	0.21	0.21
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		113	633	278		140	1777	543		235	362	535
v/s Ratio Prot			c0.13			0.03	c0.16				0.10	
v/s Ratio Perm		0.02		0.00				0.04		c0.12		0.02
v/c Ratio		0.07	0.56	0.02		0.39	0.44	0.11		0.57	0.47	0.09
Uniform Delay, d1		25.1	28.3	24.7		36.2	20.3	17.7		29.6	28.9	26.6
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.3	1.1	0.0		1.8	0.2	0.1		3.3	1.0	0.1
Delay (s)		25.3	29.4	24.8		37.9	20.5	17.8		32.9	29.9	26.6
Level of Service		C	C	C		D	C	B		C	C	C
Approach Delay (s)			29.1				20.9				29.2	
Approach LOS			C				C				C	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	83.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	308	145	26
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.0	4.0	
Lane Util. Factor	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.98	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	1752	1799	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	1752	1799	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	308	145	26
RTOR Reduction (vph)	0	3	0
Lane Group Flow (vph)	308	168	0
Confl. Peds. (#/hr)			4
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	3%	3%	3%
Turn Type	Prot	NA	
Protected Phases	3	8	
Permitted Phases			
Actuated Green, G (s)	23.9	45.2	
Effective Green, g (s)	23.9	45.2	
Actuated g/C Ratio	0.29	0.54	
Clearance Time (s)	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	
Lane Grp Cap (vph)	503	978	
v/s Ratio Prot	c0.18	0.09	
v/s Ratio Perm			
v/c Ratio	0.61	0.17	
Uniform Delay, d1	25.6	9.5	
Progression Factor	1.00	1.00	
Incremental Delay, d2	2.2	0.1	
Delay (s)	27.8	9.6	
Level of Service	C	A	
Approach Delay (s)		21.3	
Approach LOS		C	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	810	11	85	976	324	32	161	122	148	52	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.96	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		5057		1752	5036	1549	1671	4361	1286	1480	2959	1324
Flt Permitted		0.77		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3934		1752	5036	1549	1671	4361	1286	1480	2959	1324
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	68	810	11	85	976	324	32	161	122	148	52	10
RTOR Reduction (vph)	0	0	0	0	0	119	0	51	59	0	0	8
Lane Group Flow (vph)	0	889	0	85	976	205	32	167	6	148	52	2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	8%	8%	8%	22%	22%	22%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		59.6		9.3	72.9	72.9	5.4	11.3	11.3	16.8	22.7	22.7
Effective Green, g (s)		59.6		9.3	72.9	72.9	5.4	11.3	11.3	16.8	22.7	22.7
Actuated g/C Ratio		0.52		0.08	0.63	0.63	0.05	0.10	0.10	0.15	0.20	0.20
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		2038		141	3192	981	78	428	126	216	584	261
v/s Ratio Prot				c0.05	0.19		0.02	c0.04		c0.10	0.02	
v/s Ratio Perm		c0.23				0.13			0.00			0.00
v/c Ratio		0.44		0.60	0.31	0.21	0.41	0.39	0.05	0.69	0.09	0.01
Uniform Delay, d1		17.2		51.1	9.6	8.9	53.3	48.6	47.0	46.6	37.7	37.1
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.7		7.1	0.2	0.5	3.5	0.6	0.2	8.7	0.1	0.0
Delay (s)		17.9		58.1	9.8	9.4	56.7	49.2	47.2	55.3	37.8	37.1
Level of Service		B		E	A	A	E	D	D	E	D	D
Approach Delay (s)		17.9			12.7			49.5			50.1	
Approach LOS		B			B			D			D	

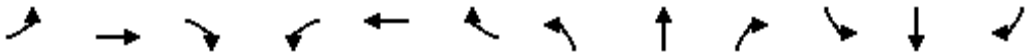
Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1026	679	194	679	1221	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3328		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3328		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1026	679	194	679	1221	211
RTOR Reduction (vph)	185	0	0	0	0	0
Lane Group Flow (vph)	1520	0	194	679	1221	211
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		10.0	37.0	14.0	59.0
Effective Green, g (s)	23.0		10.0	37.0	14.0	59.0
Actuated g/C Ratio	0.39		0.17	0.63	0.24	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1297		300	2219	814	1583
v/s Ratio Prot	c0.46		c0.11	0.19	c0.36	
v/s Ratio Perm						0.13
v/c Ratio	1.17		0.65	0.31	1.50	0.13
Uniform Delay, d1	18.0		22.9	5.1	22.5	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	85.9		4.7	0.1	231.4	0.2
Delay (s)	103.9		27.6	5.2	253.9	0.2
Level of Service	F		C	A	F	A
Approach Delay (s)	103.9			10.1	216.6	
Approach LOS	F			B	F	

Intersection Summary			
HCM 2000 Control Delay	123.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	576	354	163	615	247	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	576	354	163	615	247	88
RTOR Reduction (vph)	0	222	0	0	0	70
Lane Group Flow (vph)	576	132	163	615	247	18
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	16.1	16.1	6.1	26.2	8.9	8.9
Effective Green, g (s)	16.1	16.1	6.1	26.2	8.9	8.9
Actuated g/C Ratio	0.37	0.37	0.14	0.61	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1321	591	485	2151	708	326
v/s Ratio Prot	c0.16		0.05	c0.17	c0.07	
v/s Ratio Perm		0.08				0.01
v/c Ratio	0.44	0.22	0.34	0.29	0.35	0.06
Uniform Delay, d1	10.1	9.2	16.7	4.0	14.6	13.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.4	0.1	0.3	0.1
Delay (s)	10.3	9.4	17.1	4.1	14.9	13.8
Level of Service	B	A	B	A	B	B
Approach Delay (s)	10.0			6.8	14.6	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	43.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	5	116	17	18	82	90	806	26	42	750	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1649	1736	1553	1736	3044		3367	3453		1736	3464	
Flt Permitted	0.69	1.00	1.00	0.75	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1196	1736	1553	1378	3044		3367	3453		1736	3464	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	5	116	17	18	82	90	806	26	42	750	10
RTOR Reduction (vph)	0	0	91	0	64	0	0	2	0	0	1	0
Lane Group Flow (vph)	4	5	25	17	36	0	90	830	0	42	759	0
Confl. Peds. (#/hr)									3	3		
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.1	10.1	10.1	10.1	10.1		3.5	22.4		2.4	21.3	
Effective Green, g (s)	10.1	10.1	10.1	10.1	10.1		3.5	22.4		2.4	21.3	
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.08	0.48		0.05	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	260	377	338	299	662		253	1666		89	1590	
v/s Ratio Prot					0.01		c0.03	c0.24		0.02	0.22	
v/s Ratio Perm	0.00	0.00	c0.02	0.01								
v/c Ratio	0.02	0.01	0.07	0.06	0.05		0.36	0.50		0.47	0.48	
Uniform Delay, d1	14.2	14.2	14.4	14.4	14.4		20.4	8.2		21.4	8.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0	0.2	0.1	0.1		0.3	0.1		1.4	0.1	
Delay (s)	14.3	14.3	14.6	14.5	14.4		20.7	8.3		22.8	8.8	
Level of Service	B	B	B	B	B		C	A		C	A	
Approach Delay (s)		14.6			14.4			9.5			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	46.4	Sum of lost time (s)	11.5
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

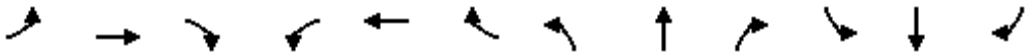
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	0	10	85	507	289	414	634	135	198	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91		0.97	0.95	1.00	0.97	0.95
Frpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt					1.00	0.95		1.00	1.00	0.85	1.00	1.00
Flt Protected					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)					1736	4693		3367	3471	1553	3367	3471
Flt Permitted					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)					1736	4693		3367	3471	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	10	85	507	289	414	634	135	198	525
RTOR Reduction (vph)	0	0	0	0	0	132	0	0	0	61	0	0
Lane Group Flow (vph)	0	0	0	0	95	664	0	414	634	74	198	525
Confl. Peds. (#/hr)	1						1					
Confl. Bikes (#/hr)			3									
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	Perm	NA		Prot	NA	Perm	Prot	NA
Protected Phases						8		5	2		1	6
Permitted Phases				8	8					2		
Actuated Green, G (s)					21.9	21.9		15.4	54.9	54.9	11.2	50.7
Effective Green, g (s)					21.9	21.9		15.4	54.9	54.9	11.2	50.7
Actuated g/C Ratio					0.22	0.22		0.15	0.55	0.55	0.11	0.51
Clearance Time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					380	1027		518	1905	852	377	1759
v/s Ratio Prot						c0.14		c0.12	c0.18		0.06	0.15
v/s Ratio Perm					0.05					0.05		
v/c Ratio					0.25	0.65		0.80	0.33	0.09	0.53	0.30
Uniform Delay, d1					32.3	35.5		40.8	12.4	10.7	41.9	14.3
Progression Factor					1.00	1.00		0.78	1.62	4.11	1.00	1.00
Incremental Delay, d2					0.3	1.4		7.8	0.4	0.2	1.3	0.4
Delay (s)					32.6	36.9		39.4	20.6	44.1	43.2	14.8
Level of Service					C	D		D	C	D	D	B
Approach Delay (s)		0.0				36.5			29.9			21.0
Approach LOS		A				D			C			C

Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	141
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1532
Flt Permitted	1.00
Satd. Flow (perm)	1532
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	141
RTOR Reduction (vph)	70
Lane Group Flow (vph)	71
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	3
Heavy Vehicles (%)	4%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	50.7
Effective Green, g (s)	50.7
Actuated g/C Ratio	0.51
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	776
v/s Ratio Prot	
v/s Ratio Perm	0.05
v/c Ratio	0.09
Uniform Delay, d1	12.7
Progression Factor	1.00
Incremental Delay, d2	0.2
Delay (s)	13.0
Level of Service	B
Approach Delay (s)	
Approach LOS	

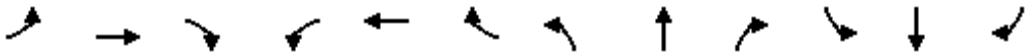
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	37	212	77	0	58	0	1051	270	21	440	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00		1.00		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5085	1555	3367		1553		3343	1466	1770	3539	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5085	1555	3367		1553		3343	1466	1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	109	37	212	77	0	58	0	1051	270	21	440	0
RTOR Reduction (vph)	0	0	187	0	0	54	0	0	101	0	0	0
Lane Group Flow (vph)	109	37	25	77	0	4	0	1051	169	21	440	0
Confl. Peds. (#/hr)									5	5		
Confl. Bikes (#/hr)			3						6			3
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	8%	8%	8%	2%	2%	2%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	11.6	11.6	11.6	6.5		6.5		62.7	62.7	3.2	69.9	
Effective Green, g (s)	11.6	11.6	11.6	6.5		6.5		62.7	62.7	3.2	69.9	
Actuated g/C Ratio	0.12	0.12	0.12	0.06		0.06		0.63	0.63	0.03	0.70	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	205	589	180	218		100		2096	919	56	2473	
v/s Ratio Prot	c0.06	0.01		c0.02				c0.31		c0.01	0.12	
v/s Ratio Perm			0.02			0.00			0.12			
v/c Ratio	0.53	0.06	0.14	0.35		0.04		0.50	0.18	0.38	0.18	
Uniform Delay, d1	41.6	39.4	39.7	44.7		43.8		10.1	7.9	47.4	5.2	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.75	2.07	
Incremental Delay, d2	2.6	0.0	0.3	1.0		0.2		0.9	0.4	4.1	0.2	
Delay (s)	44.3	39.4	40.0	45.7		44.0		11.0	8.3	39.8	10.9	
Level of Service	D	D	D	D		D		B	A	D	B	
Approach Delay (s)		41.3			45.0			10.5			12.2	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



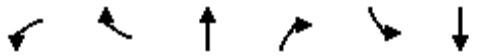
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	139	30	253	126	732	49	753	241	355	343	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1299	2522		3242	1759	1486	1671	4803	1480	3335	3390	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1299	2522		3242	1759	1486	1671	4803	1480	3335	3390	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	139	30	253	126	732	49	753	241	355	343	35
RTOR Reduction (vph)	0	19	0	0	0	135	0	0	140	0	6	0
Lane Group Flow (vph)	53	150	0	253	126	597	49	753	101	355	372	0
Confl. Peds. (#/hr)			2	2					3	3		
Confl. Bikes (#/hr)						1			4			
Heavy Vehicles (%)	39%	39%	39%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	5.7	11.8		11.4	17.5	33.6	11.8	20.2	31.6	16.1	24.5	
Effective Green, g (s)	5.7	11.8		11.4	17.5	33.6	11.8	20.2	31.6	16.1	24.5	
Actuated g/C Ratio	0.08	0.16		0.15	0.23	0.45	0.16	0.27	0.42	0.21	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	98	394		489	407	740	261	1285	697	711	1100	
v/s Ratio Prot	0.04	0.06		c0.08	0.07	c0.17	0.03	c0.16	0.02	0.11	0.11	
v/s Ratio Perm						0.23			0.05			
v/c Ratio	0.54	0.38		0.52	0.31	0.81	0.19	0.59	0.14	0.50	0.34	
Uniform Delay, d1	33.6	28.6		29.5	24.0	18.1	27.7	24.0	13.6	26.2	19.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.0	0.6		0.9	0.4	6.4	0.4	0.7	0.1	0.6	0.2	
Delay (s)	39.6	29.2		30.4	24.4	24.6	28.0	24.7	13.7	26.7	19.5	
Level of Service	D	C		C	C	C	C	C	B	C	B	
Approach Delay (s)		31.7			25.9			22.3			23.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	75.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	265	20	20	546	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1845			1859	1695	
Flt Permitted	1.00			0.98	0.98	
Satd. Flow (perm)	1845			1832	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	265	20	20	546	20	20
RTOR Reduction (vph)	3	0	0	0	17	0
Lane Group Flow (vph)	282	0	0	566	23	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	24.2			24.2	10.1	
Effective Green, g (s)	24.2			24.2	10.1	
Actuated g/C Ratio	0.33			0.33	0.14	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	616			612	236	
v/s Ratio Prot	0.15				c0.01	
v/s Ratio Perm				c0.31		
v/c Ratio	0.46			0.92	0.10	
Uniform Delay, d1	18.9			23.2	27.2	
Progression Factor	1.00			0.48	1.00	
Incremental Delay, d2	0.2			15.1	0.1	
Delay (s)	19.1			26.4	27.2	
Level of Service	B			C	C	
Approach Delay (s)	19.1			26.4	27.2	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	72.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

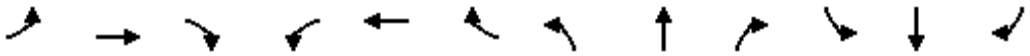


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	490	10	0	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1858			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1858			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	490	10	0	58
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	500	0	0	58
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.0		21.5			21.5
Effective Green, g (s)	1.0		21.5			21.5
Actuated g/C Ratio	0.01		0.30			0.30
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	25		565			567
v/s Ratio Prot	c0.01		c0.27			0.03
v/s Ratio Perm						
v/c Ratio	0.40		0.88			0.10
Uniform Delay, d1	34.5		23.4			17.6
Progression Factor	1.00		1.00			0.97
Incremental Delay, d2	10.2		15.3			0.0
Delay (s)	44.7		38.7			17.1
Level of Service	D		D			B
Approach Delay (s)	44.7		38.7			17.1
Approach LOS	D		D			B

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1: Frontage Road/SR 13 NB On-Ramp & Mountain Boulevard

1/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	105	36	543	48	29	14	20	155	29	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	105	36	543	48	29	14	20	155	29	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	684	91	204
Volume Left (vph)	105	48	20
Volume Right (vph)	543	14	29
Hadj (s)	-0.41	0.05	-0.03
Departure Headway (s)	4.2	5.3	5.6
Degree Utilization, x	0.81	0.14	0.32
Capacity (veh/h)	833	626	600
Control Delay (s)	22.2	9.2	11.2
Approach Delay (s)	22.2	9.2	11.2
Approach LOS	C	A	B

Intersection Summary				
Delay	18.7			
Level of Service	C			
Intersection Capacity Utilization	59.8%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	4	11	447	8	14	587
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	11	447	8	14	587
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1067	454			456	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1067	454			456	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	98			99	
cM capacity (veh/h)	242	604			1104	

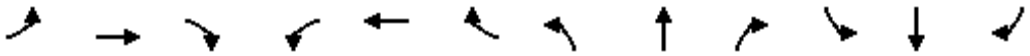
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	455	601
Volume Left	4	0	14
Volume Right	11	8	0
cSH	432	1700	1104
Volume to Capacity	0.03	0.27	0.01
Queue Length 95th (ft)	3	0	1
Control Delay (s)	13.6	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	13.6	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		52.8%	ICU Level of Service A
Analysis Period (min)		15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	0	622	248	36	2	379	2	0	0	6	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	2	0	622	248	36	2	379	2	0	0	6	11
Pedestrians		1										
Lane Width (ft)		12.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	792	772	12	1394	778	1	18			2		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	792	772	12	1394	778	1	18			2		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	42	0	86	100	76			100		
cM capacity (veh/h)	207	254	1067	35	252	1089	1603			1634		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1
Volume Total	624	248	38	379	1	1	17
Volume Left	2	248	0	379	0	0	0
Volume Right	622	0	2	0	0	0	11
cSH	1053	35	262	1603	1700	1700	1700
Volume to Capacity	0.59	7.13	0.14	0.24	0.00	0.00	0.01
Queue Length 95th (ft)	101	Err	12	23	0	0	0
Control Delay (s)	13.3	Err	21.0	7.9	0.0	0.0	0.0
Lane LOS	B	F	C	A			
Approach Delay (s)	13.3	8673.3		7.9			0.0
Approach LOS	B	F					

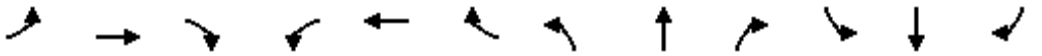
Intersection Summary				
Average Delay	1905.1			
Intersection Capacity Utilization	90.0%	ICU Level of Service	E	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	404	471	41	0	0	0	13	31	14	476	99	295
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	404	471	41	0	0	0	13	31	14	476	99	295

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	640	277	58	476	394
Volume Left (vph)	404	0	13	476	0
Volume Right (vph)	0	41	14	0	295
Hadj (s)	0.33	-0.08	0.02	0.50	-0.49
Departure Headway (s)	7.3	6.9	7.5	7.4	6.4
Degree Utilization, x	1.0	0.53	0.12	0.97	0.70
Capacity (veh/h)	497	516	470	479	553
Control Delay (s)	172.0	16.3	11.6	60.4	21.7
Approach Delay (s)	125.0		11.6	42.9	
Approach LOS	F		B	E	

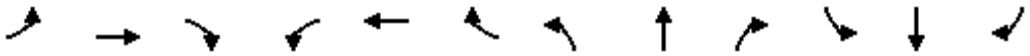
Intersection Summary				
Delay	82.7			
Level of Service	F			
Intersection Capacity Utilization	65.8%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	718	1	11	316	0	2	0	13	213	99	424
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	718	1	11	316	0	2	0	13	213	99	424
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	316			722			1533	1060	362	710	1060	316
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	316			722			1533	1060	362	710	1060	316
tC, single (s)	4.1			4.8			7.5	6.5	7.1	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.5			3.5	4.0	3.4	3.5	4.0	3.3
p0 queue free %	100			98			90	100	98	32	55	38
cM capacity (veh/h)	1256			697			20	222	616	313	220	683

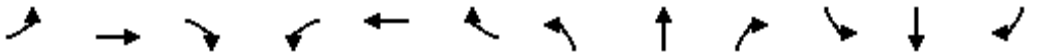
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	479	240	11	316	15	312	424
Volume Left	0	0	11	0	2	213	0
Volume Right	0	1	0	0	13	0	424
cSH	1700	1700	697	1700	122	276	683
Volume to Capacity	0.28	0.14	0.02	0.19	0.12	1.13	0.62
Queue Length 95th (ft)	0	0	1	0	10	332	108
Control Delay (s)	0.0	0.0	10.3	0.0	38.6	133.7	18.5
Lane LOS			B		E	F	C
Approach Delay (s)	0.0		0.3		38.6	67.3	
Approach LOS					E	F	

Intersection Summary				
Average Delay	28.0			
Intersection Capacity Utilization	56.2%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	491	65	195	16	2	28	147	18	21	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.89			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1805	1665			1631	1518	1787	1900	1502			
Flt Permitted	0.95	1.00			0.65	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1805	1665			1108	1518	1787	1900	1502			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	491	65	195	16	2	28	147	18	21	0	0	0
RTOR Reduction (vph)	0	65	0	0	0	23	0	0	18	0	0	0
Lane Group Flow (vph)	491	195	0	0	18	5	147	18	3	0	0	0
Confl. Peds. (#/hr)						1			1			
Heavy Vehicles (%)	0%	2%	1%	13%	0%	4%	1%	0%	5%	0%	0%	0%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	18.0	28.6			7.1	7.1	6.9	6.9	6.9			
Effective Green, g (s)	17.0	28.6			7.6	7.6	6.4	6.4	6.4			
Actuated g/C Ratio	0.40	0.67			0.18	0.18	0.15	0.15	0.15			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	713	1107			195	268	265	282	223			
v/s Ratio Prot	c0.27	c0.12						0.01				
v/s Ratio Perm					0.02	0.00	c0.08		0.00			
v/c Ratio	0.69	0.18			0.09	0.02	0.55	0.06	0.01			
Uniform Delay, d1	10.8	2.7			14.8	14.6	17.0	15.7	15.6			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	2.8	0.1			0.1	0.0	1.4	0.0	0.0			
Delay (s)	13.6	2.8			14.9	14.6	18.4	15.8	15.6			
Level of Service	B	A			B	B	B	B	B			
Approach Delay (s)		9.9			14.7			17.8			0.0	
Approach LOS		A			B			B			A	

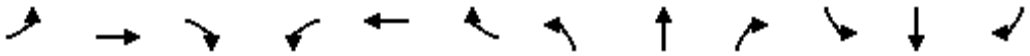
Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	43.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	669	2	2	150	0	3	0	2	79	1	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.95
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			0.95			1.00	0.85
Flt Protected		1.00			1.00			0.97			0.95	1.00
Satd. Flow (prot)		1899			1880			1454			1721	1525
Flt Permitted		1.00			0.99			0.97			0.95	1.00
Satd. Flow (perm)		1899			1871			1454			1721	1525
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	669	2	2	150	0	3	0	2	79	1	400
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	325
Lane Group Flow (vph)	0	671	0	0	152	0	0	0	0	0	80	75
Confl. Peds. (#/hr)	2					2						20
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	50%	4%	100%	1%
Turn Type		NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		21.9			21.9			0.6			8.0	8.0
Effective Green, g (s)		21.9			21.9			0.6			8.0	8.0
Actuated g/C Ratio		0.52			0.52			0.01			0.19	0.19
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		978			964			20			323	287
v/s Ratio Prot		c0.35						c0.00			0.05	
v/s Ratio Perm					0.08							c0.05
v/c Ratio		0.69			0.16			0.00			0.25	0.26
Uniform Delay, d1		7.7			5.4			20.7			14.7	14.7
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.2			0.1			0.1			0.1	0.2
Delay (s)		9.9			5.5			20.7			14.8	14.9
Level of Service		A			A			C			B	B
Approach Delay (s)		9.9			5.5			20.7			14.9	
Approach LOS		A			A			C			B	

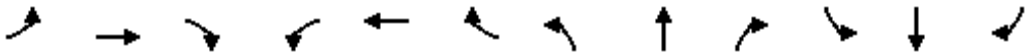
Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	42.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



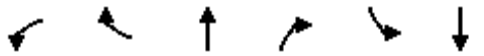
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	79	157	514	181	0	46	0	619	139	563	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.98	1.00	1.00		1.00		1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		0.99	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1881	1557	3433	1881		1770		2814		3505	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1881	1557	3433	1881		1770		2814		3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	79	157	514	181	0	46	0	619	139	563	31
RTOR Reduction (vph)	0	0	143	0	0	0	0	0	305	0	4	0
Lane Group Flow (vph)	0	79	14	514	181	0	46	0	314	0	729	0
Confl. Peds. (#/hr)			2			20			20			20
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	2%	0%	1%	1%	1%	0%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		8.6	8.6	40.3	53.9		6.4		51.7		25.7	
Effective Green, g (s)		8.6	8.6	40.3	53.9		5.4		50.7		25.7	
Actuated g/C Ratio		0.09	0.09	0.40	0.54		0.05		0.51		0.26	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		161	133	1383	1013		95		1426		900	
v/s Ratio Prot		c0.04		c0.15	0.10		c0.03		0.11		c0.21	
v/s Ratio Perm			0.01									
v/c Ratio		0.49	0.10	0.37	0.18		0.48		0.22		0.81	
Uniform Delay, d1		43.6	42.1	21.0	11.8		45.9		13.7		34.9	
Progression Factor		1.00	1.00	1.03	0.78		1.00		1.00		1.00	
Incremental Delay, d2		0.9	0.1	0.7	0.3		1.4		0.0		5.3	
Delay (s)		44.5	42.3	22.3	9.5		47.4		13.7		40.2	
Level of Service		D	D	C	A		D		B		D	
Approach Delay (s)		43.0			19.0			16.0			40.2	
Approach LOS		D			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	553	291	0	0	249	136	439	1	212	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3467	1881			1810	1577		1810	1599			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3467	1881			1810	1577		1810	1599			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	553	291	0	0	249	136	439	1	212	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	108	0	0	115	0	0	0
Lane Group Flow (vph)	553	291	0	0	249	28	0	440	97	0	0	0
Confl. Peds. (#/hr)			3	3		1						
Heavy Vehicles (%)	1%	1%	0%	0%	5%	1%	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	20.0	45.2			20.7	20.7		45.8	45.8			
Effective Green, g (s)	20.0	45.2			20.7	20.7		45.8	45.8			
Actuated g/C Ratio	0.20	0.45			0.21	0.21		0.46	0.46			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	693	850			374	326		828	732			
v/s Ratio Prot	c0.16	0.15			c0.14							
v/s Ratio Perm						0.02		0.24	0.06			
v/c Ratio	0.80	0.34			0.67	0.09		0.53	0.13			
Uniform Delay, d1	38.1	17.8			36.5	32.0		19.4	15.6			
Progression Factor	1.00	1.28			1.00	1.00		1.00	1.00			
Incremental Delay, d2	6.9	0.5			5.8	0.2		2.4	0.4			
Delay (s)	44.9	23.2			42.3	32.3		21.9	16.0			
Level of Service	D	C			D	C		C	B			
Approach Delay (s)		37.4			38.8			20.0			0.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	669	385	270	966
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	669	385	270	966
Pedestrians	2					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.88					
vC, conflicting volume	1886	529			671	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1733	529			671	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			71	
cM capacity (veh/h)	50	499			922	

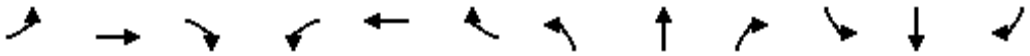
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	446	608	270	483	483
Volume Left	0	0	270	0	0
Volume Right	0	385	0	0	0
cSH	1700	1700	922	1700	1700
Volume to Capacity	0.26	0.36	0.29	0.28	0.28
Queue Length 95th (ft)	0	0	31	0	0
Control Delay (s)	0.0	0.0	10.5	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.3		
Approach LOS					

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	52.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	336	97	6	234	397	163	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.93	
Flt Protected	1.00	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3539	1583		1766	3539	1681	
Flt Permitted	1.00	1.00		0.43	1.00	0.98	
Satd. Flow (perm)	3539	1583		798	3539	1681	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	336	97	6	234	397	163	156
RTOR Reduction (vph)	0	34	0	0	0	38	0
Lane Group Flow (vph)	336	63	0	240	397	281	0
Confl. Peds. (#/hr)		5		5			10
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	10.7	29.4		23.5	23.5	13.2	
Effective Green, g (s)	10.7	29.4		23.5	23.5	13.2	
Actuated g/C Ratio	0.23	0.63		0.50	0.50	0.28	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	810	996		604	1780	475	
v/s Ratio Prot	0.09	0.04		c0.08	0.11	c0.17	
v/s Ratio Perm				c0.12			
v/c Ratio	0.41	0.06		0.40	0.22	0.59	
Uniform Delay, d1	15.3	3.3		6.8	6.5	14.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.0		0.4	0.1	2.0	
Delay (s)	15.7	3.4		7.2	6.6	16.4	
Level of Service	B	A		A	A	B	
Approach Delay (s)	12.9				6.8	16.4	
Approach LOS	B				A	B	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	46.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

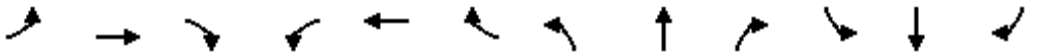
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	219	10	95	235	222	8	221	58	164	372	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		1.00			1.00	0.85		0.97		1.00	0.97	
Flt Protected		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1825			3489	1583		3418		1770	1792	
Flt Permitted		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1825			3489	1583		3418		1770	1792	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	219	10	95	235	222	8	221	58	164	372	101
RTOR Reduction (vph)	0	1	0	0	0	105	0	22	0	0	7	0
Lane Group Flow (vph)	0	326	0	0	330	117	0	265	0	164	466	0
Confl. Peds. (#/hr)	3		11	11		3	12		1	1		12
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		21.2			14.0	30.4		12.5		30.4	30.4	
Effective Green, g (s)		21.2			14.0	30.4		12.5		30.4	30.4	
Actuated g/C Ratio		0.24			0.16	0.34		0.14		0.34	0.34	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		429			542	534		474		597	604	
v/s Ratio Prot		c0.18			c0.09	0.07		c0.08		0.09	c0.26	
v/s Ratio Perm												
v/c Ratio		0.76			0.61	0.22		0.56		0.27	0.77	
Uniform Delay, d1		32.1			35.5	21.4		36.2		21.8	26.7	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		7.8			1.9	0.2		1.4		0.3	6.0	
Delay (s)		39.8			37.4	21.6		37.7		22.1	32.8	
Level of Service		D			D	C		D		C	C	
Approach Delay (s)		39.8			31.1			37.7			30.0	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	551	177	38	376	29	97	169	29	97	256	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			0.99			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (prot)	1736	1881	1575	1805	1844			3379			3409	1449
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (perm)	1736	1881	1575	1805	1844			3379			3409	1449
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	162	551	177	38	376	29	97	169	29	97	256	125
RTOR Reduction (vph)	0	0	75	0	2	0	0	5	0	0	0	0
Lane Group Flow (vph)	162	551	102	38	403	0	0	290	0	0	353	125
Confl. Peds. (#/hr)			2						17			4
Confl. Bikes (#/hr)						1						1
Heavy Vehicles (%)	4%	1%	1%	0%	2%	0%	7%	1%	0%	3%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	15.5	41.9	41.9	4.8	31.2			15.1			17.1	98.4
Effective Green, g (s)	15.5	43.4	43.4	4.8	32.7			16.1			18.1	98.4
Actuated g/C Ratio	0.16	0.44	0.44	0.05	0.33			0.16			0.18	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	273	829	694	88	612			552			627	1449
v/s Ratio Prot	0.09	c0.29		0.02	c0.22			c0.09			c0.10	
v/s Ratio Perm			0.06									0.09
v/c Ratio	0.59	0.66	0.15	0.43	0.66			0.53			0.56	0.09
Uniform Delay, d1	38.5	21.7	16.4	45.5	28.1			37.7			36.5	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	3.4	2.0	0.1	3.4	2.6			0.9			1.2	0.1
Delay (s)	42.0	23.8	16.5	48.9	30.6			38.6			37.7	0.1
Level of Service	D	C	B	D	C			D			D	A
Approach Delay (s)		25.6			32.2			38.6			27.9	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	3	561	17	18	25	424	183	10	12	18	232	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0				4.0			4.0			4.0
Lane Util. Factor		0.95				0.95			1.00			0.95
Frpb, ped/bikes		1.00				0.99			1.00			0.99
Flpb, ped/bikes		1.00				1.00			0.99			1.00
Frt		1.00				0.96			0.94			0.98
Flt Protected		1.00				1.00			0.99			0.96
Satd. Flow (prot)		3515				3350			1714			3294
Flt Permitted		0.95				0.89			0.89			0.75
Satd. Flow (perm)		3352				3006			1551			2575
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	561	17	18	25	424	183	10	12	18	232	12
RTOR Reduction (vph)	0	2	0	0	0	51	0	0	15	0	0	24
Lane Group Flow (vph)	0	579	0	0	0	599	0	0	25	0	0	263
Confl. Peds. (#/hr)	28		57		57		28	42				
Confl. Bikes (#/hr)			9				1					
Turn Type	Perm	NA		Perm	Perm	NA		Perm	NA		Perm	NA
Protected Phases		1				1			2			2
Permitted Phases	1			1	1			2			2	
Actuated Green, G (s)		45.0				45.0			12.0			12.0
Effective Green, g (s)		45.0				45.0			12.0			12.0
Actuated g/C Ratio		0.69				0.69			0.18			0.18
Clearance Time (s)		4.0				4.0			4.0			4.0
Vehicle Extension (s)		3.0				3.0			3.0			3.0
Lane Grp Cap (vph)		2320				2081			286			475
v/s Ratio Prot												
v/s Ratio Perm		0.17				c0.20			0.02			c0.10
v/c Ratio		0.25				0.29			0.09			0.85dl
Uniform Delay, d1		3.7				3.8			22.0			24.1
Progression Factor		1.00				1.00			1.00			1.00
Incremental Delay, d2		0.3				0.3			0.1			1.4
Delay (s)		4.0				4.2			22.1			25.5
Level of Service		A				A			C			C
Approach Delay (s)		4.0				4.2			22.1			25.5
Approach LOS		A				A			C			C

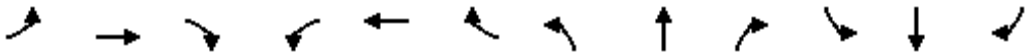
Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

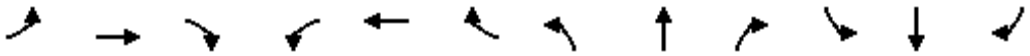
Movement	SBR
Lane Configurations	
Volume (vph)	43
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	43
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	42
Confl. Bikes (#/hr)	3
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



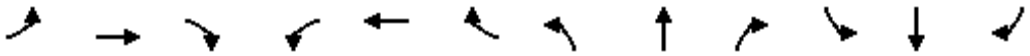
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	823	195	106	497	76	26	120	7	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			1.00				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.98			0.99				
Flt Protected		1.00	1.00		0.99			0.99				
Satd. Flow (prot)		3539	1573		3448			3478				
Flt Permitted		1.00	1.00		0.66			0.99				
Satd. Flow (perm)		3539	1573		2278			3478				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	823	195	106	497	76	26	120	7	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	823	195	0	658	0	0	150	0	0	0	0
Confl. Peds. (#/hr)	22								17			
Confl. Bikes (#/hr)			13			3			17			
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		24.2	57.5		24.2			33.3				
Effective Green, g (s)		24.2	57.5		24.2			33.3				
Actuated g/C Ratio		0.37	0.88		0.37			0.51				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		1317	1500		848			1781				
v/s Ratio Prot		0.23	c0.07									
v/s Ratio Perm			0.06		c0.29			0.04				
v/c Ratio		0.62	0.13		0.78			0.08				
Uniform Delay, d1		16.7	0.5		18.0			8.1				
Progression Factor		0.68	1.91		1.00			1.00				
Incremental Delay, d2		0.9	0.0		4.5			0.1				
Delay (s)		12.2	1.0		22.5			8.2				
Level of Service		B	A		C			A				
Approach Delay (s)		10.1			22.5			8.2			0.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



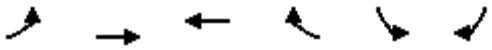
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	265	33	19	182	33	27	244	24	39	327	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.99			0.98	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		1815			1806			3442			3397	
Flt Permitted		0.96			0.96			0.90			0.90	
Satd. Flow (perm)		1759			1740			3111			3080	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	265	33	19	182	33	27	244	24	39	327	51
RTOR Reduction (vph)	0	7	0	0	9	0	0	8	0	0	13	0
Lane Group Flow (vph)	0	322	0	0	225	0	0	287	0	0	404	0
Confl. Peds. (#/hr)	29		42	42		29	39		26	26		39
Confl. Bikes (#/hr)			11			3			9			16
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		31.0			16.2			25.3			25.3	
Effective Green, g (s)		27.0			16.2			25.3			25.3	
Actuated g/C Ratio		0.41			0.25			0.39			0.39	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		727			431			1205			1193	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			c0.13			0.09			c0.13	
v/c Ratio		0.44			0.52			0.24			0.34	
Uniform Delay, d1		13.7			21.2			13.5			14.1	
Progression Factor		0.11			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.5			0.5			0.8	
Delay (s)		1.7			21.7			14.0			14.9	
Level of Service		A			C			B			B	
Approach Delay (s)		1.7			21.7			14.0			14.9	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



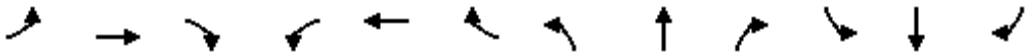
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	639	89	17	281	45	104	276	25	54	260	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97			0.94		1.00	0.97		1.00	0.94	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3349			1701		1770	1788		1770	1723	
Flt Permitted		0.95			0.95		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3190			1624		1770	1788		1770	1723	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	639	89	17	281	45	104	276	25	54	260	38
RTOR Reduction (vph)	0	8	0	0	4	0	0	5	0	0	8	0
Lane Group Flow (vph)	0	726	0	0	339	0	104	297	0	54	290	0
Confl. Peds. (#/hr)	153		85	85		153			216			136
Confl. Bikes (#/hr)			3			13			19			9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		48.8			48.8		13.6	25.0		10.7	22.1	
Effective Green, g (s)		48.8			48.8		13.6	25.0		10.7	22.1	
Actuated g/C Ratio		0.49			0.49		0.14	0.25		0.11	0.22	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1556			792		240	447		189	380	
v/s Ratio Prot							c0.06	0.17		0.03	c0.17	
v/s Ratio Perm		c0.23			0.21							
v/c Ratio		0.47			0.43		0.43	0.66		0.29	0.76	
Uniform Delay, d1		17.0			16.6		39.7	33.7		41.1	36.5	
Progression Factor		1.00			1.00		0.93	0.68		1.00	1.00	
Incremental Delay, d2		1.0			1.7		0.4	2.5		0.3	8.0	
Delay (s)		18.0			18.3		37.3	25.6		41.4	44.5	
Level of Service		B			B		D	C		D	D	
Approach Delay (s)		18.0			18.3			28.6			44.0	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



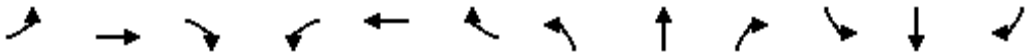
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	98	436	356	121	213	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.97	
Flt Protected	0.95	1.00	1.00		0.96	
Satd. Flow (prot)	1770	1863	1750		1724	
Flt Permitted	0.95	1.00	1.00		0.96	
Satd. Flow (perm)	1770	1863	1750		1724	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	436	356	121	213	70
RTOR Reduction (vph)	0	0	6	0	13	0
Lane Group Flow (vph)	98	436	471	0	270	0
Confl. Peds. (#/hr)	99			99	29	
Confl. Bikes (#/hr)				6		4
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	8.1	70.7	58.1		20.8	
Effective Green, g (s)	8.1	70.7	58.1		20.8	
Actuated g/C Ratio	0.08	0.71	0.58		0.21	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	143	1317	1016		358	
v/s Ratio Prot	c0.06	0.23	c0.27		c0.16	
v/s Ratio Perm						
v/c Ratio	0.69	0.33	0.46		0.75	
Uniform Delay, d1	44.7	5.6	12.0		37.2	
Progression Factor	0.90	1.93	0.46		1.00	
Incremental Delay, d2	12.5	0.7	1.4		8.7	
Delay (s)	53.0	11.5	6.8		45.9	
Level of Service	D	B	A		D	
Approach Delay (s)		19.1	6.8		45.9	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



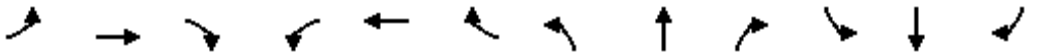
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	456	113	111	533	73	116	301	85	69	411	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.97			0.99			0.97		1.00	0.99	
Flt Protected		1.00			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1811			1823			3410		1770	3496	
Flt Permitted		0.96			0.83			0.66		0.33	1.00	
Satd. Flow (perm)		1740			1531			2284		614	3496	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	456	113	111	533	73	116	301	85	69	411	36
RTOR Reduction (vph)	0	6	0	0	3	0	0	21	0	0	8	0
Lane Group Flow (vph)	0	588	0	0	714	0	0	481	0	69	439	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		63.9			63.9			26.1		26.1	26.1	
Effective Green, g (s)		63.9			63.9			26.1		26.1	26.1	
Actuated g/C Ratio		0.64			0.64			0.26		0.26	0.26	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		1111			978			596		160	912	
v/s Ratio Prot											0.13	
v/s Ratio Perm		0.34			c0.47			c0.21		0.11		
v/c Ratio		0.53			0.73			0.81		0.43	0.48	
Uniform Delay, d1		9.8			12.2			34.6		30.8	31.2	
Progression Factor		1.00			1.00			1.00		0.72	0.74	
Incremental Delay, d2		1.8			4.8			7.9		1.7	0.4	
Delay (s)		11.6			17.0			42.5		23.8	23.3	
Level of Service		B			B			D		C	C	
Approach Delay (s)		11.6			17.0			42.5			23.4	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



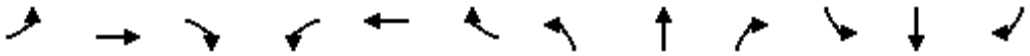
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	187	41	57	145	42	31	468	71	48	595	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99		0.95	1.00		0.98	1.00		0.99	1.00	
Frt		0.98		1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1763		1677	1768		1742	1813		1747	1824	
Flt Permitted		0.93		0.46	1.00		0.31	1.00		0.39	1.00	
Satd. Flow (perm)		1650		818	1768		563	1813		709	1824	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	187	41	57	145	42	31	468	71	48	595	63
RTOR Reduction (vph)	0	10	0	0	16	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	260	0	57	171	0	31	531	0	48	652	0
Confl. Peds. (#/hr)	29		52	52		29	56		36	36		56
Confl. Bikes (#/hr)			11			4			7			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		431		213	462		346	1115		436	1122	
v/s Ratio Prot					0.10			0.29			c0.36	
v/s Ratio Perm		c0.16		0.07			0.06			0.07		
v/c Ratio		0.60		0.27	0.37		0.09	0.48		0.11	0.58	
Uniform Delay, d1		21.0		19.1	19.6		5.1	6.8		5.2	7.5	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		6.2		0.7	0.5		0.5	1.5		0.5	2.2	
Delay (s)		27.2		19.7	20.1		5.6	8.3		5.7	9.7	
Level of Service		C		B	C		A	A		A	A	
Approach Delay (s)		27.2			20.0			8.1			9.4	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	223	198	34	3	144	55	54	362	14	69	419	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00		1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1816			3365		1770	1850		1770	1863	1492
Flt Permitted	0.95	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1816			3206		1770	1850		1770	1863	1492
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	223	198	34	3	144	55	54	362	14	69	419	205
RTOR Reduction (vph)	0	7	0	0	38	0	0	1	0	0	0	133
Lane Group Flow (vph)	223	225	0	0	164	0	54	375	0	69	419	72
Confl. Peds. (#/hr)	4		6	6		4	39		19	19		39
Confl. Bikes (#/hr)			4						4			8
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	15.3	44.6			24.3		5.3	31.1		4.7	32.5	32.5
Effective Green, g (s)	15.3	44.6			24.3		5.3	31.1		4.7	32.5	32.5
Actuated g/C Ratio	0.17	0.48			0.26		0.06	0.34		0.05	0.35	0.35
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	293	876			843		101	622		90	655	524
v/s Ratio Prot	c0.13	c0.12					0.03	0.20		c0.04	c0.22	
v/s Ratio Perm					0.05							0.05
v/c Ratio	0.76	0.26			0.19		0.53	0.60		0.77	0.64	0.14
Uniform Delay, d1	36.8	14.1			26.4		42.4	25.5		43.3	25.1	20.4
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.0	0.7			0.5		2.7	4.3		28.9	4.7	0.5
Delay (s)	46.8	14.8			27.0		45.1	29.8		72.2	29.8	21.0
Level of Service	D	B			C		D	C		E	C	C
Approach Delay (s)		30.5			27.0			31.7			31.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	92.4	Sum of lost time (s)	17.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	484	49	66	323	12	51	280	76	17	353	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			1.00			0.97			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3438			3474			3396			3429	
Flt Permitted		0.73			0.77			0.85			0.94	
Satd. Flow (perm)		2547			2684			2897			3218	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	114	484	49	66	323	12	51	280	76	17	353	69
RTOR Reduction (vph)	0	7	0	0	3	0	0	25	0	0	19	0
Lane Group Flow (vph)	0	640	0	0	398	0	0	382	0	0	420	0
Confl. Peds. (#/hr)	51		45	45		51	18		9	9		18
Confl. Bikes (#/hr)			3			3			8			7
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1158			905			977			1418	
v/s Ratio Prot		c0.03									c0.01	
v/s Ratio Perm		c0.21			0.15			c0.13			0.11	
v/c Ratio		0.55			0.44			0.39			0.30	
Uniform Delay, d1		16.7			20.6			20.2			14.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.9			1.6			1.2			0.5	
Delay (s)		18.6			22.2			21.4			15.1	
Level of Service		B			C			C			B	
Approach Delay (s)		18.6			22.2			21.4			15.1	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

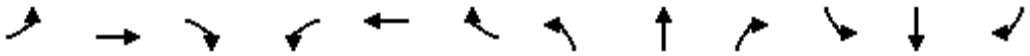
c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Volume (vph)	39	9	311	37	18	315	38	5	13	174	2	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0			4.0			4.0	4.0	4.0	
Lane Util. Factor			1.00			1.00			1.00	1.00	1.00	
Frpb, ped/bikes			0.99			0.99			1.00	1.00	0.93	
Flpb, ped/bikes			1.00			1.00			0.99	1.00	1.00	
Frt			0.99			0.98			1.00	1.00	0.85	
Flt Protected			0.99			1.00			0.95	1.00	1.00	
Satd. Flow (prot)			1811			1811			1744	1863	1478	
Flt Permitted			0.93			0.98			0.42	1.00	1.00	
Satd. Flow (perm)			1690			1776			763	1863	1478	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	39	9	311	37	18	315	38	5	13	174	2	33
RTOR Reduction (vph)	0	0	4	0	0	0	0	0	0	0	28	0
Lane Group Flow (vph)	0	0	392	0	0	376	0	0	13	174	7	0
Confl. Peds. (#/hr)	16	36		37	37		16	36	12			23
Confl. Bikes (#/hr)				1			1					2
Turn Type	Perm	Perm	NA		Perm	NA			Perm	NA	Perm	
Protected Phases			2			6				8		
Permitted Phases	2	2			6				8		8	
Actuated Green, G (s)			38.6			38.6			13.2	13.2	13.2	
Effective Green, g (s)			38.6			38.6			13.2	13.2	13.2	
Actuated g/C Ratio			0.59			0.59			0.20	0.20	0.20	
Clearance Time (s)			4.0			4.0			4.0	4.0	4.0	
Vehicle Extension (s)			3.0			3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)			1003			1054			154	378	300	
v/s Ratio Prot										0.09		
v/s Ratio Perm			c0.23			0.21			0.02		0.00	
v/c Ratio			0.39			0.36			0.08	0.46	0.02	
Uniform Delay, d1			7.0			6.8			21.0	22.8	20.7	
Progression Factor			1.10			1.00			1.00	1.00	1.00	
Incremental Delay, d2			1.1			0.9			0.2	0.9	0.0	
Delay (s)			8.8			7.7			21.2	23.7	20.8	
Level of Service			A			A			C	C	C	
Approach Delay (s)			8.8			7.7				23.1		
Approach LOS			A			A				C		

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Volume (vph)	6	40	213	32	3	3	4	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0		
Lane Util. Factor		1.00	1.00			1.00		
Frpb, ped/bikes		1.00	0.99			1.00		
Flpb, ped/bikes		0.97	1.00			1.00		
Frt		1.00	0.98			0.91		
Flt Protected		0.95	1.00			0.98		
Satd. Flow (prot)		1711	1815			1667		
Flt Permitted		0.57	1.00			1.00		
Satd. Flow (perm)		1030	1815			1695		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	40	213	32	3	3	4	8
RTOR Reduction (vph)	0	0	9	0	0	0	0	0
Lane Group Flow (vph)	0	46	236	0	0	18	0	0
Confl. Peds. (#/hr)		23		12				
Confl. Bikes (#/hr)				2				
Turn Type	Perm	Perm	NA		Perm	Prot		
Protected Phases			4			9		
Permitted Phases	4	4			9			
Actuated Green, G (s)		13.2	13.2			1.2		
Effective Green, g (s)		13.2	13.2			1.2		
Actuated g/C Ratio		0.20	0.20			0.02		
Clearance Time (s)		4.0	4.0			4.0		
Vehicle Extension (s)		3.0	3.0			3.0		
Lane Grp Cap (vph)		209	368			31		
v/s Ratio Prot			c0.13					
v/s Ratio Perm		0.04				c0.01		
v/c Ratio		0.22	0.64			0.58		
Uniform Delay, d1		21.6	23.7			31.7		
Progression Factor		1.00	1.00			1.00		
Incremental Delay, d2		0.5	3.8			24.7		
Delay (s)		22.1	27.5			56.4		
Level of Service		C	C			E		
Approach Delay (s)			26.7			56.4		
Approach LOS			C			E		

Intersection Summary



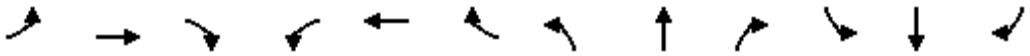
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	187	25	121	323	10	35	196	119	15	235	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	0.99			0.99	
Flpb, ped/bikes	0.98	1.00			1.00		0.99	1.00			1.00	
Frt	1.00	0.98			1.00		1.00	0.94			0.97	
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1742	1822			3467		1760	1740			1794	
Flt Permitted	0.49	1.00			0.80		0.34	1.00			0.95	
Satd. Flow (perm)	899	1822			2827		630	1740			1705	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	33	187	25	121	323	10	35	196	119	15	235	69
RTOR Reduction (vph)	0	3	0	0	1	0	0	42	0	0	19	0
Lane Group Flow (vph)	33	209	0	0	453	0	35	273	0	0	300	0
Confl. Peds. (#/hr)	20		10	10		20	18		7	7		18
Confl. Bikes (#/hr)			2			2						3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	54.5	54.5			54.5		20.5	20.5			20.5	
Effective Green, g (s)	54.5	54.5			54.5		20.5	20.5			20.5	
Actuated g/C Ratio	0.64	0.64			0.64		0.24	0.24			0.24	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	576	1168			1812		151	419			411	
v/s Ratio Prot		0.11						0.16				
v/s Ratio Perm	0.04				c0.16		0.06				c0.18	
v/c Ratio	0.06	0.18			0.25		0.23	0.65			0.73	
Uniform Delay, d1	5.7	6.2			6.5		25.9	29.0			29.7	
Progression Factor	0.64	0.76			1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.3			0.3		0.8	3.6			6.4	
Delay (s)	3.8	5.0			6.8		26.7	32.6			36.1	
Level of Service	A	A			A		C	C			D	
Approach Delay (s)		4.8			6.8			32.0			36.1	
Approach LOS		A			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	347	0	0	407	95	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	3539			3539	3208	
Flt Permitted	1.00			1.00	0.98	
Satd. Flow (perm)	3539			3539	3208	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	347	0	0	407	95	110
RTOR Reduction (vph)	0	0	0	0	96	0
Lane Group Flow (vph)	347	0	0	407	109	0
Confl. Bikes (#/hr)		2				1
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	43.1			43.1	7.4	
Effective Green, g (s)	43.1			43.1	7.4	
Actuated g/C Ratio	0.72			0.72	0.12	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2542			2542	395	
v/s Ratio Prot	0.10			c0.11	c0.03	
v/s Ratio Perm						
v/c Ratio	0.14			0.16	0.27	
Uniform Delay, d1	2.6			2.7	23.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.1	0.4	
Delay (s)	2.8			2.8	24.2	
Level of Service	A			A	C	
Approach Delay (s)	2.8			2.8	24.2	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	600	0	0	468	13	73	154	76	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			1.00				
Frt		1.00			1.00			0.96				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3527			3522			3323				
Flt Permitted		0.91			1.00			0.99				
Satd. Flow (perm)		3215			3522			3323				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	600	0	0	468	13	73	154	76	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	63	0	0	0	0
Lane Group Flow (vph)	0	638	0	0	479	0	0	240	0	0	0	0
Confl. Peds. (#/hr)	31		61	61		31	15		22	22		15
Confl. Bikes (#/hr)			4			7			2			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		46.0			46.0			9.0				
Effective Green, g (s)		46.0			46.0			9.0				
Actuated g/C Ratio		0.71			0.71			0.14				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		2275			2492			460				
v/s Ratio Prot					0.14							
v/s Ratio Perm		c0.20						0.07				
v/c Ratio		0.28			0.19			0.52				
Uniform Delay, d1		3.5			3.2			26.0				
Progression Factor		0.72			1.00			1.00				
Incremental Delay, d2		0.3			0.2			0.5				
Delay (s)		2.8			3.4			26.5				
Level of Service		A			A			C				
Approach Delay (s)		2.8			3.4			26.5			0.0	
Approach LOS		A			A			C			A	

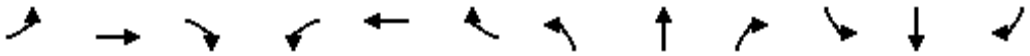
Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	350	159	85	411	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.95		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3358		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3358		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	350	159	85	411	0	0
RTOR Reduction (vph)	87	0	0	0	0	0
Lane Group Flow (vph)	422	0	85	411	0	0
Confl. Peds. (#/hr)		2	2			1
Confl. Bikes (#/hr)		2				
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1511		663	3539		
v/s Ratio Prot	c0.13		0.05	c0.12		
v/s Ratio Perm						
v/c Ratio	0.28		0.13	0.12		
Uniform Delay, d1	6.9		8.2	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.5		0.4	0.1		
Delay (s)	7.4		8.6	0.1		
Level of Service	A		A	A		
Approach Delay (s)	7.4			1.5	0.0	
Approach LOS	A			A	A	

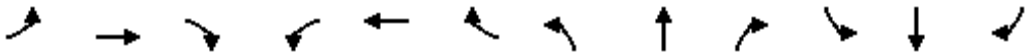
Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



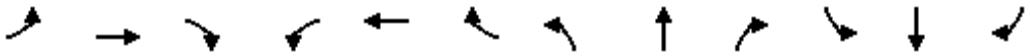
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	652	82	68	483	0	0	0	0	40	178	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		1.00			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.98			1.00						0.98	
Flt Protected		1.00			0.99						0.99	
Satd. Flow (prot)		3463			3512						3406	
Flt Permitted		1.00			0.81						0.99	
Satd. Flow (perm)		3463			2846						3406	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	652	82	68	483	0	0	0	0	40	178	31
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	721	0	0	551	0	0	0	0	0	231	0
Confl. Peds. (#/hr)	36		71	71		36	18		25	25		18
Confl. Bikes (#/hr)			9			2			1			4
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		45.4			45.4						9.6	
Effective Green, g (s)		45.4			45.4						9.6	
Actuated g/C Ratio		0.70			0.70						0.15	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2418			1987						503	
v/s Ratio Prot		c0.21										
v/s Ratio Perm					0.19						0.07	
v/c Ratio		0.30			0.28						0.46	
Uniform Delay, d1		3.7			3.7						25.3	
Progression Factor		1.00			0.71						1.00	
Incremental Delay, d2		0.3			0.3						0.7	
Delay (s)		4.0			2.9						26.0	
Level of Service		A			A						C	
Approach Delay (s)		4.0			2.9			0.0			26.0	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



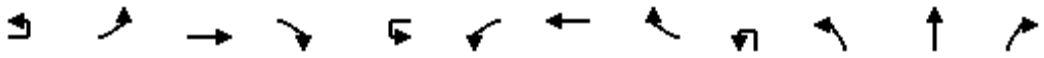
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	292	47	29	291	26	33	275	6	48	287	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	
Frt		0.98			0.99		1.00	1.00		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1812			1829		1758	1855		1757	1851	
Flt Permitted		0.98			0.96		0.37	1.00		0.40	1.00	
Satd. Flow (perm)		1783			1756		687	1855		739	1851	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	292	47	29	291	26	33	275	6	48	287	10
RTOR Reduction (vph)	0	5	0	0	3	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	349	0	0	343	0	33	279	0	48	295	0
Confl. Peds. (#/hr)	8		28	28		8	10		10	10		10
Confl. Bikes (#/hr)						1			2			3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		39.6			39.6		15.9	15.9		15.9	15.9	
Effective Green, g (s)		39.6			39.6		15.9	15.9		15.9	15.9	
Actuated g/C Ratio		0.61			0.61		0.24	0.24		0.24	0.24	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1086			1069		168	453		180	452	
v/s Ratio Prot								0.15			c0.16	
v/s Ratio Perm		c0.20			0.20		0.05			0.06		
v/c Ratio		0.32			0.32		0.20	0.62		0.27	0.65	
Uniform Delay, d1		6.2			6.2		19.5	21.8		19.8	22.1	
Progression Factor		1.00			1.32		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			0.8		0.6	2.5		0.8	3.4	
Delay (s)		7.0			8.9		20.1	24.3		20.6	25.4	
Level of Service		A			A		C	C		C	C	
Approach Delay (s)		7.0			8.9			23.9			24.8	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



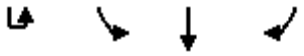
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	158	105	192	184	34	52	343	83	7	387	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00	1.00	0.95	0.95			1.00			0.95	
Frpb, ped/bikes		1.00	0.96	1.00	0.98			0.99			1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	
Frt		1.00	0.85	1.00	0.98			0.98			0.99	
Flt Protected		0.99	1.00	0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1849	1515	1681	1694			1792			3473	
Flt Permitted		0.99	1.00	0.95	1.00			0.92			0.95	
Satd. Flow (perm)		1849	1515	1681	1694			1650			3297	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	27	158	105	192	184	34	52	343	83	7	387	38
RTOR Reduction (vph)	0	0	89	0	7	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	185	16	173	230	0	0	470	0	0	424	0
Confl. Peds. (#/hr)	40		18	18		40	29		52	52		29
Confl. Bikes (#/hr)			2						2			2
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases			2				4			8		
Actuated Green, G (s)		13.1	13.1	14.7	14.7			46.2			46.2	
Effective Green, g (s)		13.1	13.1	14.7	14.7			46.2			46.2	
Actuated g/C Ratio		0.15	0.15	0.17	0.17			0.54			0.54	
Clearance Time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		284	233	290	292			896			1792	
v/s Ratio Prot		c0.10		0.10	c0.14							
v/s Ratio Perm			0.01					c0.28			0.13	
v/c Ratio		0.65	0.07	0.60	0.79			0.52			0.24	
Uniform Delay, d1		33.8	30.7	32.4	33.6			12.4			10.2	
Progression Factor		1.00	1.00	0.76	0.76			1.00			1.00	
Incremental Delay, d2		5.3	0.1	3.2	12.8			2.2			0.3	
Delay (s)		39.1	30.9	28.0	38.5			14.6			10.5	
Level of Service		D	C	C	D			B			B	
Approach Delay (s)		36.1			34.0			14.6			10.5	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



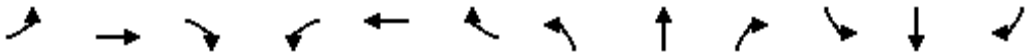
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	15	220	672	156	4	147	536	65	5	126	319	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00		1.00	0.95	
Frpb, ped/bikes		1.00	1.00	0.95		1.00	1.00	0.93		1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	3539	1504		1770	3539	1480		1770	3526	
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		1770	3539	1504		1770	3539	1480		1770	3526	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	220	672	156	4	147	536	65	5	126	319	6
RTOR Reduction (vph)	0	0	0	100	0	0	0	46	0	0	1	0
Lane Group Flow (vph)	0	235	672	56	0	151	536	19	0	131	324	0
Confl. Peds. (#/hr)		42		29		29		42		19		27
Confl. Bikes (#/hr)				7				6				3
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	
Protected Phases	5	5	2		1	1	6		7	7	4	
Permitted Phases				2				6				
Actuated Green, G (s)		20.9	41.5	41.5		13.4	34.0	34.0		12.9	36.2	
Effective Green, g (s)		20.9	41.5	41.5		13.4	34.0	34.0		12.9	36.2	
Actuated g/C Ratio		0.18	0.36	0.36		0.12	0.29	0.29		0.11	0.31	
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		318	1266	538		204	1037	433		196	1100	
v/s Ratio Prot		c0.13	c0.19			c0.09	0.15			c0.07	0.09	
v/s Ratio Perm				0.04				0.01				
v/c Ratio		0.74	0.53	0.10		0.74	0.52	0.04		0.67	0.29	
Uniform Delay, d1		45.0	29.5	24.8		49.6	34.2	29.4		49.5	30.2	
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		7.5	0.2	0.0		11.9	1.8	0.2		6.5	0.1	
Delay (s)		52.5	29.7	24.9		61.5	36.0	29.6		56.0	30.3	
Level of Service		D	C	C		E	D	C		E	C	
Approach Delay (s)			34.1				40.6				37.7	
Approach LOS			C				D				D	

Intersection Summary			
HCM 2000 Control Delay	39.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



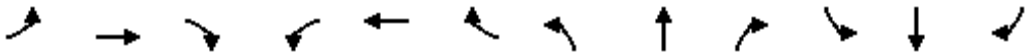
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	3	49	482	262
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	
Lane Util. Factor		1.00	0.95	
Frpb, ped/bikes		1.00	0.98	
Flpb, ped/bikes		1.00	1.00	
Frt		1.00	0.95	
Flt Protected		0.95	1.00	
Satd. Flow (prot)		1770	3298	
Flt Permitted		0.95	1.00	
Satd. Flow (perm)		1770	3298	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	49	482	262
RTOR Reduction (vph)	0	0	58	0
Lane Group Flow (vph)	0	52	686	0
Confl. Peds. (#/hr)		27		19
Confl. Bikes (#/hr)				12
Turn Type	Prot	Prot	NA	
Protected Phases	3	3	8	
Permitted Phases				
Actuated Green, G (s)		6.9	30.2	
Effective Green, g (s)		6.9	30.2	
Actuated g/C Ratio		0.06	0.26	
Clearance Time (s)		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	
Lane Grp Cap (vph)		105	858	
v/s Ratio Prot		0.03	c0.21	
v/s Ratio Perm				
v/c Ratio		0.50	0.80	
Uniform Delay, d1		52.9	40.1	
Progression Factor		1.00	1.00	
Incremental Delay, d2		1.3	4.9	
Delay (s)		54.2	45.0	
Level of Service		D	D	
Approach Delay (s)			45.6	
Approach LOS			D	

Intersection Summary



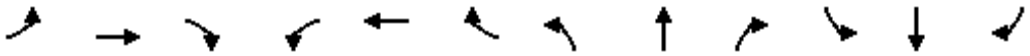
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	156	15	56	110	54	20	459	54	34	635	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.98			1.00	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1647			1585			3115			3159	
Flt Permitted		0.98			0.87			0.93			0.92	
Satd. Flow (perm)		1619			1398			2891			2904	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	13	156	15	56	110	54	20	459	54	34	635	19
RTOR Reduction (vph)	0	6	0	0	20	0	0	11	0	0	3	0
Lane Group Flow (vph)	0	178	0	0	200	0	0	522	0	0	685	0
Confl. Peds. (#/hr)	7		25	25		7	24		28	28		24
Confl. Bikes (#/hr)						2			11			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		13.8			13.8			44.2			44.2	
Effective Green, g (s)		13.8			13.8			44.2			44.2	
Actuated g/C Ratio		0.21			0.21			0.68			0.68	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		343			296			1965			1974	
v/s Ratio Prot												
v/s Ratio Perm		0.11			c0.14			0.18			c0.24	
v/c Ratio		0.52			0.68			0.27			0.35	
Uniform Delay, d1		22.7			23.5			4.1			4.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.4			6.0			0.3			0.5	
Delay (s)		24.1			29.6			4.4			4.8	
Level of Service		C			C			A			A	
Approach Delay (s)		24.1			29.6			4.4			4.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



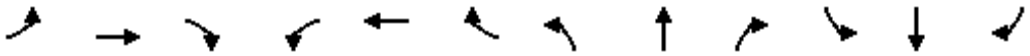
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	568	76	6	339	65	113	518	104	86	648	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.98			0.98		1.00	0.96		1.00	0.98	
Flpb, ped/bikes		1.00			1.00		0.92	1.00		0.91	1.00	
Frt		0.98			0.98		1.00	0.97		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3399			1784		1631	3314		1613	3433	
Flt Permitted		0.92			0.99		0.36	1.00		0.40	1.00	
Satd. Flow (perm)		3133			1767		612	3314		671	3433	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	23	568	76	6	339	65	113	518	104	86	648	54
RTOR Reduction (vph)	0	13	0	0	9	0	0	14	0	0	5	0
Lane Group Flow (vph)	0	654	0	0	401	0	113	608	0	86	697	0
Confl. Peds. (#/hr)	93		135	135		93	156		152	152		156
Confl. Bikes (#/hr)			13			8			4			9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.4			25.4		55.1	55.1		55.1	55.1	
Effective Green, g (s)		25.4			25.4		55.1	55.1		55.1	55.1	
Actuated g/C Ratio		0.28			0.28		0.61	0.61		0.61	0.61	
Clearance Time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		884			498		374	2028		410	2101	
v/s Ratio Prot								0.18			c0.20	
v/s Ratio Perm		0.21			c0.23		0.18			0.13		
v/c Ratio		0.74			0.80		0.30	0.30		0.21	0.33	
Uniform Delay, d1		29.3			30.0		8.3	8.3		7.8	8.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.8			8.7		2.1	0.4		1.2	0.4	
Delay (s)		32.1			38.7		10.4	8.7		8.9	8.9	
Level of Service		C			D		B	A		A	A	
Approach Delay (s)		32.1			38.7			8.9			8.9	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



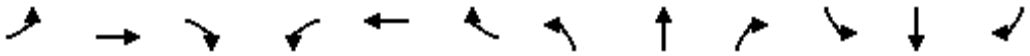
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	208	374	95	34	330	103	134	793	38	173	833	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3432		1770	3413		1770	3515		1770	3483	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3432		1770	3413		1770	3515		1770	3483	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	208	374	95	34	330	103	134	793	38	173	833	99
RTOR Reduction (vph)	0	22	0	0	31	0	0	4	0	0	9	0
Lane Group Flow (vph)	208	447	0	34	402	0	134	827	0	173	923	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.9	27.5		4.1	18.7		10.5	39.1		12.8	41.4	
Effective Green, g (s)	12.9	27.5		4.1	18.7		10.5	39.1		12.8	41.4	
Actuated g/C Ratio	0.13	0.28		0.04	0.19		0.10	0.39		0.13	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.5		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	228	943		72	638		185	1374		226	1441	
v/s Ratio Prot	c0.12	0.13		0.02	c0.12		0.08	0.24		c0.10	c0.26	
v/s Ratio Perm												
v/c Ratio	0.91	0.47		0.47	0.63		0.72	0.60		0.77	0.64	
Uniform Delay, d1	43.0	30.2		46.9	37.5		43.3	24.3		42.1	23.4	
Progression Factor	1.00	1.00		1.00	1.00		0.94	0.97		1.00	1.00	
Incremental Delay, d2	36.0	0.1		1.8	2.1		10.2	1.8		13.0	2.2	
Delay (s)	79.0	30.4		48.7	39.6		51.1	25.3		55.1	25.6	
Level of Service	E	C		D	D		D	C		E	C	
Approach Delay (s)		45.3			40.3			28.9			30.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



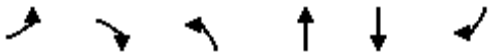
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	467	65	74	356	93	95	856	124	82	852	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.98			0.97		1.00	0.98		1.00	0.99	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3465			3421		1770	3472		1770	3518	
Flt Permitted		0.77			0.65		0.29	1.00		0.25	1.00	
Satd. Flow (perm)		2695			2229		533	3472		472	3518	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	49	467	65	74	356	93	95	856	124	82	852	35
RTOR Reduction (vph)	0	11	0	0	20	0	0	9	0	0	2	0
Lane Group Flow (vph)	0	570	0	0	503	0	95	971	0	82	885	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.9			24.9		66.6	66.6		66.6	66.6	
Effective Green, g (s)		24.9			24.9		66.6	66.6		66.6	66.6	
Actuated g/C Ratio		0.25			0.25		0.67	0.67		0.67	0.67	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		2.0			2.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		671			555		354	2312		314	2342	
v/s Ratio Prot								c0.28			0.25	
v/s Ratio Perm		0.21			c0.23		0.18			0.17		
v/c Ratio		0.85			0.91		0.27	0.42		0.26	0.38	
Uniform Delay, d1		35.8			36.4		6.8	7.7		6.8	7.5	
Progression Factor		1.00			1.00		1.00	1.00		1.10	1.19	
Incremental Delay, d2		9.7			18.0		1.9	0.6		1.6	0.4	
Delay (s)		45.5			54.4		8.6	8.3		9.1	9.3	
Level of Service		D			D		A	A		A	A	
Approach Delay (s)		45.5			54.4			8.3			9.3	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	201	25	84	181	77	28	732	102	76	881	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.99			0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1815			1766		1765	3447		1750	3487	
Flt Permitted		0.88			0.81		0.25	1.00		0.30	1.00	
Satd. Flow (perm)		1608			1443		469	3447		557	3487	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	45	201	25	84	181	77	28	732	102	76	881	76
RTOR Reduction (vph)	0	6	0	0	17	0	0	13	0	0	8	0
Lane Group Flow (vph)	0	265	0	0	325	0	28	821	0	76	949	0
Confl. Peds. (#/hr)	15		41	41		15	11		43	43		11
Confl. Bikes (#/hr)			2			3			11			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.0			17.0		35.3	35.3		35.3	35.3	
Effective Green, g (s)		17.0			17.0		35.3	35.3		35.3	35.3	
Actuated g/C Ratio		0.27			0.27		0.57	0.57		0.57	0.57	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		438			393		265	1953		315	1975	
v/s Ratio Prot								0.24			c0.27	
v/s Ratio Perm		0.16			c0.23		0.06			0.14		
v/c Ratio		0.61			0.83		0.11	0.42		0.24	0.48	
Uniform Delay, d1		19.7			21.3		6.2	7.7		6.8	8.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.6			12.8		0.1	0.1		0.1	0.1	
Delay (s)		21.4			34.0		6.3	7.7		6.9	8.1	
Level of Service		C			C		A	A		A	A	
Approach Delay (s)		21.4			34.0			7.7			8.0	
Approach LOS		C			C			A			A	

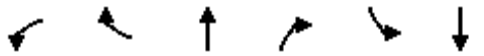
Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	62.3	Sum of lost time (s)	10.0
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	146	230	166	664	780	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3428	
Flt Permitted	0.95	1.00	0.25	1.00	1.00	
Satd. Flow (perm)	1770	1583	467	3539	3428	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	146	230	166	664	780	112
RTOR Reduction (vph)	0	15	0	0	8	0
Lane Group Flow (vph)	146	215	166	664	884	0
Confl. Peds. (#/hr)	19					76
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	7.9	16.5	36.8	28.2	28.5	
Effective Green, g (s)	7.9	16.5	36.8	28.2	28.5	
Actuated g/C Ratio	0.14	0.30	0.67	0.51	0.52	
Clearance Time (s)	4.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	3.0	3.0	2.0	2.0	
Lane Grp Cap (vph)	254	474	516	1814	1776	
v/s Ratio Prot	c0.08	c0.07	0.05	0.19	c0.26	
v/s Ratio Perm		0.07	0.16			
v/c Ratio	0.57	0.45	0.32	0.37	0.50	
Uniform Delay, d1	22.0	15.6	3.8	8.0	8.6	
Progression Factor	1.00	1.00	1.48	0.48	1.00	
Incremental Delay, d2	2.0	0.7	0.3	0.0	0.1	
Delay (s)	23.9	16.3	5.9	3.9	8.7	
Level of Service	C	B	A	A	A	
Approach Delay (s)	19.3			4.3	8.7	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

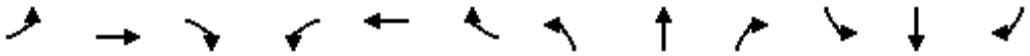
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	108	165	665	94	255	755
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0		3.0	3.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3447		1770	3539
Flt Permitted	0.95	1.00	1.00		0.30	1.00
Satd. Flow (perm)	1770	1583	3447		560	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	108	165	665	94	255	755
RTOR Reduction (vph)	0	34	8	0	0	0
Lane Group Flow (vph)	108	131	751	0	255	755
Confl. Peds. (#/hr)	27			36		
Confl. Bikes (#/hr)				3		
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	7.9	16.8	28.2		37.4	28.5
Effective Green, g (s)	7.9	16.8	28.2		37.4	28.5
Actuated g/C Ratio	0.14	0.31	0.51		0.68	0.52
Clearance Time (s)	4.0	3.0	3.0		3.0	3.0
Vehicle Extension (s)	2.0	3.0	2.0		3.0	2.0
Lane Grp Cap (vph)	254	483	1767		576	1833
v/s Ratio Prot	c0.06	0.04	0.22		c0.07	0.21
v/s Ratio Perm		0.04			c0.23	
v/c Ratio	0.43	0.27	0.43		0.44	0.41
Uniform Delay, d1	21.5	14.5	8.3		3.6	8.1
Progression Factor	1.00	1.00	1.00		1.66	0.55
Incremental Delay, d2	0.4	0.3	0.1		0.5	0.1
Delay (s)	21.9	14.8	8.4		6.6	4.5
Level of Service	C	B	A		A	A
Approach Delay (s)	17.6		8.4			5.0
Approach LOS	B		A			A

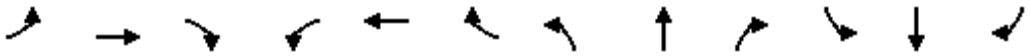
Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



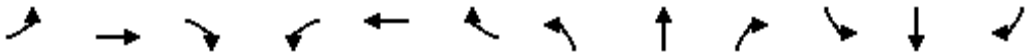
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	760	169	197	577	122	120	489	139	136	540	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.91	1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1441	1770	4839		1770	3390		1770	3392	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1441	1770	4839		1770	3390		1770	3392	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	167	760	169	197	577	122	120	489	139	136	540	130
RTOR Reduction (vph)	0	0	127	0	25	0	0	21	0	0	17	0
Lane Group Flow (vph)	167	760	42	197	674	0	120	607	0	136	653	0
Confl. Peds. (#/hr)			62			96			34			56
Confl. Bikes (#/hr)			7			9			2			12
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8									
Actuated Green, G (s)	14.8	23.0	23.0	15.9	24.6		12.3	24.5		13.2	25.4	
Effective Green, g (s)	14.8	23.0	23.0	15.9	24.6		12.3	24.5		13.2	25.4	
Actuated g/C Ratio	0.16	0.25	0.25	0.17	0.27		0.13	0.27		0.14	0.28	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	285	1276	361	307	1299		237	906		255	940	
v/s Ratio Prot	0.09	c0.15		c0.11	0.14		0.07	0.18		c0.08	c0.19	
v/s Ratio Perm			0.03									
v/c Ratio	0.59	0.60	0.12	0.64	0.52		0.51	0.67		0.53	0.69	
Uniform Delay, d1	35.6	30.2	26.5	35.2	28.5		36.8	29.9		36.3	29.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.1	0.8	0.1	4.5	0.4		1.7	2.0		2.1	2.2	
Delay (s)	38.6	31.0	26.6	39.7	28.8		38.5	31.9		38.5	31.9	
Level of Service	D	C	C	D	C		D	C		D	C	
Approach Delay (s)		31.5			31.2			33.0			33.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	91.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



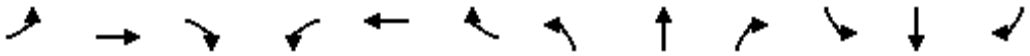
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	318	695	196	144	356	141	109	486	174	311	611	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.92	1.00	1.00	0.94	1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3355		1770	3539	1450	1770	3539	1494	1770	3349	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3355		1770	3539	1450	1770	3539	1494	1770	3349	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	318	695	196	144	356	141	109	486	174	311	611	163
RTOR Reduction (vph)	0	20	0	0	0	111	0	0	101	0	18	0
Lane Group Flow (vph)	318	871	0	144	356	30	109	486	73	311	756	0
Confl. Peds. (#/hr)			39			38			19			48
Confl. Bikes (#/hr)			6						8			8
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	23.6	32.0		13.9	22.3	22.3	11.9	21.6	21.6	20.3	30.0	
Effective Green, g (s)	23.6	32.0		13.9	22.3	22.3	11.9	21.6	21.6	20.3	30.0	
Actuated g/C Ratio	0.23	0.31		0.13	0.21	0.21	0.11	0.21	0.21	0.20	0.29	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	402	1034		237	760	311	202	736	310	346	967	
v/s Ratio Prot	c0.18	c0.26		0.08	0.10		0.06	0.14		c0.18	c0.23	
v/s Ratio Perm						0.02			0.05			
v/c Ratio	0.79	0.84		0.61	0.47	0.10	0.54	0.66	0.24	0.90	0.78	
Uniform Delay, d1	37.8	33.5		42.4	35.6	32.7	43.4	37.7	34.2	40.7	33.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.2	6.3		4.4	0.5	0.1	2.8	2.2	0.4	24.7	4.2	
Delay (s)	48.0	39.9		46.7	36.0	32.8	46.1	40.0	34.6	65.4	38.1	
Level of Service	D	D		D	D	C	D	D	C	E	D	
Approach Delay (s)		42.0			37.7			39.6			45.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	103.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



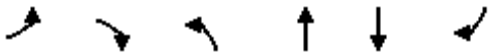
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	585	231	25	260	42	245	462	82	64	494	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1763	3539	1521	1752	3457		1770	3441		1770	3486	
Flt Permitted	0.57	1.00	1.00	0.33	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1054	3539	1521	609	3457		1770	3441		1770	3486	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	108	585	231	25	260	42	245	462	82	64	494	43
RTOR Reduction (vph)	0	0	159	0	17	0	0	15	0	0	8	0
Lane Group Flow (vph)	108	585	72	25	285	0	245	529	0	64	529	0
Confl. Peds. (#/hr)	8		35	35		8			29			22
Confl. Bikes (#/hr)			5						5			12
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	18.2	18.2	18.2	18.2	18.2		13.4	23.3		4.8	14.7	
Effective Green, g (s)	18.2	18.2	18.2	18.2	18.2		13.4	23.3		4.8	14.7	
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31		0.23	0.40		0.08	0.25	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	329	1104	474	190	1079		406	1375		145	878	
v/s Ratio Prot		c0.17			0.08		c0.14	0.15		0.04	c0.15	
v/s Ratio Perm	0.10		0.05	0.04								
v/c Ratio	0.33	0.53	0.15	0.13	0.26		0.60	0.38		0.44	0.60	
Uniform Delay, d1	15.4	16.5	14.5	14.4	15.0		20.1	12.4		25.5	19.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.5	0.1	0.3	0.1		2.5	0.2		2.1	1.2	
Delay (s)	16.0	17.0	14.6	14.7	15.2		22.6	12.6		27.6	20.4	
Level of Service	B	B	B	B	B		C	B		C	C	
Approach Delay (s)		16.3			15.1			15.7			21.2	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	58.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



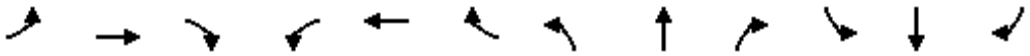
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	141	30	192	95	171	42	521	81	179	504	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.90		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1729	1808		1762	1633		1754	3450		1759	3459	
Flt Permitted	0.57	1.00		0.65	1.00		0.43	1.00		0.41	1.00	
Satd. Flow (perm)	1039	1808		1204	1633		793	3450		759	3459	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	141	30	192	95	171	42	521	81	179	504	67
RTOR Reduction (vph)	0	8	0	0	67	0	0	19	0	0	16	0
Lane Group Flow (vph)	97	163	0	192	199	0	42	583	0	179	555	0
Confl. Peds. (#/hr)	70		11	11		70	25		18	18		25
Confl. Bikes (#/hr)			2			3			4			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.6	13.6		13.6	13.6		18.3	18.3		18.3	18.3	
Effective Green, g (s)	13.6	13.6		13.6	13.6		18.3	18.3		18.3	18.3	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	354	616		410	556		363	1582		348	1586	
v/s Ratio Prot		0.09			0.12			0.17			0.16	
v/s Ratio Perm	0.09			c0.16			0.05			c0.24		
v/c Ratio	0.27	0.26		0.47	0.36		0.12	0.37		0.51	0.35	
Uniform Delay, d1	9.6	9.5		10.3	9.9		6.2	7.0		7.7	7.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.2		0.8	0.4		0.1	0.1		1.3	0.1	
Delay (s)	10.0	9.8		11.2	10.3		6.3	7.2		8.9	7.1	
Level of Service	A	A		B	B		A	A		A	A	
Approach Delay (s)		9.8			10.6			7.1			7.5	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	39.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	52	539	278	501	508	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3489	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3489	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	52	539	278	501	508	47
RTOR Reduction (vph)	0	216	0	0	6	0
Lane Group Flow (vph)	52	323	278	501	549	0
Confl. Peds. (#/hr)	14					5
Confl. Bikes (#/hr)						4
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	7.7	26.5	14.8	34.4	15.6	
Effective Green, g (s)	7.7	26.5	14.8	34.4	15.6	
Actuated g/C Ratio	0.15	0.53	0.30	0.69	0.31	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	272	1474	522	2429	1086	
v/s Ratio Prot	0.03	c0.12	c0.16	0.14	c0.16	
v/s Ratio Perm						
v/c Ratio	0.19	0.22	0.53	0.21	0.51	
Uniform Delay, d1	18.5	6.3	14.8	2.9	14.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.1	1.0	0.0	0.4	
Delay (s)	18.8	6.4	15.8	2.9	14.5	
Level of Service	B	A	B	A	B	
Approach Delay (s)	7.5			7.5	14.5	
Approach LOS	A			A	B	

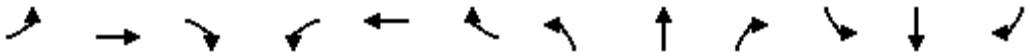
Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	50.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	311	77	39	173	9	31	305	58	18	478	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.97	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1794			1832			3425			3395	
Flt Permitted		0.92			0.90			0.89			0.94	
Satd. Flow (perm)		1663			1667			3073			3199	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	72	311	77	39	173	9	31	305	58	18	478	104
RTOR Reduction (vph)	0	11	0	0	2	0	0	22	0	0	27	0
Lane Group Flow (vph)	0	449	0	0	219	0	0	372	0	0	573	0
Confl. Peds. (#/hr)	17		24	24		17	52		12	12		52
Confl. Bikes (#/hr)			7						2			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			33.0			33.0	
Effective Green, g (s)		25.0			25.0			33.0			33.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Lane Grp Cap (vph)		639			641			1560			1624	
v/s Ratio Prot												
v/s Ratio Perm		c0.27			0.13			0.12			c0.18	
v/c Ratio		0.70			0.34			0.24			0.35	
Uniform Delay, d1		16.9			14.2			9.0			9.6	
Progression Factor		0.35			1.00			1.00			1.00	
Incremental Delay, d2		5.3			1.4			0.4			0.6	
Delay (s)		11.2			15.6			9.3			10.2	
Level of Service		B			B			A			B	
Approach Delay (s)		11.2			15.6			9.3			10.2	
Approach LOS		B			B			A			B	

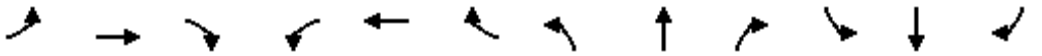
Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	421	0	0	479	62	175	345	224	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.91		0.91	0.91				
Frpb, ped/bikes		1.00			1.00		1.00	0.99				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.98		1.00	0.94				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5083			4998		1610	3165				
Flt Permitted		0.93			1.00		0.95	1.00				
Satd. Flow (perm)		4750			4998		1610	3165				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	421	0	0	479	62	175	345	224	0	0	0
RTOR Reduction (vph)	0	0	0	0	35	0	0	69	0	0	0	0
Lane Group Flow (vph)	0	425	0	0	506	0	157	518	0	0	0	0
Confl. Peds. (#/hr)									11			
Confl. Bikes (#/hr)									7			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		12.6			12.6		44.9	44.9				
Effective Green, g (s)		12.6			12.6		44.9	44.9				
Actuated g/C Ratio		0.19			0.19		0.69	0.69				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		920			968		1112	2186				
v/s Ratio Prot					c0.10							
v/s Ratio Perm		0.09					0.10	0.16				
v/c Ratio		0.46			0.52		0.14	0.24				
Uniform Delay, d1		23.2			23.5		3.4	3.7				
Progression Factor		1.43			0.37		1.00	1.00				
Incremental Delay, d2		0.4			0.5		0.3	0.3				
Delay (s)		33.4			9.1		3.7	4.0				
Level of Service		C			A		A	A				
Approach Delay (s)		33.4			9.1			3.9			0.0	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	436	28	21	396	5	143	386	69	0	804	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.91	1.00
Frt	1.00	0.99			1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1846			3524		1770	4970			5085	1583
Flt Permitted	0.37	1.00			0.92		0.95	1.00			1.00	1.00
Satd. Flow (perm)	691	1846			3233		1770	4970			5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	436	28	21	396	5	143	386	69	0	804	494
RTOR Reduction (vph)	0	2	0	0	1	0	0	21	0	0	0	290
Lane Group Flow (vph)	300	462	0	0	421	0	143	434	0	0	804	204
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Effective Green, g (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Actuated g/C Ratio	0.45	0.45			0.30		0.13	0.46			0.30	0.30
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	448	833			954		224	2264			1501	467
v/s Ratio Prot	c0.08	0.25					c0.08	0.09			c0.16	
v/s Ratio Perm	c0.22				0.13							0.13
v/c Ratio	0.67	0.55			0.44		0.64	0.19			0.54	0.44
Uniform Delay, d1	22.1	23.8			33.8		49.2	19.2			34.9	33.8
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	7.7	2.7			1.5		13.1	0.2			1.4	2.9
Delay (s)	29.9	26.4			35.3		62.3	19.4			36.3	36.7
Level of Service	C	C			D		E	B			D	D
Approach Delay (s)		27.8			35.3			29.7			36.5	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	18.5
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

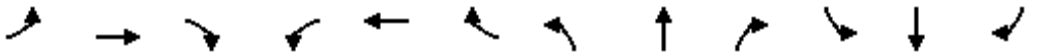
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	3	3	3	75	1	68	3	1	509	109	10	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		1.00			0.99				0.99			1.00
Flpb, ped/bikes		1.00			1.00				1.00			1.00
Frt		0.95			0.94				0.97			1.00
Flt Protected		0.98			0.97				1.00			0.95
Satd. Flow (prot)		1742			1687				4899			1768
Flt Permitted		0.93			0.83				0.94			0.37
Satd. Flow (perm)		1654			1440				4589			691
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	3	3	75	1	68	3	1	509	109	10	142
RTOR Reduction (vph)	0	3	0	0	42	0	0	0	23	0	0	0
Lane Group Flow (vph)	0	6	0	0	102	0	0	0	599	0	0	152
Confl. Peds. (#/hr)			1	1						13		3
Confl. Bikes (#/hr)						1						
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		9.8			9.8				49.2			60.1
Effective Green, g (s)		9.8			9.8				49.2			60.1
Actuated g/C Ratio		0.12			0.12				0.62			0.76
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		205			178				2861			613
v/s Ratio Prot												c0.02
v/s Ratio Perm		0.00			c0.07				0.13			c0.17
v/c Ratio		0.03			0.57				0.21			0.25
Uniform Delay, d1		30.4			32.6				6.4			2.6
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			2.8				0.2			0.1
Delay (s)		30.4			35.3				6.6			2.7
Level of Service		C			D				A			A
Approach Delay (s)		30.4			35.3				6.6			
Approach LOS		C			D				A			

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	78.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

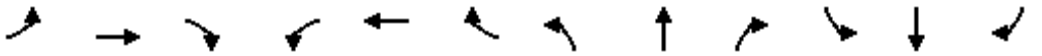
Movement	SBT	SBR
Lane Configurations		
Volume (vph)	809	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	5085	
Flt Permitted	1.00	
Satd. Flow (perm)	5085	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	809	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	809	0
Confl. Peds. (#/hr)		1
Confl. Bikes (#/hr)		8
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	60.1	
Effective Green, g (s)	60.1	
Actuated g/C Ratio	0.76	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	3873	
v/s Ratio Prot	0.16	
v/s Ratio Perm		
v/c Ratio	0.21	
Uniform Delay, d1	2.7	
Progression Factor	1.00	
Incremental Delay, d2	0.1	
Delay (s)	2.8	
Level of Service	A	
Approach Delay (s)	2.8	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	181	252	192	71	188	48	91	365	93	48	640	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.94			0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1742			3417		1770	3431		1770	3539	1583
Flt Permitted	0.56	1.00			0.72		0.23	1.00		0.49	1.00	1.00
Satd. Flow (perm)	1052	1742			2477		434	3431		909	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	181	252	192	71	188	48	91	365	93	48	640	169
RTOR Reduction (vph)	0	32	0	0	18	0	0	26	0	0	0	107
Lane Group Flow (vph)	181	412	0	0	289	0	91	432	0	48	640	62
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	27.1	27.1			27.1		25.9	25.9		26.7	24.7	24.7
Effective Green, g (s)	27.1	27.1			27.1		25.9	25.9		26.7	24.7	24.7
Actuated g/C Ratio	0.38	0.38			0.38		0.37	0.37		0.38	0.35	0.35
Clearance Time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	403	667			949		270	1256		400	1236	553
v/s Ratio Prot		c0.24					0.03	c0.13		0.01	c0.18	
v/s Ratio Perm	0.17				0.12		0.10			0.04		0.04
v/c Ratio	0.45	0.62			0.30		0.34	0.34		0.12	0.52	0.11
Uniform Delay, d1	16.2	17.6			15.2		15.6	16.2		14.5	18.3	15.6
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.6	4.3			0.8		0.3	0.7		0.0	1.6	0.4
Delay (s)	19.8	21.9			16.1		15.8	17.0		14.5	19.8	16.0
Level of Service	B	C			B		B	B		B	B	B
Approach Delay (s)		21.3			16.1			16.8			18.8	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	257	492	135	54	396	36	107	151	47	153	277	555
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	0.99			0.99		1.00	0.97		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97			0.99		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3257			3439		1770	3324		1770	1863	2787
Flt Permitted	0.95	0.94			0.81		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	3074			2805		1770	3324		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	257	492	135	54	396	36	107	151	47	153	277	555
RTOR Reduction (vph)	0	19	0	0	5	0	0	29	0	0	0	406
Lane Group Flow (vph)	231	634	0	0	481	0	107	169	0	153	277	149
Confl. Peds. (#/hr)			19			134			77			
Confl. Bikes (#/hr)			1			14			8			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	18.4	45.7			23.3		7.8	20.7		11.2	24.1	24.1
Effective Green, g (s)	18.4	45.7			23.3		7.8	20.7		11.2	24.1	24.1
Actuated g/C Ratio	0.21	0.51			0.26		0.09	0.23		0.12	0.27	0.27
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	330	1605			729		154	767		221	501	749
v/s Ratio Prot	c0.14	0.08					0.06	0.05		c0.09	c0.15	
v/s Ratio Perm		0.12			c0.17							0.05
v/c Ratio	0.70	0.39			0.66		0.69	0.22		0.69	0.55	0.20
Uniform Delay, d1	33.0	13.5			29.6		39.7	27.9		37.5	28.1	25.3
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.4	0.2			2.2		12.8	0.1		9.0	1.3	0.1
Delay (s)	39.4	13.6			31.8		52.5	28.1		46.6	29.4	25.4
Level of Service	D	B			C		D	C		D	C	C
Approach Delay (s)		20.4			31.8			36.6			29.8	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

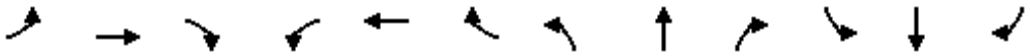
Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	535	62	7	492	40	108	18	6	66	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.98			1.00		0.98		0.86		0.85
Flt Protected	1.00			1.00		0.99		1.00		1.00
Satd. Flow (prot)	3484			3537		4943		1600		1504
Flt Permitted	1.00			0.95		0.99		1.00		1.00
Satd. Flow (perm)	3484			3353		4943		1600		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	535	62	7	492	40	108	18	6	66	11
RTOR Reduction (vph)	10	0	0	0	0	0	0	47	0	8
Lane Group Flow (vph)	587	0	0	499	0	166	0	26	0	2
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1393			1341		1508		286		269
v/s Ratio Prot	c0.17							c0.02		
v/s Ratio Perm				0.15		0.03				0.00
v/c Ratio	0.42			0.37		0.11		0.09		0.01
Uniform Delay, d1	20.6			20.1		23.7		32.6		32.1
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	0.9			0.8		0.1		0.6		0.0
Delay (s)	21.5			20.9		23.9		33.2		32.1
Level of Service	C			C		C		C		C
Approach Delay (s)	21.5			20.9		23.9		33.1		
Approach LOS	C			C		C		C		

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	351	21	10	164	35	21	97	17	87	192	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1838			1805			1809			1776	
Flt Permitted		0.96			0.98			0.93			0.89	
Satd. Flow (perm)		1774			1768			1701			1609	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	351	21	10	164	35	21	97	17	87	192	67
RTOR Reduction (vph)	0	3	0	0	11	0	0	8	0	0	13	0
Lane Group Flow (vph)	0	404	0	0	198	0	0	127	0	0	333	0
Confl. Peds. (#/hr)	7		3	3		7	10		4	4		10
Confl. Bikes (#/hr)			8			8			6			17
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		627			625			863			816	
v/s Ratio Prot												
v/s Ratio Perm		c0.23			0.11			0.07			c0.21	
v/c Ratio		0.64			0.32			0.15			0.41	
Uniform Delay, d1		17.6			15.3			8.5			9.9	
Progression Factor		1.01			1.13			1.00			1.00	
Incremental Delay, d2		4.6			1.3			0.4			1.5	
Delay (s)		22.4			18.6			8.9			11.4	
Level of Service		C			B			A			B	
Approach Delay (s)		22.4			18.6			8.9			11.4	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



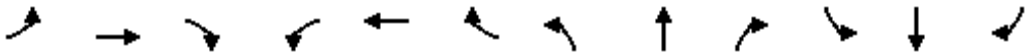
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	295	60	29	235	76	50	241	3	115	822	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1813			1799		1770	5076		1770	4956	
Flt Permitted		0.90			0.95		0.22	1.00		0.59	1.00	
Satd. Flow (perm)		1651			1717		401	5076		1107	4956	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	295	60	29	235	76	50	241	3	115	822	167
RTOR Reduction (vph)	0	9	0	0	16	0	0	2	0	0	47	0
Lane Group Flow (vph)	0	411	0	0	324	0	50	242	0	115	942	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		787			818		160	2030		442	1982	
v/s Ratio Prot								0.05			c0.19	
v/s Ratio Perm		c0.25			0.19		0.12			0.10		
v/c Ratio		0.52			0.40		0.31	0.12		0.26	0.48	
Uniform Delay, d1		11.8			11.0		13.4	12.3		13.1	14.4	
Progression Factor		1.00			0.85		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.5			1.4		5.0	0.1		1.4	0.8	
Delay (s)		14.3			10.8		18.4	12.4		14.5	15.3	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.3			10.8			13.4			15.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

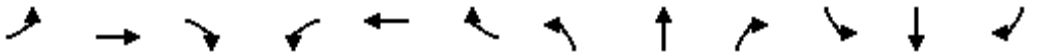
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	260	410	236	416	0	0	0	152	370	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frt	1.00	0.85	1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3525	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3525	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	260	410	236	416	0	0	0	152	370	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	260	410	236	416	0	0	0	152	378	0
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	14.2	29.0	9.8	65.0				26.0	26.0	
Effective Green, g (s)	14.2	29.0	9.8	65.0				26.0	26.0	
Actuated g/C Ratio	0.22	0.45	0.15	1.00				0.40	0.40	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	386	1610	517	1583				708	1410	
v/s Ratio Prot	c0.15	0.11						0.09	0.11	
v/s Ratio Perm			c0.07	c0.26						
v/c Ratio	0.67	0.25	0.46	0.26				0.21	0.27	
Uniform Delay, d1	23.3	11.2	25.2	0.0				12.8	13.1	
Progression Factor	1.69	0.56	1.00	1.00				1.00	1.00	
Incremental Delay, d2	4.5	0.1	0.6	0.4				0.7	0.5	
Delay (s)	43.9	6.4	25.8	0.4				13.5	13.6	
Level of Service	D	A	C	A				B	B	
Approach Delay (s)	21.0		9.6			0.0			13.5	
Approach LOS	C		A			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	527	154	423	472	3	229	0	337	4	17	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Lane Util. Factor		0.95		0.91	0.91			1.00	1.00		1.00	
Frt		0.97		1.00	1.00			1.00	0.85		0.93	
Flt Protected		1.00		0.95	0.99			0.95	1.00		1.00	
Satd. Flow (prot)		3419		1610	3351			1770	1583		1729	
Flt Permitted		0.95		0.95	0.65			0.73	1.00		0.97	
Satd. Flow (perm)		3260		1610	2188			1359	1583		1689	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	527	154	423	472	3	229	0	337	4	17	21
RTOR Reduction (vph)	0	25	0	0	0	0	0	0	269	0	17	0
Lane Group Flow (vph)	0	659	0	292	606	0	0	229	68	0	25	0
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		45.7		21.7	71.4			20.1	20.1		20.1	
Effective Green, g (s)		45.7		21.7	71.4			20.1	20.1		20.1	
Actuated g/C Ratio		0.46		0.22	0.71			0.20	0.20		0.20	
Clearance Time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1489		349	1814			273	318		339	
v/s Ratio Prot				c0.18	0.07							
v/s Ratio Perm		c0.20			0.17			c0.17	0.04		0.01	
v/c Ratio		0.44		0.84	0.33			0.84	0.21		0.07	
Uniform Delay, d1		18.5		37.5	5.4			38.4	33.3		32.4	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.0		15.8	0.1			19.7	0.3		0.1	
Delay (s)		19.4		53.3	5.5			58.0	33.7		32.5	
Level of Service		B		D	A			E	C		C	
Approach Delay (s)		19.4			21.0			43.5			32.5	
Approach LOS		B			C			D			C	

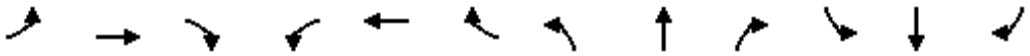
Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	477	84	47	378	60	96	499	82	44	559	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frt		0.98			0.98			0.98			1.00	0.85
Flt Protected		0.99			1.00			0.99			1.00	1.00
Satd. Flow (prot)		3447			3457			3450			3526	1583
Flt Permitted		0.82			0.85			0.77			0.87	1.00
Satd. Flow (perm)		2829			2938			2675			3067	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	86	477	84	47	378	60	96	499	82	44	559	117
RTOR Reduction (vph)	0	16	0	0	15	0	0	15	0	0	0	65
Lane Group Flow (vph)	0	631	0	0	470	0	0	662	0	0	603	52
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		30.0			30.0			32.0			32.0	32.0
Effective Green, g (s)		30.0			30.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42			0.42			0.44			0.44	0.44
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)		1178			1224			1188			1363	703
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.16			c0.25			0.20	0.03
v/c Ratio		0.54			0.38			0.56			0.44	0.07
Uniform Delay, d1		15.8			14.6			14.8			13.8	11.5
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		1.7			0.9			1.9			1.0	0.2
Delay (s)		17.5			15.5			16.7			14.9	11.7
Level of Service		B			B			B			B	B
Approach Delay (s)		17.5			15.5			16.7			14.4	
Approach LOS		B			B			B			B	

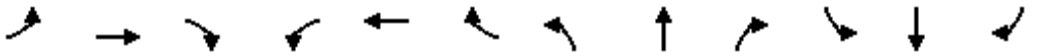
Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	192	29	71	68	28	15	472	33	43	850	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.99			0.98		1.00	0.99			0.99	
Flt Protected		0.99			0.98		0.95	1.00			1.00	
Satd. Flow (prot)		1810			1777		1767	3498			3500	
Flt Permitted		0.84			0.72		0.26	1.00			0.92	
Satd. Flow (perm)		1547			1307		492	3498			3210	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	89	192	29	71	68	28	15	472	33	43	850	46
RTOR Reduction (vph)	0	5	0	0	11	0	0	6	0	0	4	0
Lane Group Flow (vph)	0	305	0	0	156	0	15	499	0	0	935	0
Confl. Peds. (#/hr)	3		2	2		3	7		4	4		7
Confl. Bikes (#/hr)			2			3			5			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		15.9			16.9		41.3	41.3			41.3	
Effective Green, g (s)		15.9			16.9		41.3	41.3			41.3	
Actuated g/C Ratio		0.24			0.26		0.62	0.62			0.62	
Clearance Time (s)		5.0			4.0		4.0	4.0			4.0	
Vehicle Extension (s)		1.0			1.0		1.0	1.0			1.0	
Lane Grp Cap (vph)		371			333		306	2182			2002	
v/s Ratio Prot								0.14				
v/s Ratio Perm		c0.20			0.12		0.03				c0.29	
v/c Ratio		0.82			0.47		0.05	0.23			0.47	
Uniform Delay, d1		23.8			20.8		4.8	5.5			6.6	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		13.0			0.4		0.3	0.2			0.8	
Delay (s)		36.8			21.2		5.1	5.7			7.4	
Level of Service		D			C		A	A			A	
Approach Delay (s)		36.8			21.2			5.7			7.4	
Approach LOS		D			C			A			A	

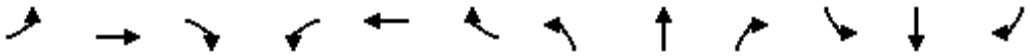
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	4	7	226	1	57	5	484	215	116	859	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.97		1.00	0.95		1.00	1.00	
Flt Protected		0.99			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1688			1721		1751	3343		1752	3503	
Flt Permitted		0.94			0.76		0.29	1.00		0.36	1.00	
Satd. Flow (perm)		1611			1361		541	3343		669	3503	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	4	7	226	1	57	5	484	215	116	859	2
RTOR Reduction (vph)	0	5	0	0	14	0	0	52	0	0	0	0
Lane Group Flow (vph)	0	9	0	0	270	0	5	647	0	116	861	0
Confl. Peds. (#/hr)	2					2	2					2
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.2			17.2		41.2	41.2		41.2	41.2	
Effective Green, g (s)		17.2			17.2		41.2	41.2		41.2	41.2	
Actuated g/C Ratio		0.26			0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		417			352		335	2074		415	2173	
v/s Ratio Prot								0.19			c0.25	
v/s Ratio Perm		0.01			c0.20		0.01			0.17		
v/c Ratio		0.02			0.77		0.01	0.31		0.28	0.40	
Uniform Delay, d1		18.3			22.7		4.8	5.9		5.8	6.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			8.7		0.1	0.4		1.7	0.5	
Delay (s)		18.3			31.4		4.9	6.3		7.5	6.9	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		18.3			31.4			6.3			7.0	
Approach LOS		B			C			A			A	

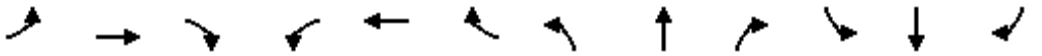
Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



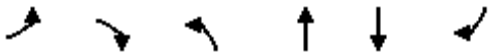
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	203	394	309	91	372	85	169	545	163	72	645	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frt		0.95			0.98		1.00	0.97		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3321			1809		1770	3417		1770	3424	
Flt Permitted		0.63			0.46		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2114			845		1770	3417		1770	3424	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	203	394	309	91	372	85	169	545	163	72	645	178
RTOR Reduction (vph)	0	52	0	0	5	0	0	24	0	0	25	0
Lane Group Flow (vph)	0	854	0	0	543	0	169	684	0	72	798	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		33.3			33.3		12.8	32.2		7.0	26.4	
Effective Green, g (s)		33.3			33.3		12.8	32.2		7.0	26.4	
Actuated g/C Ratio		0.37			0.37		0.14	0.36		0.08	0.30	
Clearance Time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)		1.0			1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		790			316		254	1236		139	1015	
v/s Ratio Prot							c0.10	0.20		0.04	c0.23	
v/s Ratio Perm		0.40			c0.64							
v/c Ratio		1.08			1.72		0.67	0.55		0.52	0.79	
Uniform Delay, d1		27.9			27.9		36.1	22.7		39.4	28.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		56.2			336.3		5.0	0.3		1.4	3.8	
Delay (s)		84.1			364.2		41.1	23.0		40.7	32.5	
Level of Service		F			F		D	C		D	C	
Approach Delay (s)		84.1			364.2			26.5			33.1	
Approach LOS		F			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	101.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	89.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	108.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



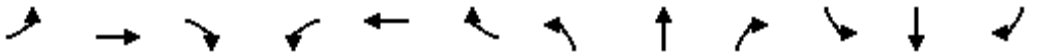
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	23	0	18	34	751	13	24	1035	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frt					0.94		1.00	1.00		1.00	1.00	
Flt Protected					0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1705		1770	3530		1770	3539	
Flt Permitted					1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)					1752		1770	3530		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	23	0	18	34	751	13	24	1035	0
RTOR Reduction (vph)	0	0	0	0	39	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	2	0	34	763	0	24	1035	0
Turn Type				Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)					1.9		2.1	28.6		1.0	27.5	
Effective Green, g (s)					1.9		2.1	28.6		1.0	27.5	
Actuated g/C Ratio					0.04		0.05	0.64		0.02	0.62	
Clearance Time (s)					4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)					2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)					74		83	2268		39	2187	
v/s Ratio Prot							c0.02	0.22		0.01	c0.29	
v/s Ratio Perm					c0.00							
v/c Ratio					0.02		0.41	0.34		0.62	0.47	
Uniform Delay, d1					20.4		20.6	3.6		21.6	4.6	
Progression Factor					1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2					0.0		1.2	0.0		18.5	0.1	
Delay (s)					20.5		21.8	3.7		40.1	4.6	
Level of Service					C		C	A		D	A	
Approach Delay (s)		0.0			20.5			4.4			5.5	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	44.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	154	792	751	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.97	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3429	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3429	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	154	792	751	196
RTOR Reduction (vph)	0	0	0	0	46	0
Lane Group Flow (vph)	0	0	154	792	901	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			5.6	36.5	22.9	
Effective Green, g (s)			5.6	36.5	22.9	
Actuated g/C Ratio			0.15	1.00	0.63	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			526	3539	2151	
v/s Ratio Prot			0.04	c0.22	c0.26	
v/s Ratio Perm						
v/c Ratio			0.29	0.22	0.42	
Uniform Delay, d1			13.7	0.0	3.4	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			0.3	0.0	0.1	
Delay (s)			14.0	0.0	3.6	
Level of Service			B	A	A	
Approach Delay (s)	0.0			2.3	3.6	
Approach LOS	A			A	A	

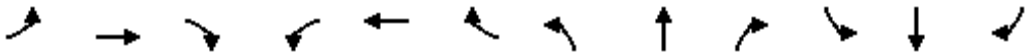
Intersection Summary			
HCM 2000 Control Delay	2.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	36.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	111	113	136	0	225	0	627	112	158	563	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.92			0.98		1.00	1.00	
Flt Protected	0.95	0.99	1.00		0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1752	1583		1674			3459		1770	3539	
Flt Permitted	0.95	0.99	1.00		0.98			1.00		0.28	1.00	
Satd. Flow (perm)	1681	1752	1583		1674			3459		520	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	161	111	113	136	0	225	0	627	112	158	563	0
RTOR Reduction (vph)	0	0	94	0	65	0	0	16	0	0	0	0
Lane Group Flow (vph)	134	138	19	0	296	0	0	723	0	158	563	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	11.9	11.9	11.9		17.0			29.4		29.4	29.4	
Effective Green, g (s)	11.9	11.9	11.9		17.0			29.4		29.4	29.4	
Actuated g/C Ratio	0.17	0.17	0.17		0.24			0.42		0.42	0.42	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	284	296	267		404			1446		217	1480	
v/s Ratio Prot	c0.08	0.08			c0.18			0.21			0.16	
v/s Ratio Perm			0.01							c0.30		
v/c Ratio	0.47	0.47	0.07		0.73			0.50		0.73	0.38	
Uniform Delay, d1	26.4	26.3	24.6		24.6			15.0		17.1	14.1	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	1.2	1.2	0.1		6.7			0.3		11.5	0.2	
Delay (s)	27.6	27.5	24.7		31.3			15.3		28.6	14.3	
Level of Service	C	C	C		C			B		C	B	
Approach Delay (s)		26.7			31.3			15.3			17.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	70.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

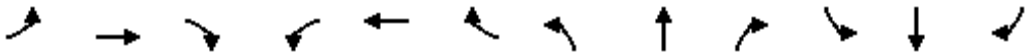
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	67	0	100	0	568	53	124	939	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frpb, ped/bikes					1.00			1.00		1.00	1.00	
Flpb, ped/bikes					1.00			1.00		1.00	1.00	
Frt					0.92			0.99		1.00	1.00	
Flt Protected					0.98			1.00		0.95	1.00	
Satd. Flow (prot)					1678			3487		1770	3539	
Flt Permitted					0.89			1.00		0.95	1.00	
Satd. Flow (perm)					1525			3487		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	67	0	100	0	568	53	124	939	0
RTOR Reduction (vph)	0	0	0	0	69	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	98	0	0	612	0	124	939	0
Confl. Peds. (#/hr)			1	1						3		
Confl. Bikes (#/hr)									2			
Turn Type				Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)					23.0			26.0		14.0	26.0	
Effective Green, g (s)					23.0			26.0		14.0	26.0	
Actuated g/C Ratio					0.31			0.35		0.19	0.35	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)					467			1208		330	1226	
v/s Ratio Prot								0.18		c0.07	c0.27	
v/s Ratio Perm					c0.06							
v/c Ratio					0.21			0.51		0.38	0.77	
Uniform Delay, d1					19.3			19.4		26.7	21.8	
Progression Factor					1.00			0.70		1.00	1.00	
Incremental Delay, d2					1.0			1.4		3.2	4.6	
Delay (s)					20.3			15.1		29.9	26.4	
Level of Service					C			B		C	C	
Approach Delay (s)		0.0			20.3			15.1			26.8	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

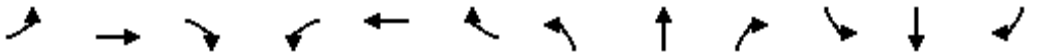
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	254	121	46	156	112	40	428	61	157	766	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.95		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1755			1728		1746	3428		1747	3434	
Flt Permitted		0.82			0.83		0.29	1.00		0.47	1.00	
Satd. Flow (perm)		1447			1450		525	3428		864	3434	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	84	254	121	46	156	112	40	428	61	157	766	93
RTOR Reduction (vph)	0	17	0	0	27	0	0	15	0	0	12	0
Lane Group Flow (vph)	0	442	0	0	287	0	40	474	0	157	847	0
Confl. Peds. (#/hr)	11					11	5		2	2		5
Confl. Bikes (#/hr)			1			2			2			7
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		22.0			22.0		43.0	43.0		43.0	43.0	
Effective Green, g (s)		22.0			22.0		43.0	43.0		43.0	43.0	
Actuated g/C Ratio		0.29			0.29		0.57	0.57		0.57	0.57	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		424			425		301	1965		495	1968	
v/s Ratio Prot								0.14			c0.25	
v/s Ratio Perm		c0.31			0.20		0.08			0.18		
v/c Ratio		1.04			0.68		0.13	0.24		0.32	0.43	
Uniform Delay, d1		26.5			23.4		7.4	7.9		8.3	9.1	
Progression Factor		1.00			1.00		1.00	1.00		3.09	3.21	
Incremental Delay, d2		55.2			4.2		0.9	0.3		1.1	0.5	
Delay (s)		81.7			27.6		8.3	8.2		26.9	29.6	
Level of Service		F			C		A	A		C	C	
Approach Delay (s)		81.7			27.6			8.2			29.1	
Approach LOS		F			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



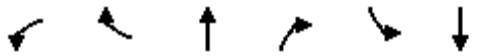
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	701	202	77	672	87	143	199	68	162	596	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1550	1770	3478		1770	3393		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1550	1770	3478		1770	3393		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	701	202	77	672	87	143	199	68	162	596	112
RTOR Reduction (vph)	0	0	100	0	11	0	0	27	0	0	0	70
Lane Group Flow (vph)	110	701	102	77	748	0	143	240	0	162	596	42
Confl. Peds. (#/hr)			6						1			
Confl. Bikes (#/hr)			3									
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	7.0	30.7	30.7	8.9	32.6		11.5	44.4		8.0	40.9	40.9
Effective Green, g (s)	7.0	30.7	30.7	8.9	32.6		11.5	44.4		8.0	40.9	40.9
Actuated g/C Ratio	0.06	0.28	0.28	0.08	0.30		0.10	0.40		0.07	0.37	0.37
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	112	987	432	143	1030		185	1369		128	1315	588
v/s Ratio Prot	c0.06	0.20		0.04	c0.22		0.08	c0.07		c0.09	c0.17	
v/s Ratio Perm			0.07									0.03
v/c Ratio	0.98	0.71	0.24	0.54	0.73		0.77	0.18		1.27	0.45	0.07
Uniform Delay, d1	51.4	35.7	30.6	48.6	34.7		48.0	21.1		51.0	26.1	22.3
Progression Factor	1.21	0.86	1.01	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	71.5	2.0	0.2	3.9	2.6		18.0	0.3		167.4	1.1	0.2
Delay (s)	133.9	32.6	31.2	52.4	37.3		66.0	21.3		218.4	27.2	22.5
Level of Service	F	C	C	D	D		E	C		F	C	C
Approach Delay (s)		43.3			38.7			36.9			62.2	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	46.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	66	72	498	92	49	511
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	66	72	498	92	49	511
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	898	295			590	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	898	295			590	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	75	90			95	
cM capacity (veh/h)	265	701			982	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	138	332	258	219	341
Volume Left	66	0	0	49	0
Volume Right	72	0	92	0	0
cSH	393	1700	1700	982	1700
Volume to Capacity	0.35	0.20	0.15	0.05	0.20
Queue Length 95th (ft)	39	0	0	4	0
Control Delay (s)	19.1	0.0	0.0	2.4	0.0
Lane LOS	C			A	
Approach Delay (s)	19.1	0.0		0.9	
Approach LOS	C				

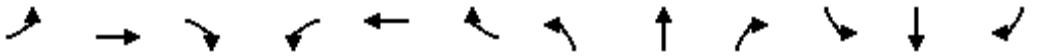
Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	128	168	378	296	175	360
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	128	168	378	296	175	360
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1056	337			674	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1056	337			674	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	28	74			81	
cM capacity (veh/h)	178	659			913	

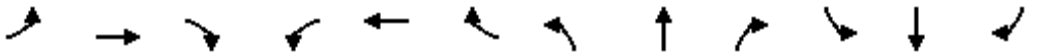
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	296	252	422	295	240
Volume Left	128	0	0	175	0
Volume Right	168	0	296	0	0
cSH	304	1700	1700	913	1700
Volume to Capacity	0.97	0.15	0.25	0.19	0.14
Queue Length 95th (ft)	251	0	0	18	0
Control Delay (s)	83.0	0.0	0.0	6.7	0.0
Lane LOS	F			A	
Approach Delay (s)	83.0	0.0		3.7	
Approach LOS	F				

Intersection Summary			
Average Delay	17.6		
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		



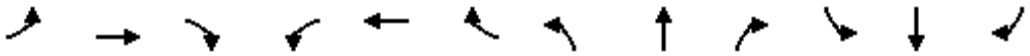
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	331	819	165	152	675	75	236	405	157	124	483	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1525	3433	3539	1541	3433	3356		3433	3280	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1525	3433	3539	1541	3433	3356		3433	3280	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	331	819	165	152	675	75	236	405	157	124	483	307
RTOR Reduction (vph)	0	0	55	0	0	54	0	32	0	0	82	0
Lane Group Flow (vph)	331	819	110	152	675	21	236	530	0	124	708	0
Confl. Peds. (#/hr)			23			15			26			28
Confl. Bikes (#/hr)			6			1			2			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	14.9	30.6	30.6	9.9	25.6	25.6	10.7	28.1		8.9	26.3	
Effective Green, g (s)	14.9	30.6	30.6	9.9	25.6	25.6	10.7	28.1		8.9	26.3	
Actuated g/C Ratio	0.16	0.33	0.33	0.11	0.27	0.27	0.11	0.30		0.10	0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	547	1158	499	363	968	421	392	1008		326	922	
v/s Ratio Prot	c0.10	c0.23		0.04	0.19		c0.07	0.16		0.04	c0.22	
v/s Ratio Perm			0.07			0.01						
v/c Ratio	0.61	0.71	0.22	0.42	0.70	0.05	0.60	0.53		0.38	0.77	
Uniform Delay, d1	36.6	27.5	22.8	39.1	30.5	25.0	39.4	27.2		39.7	30.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	2.0	0.2	0.8	2.2	0.0	2.6	0.5		0.7	3.9	
Delay (s)	38.5	29.5	23.0	39.9	32.7	25.0	42.0	27.7		40.5	34.7	
Level of Service	D	C	C	D	C	C	D	C		D	C	
Approach Delay (s)		31.0			33.3			31.9			35.5	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	93.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	186	147	14	103	17	102	526	20	17	569	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1749	1721			1814		1770	3513		1770	3539	1529
Flt Permitted	0.71	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1312	1721			1738		1770	3513		1770	3539	1529
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	182	186	147	14	103	17	102	526	20	17	569	311
RTOR Reduction (vph)	0	27	0	0	5	0	0	2	0	0	0	198
Lane Group Flow (vph)	182	306	0	0	129	0	102	544	0	17	569	113
Confl. Peds. (#/hr)	26		9	9		26	7		18	18		7
Confl. Bikes (#/hr)			9			5			2			3
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	16.8	16.8			16.8		7.0	26.3		1.1	20.4	20.4
Effective Green, g (s)	16.8	16.8			16.8		7.0	26.3		1.1	20.4	20.4
Actuated g/C Ratio	0.30	0.30			0.30		0.12	0.47		0.02	0.36	0.36
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	392	514			519		220	1643		34	1284	555
v/s Ratio Prot		c0.18					c0.06	0.15		0.01	c0.16	
v/s Ratio Perm	0.14				0.07							0.07
v/c Ratio	0.46	0.60			0.25		0.46	0.33		0.50	0.44	0.20
Uniform Delay, d1	16.0	16.8			14.9		22.9	9.4		27.3	13.6	12.3
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	1.9			0.3		1.5	0.1		11.1	0.2	0.2
Delay (s)	16.9	18.7			15.2		24.4	9.5		38.4	13.8	12.5
Level of Service	B	B			B		C	A		D	B	B
Approach Delay (s)		18.0			15.2			11.9			13.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	433	427	4	192	13	227	381	15	69	659	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1861	1583	1770	3519		1770	3437	
Flt Permitted	0.95	1.00	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1841	1583	1770	3519		1770	3437	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	433	427	4	192	13	227	381	15	69	659	158
RTOR Reduction (vph)	0	0	212	0	0	11	0	3	0	0	21	0
Lane Group Flow (vph)	340	433	215	0	196	2	227	393	0	69	796	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	12.2	32.2	32.2		15.0	15.0	12.2	32.6		7.3	27.7	
Effective Green, g (s)	12.2	32.2	32.2		15.0	15.0	12.2	32.6		7.3	27.7	
Actuated g/C Ratio	0.14	0.37	0.37		0.17	0.17	0.14	0.37		0.08	0.32	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	247	688	585		317	272	247	1317		148	1093	
v/s Ratio Prot	c0.19	c0.23					c0.13	c0.11		0.04	c0.23	
v/s Ratio Perm			0.14		0.11	0.00						
v/c Ratio	1.38	0.63	0.37		0.62	0.01	0.92	0.30		0.47	0.73	
Uniform Delay, d1	37.4	22.5	20.0		33.4	29.9	37.0	19.2		38.0	26.4	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	192.8	1.8	0.4		3.6	0.0	35.7	0.1		2.3	2.5	
Delay (s)	230.3	24.4	20.4		37.0	29.9	72.7	19.3		40.4	28.8	
Level of Service	F	C	C		D	C	E	B		D	C	
Approach Delay (s)		81.3			36.5			38.8			29.7	
Approach LOS		F			D			D			C	

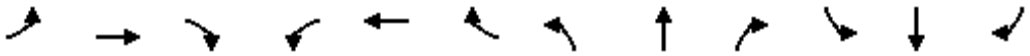
Intersection Summary			
HCM 2000 Control Delay	53.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	87.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	292	226	89	100	287	16	2	124	279	42	13	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.96		1.00	0.99			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3373		1770	3508			1768	3461			1763
Flt Permitted	0.95	1.00		0.95	1.00			0.36	1.00			0.69
Satd. Flow (perm)	3433	3373		1770	3508			665	3461			1280
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	292	226	89	100	287	16	2	124	279	42	13	23
RTOR Reduction (vph)	0	39	0	0	4	0	0	0	11	0	0	0
Lane Group Flow (vph)	292	276	0	100	299	0	0	126	310	0	0	36
Confl. Peds. (#/hr)	2		7	7		2		3		9		9
Confl. Bikes (#/hr)						2				3		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	11.2	15.7		7.8	12.3			11.2	23.0			5.8
Effective Green, g (s)	11.2	15.7		7.8	12.3			11.2	23.0			5.8
Actuated g/C Ratio	0.16	0.23		0.11	0.18			0.16	0.34			0.08
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	562	775		202	631			109	1165			108
v/s Ratio Prot	c0.09	c0.08		0.06	c0.09				0.09			
v/s Ratio Perm								c0.19				0.03
v/c Ratio	0.52	0.36		0.50	0.47			1.16	0.27			0.33
Uniform Delay, d1	26.1	22.1		28.4	25.1			28.5	16.5			29.4
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	0.8	0.3		1.9	0.6			134.2	0.1			1.8
Delay (s)	26.9	22.3		30.3	25.7			162.7	16.6			31.3
Level of Service	C	C		C	C			F	B			C
Approach Delay (s)		24.5			26.8				57.8			
Approach LOS		C			C				E			

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	68.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	425	433
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.98
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1559
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1559
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	425	433
RTOR Reduction (vph)	0	321
Lane Group Flow (vph)	425	112
Confl. Peds. (#/hr)		3
Confl. Bikes (#/hr)		2
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	17.6	17.6
Effective Green, g (s)	17.6	17.6
Actuated g/C Ratio	0.26	0.26
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	911	401
v/s Ratio Prot	c0.12	
v/s Ratio Perm		0.07
v/c Ratio	0.47	0.28
Uniform Delay, d1	21.4	20.3
Progression Factor	1.00	1.00
Incremental Delay, d2	0.4	0.4
Delay (s)	21.8	20.7
Level of Service	C	C
Approach Delay (s)	21.6	
Approach LOS	C	

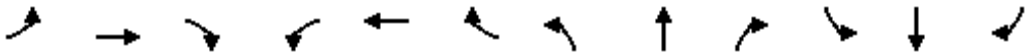
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	9	2	93	3	58	1	65	117	197	47	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	9	2	93	3	58	1	65	117	197	47	0
Pedestrians								2				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	568	625	49	516	508	65	47			182		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	568	625	49	516	508	65	47			182		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	97	100	77	99	94	100			86		
cM capacity (veh/h)	358	340	1009	404	397	991	1541			1375		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	16	154	66	117	244
Volume Left	5	93	1	0	197
Volume Right	2	58	0	117	0
cSH	377	519	1541	1700	1375
Volume to Capacity	0.04	0.30	0.00	0.07	0.14
Queue Length 95th (ft)	3	31	0	0	12
Control Delay (s)	15.0	14.8	0.1	0.0	6.7
Lane LOS	B	B	A		A
Approach Delay (s)	15.0	14.8	0.0		6.7
Approach LOS	B	B			

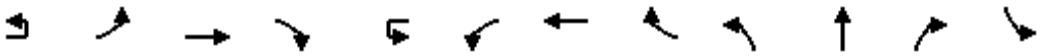
Intersection Summary				
Average Delay	7.0			
Intersection Capacity Utilization	42.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	137	601	25	5	517	58	85	4	19	96	2	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.99	
Satd. Flow (prot)	1736	3140	2634	1736	4904		1579	3180	1531		3024	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.99	
Satd. Flow (perm)	1736	3140	2634	1736	4904		1579	3180	1531		3024	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	137	601	25	5	517	58	85	4	19	96	2	232
RTOR Reduction (vph)	0	0	12	0	11	0	0	0	17	0	192	0
Lane Group Flow (vph)	137	604	10	5	564	0	42	47	2	0	138	0
Confl. Peds. (#/hr)	4					4			4	4		
Confl. Bikes (#/hr)			4			2						4
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	7.7	22.1	22.1	0.9	15.3		5.4	5.4	5.4		8.5	
Effective Green, g (s)	7.7	22.1	22.1	0.9	15.3		5.4	5.4	5.4		8.5	
Actuated g/C Ratio	0.16	0.45	0.45	0.02	0.31		0.11	0.11	0.11		0.17	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	273	1419	1190	31	1534		174	351	169		525	
v/s Ratio Prot	c0.08	c0.19		0.00	0.11		c0.03	0.01			c0.05	
v/s Ratio Perm			0.00						0.00			
v/c Ratio	0.50	0.43	0.01	0.16	0.37		0.24	0.13	0.01		0.26	
Uniform Delay, d1	18.8	9.1	7.4	23.6	13.0		19.9	19.6	19.4		17.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	1.5	0.2	0.0	2.4	0.2		0.7	0.2	0.0		0.3	
Delay (s)	20.3	9.3	7.4	26.1	13.2		20.6	19.8	19.4		17.8	
Level of Service	C	A	A	C	B		C	B	B		B	
Approach Delay (s)		11.2			13.3			20.0			17.8	
Approach LOS		B			B			C			B	

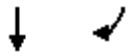
Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	48.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



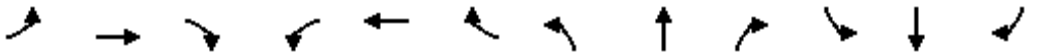
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	30	0	1257	84	10	86	1146	0	80	0	71	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0			3.0	4.0			5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.86			1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00			1.00	0.99	
Flpb, ped/bikes		0.99	1.00			1.00	1.00			0.99	1.00	
Frt		1.00	0.99			1.00	1.00			1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1756	6338			1768	6408			1754	1560	
Flt Permitted		0.50	1.00			0.27	1.00			0.76	1.00	
Satd. Flow (perm)		924	6338			496	6408			1398	1560	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	0	1257	84	10	86	1146	0	80	0	71	0
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	0	0	65	0
Lane Group Flow (vph)	0	30	1335	0	0	96	1146	0	0	80	6	0
Confl. Peds. (#/hr)		15		4		4		15	8			
Confl. Bikes (#/hr)				1				3			1	
Turn Type	custom	Prot	NA		custom	Prot	NA		Perm	NA	Perm	
Protected Phases		5	2			1	6			3		
Permitted Phases	5				1				3	3	3	3
Actuated Green, G (s)		8.0	69.6			15.0	76.6			9.4	9.4	
Effective Green, g (s)		8.0	69.6			15.0	76.6			9.4	9.4	
Actuated g/C Ratio		0.08	0.66			0.14	0.72			0.09	0.09	
Clearance Time (s)		3.0	4.0			3.0	4.0			5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0			2.0	2.0	
Lane Grp Cap (vph)		69	4161			70	4630			123	138	
v/s Ratio Prot			c0.21				0.18					
v/s Ratio Perm		0.03				c0.19				c0.06	0.00	
v/c Ratio		0.43	0.32			1.37	0.25			0.65	0.05	
Uniform Delay, d1		46.8	7.9			45.5	5.0			46.7	44.2	
Progression Factor		0.77	1.23			1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.5	0.2			234.7	0.1			9.0	0.0	
Delay (s)		37.7	9.9			280.2	5.1			55.7	44.2	
Level of Service		D	A			F	A			E	D	
Approach Delay (s)			10.6				26.4			50.3		
Approach LOS			B				C			D		

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Volume (vph)	0	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		
Lane Util. Factor		
Frpb, ped/bikes		
Flpb, ped/bikes		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	0	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Confl. Peds. (#/hr)		8
Confl. Bikes (#/hr)		
Turn Type		Perm
Protected Phases	3	
Permitted Phases	3	3
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)	0.0	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	934	82	106	753	21	437	21	410	13	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.99		1.00	1.00		1.00	0.89			0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99			0.96	1.00
Satd. Flow (prot)	3433	5024		1770	6382		1610	2984			1673	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.99			0.96	1.00
Satd. Flow (perm)	3433	5024		1770	6382		1610	2984			1673	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	28	934	82	106	753	21	437	21	410	13	0	8
RTOR Reduction (vph)	0	6	0	0	2	0	0	314	0	0	14	7
Lane Group Flow (vph)	28	1010	0	106	772	0	306	248	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	3.5	51.7		10.5	58.7		24.8	24.8			2.0	2.0
Effective Green, g (s)	3.5	51.7		10.5	58.7		24.8	24.8			2.0	2.0
Actuated g/C Ratio	0.03	0.49		0.10	0.55		0.23	0.23			0.02	0.02
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	113	2450		175	3534		376	698			31	28
v/s Ratio Prot	0.01	c0.20		c0.06	0.12		c0.19	0.08			c0.00	
v/s Ratio Perm												0.00
v/c Ratio	0.25	0.41		0.61	0.22		0.81	0.36			0.01	0.00
Uniform Delay, d1	50.0	17.4		45.8	12.0		38.4	33.9			51.0	51.0
Progression Factor	1.00	1.00		1.06	0.65		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.4	0.5		4.0	0.1		12.0	0.1			0.0	0.0
Delay (s)	50.4	17.9		52.6	7.9		50.5	34.0			51.1	51.0
Level of Service	D	B		D	A		D	C			D	D
Approach Delay (s)		18.8			13.3			39.8			51.1	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

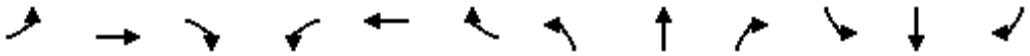
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	65	989	147	53	714	63	7	134	79	60	2	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00			1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99			1.00	0.99			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.98		1.00	0.99			1.00	0.94			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	1752	3420		1752	3441			1752	1703			1719
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (perm)	1752	3420		1752	3441			1752	1703			1719
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	989	147	53	714	63	7	134	79	60	2	73
RTOR Reduction (vph)	0	8	0	0	4	0	0	0	31	0	0	0
Lane Group Flow (vph)	65	1128	0	53	773	0	0	141	108	0	0	75
Confl. Peds. (#/hr)	18		6	6		18		19		16		16
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA		Prot	Prot
Protected Phases	5	2		1	6		3	3	8		7	7
Permitted Phases												
Actuated Green, G (s)	7.1	58.2		6.1	57.2			12.0	13.8			11.9
Effective Green, g (s)	7.1	58.2		6.1	57.2			12.0	13.8			11.9
Actuated g/C Ratio	0.06	0.53		0.06	0.52			0.11	0.13			0.11
Clearance Time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)	113	1809		97	1789			191	213			185
v/s Ratio Prot	0.04	c0.33		c0.03	0.22			c0.08	0.06			0.04
v/s Ratio Perm												
v/c Ratio	0.58	0.62		0.55	0.43			0.74	0.50			0.41
Uniform Delay, d1	50.0	18.2		50.6	16.3			47.5	44.9			45.8
Progression Factor	1.12	1.06		0.95	1.41			1.00	1.00			1.00
Incremental Delay, d2	3.3	0.4		2.8	0.6			12.1	0.7			0.5
Delay (s)	59.1	19.7		50.9	23.7			59.5	45.6			46.3
Level of Service	E	B		D	C			E	D			D
Approach Delay (s)		21.9			25.4				52.6			
Approach LOS		C			C				D			

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

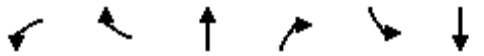
Movement	SBT	SBR
Lane Configurations		
Volume (vph)	73	114
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.98	
Flpb, ped/bikes	1.00	
Frt	0.91	
Flt Protected	1.00	
Satd. Flow (prot)	1608	
Flt Permitted	1.00	
Satd. Flow (perm)	1608	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	73	114
RTOR Reduction (vph)	62	0
Lane Group Flow (vph)	125	0
Confl. Peds. (#/hr)		19
Confl. Bikes (#/hr)		2
Heavy Vehicles (%)	5%	5%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	13.7	
Effective Green, g (s)	13.7	
Actuated g/C Ratio	0.12	
Clearance Time (s)	5.0	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	200	
v/s Ratio Prot	c0.08	
v/s Ratio Perm		
v/c Ratio	0.62	
Uniform Delay, d1	45.7	
Progression Factor	1.00	
Incremental Delay, d2	4.3	
Delay (s)	50.0	
Level of Service	D	
Approach Delay (s)	49.0	
Approach LOS	D	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	622	0	0	695	449	2	951	552	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95			0.95	1.00			
Frt	1.00	1.00			0.94			1.00	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	1770	3539			3331			3539	1583			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	1770	3539			3331			3539	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	622	0	0	695	449	2	951	552	0	0	0
RTOR Reduction (vph)	0	0	0	0	103	0	0	0	77	0	0	0
Lane Group Flow (vph)	2	622	0	0	1041	0	0	953	475	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	0.9	31.8			26.9			32.3	32.3			
Effective Green, g (s)	0.9	31.8			26.9			32.3	32.3			
Actuated g/C Ratio	0.01	0.44			0.37			0.45	0.45			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	22	1560			1242			1585	709			
v/s Ratio Prot	0.00	c0.18			c0.31							
v/s Ratio Perm								0.27	c0.30			
v/c Ratio	0.09	0.40			0.84			0.60	0.67			
Uniform Delay, d1	35.2	13.7			20.6			15.0	15.7			
Progression Factor	1.00	1.00			1.00			1.00	1.00			
Incremental Delay, d2	1.8	0.2			5.1			0.6	2.4			
Delay (s)	37.0	13.8			25.7			15.7	18.1			
Level of Service	D	B			C			B	B			
Approach Delay (s)		13.9			25.7			16.6			0.0	
Approach LOS		B			C			B			A	

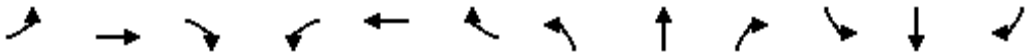
Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	72.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	713	0	0	0	624	959
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0
Lane Util. Factor	0.97					0.91
Frt	1.00					1.00
Flt Protected	0.95					0.98
Satd. Flow (prot)	3433					4987
Flt Permitted	0.95					0.98
Satd. Flow (perm)	3433					4987
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	713	0	0	0	624	959
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	713	0	0	0	0	1583
Turn Type	Prot				Split	NA
Protected Phases	8				6	6
Permitted Phases						
Actuated Green, G (s)	11.0					31.0
Effective Green, g (s)	11.0					31.0
Actuated g/C Ratio	0.22					0.62
Clearance Time (s)	4.0					4.0
Lane Grp Cap (vph)	755					3091
v/s Ratio Prot	c0.21					c0.32
v/s Ratio Perm						
v/c Ratio	0.94					0.51
Uniform Delay, d1	19.2					5.3
Progression Factor	1.00					1.00
Incremental Delay, d2	21.7					0.6
Delay (s)	40.9					5.9
Level of Service	D					A
Approach Delay (s)	40.9		0.0			5.9
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	490	426	43	2	551	108	231	481	527	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00				
Frt	1.00	0.99			0.98		1.00	0.92				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1770	3491			3452		1770	1717				
Flt Permitted	0.95	1.00			0.95		0.95	1.00				
Satd. Flow (perm)	1770	3491			3293		1770	1717				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	490	426	43	2	551	108	231	481	527	0	0	0
RTOR Reduction (vph)	0	8	0	0	17	0	0	41	0	0	0	0
Lane Group Flow (vph)	490	461	0	0	644	0	231	967	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	24.5	50.5			21.5		35.5	35.5				
Effective Green, g (s)	24.5	50.5			21.5		35.5	35.5				
Actuated g/C Ratio	0.26	0.53			0.23		0.37	0.37				
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0			2.0		2.0	2.0				
Lane Grp Cap (vph)	456	1855			745		661	641				
v/s Ratio Prot	c0.28	0.13						c0.56				
v/s Ratio Perm					c0.20		0.13					
v/c Ratio	1.07	0.25			0.86		0.35	1.51				
Uniform Delay, d1	35.2	12.0			35.3		21.4	29.8				
Progression Factor	1.01	0.30			1.00		1.00	1.00				
Incremental Delay, d2	53.3	0.2			12.7		0.1	236.7				
Delay (s)	88.9	3.8			48.1		21.5	266.4				
Level of Service	F	A			D		C	F				
Approach Delay (s)		47.3			48.1			220.8			0.0	
Approach LOS		D			D			F			A	

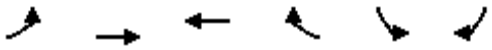
Intersection Summary			
HCM 2000 Control Delay	122.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	114.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	873	421	350	830	357	17	15	91	78	908	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Lane Util. Factor	0.95		1.00	0.95			1.00	1.00		0.91	
Frt	0.95		1.00	0.95			1.00	0.85		0.96	
Flt Protected	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	3366		1770	3380			1770	1583		4880	
Flt Permitted	1.00		0.95	1.00			0.15	1.00		1.00	
Satd. Flow (perm)	3366		1770	3380			271	1583		4880	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	873	421	350	830	357	17	15	91	78	908	330
RTOR Reduction (vph)	13	0	0	0	0	0	0	65	0	0	0
Lane Group Flow (vph)	1281	0	350	1187	0	0	32	26	0	1316	0
Turn Type	NA		Prot	NA		Perm	Perm	Perm	Perm	NA	
Protected Phases	2		1	6						4	
Permitted Phases						8	8	8	4		
Actuated Green, G (s)	41.5		13.5	58.5			27.5	27.5		27.5	
Effective Green, g (s)	41.5		13.5	58.5			27.5	27.5		27.5	
Actuated g/C Ratio	0.44		0.14	0.62			0.29	0.29		0.29	
Clearance Time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Vehicle Extension (s)	2.0		2.0	2.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	1470		251	2081			78	458		1412	
v/s Ratio Prot	c0.38		c0.20	0.35							
v/s Ratio Perm							0.12	0.02		0.27	
v/c Ratio	0.87		1.39	0.57			0.41	0.06		0.93	
Uniform Delay, d1	24.3		40.8	10.8			27.2	24.4		32.8	
Progression Factor	1.00		0.91	1.70			1.00	1.00		1.00	
Incremental Delay, d2	7.4		198.9	1.1			1.3	0.0		11.2	
Delay (s)	31.7		236.1	19.5			28.5	24.4		44.0	
Level of Service	C		F	B			C	C		D	
Approach Delay (s)	31.7			68.8						44.0	
Approach LOS	C			E						D	

Intersection Summary			
HCM 2000 Control Delay	48.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	111.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑	↰	↱
Volume (vph)	440	0	0	514	61	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	440	0	0	514	61	388
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	440	0	0	514	61	388
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	12.0			12.0	13.6	13.6
Effective Green, g (s)	12.0			12.0	13.6	13.6
Actuated g/C Ratio	0.36			0.36	0.40	0.40
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1816			1263	716	640
v/s Ratio Prot	0.09			c0.15	0.03	c0.25
v/s Ratio Perm						
v/c Ratio	0.24			0.41	0.09	0.61
Uniform Delay, d1	7.6			8.1	6.2	7.9
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.2	0.1	1.6
Delay (s)	7.7			8.3	6.2	9.5
Level of Service	A			A	A	A
Approach Delay (s)	7.7			8.3	9.1	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	33.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

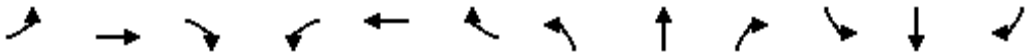


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	581	148	0	238	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.94	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3539	3539		3307	
Flt Permitted		1.00	1.00		0.97	
Satd. Flow (perm)		3539	3539		3307	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	581	148	0	238	143
RTOR Reduction (vph)	0	0	0	0	103	0
Lane Group Flow (vph)	0	581	148	0	278	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		11.5	11.5		7.6	
Effective Green, g (s)		11.5	11.5		7.6	
Actuated g/C Ratio		0.42	0.42		0.28	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1501	1501		927	
v/s Ratio Prot		c0.16	0.04		c0.08	
v/s Ratio Perm						
v/c Ratio		0.39	0.10		0.30	
Uniform Delay, d1		5.4	4.7		7.7	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.2	0.0		0.2	
Delay (s)		5.5	4.7		7.8	
Level of Service		A	A		A	
Approach Delay (s)		5.5	4.7		7.8	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	27.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBU	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	16	307	70	105	551	123	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5		4.0			4.0
Lane Util. Factor		0.97		1.00			1.00
Frpb, ped/bikes		1.00		1.00			1.00
Flpb, ped/bikes		1.00		1.00			1.00
Frt		0.97		0.89			1.00
Flt Protected		0.96		1.00			0.97
Satd. Flow (prot)		3333		1635			1798
Flt Permitted		0.96		1.00			0.60
Satd. Flow (perm)		3333		1635			1113
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	307	70	105	551	123	113
RTOR Reduction (vph)	0	26	0	110	0	0	0
Lane Group Flow (vph)	0	367	0	546	0	0	236
Confl. Peds. (#/hr)		2					
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	Prot		NA		Perm	NA
Protected Phases		6		8			4
Permitted Phases	6					4	
Actuated Green, G (s)		9.1		26.1			26.1
Effective Green, g (s)		9.1		26.1			26.1
Actuated g/C Ratio		0.21		0.61			0.61
Clearance Time (s)		3.5		4.0			4.0
Vehicle Extension (s)		2.2		2.0			2.0
Lane Grp Cap (vph)		710		999			680
v/s Ratio Prot				c0.33			
v/s Ratio Perm		0.11					0.21
v/c Ratio		0.52		0.55			0.35
Uniform Delay, d1		14.9		4.8			4.1
Progression Factor		1.00		1.00			1.00
Incremental Delay, d2		0.3		0.3			0.1
Delay (s)		15.2		5.2			4.2
Level of Service		B		A			A
Approach Delay (s)		15.2		5.2			4.2
Approach LOS		B		A			A

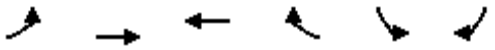
Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	42.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	557	0	132	0	0	0	154	132	0	0	134	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.99	
Flt Protected	0.95		1.00					0.97			1.00	
Satd. Flow (prot)	3367		1553					3380			1811	
Flt Permitted	0.95		1.00					0.97			1.00	
Satd. Flow (perm)	3367		1553					3380			1811	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	557	0	132	0	0	0	154	132	0	0	134	9
RTOR Reduction (vph)	0	0	93	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	557	0	39	0	0	0	0	286	0	0	141	0
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	4%	2%	4%	2%	2%	2%	4%	4%	2%	2%	4%	4%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4				8		2	2			6	
Permitted Phases			4	8						6		
Actuated Green, G (s)	15.6		15.6					10.8			10.4	
Effective Green, g (s)	15.6		15.6					10.8			10.4	
Actuated g/C Ratio	0.30		0.30					0.20			0.20	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	994		458					691			356	
v/s Ratio Prot	c0.17							c0.08			c0.08	
v/s Ratio Perm			0.03									
v/c Ratio	0.56		0.09					0.41			0.40	
Uniform Delay, d1	15.7		13.4					18.2			18.5	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	0.7		0.1					0.4			0.7	
Delay (s)	16.4		13.5					18.7			19.2	
Level of Service	B		B					B			B	
Approach Delay (s)		15.9			0.0			18.7			19.2	
Approach LOS		B			A			B			B	

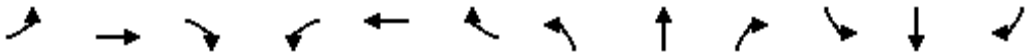
Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	52.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



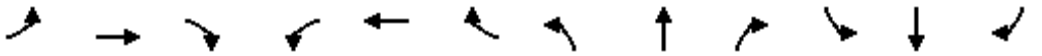
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1252	857	0	262	588
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5767	5767		3090	2508
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5767	5767		3090	2508
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1252	857	0	262	588
RTOR Reduction (vph)	0	0	0	0	0	160
Lane Group Flow (vph)	0	1252	857	0	262	428
Confl. Peds. (#/hr)	8			8		8
Confl. Bikes (#/hr)				3		
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		24.2	13.9		9.5	19.8
Effective Green, g (s)		24.2	13.9		9.5	19.8
Actuated g/C Ratio		0.58	0.33		0.23	0.47
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		3346	1922		703	1190
v/s Ratio Prot		0.22	c0.15		0.08	c0.17
v/s Ratio Perm						
v/c Ratio		0.37	0.45		0.37	0.36
Uniform Delay, d1		4.7	10.9		13.6	6.9
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1	0.2		0.3	0.2
Delay (s)		4.8	11.1		13.9	7.1
Level of Service		A	B		B	A
Approach Delay (s)		4.8	11.1		9.2	
Approach LOS		A	B		A	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	41.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	742	483	0	747	283	559	0	602	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frt		0.98	0.85		0.96		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3260	1413		4782		3367		1553			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3260	1413		4782		3367		1553			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	742	483	0	747	283	559	0	602	0	0	0
RTOR Reduction (vph)	0	10	0	0	62	0	0	0	146	0	0	0
Lane Group Flow (vph)	0	843	372	0	968	0	559	0	456	0	0	0
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		66.0	110.0		66.0		36.0		36.0			
Effective Green, g (s)		66.0	110.0		66.0		36.0		36.0			
Actuated g/C Ratio		0.60	1.00		0.60		0.33		0.33			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1956	1413		2869		1101		508			
v/s Ratio Prot		c0.26			0.20		0.17					
v/s Ratio Perm			0.26						c0.29			
v/c Ratio		0.43	0.26		0.34		0.51		0.90			
Uniform Delay, d1		11.9	0.0		11.0		29.9		35.2			
Progression Factor		1.00	1.00		1.01		1.00		1.00			
Incremental Delay, d2		0.7	0.5		0.3		1.7		21.3			
Delay (s)		12.6	0.5		11.5		31.5		56.5			
Level of Service		B	A		B		C		E			
Approach Delay (s)		8.9			11.5			44.5			0.0	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	21.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

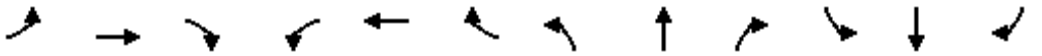


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	989	895	0	1014	0	0	0	0	256	0	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		0.99
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.95	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4493	1335		4988					3367		1532
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4493	1335		4988					3367		1532
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	989	895	0	1014	0	0	0	0	256	0	135
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	110
Lane Group Flow (vph)	0	1437	447	0	1014	0	0	0	0	256	0	25
Confl. Peds. (#/hr)							5					2
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	4%	4%	4%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		37.7	37.7		37.7					10.5		10.5
Effective Green, g (s)		37.7	37.7		37.7					10.5		10.5
Actuated g/C Ratio		0.67	0.67		0.67					0.19		0.19
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3013	895		3346					629		286
v/s Ratio Prot		0.32	c0.33		0.20							
v/s Ratio Perm										c0.08		0.02
v/c Ratio		0.48	0.50		0.30					0.41		0.09
Uniform Delay, d1		4.5	4.6		3.8					20.1		18.9
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.1	0.4		0.1					0.4		0.1
Delay (s)		4.6	5.0		3.9					20.5		19.0
Level of Service		A	A		A					C		B
Approach Delay (s)		4.7			3.9			0.0			20.0	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1029	500	0	945	499	528
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.96	0.85
Flt Protected	1.00	1.00		1.00	0.97	1.00
Satd. Flow (prot)	3471	1519		3471	3273	1413
Flt Permitted	1.00	1.00		1.00	0.97	1.00
Satd. Flow (perm)	3471	1519		3471	3273	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1029	500	0	945	499	528
RTOR Reduction (vph)	0	0	0	0	43	82
Lane Group Flow (vph)	1029	500	0	945	662	240
Confl. Peds. (#/hr)		4	4			
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	25.1	49.8		25.1	16.7	16.7
Effective Green, g (s)	25.1	49.8		25.1	16.7	16.7
Actuated g/C Ratio	0.50	1.00		0.50	0.34	0.34
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1749	1519		1749	1097	473
v/s Ratio Prot	c0.30			0.27	c0.20	
v/s Ratio Perm		0.33				0.17
v/c Ratio	0.59	0.33		0.54	0.60	0.51
Uniform Delay, d1	8.7	0.0		8.4	13.8	13.3
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.6		0.3	0.9	0.9
Delay (s)	9.2	0.6		8.8	14.7	14.1
Level of Service	A	A		A	B	B
Approach Delay (s)	6.4			8.8	14.5	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	49.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

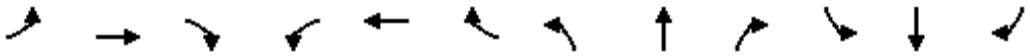


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1281	467	0	1035	400	0	0	0	353	0	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00		0.95					0.95	0.91	0.95
Frt		1.00	0.85		0.96					1.00	0.92	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		3539	1583		3391					1681	1523	1504
Flt Permitted		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (perm)		3539	1583		3391					1681	1523	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1281	467	0	1035	400	0	0	0	353	0	349
RTOR Reduction (vph)	0	0	182	0	41	0	0	0	0	0	41	91
Lane Group Flow (vph)	0	1281	285	0	1394	0	0	0	0	244	194	132
Turn Type		NA	Perm		NA					Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4							6		6
Actuated Green, G (s)		39.6	39.6		39.6					17.4	17.4	17.4
Effective Green, g (s)		39.6	39.6		39.6					17.4	17.4	17.4
Actuated g/C Ratio		0.61	0.61		0.61					0.27	0.27	0.27
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2156	964		2065					449	407	402
v/s Ratio Prot		0.36			c0.41							
v/s Ratio Perm			0.18							c0.15	0.13	0.09
v/c Ratio		0.59	0.30		0.68					0.54	0.48	0.33
Uniform Delay, d1		7.8	6.1		8.4					20.4	20.0	19.1
Progression Factor		1.00	1.00		1.00					1.00	1.00	1.00
Incremental Delay, d2		0.4	0.2		0.9					1.3	0.9	0.5
Delay (s)		8.2	6.2		9.3					21.7	20.9	19.6
Level of Service		A	A		A					C	C	B
Approach Delay (s)		7.7			9.3			0.0			20.8	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	469	190	64	872	303	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3386		1770	3539	3370	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3386		1770	3539	3370	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	469	190	64	872	303	76
RTOR Reduction (vph)	49	0	0	0	24	0
Lane Group Flow (vph)	610	0	64	872	355	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	13.8		3.6	21.4	9.6	
Effective Green, g (s)	13.8		3.6	21.4	9.6	
Actuated g/C Ratio	0.37		0.10	0.58	0.26	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1262		172	2046	874	
v/s Ratio Prot	0.18		0.04	c0.25	c0.11	
v/s Ratio Perm						
v/c Ratio	0.48		0.37	0.43	0.41	
Uniform Delay, d1	8.9		15.6	4.4	11.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		0.5	0.1	0.1	
Delay (s)	9.0		16.1	4.4	11.5	
Level of Service	A		B	A	B	
Approach Delay (s)	9.0			5.2	11.5	
Approach LOS	A			A	B	

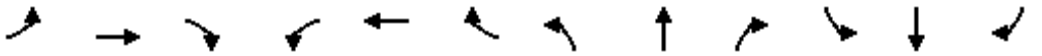
Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	37.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	1068	26	6	1165	298	18	62	140	167	43	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.97			0.91			0.99	
Flt Protected		1.00			1.00			1.00			0.97	
Satd. Flow (prot)		3526			3410			1651			1728	
Flt Permitted		0.94			0.95			0.97			0.57	
Satd. Flow (perm)		3332			3244			1604			1020	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	1068	26	6	1165	298	18	62	140	167	43	25
RTOR Reduction (vph)	0	2	0	0	27	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	1099	0	0	1442	0	0	220	0	0	230	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	5%	5%	5%	5%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.5			40.5			21.3			21.3	
Effective Green, g (s)		40.5			40.5			21.3			21.3	
Actuated g/C Ratio		0.54			0.54			0.28			0.28	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1804			1756			456			290	
v/s Ratio Prot												
v/s Ratio Perm		0.33			c0.44			0.14			c0.23	
v/c Ratio		0.61			0.82			0.48			0.79	
Uniform Delay, d1		11.7			14.2			22.2			24.7	
Progression Factor		1.00			1.00			0.08			1.00	
Incremental Delay, d2		0.6			3.2			0.7			13.8	
Delay (s)		12.3			17.4			2.5			38.5	
Level of Service		B			B			A			D	
Approach Delay (s)		12.3			17.4			2.5			38.5	
Approach LOS		B			B			A			D	

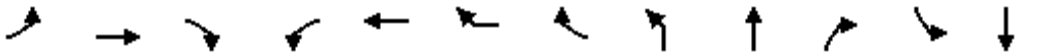
Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	399	131	300	651	215	57	163	118	120	150	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.96		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1770	3408		1770	3407			1839	1583		1822	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (perm)	1770	3408		1770	3407			1839	1583		1822	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	28	399	131	300	651	215	57	163	118	120	150	26
RTOR Reduction (vph)	0	37	0	0	30	0	0	0	90	0	0	21
Lane Group Flow (vph)	28	493	0	300	836	0	0	220	28	0	270	5
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	2.9	19.6		14.3	31.0			13.5	13.5		15.6	15.6
Effective Green, g (s)	2.9	19.6		14.3	31.0			13.5	13.5		15.6	15.6
Actuated g/C Ratio	0.04	0.25		0.18	0.39			0.17	0.17		0.20	0.20
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	64	845		320	1336			314	270		359	312
v/s Ratio Prot	0.02	0.14		c0.17	c0.25			c0.12			c0.15	
v/s Ratio Perm									0.02			0.00
v/c Ratio	0.44	0.58		0.94	0.63			0.70	0.10		0.75	0.02
Uniform Delay, d1	37.3	26.1		31.9	19.3			30.8	27.6		29.9	25.5
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	4.7	1.0		33.9	0.9			6.9	0.2		8.6	0.0
Delay (s)	42.0	27.1		65.9	20.3			37.7	27.8		38.5	25.5
Level of Service	D	C		E	C			D	C		D	C
Approach Delay (s)		27.9			32.0			34.3			37.4	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	79.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



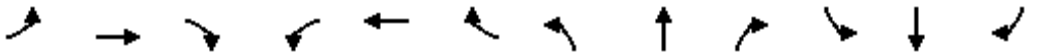
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	51	364	12	255	537	0	64	4	192	230	125	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.97			1.00		1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.92		1.00	0.98
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1843		1770	1863	1534			3251		1763	1808
Flt Permitted		0.89		0.95	1.00	1.00			0.95		0.42	1.00
Satd. Flow (perm)		1659		1770	1863	1534			3096		788	1808
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	51	364	12	255	537	0	64	4	192	230	125	303
RTOR Reduction (vph)	0	1	0	0	0	25	0	0	166	0	0	0
Lane Group Flow (vph)	0	426	0	255	537	39	0	0	260	0	125	363
Confl. Peds. (#/hr)	6		2	2		6					4	
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.2		13.8	41.0	41.0			19.0		19.0	19.0
Effective Green, g (s)		23.2		13.8	41.0	41.0			19.0		19.0	19.0
Actuated g/C Ratio		0.34		0.20	0.60	0.60			0.28		0.28	0.28
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		566		359	1123	924			865		220	505
v/s Ratio Prot				c0.14	0.29							c0.20
v/s Ratio Perm		c0.26				0.03			0.08		0.16	
v/c Ratio		0.75		0.71	0.48	0.04			0.30		0.57	0.72
Uniform Delay, d1		19.9		25.2	7.5	5.5			19.3		21.0	22.1
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		5.6		6.5	0.3	0.0			0.2		3.3	4.9
Delay (s)		25.5		31.7	7.9	5.5			19.5		24.3	27.0
Level of Service		C		C	A	A			B		C	C
Approach Delay (s)		25.5			14.8				19.5			26.3
Approach LOS		C			B				B			C

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

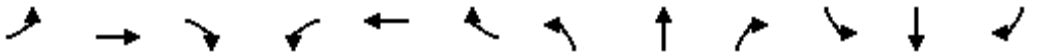
Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	60	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frpb, ped/bikes			
Flpb, ped/bikes			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	60	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Confl. Peds. (#/hr)	4		
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	286	5	336	469	12	7	174	193	37	219	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		0.99		0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3512		1770	3526			1859	1583		1849	1583
Flt Permitted		0.99		0.95	1.00			0.99	1.00		0.94	1.00
Satd. Flow (perm)		3512		1770	3526			1837	1583		1744	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	36	286	5	336	469	12	7	174	193	37	219	34
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	143	0	0	25
Lane Group Flow (vph)	0	326	0	336	479	0	0	181	50	0	256	9
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		11.7		18.9	18.9			14.9	14.9		14.9	14.9
Effective Green, g (s)		11.7		18.9	18.9			14.9	14.9		14.9	14.9
Actuated g/C Ratio		0.20		0.33	0.33			0.26	0.26		0.26	0.26
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		714		581	1158			476	410		451	410
v/s Ratio Prot		c0.09		c0.19	0.14							
v/s Ratio Perm								0.10	0.03		c0.15	0.01
v/c Ratio		0.46		0.58	0.41			0.38	0.12		0.57	0.02
Uniform Delay, d1		20.1		16.0	15.0			17.5	16.3		18.5	15.9
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5		1.4	0.2			0.5	0.1		1.6	0.0
Delay (s)		20.6		17.4	15.2			18.0	16.4		20.1	15.9
Level of Service		C		B	B			B	B		C	B
Approach Delay (s)		20.6			16.1			17.2			19.6	
Approach LOS		C			B			B			B	

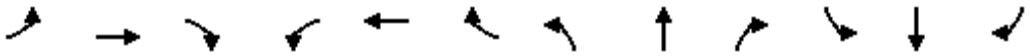
Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	537	76	47	677	68	140	316	76	135	259	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		0.99			1.00		1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.98			0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3443			3478		1753	3416		1751	3539	1544
Flt Permitted		0.86			0.89		0.59	1.00		0.49	1.00	1.00
Satd. Flow (perm)		2964			3088		1092	3416		896	3539	1544
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	537	76	47	677	68	140	316	76	135	259	82
RTOR Reduction (vph)	0	15	0	0	10	0	0	30	0	0	0	52
Lane Group Flow (vph)	0	646	0	0	782	0	140	362	0	135	259	30
Confl. Peds. (#/hr)	50		44	7		8	15		22	22		15
Confl. Bikes (#/hr)			14									
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51			0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1524			1588		405	1268		332	1314	573
v/s Ratio Prot								0.11			0.07	
v/s Ratio Perm		0.22			c0.25		0.13			c0.15		0.02
v/c Ratio		0.42			0.49		0.35	0.29		0.41	0.20	0.05
Uniform Delay, d1		10.6			11.1		15.9	15.5		16.3	14.9	14.1
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.9			1.1		2.3	0.6		3.7	0.3	0.2
Delay (s)		11.4			12.2		18.2	16.0		20.0	15.3	14.3
Level of Service		B			B		B	B		B	B	B
Approach Delay (s)		11.4			12.2			16.6			16.4	
Approach LOS		B			B			B			B	

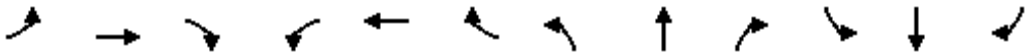
Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



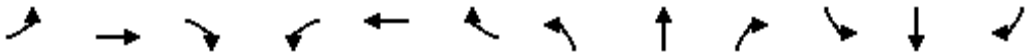
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	194	141	138	353	103	191	590	126	245	623	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3518	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3518	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	194	141	138	353	103	191	590	126	245	623	26
RTOR Reduction (vph)	0	0	0	0	0	70	0	0	63	0	2	0
Lane Group Flow (vph)	16	194	141	138	353	33	191	590	63	245	647	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	2.5	19.0	19.0	13.2	29.7	29.7	15.7	23.6	23.6	19.6	27.5	
Effective Green, g (s)	2.5	19.0	19.0	13.2	29.7	29.7	15.7	23.6	23.6	19.6	27.5	
Actuated g/C Ratio	0.03	0.21	0.21	0.14	0.32	0.32	0.17	0.26	0.26	0.21	0.30	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	48	387	329	255	605	514	304	913	408	379	1058	
v/s Ratio Prot	0.01	0.10		c0.08	c0.19		0.11	0.17		c0.14	c0.18	
v/s Ratio Perm			0.09			0.02			0.04			
v/c Ratio	0.33	0.50	0.43	0.54	0.58	0.07	0.63	0.65	0.15	0.65	0.61	
Uniform Delay, d1	43.6	32.0	31.5	36.3	25.7	21.3	35.1	30.2	26.2	32.7	27.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.1	1.0	0.9	2.3	1.4	0.1	4.0	1.6	0.2	3.8	1.1	
Delay (s)	47.7	33.0	32.4	38.6	27.1	21.3	39.2	31.8	26.4	36.5	28.4	
Level of Service	D	C	C	D	C	C	D	C	C	D	C	
Approach Delay (s)		33.4			28.8			32.6			30.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	91.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	69	96	268	137	120	97	667	258	121	778	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1721		1770	1732		1770	1863	1583	1770	3530	
Flt Permitted		0.97		0.62	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1683		1161	1732		1770	1863	1583	1770	3530	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	69	96	268	137	120	97	667	258	121	778	13
RTOR Reduction (vph)	0	67	0	0	50	0	0	0	150	0	2	0
Lane Group Flow (vph)	0	110	0	268	207	0	97	667	108	121	789	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		18.7		18.7	18.7		5.2	25.8	25.8	5.2	25.8	
Effective Green, g (s)		18.7		18.7	18.7		5.2	25.8	25.8	5.2	25.8	
Actuated g/C Ratio		0.30		0.30	0.30		0.08	0.42	0.42	0.08	0.42	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		510		351	524		149	779	661	149	1476	
v/s Ratio Prot					0.12		0.05	c0.36		c0.07	0.22	
v/s Ratio Perm		0.07		c0.23					0.07			
v/c Ratio		0.22		0.76	0.39		0.65	0.86	0.16	0.81	0.53	
Uniform Delay, d1		16.0		19.5	17.0		27.4	16.3	11.2	27.8	13.5	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2		9.5	0.5		9.8	9.2	0.1	27.4	0.4	
Delay (s)		16.2		29.0	17.5		37.1	25.4	11.3	55.2	13.8	
Level of Service		B		C	B		D	C	B	E	B	
Approach Delay (s)		16.2			23.4			23.0			19.3	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	27	131	188	50	116	97	970	72	94	978	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.89			0.96		1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1660			1734		1770	3503		1770	3532	
Flt Permitted		0.98			0.74		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1635			1322		1770	3503		1770	3532	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	27	131	188	50	116	97	970	72	94	978	14
RTOR Reduction (vph)	0	91	0	0	24	0	0	8	0	0	1	0
Lane Group Flow (vph)	0	74	0	0	330	0	97	1034	0	94	991	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		19.2			19.2		5.7	25.8		5.7	25.8	
Effective Green, g (s)		19.2			19.2		5.7	25.8		5.7	25.8	
Actuated g/C Ratio		0.31			0.31		0.09	0.41		0.09	0.41	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		500			404		160	1441		160	1453	
v/s Ratio Prot							c0.05	c0.30		0.05	0.28	
v/s Ratio Perm		0.05			c0.25							
v/c Ratio		0.15			0.82		0.61	0.72		0.59	0.68	
Uniform Delay, d1		15.8			20.1		27.4	15.4		27.4	15.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			12.0		6.4	1.7		5.4	1.3	
Delay (s)		15.9			32.1		33.8	17.1		32.8	16.4	
Level of Service		B			C		C	B		C	B	
Approach Delay (s)		15.9			32.1			18.6			17.8	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	62.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

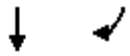
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	883	18	1158	834	38	1205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frpb, ped/bikes	1.00		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		1.00	1.00
Frt	1.00		0.94		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	3433		3299		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	3433		3299		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	883	18	1158	834	38	1205
RTOR Reduction (vph)	2	0	126	0	0	0
Lane Group Flow (vph)	899	0	1866	0	38	1205
Confl. Peds. (#/hr)		1				
Confl. Bikes (#/hr)		3		2		
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	25.5		36.9		3.2	44.1
Effective Green, g (s)	25.5		36.9		3.2	44.1
Actuated g/C Ratio	0.33		0.48		0.04	0.57
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1128		1568		72	2011
v/s Ratio Prot	c0.26		c0.57		0.02	c0.34
v/s Ratio Perm						
v/c Ratio	0.80		1.19		0.53	0.60
Uniform Delay, d1	23.7		20.3		36.5	11.0
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	4.0		92.1		6.8	0.5
Delay (s)	27.7		112.4		43.3	11.5
Level of Service	C		F		D	B
Approach Delay (s)	27.7		112.4			12.4
Approach LOS	C		F			B

Intersection Summary			
HCM 2000 Control Delay	63.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	77.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	4	5	25	432	0	17	33	0	127	107	2	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95			1.00
Frpb, ped/bikes		0.99		1.00	1.00			1.00	0.98			1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00			1.00
Frt		0.90		1.00	0.99			1.00	0.93			1.00
Flt Protected		0.99		0.95	0.96			0.95	1.00			0.95
Satd. Flow (prot)		1652		1618	1608			1703	3121			1703
Flt Permitted		0.99		0.95	0.96			0.95	1.00			0.95
Satd. Flow (perm)		1652		1618	1608			1703	3121			1703
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	5	25	432	0	17	33	0	127	107	2	19
RTOR Reduction (vph)	0	24	0	0	76	0	0	0	77	0	0	0
Lane Group Flow (vph)	0	10	0	225	148	0	0	33	157	0	0	21
Confl. Peds. (#/hr)			1	1						9		9
Confl. Bikes (#/hr)						1				2		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA		Prot	Prot
Protected Phases	4	4		8	8		5	5	2		1	1
Permitted Phases												
Actuated Green, G (s)		2.0		14.1	14.1			2.2	13.1			1.0
Effective Green, g (s)		2.0		14.1	14.1			2.2	13.1			1.0
Actuated g/C Ratio		0.04		0.31	0.31			0.05	0.28			0.02
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		71		493	490			81	884			36
v/s Ratio Prot		c0.01		c0.14	0.09			c0.02	0.05			0.01
v/s Ratio Perm												
v/c Ratio		0.14		0.46	0.30			0.41	0.18			0.58
Uniform Delay, d1		21.3		13.0	12.3			21.4	12.5			22.4
Progression Factor		1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2		0.9		0.7	0.4			3.3	0.1			21.8
Delay (s)		22.2		13.6	12.6			24.7	12.6			44.2
Level of Service		C		B	B			C	B			D
Approach Delay (s)		22.2			13.1				14.1			
Approach LOS		C			B				B			

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	46.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Volume (vph)	371	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3406	
Flt Permitted	1.00	
Satd. Flow (perm)	3406	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	371	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	371	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		1
Heavy Vehicles (%)	6%	2%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	11.9	
Effective Green, g (s)	11.9	
Actuated g/C Ratio	0.26	
Clearance Time (s)	4.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	877	
v/s Ratio Prot	c0.11	
v/s Ratio Perm		
v/c Ratio	0.42	
Uniform Delay, d1	14.3	
Progression Factor	1.00	
Incremental Delay, d2	0.3	
Delay (s)	14.6	
Level of Service	B	
Approach Delay (s)	16.2	
Approach LOS	B	

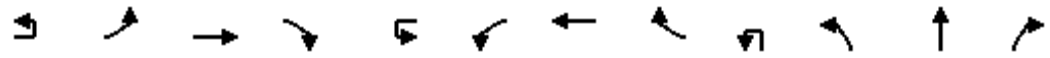
Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	3	99	928	13	41	117	871	470	19	51	152	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	0.99	0.95		1.00	0.99	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.97	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1770	6395			1770	5784	1213		1838	1561	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1770	6395			1770	5784	1213		1838	1561	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	99	928	13	41	117	871	470	19	51	152	1
RTOR Reduction (vph)	0	0	1	0	0	0	32	173	0	0	137	0
Lane Group Flow (vph)	0	102	940	0	0	158	1065	71	0	70	15	0
Confl. Peds. (#/hr)		35						35	29			
Confl. Bikes (#/hr)								2			1	
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		9.6	20.2			12.2	22.8	22.8		8.0	8.0	
Effective Green, g (s)		9.6	20.2			12.2	22.8	22.8		8.0	8.0	
Actuated g/C Ratio		0.12	0.26			0.16	0.29	0.29		0.10	0.10	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		215	1641			274	1675	351		186	158	
v/s Ratio Prot		0.06	0.15			c0.09	c0.18			c0.04		
v/s Ratio Perm								0.06			0.01	
v/c Ratio		0.47	0.57			0.58	0.64	0.20		0.38	0.10	
Uniform Delay, d1		32.2	25.5			30.9	24.3	21.1		33.0	32.1	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	0.3			1.8	0.6	0.1		0.5	0.1	
Delay (s)		32.8	25.8			32.7	24.9	21.2		33.5	32.2	
Level of Service		C	C			C	C	C		C	C	
Approach Delay (s)			26.5				25.1			32.6		
Approach LOS			C				C			C		

Intersection Summary			
HCM 2000 Control Delay	42.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	78.7	Sum of lost time (s)	21.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	838	89	149
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.97	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.91	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3433	1633	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3433	1633	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	838	89	149
RTOR Reduction (vph)	0	34	0
Lane Group Flow (vph)	839	204	0
Confl. Peds. (#/hr)			29
Confl. Bikes (#/hr)			1
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	17.3	17.3	
Effective Green, g (s)	17.3	17.3	
Actuated g/C Ratio	0.22	0.22	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	754	358	
v/s Ratio Prot	c0.24	0.13	
v/s Ratio Perm			
v/c Ratio	1.11	0.57	
Uniform Delay, d1	30.7	27.4	
Progression Factor	1.00	1.00	
Incremental Delay, d2	68.2	1.4	
Delay (s)	98.9	28.8	
Level of Service	F	C	
Approach Delay (s)		83.4	
Approach LOS		F	

Intersection Summary



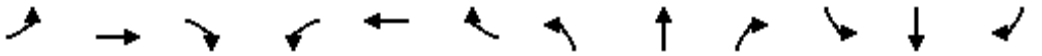
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	3	12	457	53	2	170	910	189	2	144	117	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00		1.00	0.91	1.00		1.00	1.00	0.88
Frpb, ped/bikes		1.00	1.00	0.99		1.00	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1714	3438	1516		1719	4940	1505		1717	1810	2707
Flt Permitted		0.30	1.00	1.00		0.95	1.00	1.00		0.70	1.00	1.00
Satd. Flow (perm)		544	3438	1516		1719	4940	1505		1257	1810	2707
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	12	457	53	2	170	910	189	2	144	117	230
RTOR Reduction (vph)	0	0	0	41	0	0	0	105	0	0	0	184
Lane Group Flow (vph)	0	15	457	12	0	172	910	84	0	146	117	46
Confl. Peds. (#/hr)		8		2		2		8		2		
Confl. Bikes (#/hr)								1				
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm	Perm	NA	Perm	Prot	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases			6		5	5	2				4	
Permitted Phases	6	6		6				2	4	4		4
Actuated Green, G (s)		20.2	20.2	20.2		15.9	40.1	40.1		18.1	18.1	18.1
Effective Green, g (s)		20.2	20.2	20.2		15.9	40.1	40.1		18.1	18.1	18.1
Actuated g/C Ratio		0.22	0.22	0.22		0.18	0.45	0.45		0.20	0.20	0.20
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		122	772	340		304	2203	671		253	364	545
v/s Ratio Prot			c0.13			c0.10	0.18				0.06	
v/s Ratio Perm		0.03		0.01				0.06		c0.12		0.02
v/c Ratio		0.12	0.59	0.04		0.57	0.41	0.13		0.58	0.32	0.08
Uniform Delay, d1		27.8	31.2	27.2		33.8	16.9	14.6		32.4	30.7	29.2
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.5	1.2	0.0		2.4	0.1	0.1		3.2	0.5	0.1
Delay (s)		28.2	32.4	27.3		36.3	17.0	14.7		35.6	31.2	29.2
Level of Service		C	C	C		D	B	B		D	C	C
Approach Delay (s)			31.8				19.3				31.6	
Approach LOS			C				B				C	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	241	68	27
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.0	4.0	
Lane Util. Factor	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.96	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	1719	1726	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	1719	1726	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	241	68	27
RTOR Reduction (vph)	0	9	0
Lane Group Flow (vph)	241	86	0
Confl. Peds. (#/hr)			2
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	5%	5%	5%
Turn Type	Prot	NA	
Protected Phases	3	8	
Permitted Phases			
Actuated Green, G (s)	19.7	41.8	
Effective Green, g (s)	19.7	41.8	
Actuated g/C Ratio	0.22	0.46	
Clearance Time (s)	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	
Lane Grp Cap (vph)	376	802	
v/s Ratio Prot	c0.14	0.05	
v/s Ratio Perm			
v/c Ratio	0.64	0.11	
Uniform Delay, d1	31.9	13.5	
Progression Factor	1.00	1.00	
Incremental Delay, d2	3.7	0.1	
Delay (s)	35.6	13.6	
Level of Service	D	B	
Approach Delay (s)		29.4	
Approach LOS		C	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	1095	9	174	453	322	20	129	152	86	116	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.94	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		4961		1736	4988	1532	1736	4451	1335	1736	3471	1553
Flt Permitted		0.83		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		4130		1736	4988	1532	1736	4451	1335	1736	3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	102	1095	9	174	453	322	20	129	152	86	116	16
RTOR Reduction (vph)	0	0	0	0	0	95	0	69	69	0	0	13
Lane Group Flow (vph)	0	1206	0	174	453	227	20	136	7	86	116	3
Confl. Peds. (#/hr)	1					1						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		68.8		15.2	88.0	88.0	3.4	11.5	11.5	11.5	19.6	19.6
Effective Green, g (s)		68.8		15.2	88.0	88.0	3.4	11.5	11.5	11.5	19.6	19.6
Actuated g/C Ratio		0.55		0.12	0.70	0.70	0.03	0.09	0.09	0.09	0.16	0.16
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		2273		211	3511	1078	47	409	122	159	544	243
v/s Ratio Prot				c0.10	0.09		0.01	c0.03		c0.05	0.03	
v/s Ratio Perm		c0.29				0.15			0.01			0.00
v/c Ratio		0.53		0.82	0.13	0.21	0.43	0.33	0.06	0.54	0.21	0.01
Uniform Delay, d1		17.8		53.6	6.0	6.4	59.8	53.2	51.8	54.2	46.0	44.5
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.9		22.3	0.1	0.4	6.1	0.5	0.2	3.7	0.2	0.0
Delay (s)		18.7		75.9	6.1	6.9	65.9	53.6	52.0	57.9	46.2	44.5
Level of Service		B		E	A	A	E	D	D	E	D	D
Approach Delay (s)		18.7			19.2			54.0			50.7	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	610	1347	285	1115	691	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.90		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3174		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3174		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	610	1347	285	1115	691	160
RTOR Reduction (vph)	415	0	0	0	0	0
Lane Group Flow (vph)	1542	0	285	1115	691	160
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		11.0	38.0	13.9	59.9
Effective Green, g (s)	23.0		11.0	38.0	13.9	59.9
Actuated g/C Ratio	0.38		0.18	0.63	0.23	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1218		325	2245	796	1583
v/s Ratio Prot	c0.49		c0.16	0.32	c0.20	
v/s Ratio Perm						0.10
v/c Ratio	1.30dr		0.88	0.50	0.87	0.10
Uniform Delay, d1	18.4		23.8	5.8	22.1	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	126.5		22.3	0.2	9.9	0.1
Delay (s)	145.0		46.1	6.0	32.0	0.1
Level of Service	F		D	A	C	A
Approach Delay (s)	145.0			14.2	26.0	
Approach LOS	F			B	C	

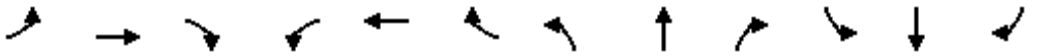
Intersection Summary			
HCM 2000 Control Delay	77.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.8%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	646	92	119	914	453	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	646	92	119	914	453	109
RTOR Reduction (vph)	0	60	0	0	0	80
Lane Group Flow (vph)	646	32	119	914	453	29
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	16.1	16.1	5.7	25.8	12.5	12.5
Effective Green, g (s)	16.1	16.1	5.7	25.8	12.5	12.5
Actuated g/C Ratio	0.35	0.35	0.12	0.56	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1230	550	422	1972	926	427
v/s Ratio Prot	0.18		0.03	c0.26	c0.13	
v/s Ratio Perm		0.02				0.02
v/c Ratio	0.53	0.06	0.28	0.46	0.49	0.07
Uniform Delay, d1	12.0	10.1	18.4	6.1	14.2	12.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.4	0.2	0.4	0.1
Delay (s)	12.5	10.1	18.8	6.3	14.6	12.6
Level of Service	B	B	B	A	B	B
Approach Delay (s)	12.2			7.7	14.2	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	19	127	25	13	123	73	924	14	48	997	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.86		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1663	1748	1568	1752	2994		3400	3496		1752	3502	
Flt Permitted	0.67	0.99	1.00	0.74	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1165	1729	1568	1372	2994		3400	3496		1752	3502	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	19	127	25	13	123	73	924	14	48	997	5
RTOR Reduction (vph)	0	0	99	0	96	0	0	1	0	0	0	0
Lane Group Flow (vph)	5	20	28	25	40	0	73	937	0	48	1002	0
Confl. Peds. (#/hr)	3											
Confl. Bikes (#/hr)						1			3			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.1	10.1	10.1	10.1	10.1		3.3	22.6		2.4	21.7	
Effective Green, g (s)	10.1	10.1	10.1	10.1	10.1		3.3	22.6		2.4	21.7	
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.07	0.48		0.05	0.47	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	252	374	339	297	648		240	1695		90	1630	
v/s Ratio Prot					0.01		0.02	0.27		c0.03	c0.29	
v/s Ratio Perm	0.00	0.01	0.02	c0.02								
v/c Ratio	0.02	0.05	0.08	0.08	0.06		0.30	0.55		0.53	0.61	
Uniform Delay, d1	14.4	14.5	14.6	14.6	14.5		20.6	8.4		21.6	9.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.1	0.2	0.2	0.1		0.3	0.2		3.0	0.5	
Delay (s)	14.4	14.6	14.7	14.8	14.6		20.8	8.7		24.6	9.8	
Level of Service	B	B	B	B	B		C	A		C	A	
Approach Delay (s)		14.7			14.6			9.5			10.5	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	11.5
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

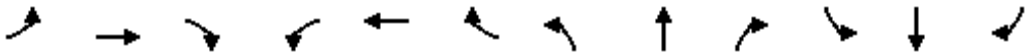
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	0	0	0	9	236	366	339	3	176	622	158	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91			0.97	0.95	1.00	0.97
Frpb, ped/bikes					1.00	0.99			1.00	1.00	0.99	1.00
Flpb, ped/bikes					1.00	1.00			1.00	1.00	1.00	1.00
Frt					1.00	0.93			1.00	1.00	0.85	1.00
Flt Protected					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (prot)					1752	4636			3400	3505	1548	3400
Flt Permitted					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (perm)					1752	4636			3400	3505	1548	3400
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	9	236	366	339	3	176	622	158	266
RTOR Reduction (vph)	0	0	0	0	0	213	0	0	0	0	75	0
Lane Group Flow (vph)	0	0	0	0	245	492	0	0	179	622	83	266
Confl. Peds. (#/hr)							2					
Confl. Bikes (#/hr)							2				2	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm	Perm	NA		Prot	Prot	NA	Perm	Prot
Protected Phases						8		5	5	2		1
Permitted Phases				8	8						2	
Actuated Green, G (s)					22.3	22.3			10.6	52.8	52.8	12.9
Effective Green, g (s)					22.3	22.3			10.6	52.8	52.8	12.9
Actuated g/C Ratio					0.22	0.22			0.11	0.53	0.53	0.13
Clearance Time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					390	1033			360	1850	817	438
v/s Ratio Prot						0.11			0.05	0.18		c0.08
v/s Ratio Perm					c0.14						0.05	
v/c Ratio					0.63	0.48			0.50	0.34	0.10	0.61
Uniform Delay, d1					35.1	33.8			42.2	13.5	11.8	41.2
Progression Factor					1.00	1.00			0.66	1.40	3.92	1.00
Incremental Delay, d2					3.2	0.3			1.0	0.5	0.2	2.4
Delay (s)					38.3	34.1			29.0	19.5	46.4	43.5
Level of Service					D	C			C	B	D	D
Approach Delay (s)		0.0				35.2				25.7		
Approach LOS		A				D				C		

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	785	92
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3505	1547
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3505	1547
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	785	92
RTOR Reduction (vph)	0	41
Lane Group Flow (vph)	785	51
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		4
Heavy Vehicles (%)	3%	3%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	55.1	55.1
Effective Green, g (s)	55.1	55.1
Actuated g/C Ratio	0.55	0.55
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1931	852
v/s Ratio Prot	c0.22	
v/s Ratio Perm		0.03
v/c Ratio	0.41	0.06
Uniform Delay, d1	13.0	10.4
Progression Factor	1.00	1.00
Incremental Delay, d2	0.6	0.1
Delay (s)	13.6	10.6
Level of Service	B	B
Approach Delay (s)	20.3	
Approach LOS	C	

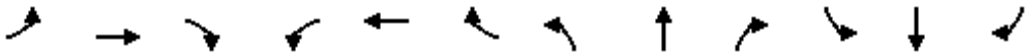
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	83	400	210	0	75	0	732	183	23	872	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	5036	1568	3400		1529		3505	1543	1752	3505	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	5036	1568	3400		1529		3505	1543	1752	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	153	83	400	210	0	75	0	732	183	23	872	0
RTOR Reduction (vph)	0	0	104	0	0	66	0	0	98	0	0	0
Lane Group Flow (vph)	153	83	296	210	0	9	0	732	85	23	872	0
Confl. Peds. (#/hr)						5			2	2		
Confl. Bikes (#/hr)									4			3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	22.6	22.6	22.6	11.5		11.5		46.6	46.6	3.3	53.9	
Effective Green, g (s)	22.6	22.6	22.6	11.5		11.5		46.6	46.6	3.3	53.9	
Actuated g/C Ratio	0.23	0.23	0.23	0.12		0.12		0.47	0.47	0.03	0.54	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	395	1138	354	391		175		1633	719	57	1889	
v/s Ratio Prot	0.09	0.02		c0.06				0.21		0.01	c0.25	
v/s Ratio Perm			c0.19			0.01			0.06			
v/c Ratio	0.39	0.07	0.84	0.54		0.05		0.45	0.12	0.40	0.46	
Uniform Delay, d1	32.8	30.5	36.9	41.7		39.4		18.0	15.1	47.4	14.1	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.86	1.39	
Incremental Delay, d2	0.6	0.0	15.7	1.4		0.1		0.9	0.3	4.3	0.8	
Delay (s)	33.5	30.5	52.6	43.2		39.5		18.9	15.4	45.0	20.4	
Level of Service	C	C	D	D		D		B	B	D	C	
Approach Delay (s)		45.1			42.2			18.2			21.0	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



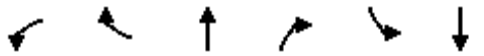
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	90	36	187	82	418	28	394	243	668	1045	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1504	2866		3242	1759	1495	1671	4803	1482	3335	3402	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1504	2866		3242	1759	1495	1671	4803	1482	3335	3402	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	84	90	36	187	82	418	28	394	243	668	1045	68
RTOR Reduction (vph)	0	31	0	0	0	183	0	0	137	0	3	0
Lane Group Flow (vph)	84	95	0	187	82	235	28	394	106	668	1110	0
Confl. Peds. (#/hr)			1	1			2		1	1		2
Confl. Bikes (#/hr)			2									1
Heavy Vehicles (%)	20%	20%	20%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	8.1	9.9		9.7	11.5	27.8	2.8	23.2	32.9	16.3	36.7	
Effective Green, g (s)	8.1	9.9		9.7	11.5	27.8	2.8	23.2	32.9	16.3	36.7	
Actuated g/C Ratio	0.11	0.13		0.13	0.15	0.37	0.04	0.31	0.44	0.22	0.49	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	162	377		418	269	633	62	1483	728	723	1662	
v/s Ratio Prot	0.06	0.03		c0.06	0.05	c0.08	0.02	c0.08	0.02	c0.20	c0.33	
v/s Ratio Perm						0.08			0.05			
v/c Ratio	0.52	0.25		0.45	0.30	0.37	0.45	0.27	0.15	0.92	0.67	
Uniform Delay, d1	31.7	29.3		30.2	28.2	17.3	35.4	19.5	12.7	28.8	14.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.8	0.4		0.8	0.6	0.4	5.2	0.1	0.1	17.5	1.0	
Delay (s)	34.4	29.6		31.0	28.9	17.6	40.6	19.6	12.8	46.3	15.6	
Level of Service	C	C		C	C	B	D	B	B	D	B	
Approach Delay (s)		31.6			22.6			18.0			27.1	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	75.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	309	20	20	240	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1847			1856	1695	
Flt Permitted	1.00			0.92	0.98	
Satd. Flow (perm)	1847			1707	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	20	20	240	20	20
RTOR Reduction (vph)	4	0	0	0	17	0
Lane Group Flow (vph)	325	0	0	260	23	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	16.2			16.2	10.8	
Effective Green, g (s)	16.2			16.2	10.8	
Actuated g/C Ratio	0.25			0.25	0.17	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	458			423	280	
v/s Ratio Prot	c0.18				c0.01	
v/s Ratio Perm				0.15		
v/c Ratio	0.71			0.61	0.08	
Uniform Delay, d1	22.4			21.8	23.1	
Progression Factor	1.00			0.63	1.00	
Incremental Delay, d2	4.3			1.8	0.0	
Delay (s)	26.7			15.4	23.1	
Level of Service	C			B	C	
Approach Delay (s)	26.7			15.4	23.1	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	21.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	220	10	0	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1852			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1852			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	220	10	0	75
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	230	0	0	75
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.0		21.3			21.3
Effective Green, g (s)	1.0		21.3			21.3
Actuated g/C Ratio	0.01		0.28			0.28
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	23		527			530
v/s Ratio Prot	c0.01		c0.12			0.04
v/s Ratio Perm						
v/c Ratio	0.43		0.44			0.14
Uniform Delay, d1	36.6		21.8			19.9
Progression Factor	1.00		1.00			0.78
Incremental Delay, d2	12.6		0.6			0.1
Delay (s)	49.2		22.4			15.7
Level of Service	D		C			B
Approach Delay (s)	49.2		22.4			15.7
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix G
Freeway LOS Summary

FEHR PEERS

Appendix G: Freeway LOS Summary												
Segment	**Type**	**Time Period**	**Existing**		**Existing Plus Project**		**2035 No Project**		**2035 Plus Coliseum Site**		**2035 Plus Specific Plan Buildout**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
I-880 Northbound												
South of Davis Street	Basic	AM	22.4	C	23.5	C	23.6	C	24.7	C	25.7	C
		PM	21.3	C	23.0	C	21.6	C	23.3	C	24.4	C
Davis Street On-Ramp	Merge	AM	30.0	D	29.0	D	29.3	D	30.3	D	31.1	D
		PM	28.5	D	27.0	C	26.2	C	27.8	C	28.7	D
Daivs Street to 98th Avenue	Basic	AM	31.0	D	33.1	D	33.1	D	35.2	E	37.2	E
		PM	27.7	D	30.6	D	29.1	D	32.2	D	34.2	D
98th Avenue Off-Ramp	Diverge	AM	38.6	E	39.9	E	39.2	E	40.5	E	41.5	E
		PM	37.0	E	39.2	E	38.1	E	40.3	E	41.5	E
98th Avenue WB On-Ramp	Merge	AM	22.1	C	22.9	C	22.9	C	23.3	C	24.0	C
		PM	20.7	C	21.9	C	21.6	C	22.8	C	23.1	C
99th Avenue to Hegenberger Road	Weave	AM		E		E		E		E		F
		PM		D		E		E		F		F
Hegenberger Rd SB On-Ramp	Merge	AM	21.2	C	21.8	C	22.1	C	22.6	C	22.7	C
		PM	20.4	C	21.4	C	21.3	C	22.3	C	23.1	C
Hegenberger Rd to 66th Avenue	Weave	AM		D		E		E		E		E
		PM		C		D		D		E		F
Coliseum Way/66th Avenue On-Ramp	Merge	AM	17.9	B	19.2	B	19.3	B	20.6	C	22.3	C
		PM	17.5	B	18.9	B	20.3	C	21.7	C	24.3	C
66th Avenue to High Street	Weave	AM		C		D		D		E		E
		PM		D		D		E		E		F
High Street On-Ramp	Merge	AM	30.7	D	31.9	D	33.1	D	34.3	D	35.7	E
		PM	29.7	D	31.0	D	31.7	D	33.0	D	35.1	E
North of High Street	Basic	AM	29.7	D	31.4	D	32.3	D	34.2	D	36.9	E
		PM	28.2	D	30.0	D	31.0	D	33.1	D	37.3	E

Appendix G: Freeway LOS Summary											
Segment	**Type**	**Time Period**	**Existing**		**Existing Plus Project**		**2035 No Project**		**2035 Plus Coliseum Site**		**2035 Plus Specific Plan Buildout**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
I-880 Southbound												
North of High Street	Basic	AM	28.5	D	29.8	D	36.4	E	38.2	E	-	F
		PM	28.5	D	30.3	D	36.9	E	39.5	E	44.5	E
42nd Avenue/High Street Off-Ramp	Diverge	AM	33.5	D	34.6	D	40.6	E	41.7	E	-	F
		PM	32.8	D	34.2	D	39.2	E	-	F	-	F
High Street/Oakport Avenue On-Ramp	Merge	AM	28.1	D	28.7	D	33.7	D	34.4	D	-	F
		PM	28.2	D	29.1	D	32.6	D	33.6	D	-	F
High Street to 66th Avenue	Basic	AM	26.1	C	27.0	D	33.0	D	34.3	D	42.0	E
		PM	26.5	D	28.0	D	33.5	D	35.6	E	39.5	E
66th Avenue Off-Ramp	Diverge	AM	14.6	B	15.3	B	18.8	B	19.5	B	-	F
		PM	15.0	B	15.9	B	19.1	B	20.1	C	-	F
66th Avenue On-Ramp	Merge	AM	23.8	C	24.8	C	29.1	D	30.1	D	31.8	D
		PM	25.6	C	27.5	C	30.4	D	32.2	D	33.6	D
66th Avenue to Hegenberger Road	Basic	AM	24.2	C	25.0	C	32.0	D	33.2	D	36.3	E
		PM	25.6	C	27.1	D	33.3	D	35.4	E	37.4	E
Hegenberger Road Off-Ramp	Diverge	AM	13.8	B	14.4	B	22.0	C	22.6	C	24.7	C
		PM	14.7	B	15.8	B	20.0	C	20.8	C	21.8	C
Hegenberger SB Loop On-Ramp	Merge	AM	16.5	B	18.7	B	18.9	B	21.1	C	22.0	C
		PM	18.2	B	21.1	C	20.5	C	23.4	C	24.2	C
Hegenberger Road to 98th Street	Weave	AM		C		D		E		E		F
		PM		D		E		E		E		F
98th Avenue WB Loop On-Ramp	Merge	AM	23.3	C	24.6	C	25.4	C	26.7	C	27.8	C
		PM	26.4	C	28.6	D	28.4	D	30.6	D	32.1	D
98th Avenue EB On-Ramp	Merge	AM	25.5	C	26.7	C	30.2	D	31.4	D	32.7	D
		PM	30.5	D	32.6	D	35.9	E	-	F	-	F
99th Avenue to Davis Street	Basic	AM	23.0	C	24.7	C	27.5	D	29.7	D	31.9	D
		PM	29.4	D	33.5	D	37.0	E	42.7	E	-	F
Davis Street Off-Ramp	Diverge	AM	30.0	D	31.5	D	33.0	D	34.5	D	35.9	E
		PM	34.4	D	37.0	E	39.4	E	-	F	-	F

Appendix G: Freeway LOS Summary												
Segment	**Type**	**Time Period**	**Existing**		**Existing Plus Project**		**2035 No Project**		**2035 Plus Coliseum Site**		**2035 Plus Specific Plan Buildout**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
I-580 Eastbound												
West of Seminary Avenue Off-Ramp	Basic	AM	13.8	B	13.8	B	15.4	B	15.4	B	15.4	B
		PM	18.8	C	18.8	C	21.3	C	21.3	C	21.3	C
West of SR 13 Merge	Basic	AM	12.9	B	13.1	B	14.5	B	14.7	B	15.0	B
		PM	17	B	17.3	B	19.4	C	19.6	C	19.9	C
SR-13 Merge	Merge	AM	-	-		-	-	F	-	F	-	F
		PM	-	-	-	F	-	F	-	F	-	F
Seminary Avenue Off-Ramp	Diverge	AM	20.1	C	20.1	C	23.4	C	23.4	C	23.5	C
		PM	26.6	C	26.8	C	30.6	D	30.8	D	30.8	D
Seminary Avenue On-Ramp	Merge	AM	24.3	C	24.5	C	26.8	C	27.0	C	27.1	C
		PM	32.6	D	32.8	D	34.8	D	35.0	D	35.3	E
Seminary Avenue On-Ramp to Edwards Avenue	Basic	AM	22.0	C	22.2	C	25.0	C	25.2	C	25.4	C
		PM	31.9	D	32.2	D	36.0	E	36.3	E	37.0	E
Edwards Avenue Off-Ramp	Diverge	AM	28.9	D	29.2	D	31.9	D	32.2	D	32.5	D
		PM	35.7	E	35.9	E	38.3	E	38.6	E	39.2	E
Edwards Avenue to Keller Avenue	Basic	AM	19.7	C	19.8	C	22.0	C	22.1	C	22.2	C
		PM	30.9	D	31.1	D	32.0	D	32.2	D	32.3	D
Keller Avenue Off-Ramp	Diverge	AM	24.9	C	25.0	C	27.2	C	27.3	C	27.4	C
		PM	34.2	D	34.3	D	35.0	D	35.1	E	35.2	E
Keller Avenue On-Ramp	Merge	AM	21.7	C	21.8	C	23.6	C	23.7	C	23.7	C
		PM	28.3	D	28.4	D	29.0	D	29.1	D	29.1	D
Keller Avenue to 98th Avenue/Golf Links Road	Basic	AM	19.7	C	19.8	C	22.0	C	22.1	C	22.1	C
		PM	29.9	D	30.1	D	31.0	D	31.2	D	31.3	D
98th Avenue/Golf Links Road Off-Ramp	Diverge	AM	28.1	D	28.3	D	31.0	D	31.2	D	31.3	D
		PM	35.7	E	35.9	E	37.5	E	37.7	E	37.8	E
East of 98th Avenue/Golf links Road	Basic	AM	15.0	B	15.1	B	16.9	B	16.9	B	16.9	B
		PM	22.0	C	22.1	C	22.1	C	22.2	C	22.3	C

Appendix G: Freeway LOS Summary												
Segment	**Type**	**Time Period**	**Existing**		**Existing Plus Project**		**2035 No Project**		**2035 Plus Coliseum Site**		**2035 Plus Specific Plan Buildout**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
I-580 Westbound												
East of 98th Avenue/Golf links Road	Basic	AM	19.2	C	19.4	C	19.9	C	20.0	C	20.3	C
		PM	21.9	C	22.0	C	23.6	C	23.7	C	23.8	C
98th Avenue/Golf Links Road Off-Ramp	Diverge	AM	26.3	C	26.6	C	27.5	C	27.8	C	28.3	D
		PM	28.7	D	28.8	D	31.1	D	31.2	D	31.4	D
98th Avenue/Golf Links Road On-Ramp	Merge	AM	22.2	C	22.5	C	23.4	C	23.7	C	24.1	C
		PM	25.2	C	25.6	C	27.4	C	30.4	D	25.5	C
98th Avenue/Golf Links Road to Keller Avenue	Basic	AM	18.9	C	19.0	C	19.6	C	19.8	C	20.0	C
		PM	22.1	C	22.3	C	23.9	C	24.2	C	24.4	C
Keller Avenue Off-Ramp	Diverge	AM	23.7	C	23.8	C	24.6	C	24.8	C	25.0	C
		PM	27.4	C	27.6	C	29.2	D	29.5	D	29.7	D
Keller Avenue On-Ramp	Merge	AM	23.2	C	23.3	C	24.5	C	24.7	C	24.8	C
		PM	23.4	C	23.6	C	24.9	C	26.4	C	22.5	C
Keller Avenue to Edwards Avenue	Basic	AM	20.2	C	20.4	C	21.3	C	21.5	C	21.7	C
		PM	21.9	C	22.1	C	23.7	C	23.9	C	24.2	C
Edwards Avenue On-Ramp	Merge	AM	28.8	D	29.1	D	29.9	D	30.3	D	30.8	D
		PM	28.6	D	29.0	D	28.7	D	22.5	C	27.7	C
Edwards Avenue to Seminary Avenue	Basic	AM	24.4	C	24.8	C	25.9	C	26.3	D	26.8	D
		PM	25.4	C	25.9	C	26.7	D	27.1	D	27.6	D
Seminary Avenue Off-Ramp	Diverge	AM	28.2	D	28.6	D	29.7	D	30.0	D	30.4	D
		PM	29.4	D	29.7	D	30.7	D	31.0	D	31.4	D
SR-13 Off-Ramp	Diverge	AM	17.5	B	17.6	B	18.1	B	18.3	B	18.6	B
		PM	17.8	B	10.8	B	18.3	B	18.6	B	18.7	B
SR-13 Off-Ramp to Mountain Blvd/Rusting Avenue	Basic	AM	14.9	B	14.9	B	15.2	B	15.2	B	15.2	B
		PM	14.1	B	14.1	B	14.7	B	14.7	B	14.7	B
Mountain Blvd/Rusting Avenue On-Ramp	Merge	AM	18.6	B	18.7	B	19.3	B	19.3	B	19.3	B
		PM	18.1	B	18.2	B	19.4	B	27.4	C	19.4	B
West of Mountain Blvd/Rusting Avenue	Basic	AM	15.7	B	15.8	B	16.2	B	16.3	B	16.3	B
		PM	15.0	B	15.1	B	15.8	B	15.8	B	15.8	B

Appendix H
Freeway LOS Calculation Worksheets

FEHR PEERS

HCM 2010
Basic Freeway Segments
Operational Analysis

Jurisdiction Caltrans District 4 | Agency or Company Caltrans
Analysis Year Existing AM | Date 1/21/2014
Scenario Existing Conditions | Project Description Coliseum City SP/EIR

General Information | *Flow Rate Calculation*

	Freeway/ Direction	From/To	Analysis Time Period	Volume (vph)	PHF	Lanes	HOV Lane?	HOV Lane Volume	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_p (pcphpl)
1	I-880 NB	South of Davis Street	AM	7,474	1.00	5	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,540
4	I-880 NB	Davis Street to 98th Street	AM	7,625	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,963
18	I-880 NB	North of High Street	AM	7,173	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,847
19	I-880 SB	North of High Street	AM	6,956	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,791
22	I-880 SB	High Street to 66th Street	AM	6,744	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,737
25	I-880 SB	66th Street to Hegenberger Road	AM	6,370	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,640
33	I-880 SB	98th Street to Davis Street	AM	6,099	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,570
37	I-580 EB	West of Seminary Avenue Off-Ramp	AM	3,858	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	965
39	I-580 EB	West of SR 13 Merge	AM	3,613	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	903
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	AM	6,059	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,515
44	I-580 EB	Edwards Avenue to Keller Avenue	AM	5,482	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,371
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	AM	5,485	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,371
50	I-580 EB	East of 98th Avenue/Golf Links Road	AM	5,260	1.00	5	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,052
51	I-580 WB	East of 98th Avenue/Golf Links Road	AM	5,360	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,340
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	AM	5,272	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,318
57	I-580 WB	Keller Avenue to Edwards Avenue	AM	5,615	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,404
59	I-580 WB	Edwards Avenue to Seminary Avenue	AM	6,610	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,653
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	AM	4,176	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,044
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	AM	4,404	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,101

HCM 2010
Basic Freeway Segments
Operational Analysis

General Information			*Speed Calculation*									*Results*		
	Freeway/		Lane		R. Shoulder		TRD	Calculated	Measured	FFS	v_p/c	Speed, S	Density, D	Level of
	Direction	From/To	Width (ft)	f_{LW}	Width (ft)	f_{LC}	(per mi)	FFS (mph)	FFS (mph)	(mph)		(mph)	(pcplpm)	Service
1	I-880 NB	South of Davis Street	12	0	10	0	2.3	68.9	65.0	70	0.64	68.7	**22.4**	**C**
4	I-880 NB	Davis Street to 98th Street	12	0	14	0	2.3	68.9	65.0	70	0.82	63.2	**31.0**	**D**
18	I-880 NB	North of High Street	11	1.9	1	1	2.5	65.5	65.0	65	0.79	62.2	**29.7**	**D**
19	I-880 SB	North of High Street	11	1.9	1	1	2.3	66.0	65.0	65	0.76	62.8	**28.5**	**D**
22	I-880 SB	High Street to 66th Street	12	0	10	0	2.3	68.9	65.0	70	0.72	66.7	**26.1**	**D**
25	I-880 SB	66th Street to Hegenberger Road	12	0	14	0	2.3	68.9	65.0	70	0.68	67.8	**24.2**	**C**
33	I-880 SB	98th Street to Davis Street	12	0	12	0	2.3	68.9	65.0	70	0.65	68.4	**23.0**	**C**
37	I-580 EB	West of Seminary Avenue Off-Ramp	12	0	9	0	2.5	68.4	65.0	70	0.40	70.0	**13.8**	**B**
39	I-580 EB	West of SR 13 Merge	12	0	12	0	2.2	69.2	65.0	70	0.38	70.0	**12.9**	**B**
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	12	0	12	0	2.2	69.2	65.0	70	0.63	68.9	**22.0**	**C**
44	I-580 EB	Edwards Avenue to Keller Avenue	12	0	11	0	2.2	69.2	65.0	70	0.57	69.7	**19.7**	**C**
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.57	69.7	**19.7**	**C**
50	I-580 EB	East of 98th Avenue/Golf Links Road	12	0	9	0	2	69.6	65.0	70	0.44	70.0	**15.0**	**B**
51	I-580 WB	East of 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.56	69.8	**19.2**	**C**
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	12	0	10	0	2.5	68.4	65.0	70	0.55	69.8	**18.9**	**C**
57	I-580 WB	Keller Avenue to Edwards Avenue	12	0	12	0	2.3	68.9	65.0	70	0.58	69.5	**20.2**	**C**
59	I-580 WB	Edwards Avenue to Seminary Avenue	12	0	8	0	2.3	68.9	65.0	70	0.69	67.6	**24.4**	**C**
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	12	0	12	0	2.3	68.9	65.0	70	0.44	70.0	**14.9**	**B**
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	12	0	10	0	2.5	68.4	65.0	70	0.46	70.0	**15.7**	**B**

HCM 2010
Merge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: Existing AM
Scenario: Existing Conditions

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information				*Freeway Data*						*Freeway Volume Adjustment*							
	Freeway/ Direction	On-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
3	I-880 NB	Davis Street On-Ramp	AM	4	65	6,942	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
7	I-880 NB	98th Street WB On-Ramp	AM	5	65	6,782	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
11	I-880 NB	Hegenberger SB On-Ramp	AM	5	65	6,852	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
14	I-880 NB	Coliseum Way/66th Street On-Ramp	AM	4	65	6,390	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
17	I-880 NB	High Street On-Ramp	AM	4	65	6,430	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
21	I-880 SB	High Street/Oakport Street On-Ramp	AM	4	65	5,925	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
24	I-880 SB	66th Street On-Ramp	AM	4	65	6,056	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
27	I-880 SB	Hegenberger SB Loop On-Ramp	AM	4	65	5,410	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
31	I-880 SB	98th Street WB Loop On-Ramp	AM	4	65	5,178	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
32	I-880 SB	98th Street EB On-Ramp	AM	4	65	5,549	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
40	I-580 EB	SR 13 Merge	AM	4	65	3,613	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
41	I-580 EB	Seminary Avenue On-Ramp	AM	4	65	5,646	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	4,628	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	4,687	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
56	I-580 WB	Keller Avenue On-Ramp	AM	4	65	5,066	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
58	I-580 WB	Edwards Avenue On-Ramp	AM	4	65	5,615	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	AM	4	65	4,176	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	Flow Rate v_F (pcph)
3	I-880 NB	Davis Street On-Ramp	7,150
7	I-880 NB	98th Street WB On-Ramp	6,985
11	I-880 NB	Hegenberger SB On-Ramp	7,058
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,582
17	I-880 NB	High Street On-Ramp	6,623
21	I-880 SB	High Street/Oakport Street On-Ramp	6,103
24	I-880 SB	66th Street On-Ramp	6,238
27	I-880 SB	Hegenberger SB Loop On-Ramp	5,572
31	I-880 SB	98th Street WB Loop On-Ramp	5,333
32	I-880 SB	98th Street EB On-Ramp	5,715
40	I-580 EB	SR 13 Merge	3,613
41	I-580 EB	Seminary Avenue On-Ramp	5,646
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	4,628
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,687
56	I-580 WB	Keller Avenue On-Ramp	5,066
58	I-580 WB	Edwards Avenue On-Ramp	5,615
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,176

HCM 2010
Merge Ramp Junctions
Capacity Analysis

	General Information		Effective	*On-Ramp Data*							*On-Ramp Volume Adjustment*								
	Freeway/ Direction	On-ramp	Flow Rate v_p (pcph)	Type	Lanes	S_{FR} (mph)	V_R (vph)	Accel Lane (ft) L_{A1}	L_{A2}	L_{Aeff}	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_R (pcph)
3	I-880 NB	Davis Street On-Ramp	7,150	Right	1	40.0	683	450		450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	690
7	I-880 NB	98th Street WB On-Ramp	5,099	Right	1	50.0	351	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	355
11	I-880 NB	Hegenberger SB On-Ramp	5,152	Right	1	25.0	213	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	215
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,582	Right	2	50.0	684	300	1,500	2,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	691
17	I-880 NB	High Street On-Ramp	6,623	Right	1	50.0	743	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	750
21	I-880 SB	High Street/Oakport Street On-Ramp	6,103	Right	1	40.0	819	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	827
24	I-880 SB	66th Street On-Ramp	6,238	Right	1	50.0	314	550		550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	317
27	I-880 SB	Hegenberger SB Loop On-Ramp	5,572	Right	1	30.0	280	1,350		1,350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	283
31	I-880 SB	98th Street WB Loop On-Ramp	5,333	Right	1	25.0	371	250		250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	375
32	I-880 SB	98th Street EB On-Ramp	5,715	Right	1	35.0	550	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	556
40	I-580 EB	SR 13 Merge	3,613	Major	1	65.0	2,033	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,053
41	I-580 EB	Seminary Avenue On-Ramp	5,646	Right	1	50.0	413	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	417
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	4,628	Right	1	50.0	632	800		800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	638
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,687	Right	1	50.0	585	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	591
56	I-580 WB	Keller Avenue On-Ramp	5,066	Right	1	50.0	549	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	554
58	I-580 WB	Edwards Avenue On-Ramp	5,615	Right	1	50.0	995	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	1,005
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,176	Right	1	50.0	228	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	230

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_U (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	1,900		0.95	Level	2%	0%	1.5	1.2	0.990	1.00	
7	I-880 NB	98th Street WB On-Ramp	On	1,100	424	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	451
11	I-880 NB	Hegenberger SB On-Ramp	On	1,750	478	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	508
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	4,550	675	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	718
17	I-880 NB	High Street On-Ramp	Off	3,300	644	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	685
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	3,650	1,031	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,096
24	I-880 SB	66th Street On-Ramp	Off	3,400	688	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	731
27	I-880 SB	Hegenberger SB Loop On-Ramp	Off	1,350	960	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,021
31	I-880 SB	98th Street WB Loop On-Ramp	Off	1,200	824	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	876
32	I-880 SB	98th Street EB On-Ramp	On	750	371	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	394
40	I-580 EB	SR 13 Merge	Off	3,700	245	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	260
41	I-580 EB	Seminary Avenue On-Ramp	On	1,000	2,033	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,161
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Off	2,000	857	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	911
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	1,900	673	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	716
56	I-580 WB	Keller Avenue On-Ramp	Off	2,300	206	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	219
58	I-580 WB	Edwards Avenue On-Ramp	On	2,800	549	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	584
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	Off	1,950	2,229	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	2,370

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	4,000	1,267	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,280
7	I-880 NB	98th Street WB On-Ramp	Off	1,700	759	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	767
11	I-880 NB	Hegenberger SB On-Ramp	Off	2,100	675	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	682
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	3,200	644	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	650
17	I-880 NB	High Street On-Ramp	No										1.00	
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	2,550	688	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	695
24	I-880 SB	66th Street On-Ramp	Off	3,100	960	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	970
27	I-880 SB	Hegenberger SB Loop On-Ramp	On	1,350	312	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	315
31	I-880 SB	98th Street WB Loop On-Ramp	On	750	550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	556
32	I-880 SB	98th Street EB On-Ramp	Off	3,700	820	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	828
40	I-580 EB	SR 13 Merge	On	1,000	413	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	417
41	I-580 EB	Seminary Avenue On-Ramp	Off	950	577	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	583
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No										1.00	
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	5,400	206	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	208
56	I-580 WB	Keller Avenue On-Ramp	On	2,800	995	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,005
58	I-580 WB	Edwards Avenue On-Ramp	Off	1,200	205	1	Level	2%	0%	1.5	1.2	0.99	1.00	207
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No										1.00	

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*						
	Freeway/		L_{EQ}		P_{FM} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_{Fo}	Max v_{Fo}		v_3, v_{av34}
	Direction	On-ramp	13-6	13-7	13-3	13-4	13-5	P_{FM}	(pcph)	(pcph)	(pcph)	LOS F?	(pcph)	(pcph)	LOS F?	(pcphpl)
3	I-880 NB	Davis Street On-Ramp	1,567	8,112	0.590	0.611	0.633	0.132	941	7,150	8,800	No	7,840	8,800	No	3,105
7	I-880 NB	98th Street WB On-Ramp	1,513	5,410	0.586		0.667	0.173	885	5,099	11,000	No	5,454	11,000	No	2,107
11	I-880 NB	Hegenberger SB On-Ramp	187	4,811	0.586		0.634	0.191	984	5,152	11,000	No	5,367	11,000	No	2,084
14	I-880 NB	Coliseum Way/66th Street On-Ramp	2,702	1,946	0.636	0.753	0.602	0.209	1,376	6,582	8,800	No	7,273	8,800	No	2,603
17	I-880 NB	High Street On-Ramp	1,857		0.582	0.672		0.124	821	6,623	8,800	No	7,373	8,800	No	2,901
21	I-880 SB	High Street/Oakport Street On-Ramp	1,350	4,560	0.589	0.733	0.620	0.114	698	6,103	8,800	No	6,930	8,800	No	2,702
24	I-880 SB	66th Street On-Ramp	1,860	5,756	0.593	0.690	0.631	0.178	1,111	6,238	8,800	No	6,555	8,800	No	2,563
27	I-880 SB	Hegenberger SB Loop On-Ramp	1,019	1,240	0.615	0.636		0.182	1,017	5,572	8,800	No	5,855	8,800	No	2,278
31	I-880 SB	98th Street WB Loop On-Ramp	238	4,074	0.585	0.645		0.171	912	5,333	8,800	No	5,708	8,800	No	2,211
32	I-880 SB	98th Street EB On-Ramp	903	5,845	0.586		0.608	0.148	848	5,715	8,800	No	6,271	8,800	No	2,434
40	I-580 EB	SR 13 Merge	2,388	2,737	0.589	0.671		0.647	2,339	3,613	8,800	No	5,666	8,800	No	637
41	I-580 EB	Seminary Avenue On-Ramp	1,644	4,113	0.586		0.710	0.166	935	5,646	8,800	No	6,063	8,800	No	2,355
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	1,695		0.600	0.619		0.138	639	4,628	8,800	No	5,266	8,800	No	1,995
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	1,498	1,415	0.587	0.613	0.559	0.144	675	4,687	8,800	No	5,278	8,800	No	2,006
56	I-580 WB	Keller Avenue On-Ramp	1,571	6,834	0.587	0.633		0.148	752	5,066	8,800	No	5,620	8,800	No	2,157
58	I-580 WB	Edwards Avenue On-Ramp	1,741	1,519	0.585		0.594	0.148	831	5,615	9,600	No	6,620	8,800	No	2,392
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,267	######	0.585	0.789		0.245	1,022	4,176	9,600	No	4,406	8,800	No	1,577

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	v_3, v_{av34} > 2,700?	v_3, v_{av34} >1.5*v_{12}/2?	v_{12a} (pcph)
3	I-880 NB	Davis Street On-Ramp	Yes	Yes	2,860
7	I-880 NB	98th Street WB On-Ramp	No	Yes	2,040
11	I-880 NB	Hegenberger SB On-Ramp	No	Yes	2,061
14	I-880 NB	Coliseum Way/66th Street On-Ramp	No	Yes	2,633
17	I-880 NB	High Street On-Ramp	Yes	Yes	2,649
21	I-880 SB	High Street/Oakport Street On-Ramp	Yes	Yes	2,441
24	I-880 SB	66th Street On-Ramp	No	Yes	2,495
27	I-880 SB	Hegenberger SB Loop On-Ramp	No	Yes	2,229
31	I-880 SB	98th Street WB Loop On-Ramp	No	Yes	2,133
32	I-880 SB	98th Street EB On-Ramp	No	Yes	2,286
40	I-580 EB	SR 13 Merge	No	No	2,339
41	I-580 EB	Seminary Avenue On-Ramp	No	Yes	2,258
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No	Yes	1,851
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	No	Yes	1,875
56	I-580 WB	Keller Avenue On-Ramp	No	Yes	2,026
58	I-580 WB	Edwards Avenue On-Ramp	No	Yes	2,246
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No	Yes	1,670

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	On-ramp	v_{R12a} (pcph)	Max v_{R12a} (pcph)	Exceeds Max v_{R12a}?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. M_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
3	I-880 NB	Davis Street On-Ramp	3,550	4,600	No	690	2,000	No	**30.0**	**D**	0.421	55.3	2,145	59.1	57.3
7	I-880 NB	98th Street WB On-Ramp	2,394	4,600	No	355	2,100	No	**22.1**	**C**	0.334	57.3	1,530	61.3	59.5
11	I-880 NB	Hegenberger SB On-Ramp	2,276	4,600	No	215	1,900	No	**21.2**	**C**	0.344	57.1	1,546	61.2	59.4
14	I-880 NB	Coliseum Way/66th Street On-Ramp	3,324	4,600	No	691	4,200	No	**17.9**	**B**	0.219	60.0	1,975	59.7	59.8
17	I-880 NB	High Street On-Ramp	3,400	4,600	No	750	2,100	No	**30.7**	**D**	0.423	55.3	1,987	59.6	57.5
21	I-880 SB	High Street/Oakport Street On-Ramp	3,268	4,600	No	827	2,000	No	**28.1**	**D**	0.391	56.0	1,831	60.2	58.1
24	I-880 SB	66th Street On-Ramp	2,812	4,600	No	317	2,100	No	**23.8**	**C**	0.331	57.4	1,871	60.1	58.9
27	I-880 SB	Hegenberger SB Loop On-Ramp	2,512	4,600	No	283	1,900	No	**16.5**	**B**	0.288	58.4	1,672	60.8	59.7
31	I-880 SB	98th Street WB Loop On-Ramp	2,508	4,600	No	375	1,900	No	**23.3**	**C**	0.356	56.8	1,600	61.0	59.1
32	I-880 SB	98th Street EB On-Ramp	2,842	4,600	No	556	2,000	No	**25.5**	**C**	0.367	56.6	1,715	60.6	58.7
40	I-580 EB	SR 13 Merge	4,392	4,600	No	2,053	2,350	No	**N/A**	**-**	0.584	51.6	637	64.5	54.0
41	I-580 EB	Seminary Avenue On-Ramp	2,676	4,600	No	417	2,100	No	**24.3**	**C**	0.348	57.0	1,694	60.7	59.0
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	2,490	4,600	No	638	2,100	No	**19.6**	**B**	0.288	58.4	1,388	61.8	60.1
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	2,466	4,600	No	591	2,100	No	**22.2**	**C**	0.332	57.4	1,406	61.7	59.6
56	I-580 WB	Keller Avenue On-Ramp	2,581	4,600	No	554	2,100	No	**23.2**	**C**	0.338	57.2	1,520	61.3	59.4
58	I-580 WB	Edwards Avenue On-Ramp	3,251	4,600	No	1,005	2,100	No	**28.8**	**D**	0.397	55.9	1,685	60.7	58.2
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,901	4,600	No	230	2,100	No	**18.6**	**B**	0.322	57.6	1,253	62.3	60.2

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

Jurisdiction Caltrans District 4
Analysis Year Existing AM
Scenario Existing Conditions

Agency or Company Caltrans
Date 1/21/2014
Project Description Coliseum City SP/EIR

General Information				*Mainline Data*					*Mainline Volume Adjustment*							
	Freeway/ Direction	Off-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
2	I-880 NB	Davis Street Off-Ramp	AM	5	65	7,474	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
5	I-880 NB	98th Street Off-Ramp	AM	4	65	7,625	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
20	I-880 SB	42nd Avenue/High Street Off-Ramp	AM	4	65	6,956	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
23	I-880 SB	66th Street Off-Ramp	AM	4	65	6,744	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
26	I-880 SB	Hegenberger Road Off-Ramp	AM	4	65	6,370	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
34	I-880 SB	Davis Street Off-Ramp	AM	4	65	6,099	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
38	I-580 EB	Seminary Avenue Off-Ramp	AM	4	65	3,858	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
43	I-580 EB	Edwards Avenue Off-Ramp	AM	4	65	6,059	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
45	I-580 EB	Keller Avenue Off-Ramp	AM	4	65	5,482	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	5,485	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	5,360	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
55	I-580 WB	Keller Avenue Off-Ramp	AM	4	65	5,272	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
60	I-580 WB	Seminary Avenue Off-Ramp	AM	4	65	6,610	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
61	I-580 WB	SR 13 Off-Ramp	AM	4	65	6,405	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Flow Rate v_F (pcph)
2	I-880 NB	Davis Street Off-Ramp	7,698
5	I-880 NB	98th Street Off-Ramp	7,854
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,165
23	I-880 SB	66th Street Off-Ramp	6,946
26	I-880 SB	Hegenberger Road Off-Ramp	6,561
34	I-880 SB	Davis Street Off-Ramp	6,282
38	I-580 EB	Seminary Avenue Off-Ramp	3,858
43	I-580 EB	Edwards Avenue Off-Ramp	6,059
45	I-580 EB	Keller Avenue Off-Ramp	5,482
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	5,485
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,360
55	I-580 WB	Keller Avenue Off-Ramp	5,272
60	I-580 WB	Seminary Avenue Off-Ramp	6,610
61	I-580 WB	SR 13 Off-Ramp	6,405

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			Effective	*Off-Ramp Data*							*Off-Ramp Volume Adjustment*								
	Freeway/		Flow Rate			S_{FR}	V_R	Decel Lane (ft)					Truck/						Flow Rate
	Direction	Off-ramp	v_p (pcph)	Type	Lanes	(mph)	(vph)	L_{D1}	L_{D2}	L_{Deff}	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_R (pcph)
2	I-880 NB	Davis Street Off-Ramp	6,159	Right	1	50.0	532	1,500		1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	537
5	I-880 NB	98th Street Off-Ramp	7,854	Right	1	50.0	1,267	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,280
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,165	Right	1	50.0	1,031	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,041
23	I-880 SB	66th Street Off-Ramp	6,946	Right	2	50.0	688	150	1,200	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	695
26	I-880 SB	Hegenberger Road Off-Ramp	6,561	Right	2	50.0	960	100	1,250	1,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	970
34	I-880 SB	Davis Street Off-Ramp	6,282	Right	1	50.0	820	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	828
38	I-580 EB	Seminary Avenue Off-Ramp	3,858	Right	1	50.0	462	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	467
43	I-580 EB	Edwards Avenue Off-Ramp	6,059	Right	1	50.0	577	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	583
45	I-580 EB	Keller Avenue Off-Ramp	5,482	Right	1	50.0	383	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	387
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	5,485	Right	1	50.0	857	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	866
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,360	Right	1	50.0	673	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	680
55	I-580 WB	Keller Avenue Off-Ramp	5,272	Right	1	50.0	206	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	208
60	I-580 WB	Seminary Avenue Off-Ramp	6,610	Right	1	50.0	205	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	207
61	I-580 WB	SR 13 Off-Ramp	6,405	Major	2	65.0	2,229	350	800	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,251

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_u (pcph)
2	I-880 NB	Davis Street Off-Ramp	No											
5	I-880 NB	98th Street Off-Ramp	On	4,000	411	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	415
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No											
23	I-880 SB	66th Street Off-Ramp	On	2,550	819	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	827
26	I-880 SB	Hegenberger Road Off-Ramp	On	3,100	314	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	317
34	I-880 SB	Davis Street Off-Ramp	On	3,700	550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	556
38	I-580 EB	Seminary Avenue Off-Ramp	No											
43	I-580 EB	Edwards Avenue Off-Ramp	On	950	413	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	417
45	I-580 EB	Keller Avenue Off-Ramp	Off	2,500	577	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	583
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	5,300	386	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	390
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No											
55	I-580 WB	Keller Avenue Off-Ramp	On	5,400	585	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	591
60	I-580 WB	Seminary Avenue Off-Ramp	On	1,200	995	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,005
61	I-580 WB	SR 13 Off-Ramp	Off	1,250	205	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	207

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
2	I-880 NB	Davis Street Off-Ramp	On	1,900	683	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	690
5	I-880 NB	98th Street Off-Ramp	On	1,250	424	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	428
20	I-880 SB	42nd Avenue/High Street Off-Ramp	On	3,650	819	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	827
23	I-880 SB	66th Street Off-Ramp	On	3,400	314	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	317
26	I-880 SB	Hegenberger Road Off-Ramp	On	1,350	280	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	283
34	I-880 SB	Davis Street Off-Ramp	On	1,950	624	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	630
38	I-580 EB	Seminary Avenue Off-Ramp	On	3,700	413	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	417
43	I-580 EB	Edwards Avenue Off-Ramp	Off	2,500	383	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	387
45	I-580 EB	Keller Avenue Off-Ramp	On	2,300	386	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	390
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	2,000	632	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	638
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	On	1,900	585	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	591
55	I-580 WB	Keller Avenue Off-Ramp	On	2,300	549	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	554
60	I-580 WB	Seminary Avenue Off-Ramp	Off	1,250	2,229	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,251
61	I-580 WB	SR 13 Off-Ramp	On	1,900	228	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	230

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

	General Information		*v_{12} Estimation*							*Capacity Checks*							
	Freeway/		L_{EQ}		P_{FD} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_3, v_{av34}	v_3, v_{av34}	v_3, v_{av34}	v_{12a}	Max v_{12a}
	Direction	Off-ramp	13-12	13-13	13-9	13-10	13-11	P_{FD}	(pcph)	(pcph)	(pcph)	LOS F?	(pcphpl)	> 2,700?	>1.5*v_{12}/2?	(pcph)	(pcph)
2	I-880 NB	Davis Street Off-Ramp		914	0.581			0.436	2,988	6,159	11,000	No	1,585	No	No	2,988	4,400
5	I-880 NB	98th Street Off-Ramp	2,689	1,004	0.505	0.473		0.436	4,146	7,854	8,800	No	1,854	No	No	4,146	4,400
20	I-880 SB	42nd Avenue/High Street Off-Ramp		1,542	0.533			0.436	3,711	7,165	8,800	No	1,727	No	No	3,711	4,400
23	I-880 SB	66th Street Off-Ramp	4,648	472	0.554	0.554		0.260	2,320	6,946	8,800	No	2,313	No	Yes	2,779	4,400
26	I-880 SB	Hegenberger Road Off-Ramp	2,140	486	0.551	0.523		0.260	2,423	6,561	8,800	No	2,069	No	Yes	2,624	4,400
34	I-880 SB	Davis Street Off-Ramp	3,642	980	0.565	0.563		0.436	3,206	6,282	8,800	No	1,538	No	No	3,206	4,400
38	I-580 EB	Seminary Avenue Off-Ramp		488	0.642			0.436	1,945	3,858	8,800	No	956	No	No	1,945	4,400
43	I-580 EB	Edwards Avenue Off-Ramp	2,512	522	0.582	0.582	0.508	0.436	2,970	6,059	8,800	No	1,544	No	No	2,970	4,400
45	I-580 EB	Keller Avenue Off-Ramp	3,475	469	0.605			0.436	2,608	5,482	8,800	No	1,437	No	No	2,608	4,400
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	2,968	974	0.583	0.548		0.436	2,880	5,485	8,800	No	1,303	No	No	2,880	4,400
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp		812	0.595			0.436	2,720	5,360	8,800	No	1,320	No	No	2,720	4,400
55	I-580 WB	Keller Avenue Off-Ramp	3,349	613	0.619	0.577		0.436	2,416	5,272	9,600	No	1,428	No	No	2,416	4,400
60	I-580 WB	Seminary Avenue Off-Ramp	4,848	2,611	0.585	0.585	0.702	0.436	2,999	6,610	9,600	No	1,806	No	No	2,999	4,400
61	I-580 WB	SR 13 Off-Ramp	4,385	2,014	0.496			0.260	3,331	6,405	9,600	No	1,537	No	No	3,331	4,400

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Exceeds Max v_{12a}?
2	I-880 NB	Davis Street Off-Ramp	No
5	I-880 NB	98th Street Off-Ramp	No
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No
23	I-880 SB	66th Street Off-Ramp	No
26	I-880 SB	Hegenberger Road Off-Ramp	No
34	I-880 SB	Davis Street Off-Ramp	No
38	I-580 EB	Seminary Avenue Off-Ramp	No
43	I-580 EB	Edwards Avenue Off-Ramp	No
45	I-580 EB	Keller Avenue Off-Ramp	No
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	No
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No
55	I-580 WB	Keller Avenue Off-Ramp	No
60	I-580 WB	Seminary Avenue Off-Ramp	No
61	I-580 WB	SR 13 Off-Ramp	No

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	Off-ramp	v_{Fo} (pcph)	Max v_{Fo} (pcph)	LOS F?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. D_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
2	I-880 NB	Davis Street Off-Ramp	5,621	11,000	No	537	2,100	No	**16.5**	**B**	0.281	58.5	1,585	69.0	63.5
5	I-880 NB	98th Street Off-Ramp	6,574	8,800	No	1,280	2,100	No	**38.6**	**E**	0.348	57.0	1,854	68.0	61.7
20	I-880 SB	42nd Avenue/High Street Off-Ramp	6,123	8,800	No	1,041	2,100	No	**33.5**	**D**	0.327	57.5	1,727	68.5	62.3
23	I-880 SB	66th Street Off-Ramp	6,251	8,800	No	695	4,200	No	**14.6**	**B**	0.296	58.2	2,084	67.1	63.2
26	I-880 SB	Hegenberger Road Off-Ramp	5,592	8,800	No	970	4,200	No	**13.8**	**B**	0.320	57.6	1,968	67.5	63.2
34	I-880 SB	Davis Street Off-Ramp	5,454	8,800	No	828	2,100	No	**30.0**	**D**	0.308	57.9	1,538	69.2	63.0
38	I-580 EB	Seminary Avenue Off-Ramp	3,391	8,800	No	467	2,100	No	**20.1**	**C**	0.275	58.7	956	71.3	64.3
43	I-580 EB	Edwards Avenue Off-Ramp	5,476	8,800	No	583	2,100	No	**28.9**	**D**	0.285	58.4	1,544	69.2	63.5
45	I-580 EB	Keller Avenue Off-Ramp	5,095	8,800	No	387	2,100	No	**24.9**	**C**	0.268	58.8	1,437	69.6	64.0
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	4,619	8,800	No	866	2,100	No	**28.1**	**D**	0.311	57.8	1,303	70.1	63.1
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	4,680	8,800	No	680	2,100	No	**26.3**	**C**	0.294	58.2	1,320	70.1	63.5
55	I-580 WB	Keller Avenue Off-Ramp	5,064	8,800	No	208	2,100	No	**23.7**	**C**	0.252	59.2	1,428	69.6	64.4
60	I-580 WB	Seminary Avenue Off-Ramp	6,403	8,800	No	207	2,100	No	**28.2**	**D**	0.252	59.2	1,806	68.2	63.8
61	I-580 WB	SR 13 Off-Ramp	4,154	8,800	No	2,251	4,400	No	**17.5**	**B**	0.241	59.5	1,537	69.2	63.8

Leisch Method for Weaving Analysis

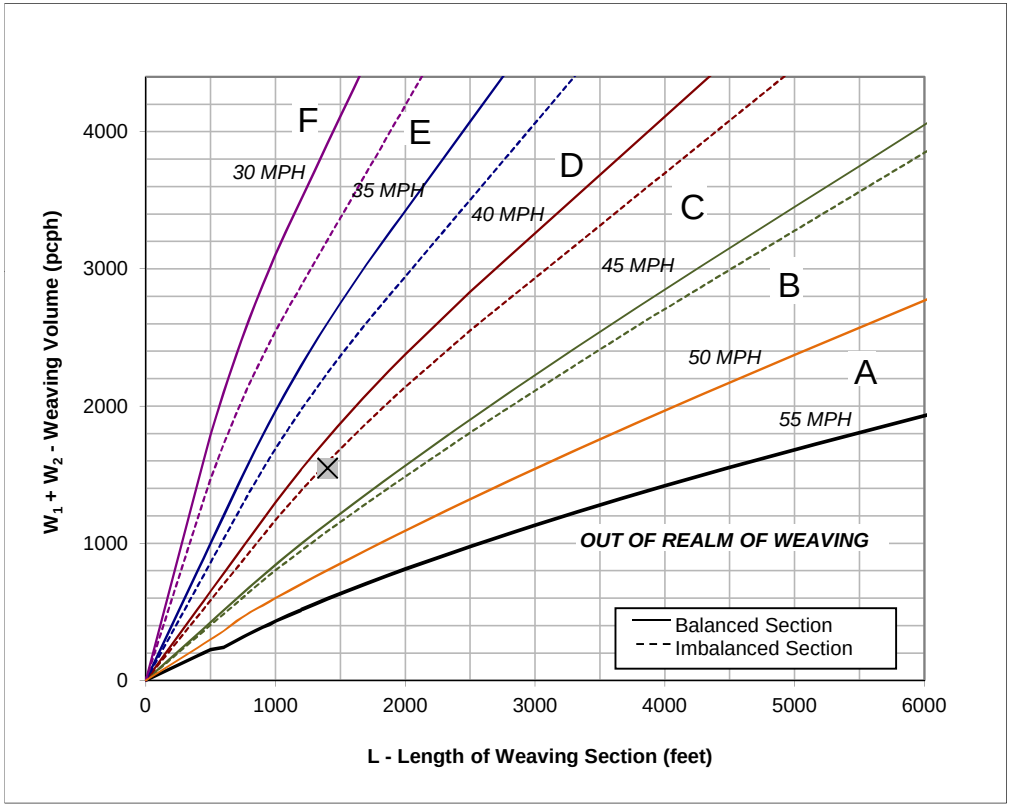
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,400

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,133	Volume (vph)*	775	Volume (vph)*	759
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,276	Volume (pcph)	783	Volume (pcph)	767

Project Information

Project	Coliseum City SP/EIR
Scenario	Existing Conditions - AM Peak
Freeway	I-880 NB
On-ramp	98th Street
Off-ramp	Hegenberger Road



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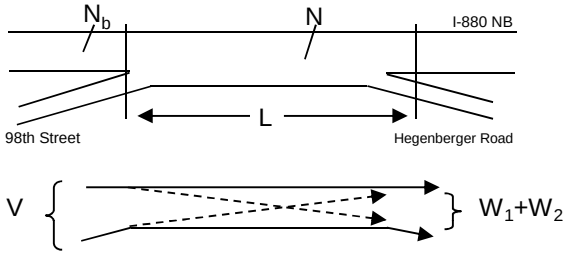


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **40.4**
4. Weaving Intensity Factor (k) **2.50**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,685**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

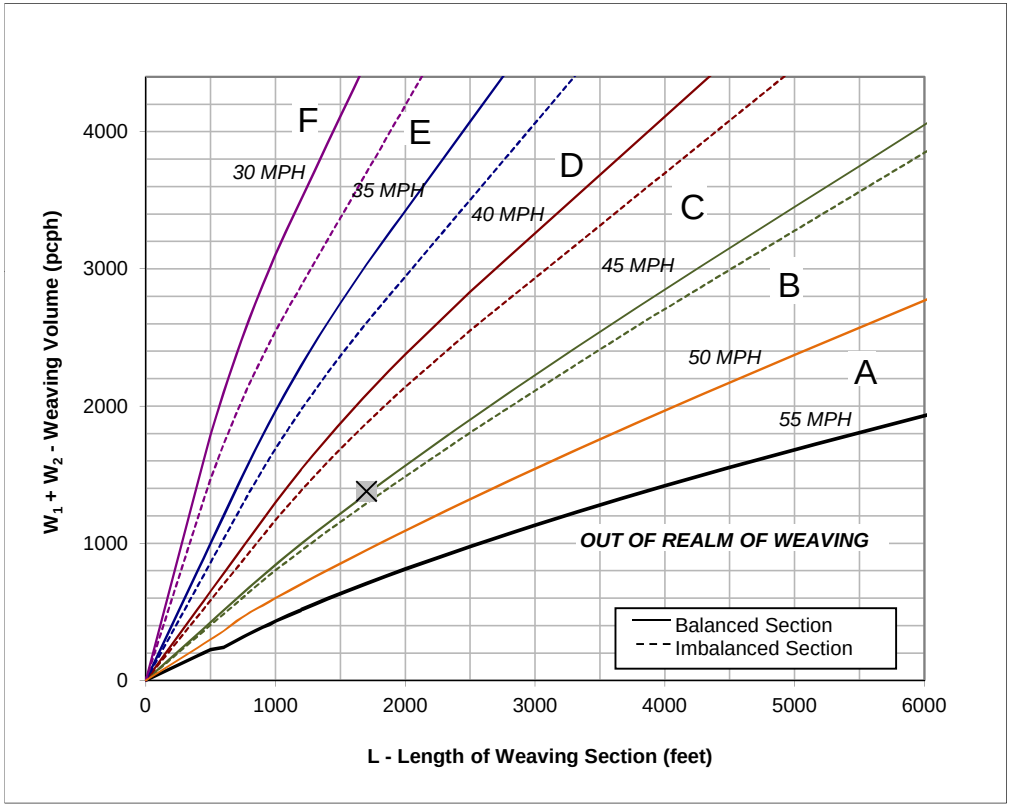
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,700

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,065	Volume (vph)*	691	Volume (vph)*	675
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,206	Volume (pcph)	698	Volume (pcph)	682

Project Information

Project	Coliseum City SP/EIR
Scenario	Existing Conditions - AM Peak
Freeway	I-880 NB
On-ramp	Hegenberger Road
Off-ramp	66th Street



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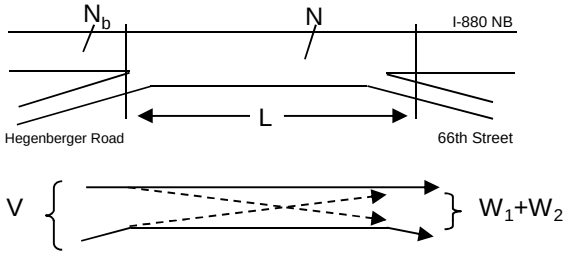


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **44.2**
4. Weaving Intensity Factor (k) **2.07**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,587**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

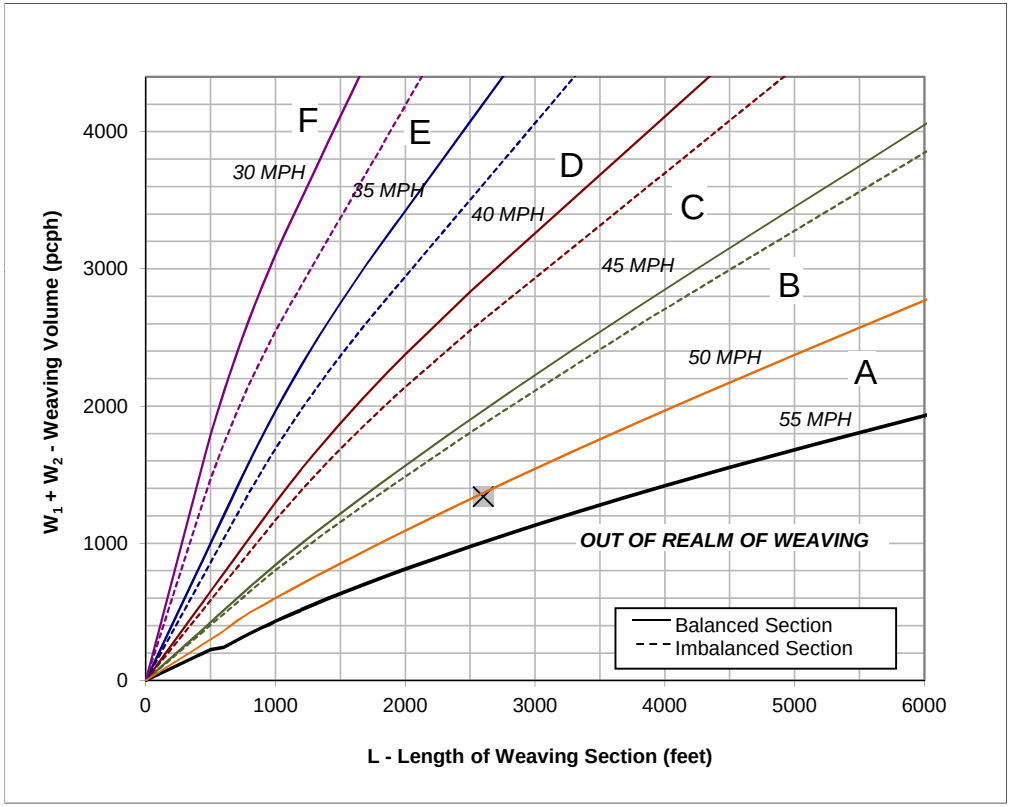
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,600

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,074	Volume (vph)*	684	Volume (vph)*	644
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,215	Volume (pcph)	691	Volume (pcph)	650

Project Information

Project	Coliseum City SP/EIR
Scenario	Existing Conditions - AM Peak
Freeway	I-880 NB
On-ramp	66th Street
Off-ramp	High Street



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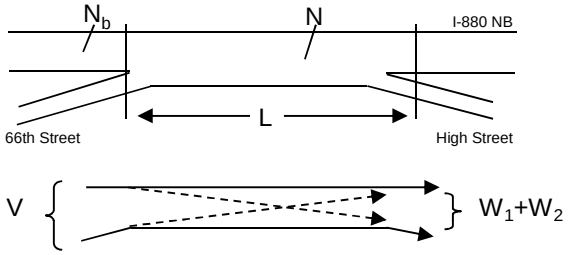


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   50 MPH and **55 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **50.3**
4. Weaving Intensity Factor (k) **1.00**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,443**
6. Level of Service (LOS) **C**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

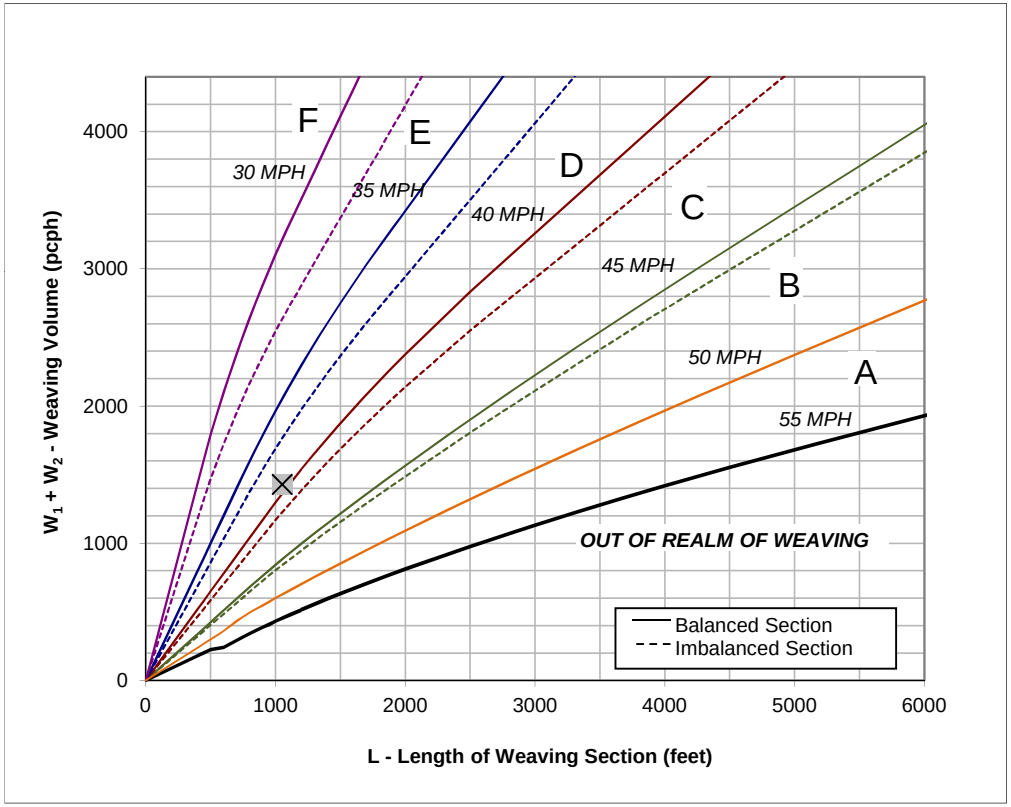
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,050

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,002	Volume (vph)*	592	Volume (vph)*	824
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,092	Volume (pcph)	598	Volume (pcph)	832

Project Information

Project	Coliseum City SP/EIR
Scenario	Existing Conditions - AM Peak
Freeway	I-880 SB
On-ramp	Hegenberger Road
Off-ramp	98th Street



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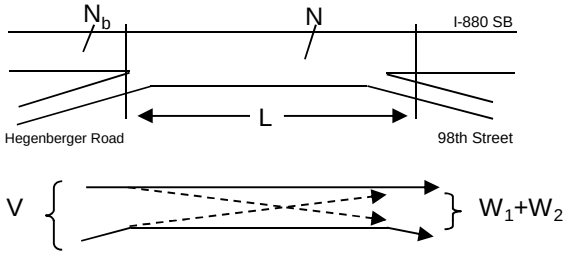


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   35 MPH and **40 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **38.1**
4. Weaving Intensity Factor (k) **2.70**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,422**
6. Level of Service (LOS) **C**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

HCM 2010
Basic Freeway Segments
Operational Analysis

Jurisdiction: Caltrans District 4
Analysis Year: Existing Conditions
Scenario: Existing Conditions - PM

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information | *Flow Rate Calculation*

	Freeway/ Direction	From/To	Analysis Time Period	Volume (vph)	PHF	Lanes	HOV Lane?	HOV Lane Volume	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_p (pcphpl)
1	I-880 NB	South of Davis Street	PM	7,150	1.00	5	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,473
4	I-880 NB	Davis Street to 98th Street	PM	7,049	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,815
18	I-880 NB	North of High Street	PM	6,900	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,777
19	I-880 SB	North of High Street	PM	6,958	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,792
22	I-880 SB	High Street to 66th Street	PM	6,830	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,759
25	I-880 SB	66th Street to Hegenberger Road	PM	6,645	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,711
33	I-880 SB	98th Street to Davis Street	PM	7,360	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,895
37	I-580 EB	West of Seminary Avenue Off-Ramp	PM	5,247	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,312
39	I-580 EB	West of SR 13 Merge	PM	4,768	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,192
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	PM	7,990	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,998
44	I-580 EB	Edwards Avenue to Keller Avenue	PM	7,831	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,958
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	PM	7,670	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,918
50	I-580 EB	East of 98th Avenue/Golf Links Road	PM	7,586	1.00	5	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,517
51	I-580 WB	East of 98th Avenue/Golf Links Road	PM	6,039	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,510
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	PM	6,076	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,519
57	I-580 WB	Keller Avenue to Edwards Avenue	PM	6,026	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,507
59	I-580 WB	Edwards Avenue to Seminary Avenue	PM	6,816	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,704
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	PM	3,960	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	990
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	PM	4,207	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,052

HCM 2010
Basic Freeway Segments
Operational Analysis

General Information			*Speed Calculation*									*Results*		
	Freeway/		Lane		R. Shoulder		TRD	Calculated	Measured	FFS	v_p/c	Speed, S	Density, D	Level of
	Direction	From/To	Width (ft)	f_{LW}	Width (ft)	f_{LC}	(per mi)	FFS (mph)	FFS (mph)	(mph)		(mph)	(pcplpm)	Service
1	I-880 NB	South of Davis Street	12	0	10	0	2.3	68.9	65.0	70	0.61	69.1	**21.3**	**C**
4	I-880 NB	Davis Street to 98th Street	12	0	14	0	2.3	68.9	65.0	70	0.76	65.6	**27.7**	**D**
18	I-880 NB	North of High Street	11	1.9	1	1	2.5	65.5	65.0	65	0.76	63.0	**28.2**	**D**
19	I-880 SB	North of High Street	11	1.9	1	1	2.3	66.0	65.0	65	0.76	62.8	**28.5**	**D**
22	I-880 SB	High Street to 66th Street	12	0	10	0	2.3	68.9	65.0	70	0.73	66.4	**26.5**	**D**
25	I-880 SB	66th Street to Hegenberger Road	12	0	14	0	2.3	68.9	65.0	70	0.71	67.0	**25.6**	**C**
33	I-880 SB	98th Street to Davis Street	12	0	12	0	2.3	68.9	65.0	70	0.79	64.4	**29.4**	**D**
37	I-580 EB	West of Seminary Avenue Off-Ramp	12	0	9	0	2.5	68.4	65.0	70	0.55	69.9	**18.8**	**C**
39	I-580 EB	West of SR 13 Merge	12	0	12	0	2.2	69.2	65.0	70	0.50	70.0	**17.0**	**B**
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	12	0	12	0	2.2	69.2	65.0	70	0.83	62.6	**31.9**	**D**
44	I-580 EB	Edwards Avenue to Keller Avenue	12	0	11	0	2.2	69.2	65.0	70	0.82	63.3	**30.9**	**D**
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.80	64.0	**29.9**	**D**
50	I-580 EB	East of 98th Avenue/Golf Links Road	12	0	9	0	2	69.6	65.0	70	0.63	68.8	**22.0**	**C**
51	I-580 WB	East of 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.63	68.9	**21.9**	**C**
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	12	0	10	0	2.5	68.4	65.0	70	0.63	68.8	**22.1**	**C**
57	I-580 WB	Keller Avenue to Edwards Avenue	12	0	12	0	2.3	68.9	65.0	70	0.63	68.9	**21.9**	**C**
59	I-580 WB	Edwards Avenue to Seminary Avenue	12	0	8	0	2.3	68.9	65.0	70	0.71	67.1	**25.4**	**C**
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	12	0	12	0	2.3	68.9	65.0	70	0.41	70.0	**14.1**	**B**
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	12	0	10	0	2.5	68.4	65.0	70	0.44	70.0	**15.0**	**B**

HCM 2010
Merge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: Existing Conditions
Scenario: Existing Conditions - PM

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information				*Freeway Data*						*Freeway Volume Adjustment*							
	Freeway/ Direction	On-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
3	I-880 NB	Davis Street On-Ramp	PM	4	65	6,298	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
7	I-880 NB	98th Street WB On-Ramp	PM	5	65	6,317	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
11	I-880 NB	Hegenberger SB On-Ramp	PM	5	65	6,476	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
14	I-880 NB	Coliseum Way/66th Street On-Ramp	PM	4	65	6,280	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
17	I-880 NB	High Street On-Ramp	PM	4	65	6,194	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
21	I-880 SB	High Street/Oakport Street On-Ramp	PM	4	65	6,059	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
24	I-880 SB	66th Street On-Ramp	PM	4	65	6,105	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
27	I-880 SB	Hegenberger SB Loop On-Ramp	PM	4	65	5,806	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
31	I-880 SB	98th Street WB Loop On-Ramp	PM	4	65	6,255	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
32	I-880 SB	98th Street EB On-Ramp	PM	4	65	6,574	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
40	I-580 EB	SR 13 Merge	PM	4	65	4,768	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
41	I-580 EB	Seminary Avenue On-Ramp	PM	4	65	7,029	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	PM	4	65	6,937	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	PM	4	65	5,387	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
56	I-580 WB	Keller Avenue On-Ramp	PM	4	65	5,723	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
58	I-580 WB	Edwards Avenue On-Ramp	PM	4	65	6,026	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	PM	4	65	3,960	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	Flow Rate v_F (pcph)
3	I-880 NB	Davis Street On-Ramp	6,487
7	I-880 NB	98th Street WB On-Ramp	6,507
11	I-880 NB	Hegenberger SB On-Ramp	6,670
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,468
17	I-880 NB	High Street On-Ramp	6,380
21	I-880 SB	High Street/Oakport Street On-Ramp	6,241
24	I-880 SB	66th Street On-Ramp	6,288
27	I-880 SB	Hegenberger SB Loop On-Ramp	5,980
31	I-880 SB	98th Street WB Loop On-Ramp	6,443
32	I-880 SB	98th Street EB On-Ramp	6,771
40	I-580 EB	SR 13 Merge	4,768
41	I-580 EB	Seminary Avenue On-Ramp	7,029
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	6,937
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	5,387
56	I-580 WB	Keller Avenue On-Ramp	5,723
58	I-580 WB	Edwards Avenue On-Ramp	6,026
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	3,960

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information	*On-Ramp Data*						*On-Ramp Volume Adjustment*								
	Freeway/ Direction	On-ramp	Effective Flow Rate v_p (pcph)	Type	Lanes	S_{FR} (mph)	V_R (vph)	Accel Lane (ft) L_{A1}	L_{A2}	L_{Aeff}	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_R (pcph)
3	I-880 NB	Davis Street On-Ramp	6,487	Right	1	40.0	751	450		450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	759
7	I-880 NB	98th Street WB On-Ramp	4,750	Right	1	50.0	305	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	308
11	I-880 NB	Hegenberger SB On-Ramp	4,869	Right	1	25.0	222	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	224
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,468	Right	2	50.0	672	300	1,500	2,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	679
17	I-880 NB	High Street On-Ramp	6,380	Right	1	50.0	706	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	713
21	I-880 SB	High Street/Oakport Street On-Ramp	6,241	Right	1	40.0	771	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	779
24	I-880 SB	66th Street On-Ramp	6,288	Right	1	50.0	540	550		550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	545
27	I-880 SB	Hegenberger SB Loop On-Ramp	5,980	Right	1	30.0	340	1,350		1,350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	343
31	I-880 SB	98th Street WB Loop On-Ramp	6,443	Right	1	25.0	319	250		250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	322
32	I-880 SB	98th Street EB On-Ramp	6,771	Right	1	35.0	786	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	794
40	I-580 EB	SR 13 Merge	4,768	Major	1	65.0	2,261	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,284
41	I-580 EB	Seminary Avenue On-Ramp	7,029	Right	1	50.0	961	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	971
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	6,937	Right	1	50.0	649	800		800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	655
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	5,387	Right	1	50.0	689	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	696
56	I-580 WB	Keller Avenue On-Ramp	5,723	Right	1	50.0	303	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	306
58	I-580 WB	Edwards Avenue On-Ramp	6,026	Right	1	50.0	790	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	798
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	3,960	Right	1	50.0	247	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	249

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_U (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	1,900	852	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	861
7	I-880 NB	98th Street WB On-Ramp	On	1,100	671	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	678
11	I-880 NB	Hegenberger SB On-Ramp	On	1,750	642	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	648
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	4,550	418	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	422
17	I-880 NB	High Street On-Ramp	Off	3,300	758	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	766
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	3,650	899	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	908
24	I-880 SB	66th Street On-Ramp	Off	3,400	725	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	732
27	I-880 SB	Hegenberger SB Loop On-Ramp	Off	1,350	839	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	847
31	I-880 SB	98th Street WB Loop On-Ramp	Off	1,200	556	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	562
32	I-880 SB	98th Street EB On-Ramp	On	750	319	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	322
40	I-580 EB	SR 13 Merge	Off	3,700	479	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	484
41	I-580 EB	Seminary Avenue On-Ramp	On	1,000	2,261	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,284
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Off	2,000	733	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	740
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	1,900	652	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	659
56	I-580 WB	Keller Avenue On-Ramp	Off	2,300	353	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	357
58	I-580 WB	Edwards Avenue On-Ramp	On	2,800	303	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	306
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	Off	1,950	2,570	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	2,596

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	4,000	1,403	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,417
7	I-880 NB	98th Street WB On-Ramp	Off	1,700	788	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	796
11	I-880 NB	Hegenberger SB On-Ramp	Off	2,100	418	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	422
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	3,200	758	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	766
17	I-880 NB	High Street On-Ramp	No										1.00	
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	2,550	725	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	732
24	I-880 SB	66th Street On-Ramp	Off	3,100	839	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	847
27	I-880 SB	Hegenberger SB Loop On-Ramp	On	1,350	665	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	672
31	I-880 SB	98th Street WB Loop On-Ramp	On	750	786	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	794
32	I-880 SB	98th Street EB On-Ramp	Off	3,700	723	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	730
40	I-580 EB	SR 13 Merge	On	1,000	961	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	971
41	I-580 EB	Seminary Avenue On-Ramp	Off	950	480	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	485
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No										1.00	
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	5,400	353	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	357
56	I-580 WB	Keller Avenue On-Ramp	On	2,800	790	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	798
58	I-580 WB	Edwards Avenue On-Ramp	Off	1,200	286	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	289
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No										1.00	

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*						
	Freeway/		L_{EQ}		P_{FM} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_{Fo}	Max v_{Fo}		v_3, v_{av34}
	Direction	On-ramp	13-6	13-7	13-3	13-4	13-5	P_{FM}	(pcph)	(pcph)	(pcph)	LOS F?	(pcph)	(pcph)	LOS F?	(pcphpl)
3	I-880 NB	Davis Street On-Ramp	1,440	8,983	0.590	0.619	0.642	0.123	798	6,487	8,800	No	7,245	8,800	No	2,845
7	I-880 NB	98th Street WB On-Ramp	1,429	5,617	0.586		0.672	0.179	852	4,750	11,000	No	5,058	11,000	No	1,949
11	I-880 NB	Hegenberger SB On-Ramp	128	2,979	0.586		0.602	0.190	924	4,869	11,000	No	5,094	11,000	No	1,973
14	I-880 NB	Coliseum Way/66th Street On-Ramp	2,675	2,290	0.636	0.754	0.612	0.209	1,352	6,468	8,800	No	7,147	8,800	No	2,558
17	I-880 NB	High Street On-Ramp	1,797		0.582	0.676		0.129	821	6,380	8,800	No	7,093	8,800	No	2,779
21	I-880 SB	High Street/Oakport Street On-Ramp	1,370	4,805	0.589	0.732	0.624	0.120	752	6,241	8,800	No	7,019	8,800	No	2,744
24	I-880 SB	66th Street On-Ramp	1,920	5,031	0.593	0.686	0.621	0.150	941	6,288	8,800	No	6,834	8,800	No	2,674
27	I-880 SB	Hegenberger SB Loop On-Ramp	1,119	2,644	0.615	0.630		0.175	1,046	5,980	8,800	No	6,324	8,800	No	2,467
31	I-880 SB	98th Street WB Loop On-Ramp	464	5,822	0.585	0.631		0.178	1,144	6,443	8,800	No	6,765	8,800	No	2,649
32	I-880 SB	98th Street EB On-Ramp	1,180	5,153	0.586		0.601	0.119	803	6,771	8,800	No	7,565	8,800	No	2,984
40	I-580 EB	SR 13 Merge	2,684	6,369	0.589	0.653		-0.068	-323	4,768	8,800	No	7,052	8,800	No	2,545
41	I-580 EB	Seminary Avenue On-Ramp	2,058	3,421	0.586		0.683	0.096	678	7,029	8,800	No	8,000	8,800	No	3,175
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	2,193		0.600	0.588		0.136	942	6,937	8,800	No	7,592	8,800	No	2,997
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	1,670	2,425	0.587	0.602	0.566	0.131	705	5,387	8,800	No	6,083	8,800	No	2,341
56	I-580 WB	Keller Avenue On-Ramp	1,659	5,426	0.587	0.628		0.180	1,028	5,723	8,800	No	6,029	8,800	No	2,348
58	I-580 WB	Edwards Avenue On-Ramp	1,784	2,119	0.585		0.612	0.174	1,047	6,026	9,600	No	6,824	8,800	No	2,489
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,225	######	0.585	0.792		0.242	960	3,960	9,600	No	4,209	8,800	No	1,500

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	v_3, v_{av34} > 2,700?	v_3, v_{av34} >1.5*v_{12}/2?	v_{12a} (pcph)
3	I-880 NB	Davis Street On-Ramp	Yes	Yes	2,595
7	I-880 NB	98th Street WB On-Ramp	No	Yes	1,900
11	I-880 NB	Hegenberger SB On-Ramp	No	Yes	1,948
14	I-880 NB	Coliseum Way/66th Street On-Ramp	No	Yes	2,587
17	I-880 NB	High Street On-Ramp	Yes	Yes	2,552
21	I-880 SB	High Street/Oakport Street On-Ramp	Yes	Yes	2,496
24	I-880 SB	66th Street On-Ramp	No	Yes	2,515
27	I-880 SB	Hegenberger SB Loop On-Ramp	No	Yes	2,392
31	I-880 SB	98th Street WB Loop On-Ramp	No	Yes	2,577
32	I-880 SB	98th Street EB On-Ramp	Yes	Yes	2,708
40	I-580 EB	SR 13 Merge	No	Yes	1,907
41	I-580 EB	Seminary Avenue On-Ramp	Yes	Yes	2,812
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Yes	Yes	2,775
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	No	Yes	2,155
56	I-580 WB	Keller Avenue On-Ramp	No	Yes	2,289
58	I-580 WB	Edwards Avenue On-Ramp	No	Yes	2,410
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No	Yes	1,584

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information						*Results*		*Speed Estimation*				
	Freeway/ Direction	On-ramp	v_{R12a} (pcph)	Max v_{R12a} (pcph)	Exceeds Max v_{R12a}?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. M_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
3	I-880 NB	Davis Street On-Ramp	3,353	4,600	No	759	2,000	No	**28.5**	**D**	0.397	55.9	1,946	59.8	57.9
7	I-880 NB	98th Street WB On-Ramp	2,208	4,600	No	308	2,100	No	**20.7**	**C**	0.326	57.5	1,425	61.7	59.8
11	I-880 NB	Hegenberger SB On-Ramp	2,172	4,600	No	224	1,900	No	**20.4**	**C**	0.340	57.2	1,461	61.5	59.6
14	I-880 NB	Coliseum Way/66th Street On-Ramp	3,266	4,600	No	679	4,200	No	**17.5**	**B**	0.213	60.1	1,941	59.8	59.9
17	I-880 NB	High Street On-Ramp	3,265	4,600	No	713	2,100	No	**29.7**	**D**	0.408	55.6	1,914	59.9	57.9
21	I-880 SB	High Street/Oakport Street On-Ramp	3,275	4,600	No	779	2,000	No	**28.2**	**D**	0.392	56.0	1,872	60.1	58.1
24	I-880 SB	66th Street On-Ramp	3,061	4,600	No	545	2,100	No	**25.6**	**C**	0.349	57.0	1,886	60.0	58.6
27	I-880 SB	Hegenberger SB Loop On-Ramp	2,735	4,600	No	343	1,900	No	**18.2**	**B**	0.300	58.1	1,794	60.3	59.3
31	I-880 SB	98th Street WB Loop On-Ramp	2,899	4,600	No	322	1,900	No	**26.4**	**C**	0.379	56.3	1,933	59.8	58.3
32	I-880 SB	98th Street EB On-Ramp	3,502	4,600	No	794	2,000	No	**30.5**	**D**	0.429	55.1	2,031	59.5	57.4
40	I-580 EB	SR 13 Merge	4,191	4,600	No	2,284	2,350	No	**N/A**	**-**	0.527	52.9	1,430	61.7	56.1
41	I-580 EB	Seminary Avenue On-Ramp	3,782	4,600	No	971	2,100	No	**32.6**	**D**	0.462	54.4	2,109	59.2	56.8
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	3,430	4,600	No	655	2,100	No	**26.9**	**C**	0.361	56.7	2,081	59.3	58.1
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	2,851	4,600	No	696	2,100	No	**25.2**	**C**	0.353	56.9	1,616	61.0	59.0
56	I-580 WB	Keller Avenue On-Ramp	2,595	4,600	No	306	2,100	No	**23.4**	**C**	0.338	57.2	1,717	60.6	59.1
58	I-580 WB	Edwards Avenue On-Ramp	3,208	4,600	No	798	2,100	No	**28.6**	**D**	0.392	56.0	1,808	60.3	58.2
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,833	4,600	No	249	2,100	No	**18.1**	**B**	0.320	57.6	1,188	62.5	60.3

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

Jurisdiction Caltrans District 4
Analysis Year Existing Conditions
Scenario Existing Conditions - PM

Agency or Company Caltrans
Date 1/21/2014
Project Description Coliseum City SP/EIR

General Information				*Mainline Data*						*Mainline Volume Adjustment*							
	Freeway/ Direction	Off-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
2	I-880 NB	Davis Street Off-Ramp	PM	5	65	7,150	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
5	I-880 NB	98th Street Off-Ramp	PM	4	65	7,049	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
20	I-880 SB	42nd Avenue/High Street Off-Ramp	PM	4	65	6,958	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
23	I-880 SB	66th Street Off-Ramp	PM	4	65	6,830	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
26	I-880 SB	Hegenberger Road Off-Ramp	PM	4	65	6,645	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
34	I-880 SB	Davis Street Off-Ramp	PM	4	65	7,360	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
38	I-580 EB	Seminary Avenue Off-Ramp	PM	4	65	5,247	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
43	I-580 EB	Edwards Avenue Off-Ramp	PM	4	65	7,990	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
45	I-580 EB	Keller Avenue Off-Ramp	PM	4	65	7,831	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	PM	4	65	7,670	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	PM	4	65	6,039	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
55	I-580 WB	Keller Avenue Off-Ramp	PM	4	65	6,076	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
60	I-580 WB	Seminary Avenue Off-Ramp	PM	4	65	6,816	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
61	I-580 WB	SR 13 Off-Ramp	PM	4	65	6,530	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Flow Rate v_F (pcph)
2	I-880 NB	Davis Street Off-Ramp	7,365
5	I-880 NB	98th Street Off-Ramp	7,260
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,167
23	I-880 SB	66th Street Off-Ramp	7,035
26	I-880 SB	Hegenberger Road Off-Ramp	6,844
34	I-880 SB	Davis Street Off-Ramp	7,581
38	I-580 EB	Seminary Avenue Off-Ramp	5,247
43	I-580 EB	Edwards Avenue Off-Ramp	7,990
45	I-580 EB	Keller Avenue Off-Ramp	7,831
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	7,670
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	6,039
55	I-580 WB	Keller Avenue Off-Ramp	6,076
60	I-580 WB	Seminary Avenue Off-Ramp	6,816
61	I-580 WB	SR 13 Off-Ramp	6,530

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			Effective	*Off-Ramp Data*							*Off-Ramp Volume Adjustment*								
	Freeway/		Flow Rate			S_{FR}	V_R	Decel Lane (ft)					Truck/						Flow Rate
	Direction	Off-ramp	v_p (pcph)	Type	Lanes	(mph)	(vph)	L_{D1}	L_{D2}	L_{Deff}	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_R (pcph)
2	I-880 NB	Davis Street Off-Ramp	5,892	Right	1	50.0	852	1,500		1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	861
5	I-880 NB	98th Street Off-Ramp	7,260	Right	1	50.0	1,403	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,417
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,167	Right	1	50.0	899	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	908
23	I-880 SB	66th Street Off-Ramp	7,035	Right	2	50.0	725	150	1,200	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	732
26	I-880 SB	Hegenberger Road Off-Ramp	6,844	Right	2	50.0	839	100	1,250	1,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	847
34	I-880 SB	Davis Street Off-Ramp	7,581	Right	1	50.0	723	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	730
38	I-580 EB	Seminary Avenue Off-Ramp	5,247	Right	1	50.0	736	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	743
43	I-580 EB	Edwards Avenue Off-Ramp	7,990	Right	1	50.0	480	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	485
45	I-580 EB	Keller Avenue Off-Ramp	7,831	Right	1	50.0	490	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	495
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	7,670	Right	1	50.0	733	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	740
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	6,039	Right	1	50.0	652	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	659
55	I-580 WB	Keller Avenue Off-Ramp	6,076	Right	1	50.0	353	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	357
60	I-580 WB	Seminary Avenue Off-Ramp	6,816	Right	1	50.0	286	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	289
61	I-580 WB	SR 13 Off-Ramp	6,530	Major	2	65.0	2,570	350	800	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,596

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_u (pcph)
2	I-880 NB	Davis Street Off-Ramp	No											
5	I-880 NB	98th Street Off-Ramp	On	4,000	751	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	759
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No											
23	I-880 SB	66th Street Off-Ramp	On	2,550	771	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	779
26	I-880 SB	Hegenberger Road Off-Ramp	On	3,100	540	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	545
34	I-880 SB	Davis Street Off-Ramp	On	3,700	786	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	794
38	I-580 EB	Seminary Avenue Off-Ramp	No											
43	I-580 EB	Edwards Avenue Off-Ramp	On	950	961	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	971
45	I-580 EB	Keller Avenue Off-Ramp	Off	2,500	480	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	485
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	5,300	329	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	332
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No											
55	I-580 WB	Keller Avenue Off-Ramp	On	5,400	689	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	696
60	I-580 WB	Seminary Avenue Off-Ramp	On	1,200	790	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	798
61	I-580 WB	SR 13 Off-Ramp	Off	1,250	286	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	289

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
2	I-880 NB	Davis Street Off-Ramp	On	1,900	414	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	418
5	I-880 NB	98th Street Off-Ramp	On	1,250	671	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	678
20	I-880 SB	42nd Avenue/High Street Off-Ramp	On	3,650	771	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	779
23	I-880 SB	66th Street Off-Ramp	On	3,400	540	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	545
26	I-880 SB	Hegenberger Road Off-Ramp	On	1,350	340	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	343
34	I-880 SB	Davis Street Off-Ramp	On	1,950	824	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	832
38	I-580 EB	Seminary Avenue Off-Ramp	On	3,700	961	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	971
43	I-580 EB	Edwards Avenue Off-Ramp	Off	2,500	490	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	495
45	I-580 EB	Keller Avenue Off-Ramp	On	2,300	329	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	332
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	2,000	649	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	655
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	On	1,900	689	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	696
55	I-580 WB	Keller Avenue Off-Ramp	On	2,300	303	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	306
60	I-580 WB	Seminary Avenue Off-Ramp	Off	1,250	2,570	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,596
61	I-580 WB	SR 13 Off-Ramp	On	1,900	247	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	249

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

			General Information		*v_{12} Estimation*						*Capacity Checks*							
	Freeway/		L_{EQ}		P_{FD} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_3, v_{av34}	v_3, v_{av34}	v_3, v_{av34}	v_{12a}	Max v_{12a}
	Direction	Off-ramp	13-12	13-13	13-9	13-10	13-11	P_{FD}	(pcph)	(pcph)	(pcph)	LOS F?	(pcphpl)	> 2,700?	>1.5*v_{12}/2?	(pcph)	(pcph)
2	I-880 NB	Davis Street Off-Ramp		649	0.573			0.436	3,054	5,892	11,000	No	1,419	No	No	3,054	4,400
5	I-880 NB	98th Street Off-Ramp	5,821	1,717	0.513	0.548		0.436	3,965	7,260	8,800	No	1,648	No	No	3,965	4,400
20	I-880 SB	42nd Avenue/High Street Off-Ramp		1,330	0.539			0.436	3,637	7,167	8,800	No	1,765	No	No	3,637	4,400
23	I-880 SB	66th Street Off-Ramp	4,396	833	0.550	0.550		0.260	2,371	7,035	8,800	No	2,332	No	Yes	2,814	4,400
26	I-880 SB	Hegenberger Road Off-Ramp	3,325	555	0.550	0.556		0.260	2,407	6,844	8,800	No	2,219	No	Yes	2,738	4,400
34	I-880 SB	Davis Street Off-Ramp	4,181	1,305	0.537	0.537		0.436	3,717	7,581	8,800	No	1,932	No	No	3,717	4,400
38	I-580 EB	Seminary Avenue Off-Ramp		1,371	0.595			0.436	2,707	5,247	8,800	No	1,270	No	No	2,707	4,400
43	I-580 EB	Edwards Avenue Off-Ramp	4,454	692	0.538	0.538	0.473	0.436	3,757	7,990	8,800	No	2,116	No	No	3,757	4,400
45	I-580 EB	Keller Avenue Off-Ramp	2,271	464	0.541			0.436	3,693	7,831	8,800	No	2,069	No	No	3,693	4,400
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	1,738	1,038	0.534	0.456		0.436	3,762	7,670	8,800	No	1,954	No	No	3,762	4,400
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp		975	0.579			0.436	3,004	6,039	8,800	No	1,517	No	No	3,004	4,400
55	I-580 WB	Keller Avenue Off-Ramp	3,789	371	0.592	0.558		0.436	2,850	6,076	9,600	No	1,613	No	No	2,850	4,400
60	I-580 WB	Seminary Avenue Off-Ramp	3,877	3,145	0.576	0.576	0.732	0.436	3,135	6,816	9,600	No	1,841	No	No	3,135	4,400
61	I-580 WB	SR 13 Off-Ramp	12,078	######	0.477			0.260	3,619	6,530	9,600	No	1,456	No	No	3,619	4,400

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Exceeds Max v_{12a}?
2	I-880 NB	Davis Street Off-Ramp	No
5	I-880 NB	98th Street Off-Ramp	No
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No
23	I-880 SB	66th Street Off-Ramp	No
26	I-880 SB	Hegenberger Road Off-Ramp	No
34	I-880 SB	Davis Street Off-Ramp	No
38	I-580 EB	Seminary Avenue Off-Ramp	No
43	I-580 EB	Edwards Avenue Off-Ramp	No
45	I-580 EB	Keller Avenue Off-Ramp	No
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	No
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No
55	I-580 WB	Keller Avenue Off-Ramp	No
60	I-580 WB	Seminary Avenue Off-Ramp	No
61	I-580 WB	SR 13 Off-Ramp	No

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	Off-ramp	v_{Fo} (pcph)	Max v_{Fo} (pcph)	LOS F?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. D_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
2	I-880 NB	Davis Street Off-Ramp	5,031	11,000	No	861	2,100	No	**17.0**	**B**	0.310	57.9	1,419	69.7	63.0
5	I-880 NB	98th Street Off-Ramp	5,843	8,800	No	1,417	2,100	No	**37.0**	**E**	0.361	56.7	1,648	68.8	61.6
20	I-880 SB	42nd Avenue/High Street Off-Ramp	6,259	8,800	No	908	2,100	No	**32.8**	**D**	0.315	57.8	1,765	68.3	62.5
23	I-880 SB	66th Street Off-Ramp	6,303	8,800	No	732	4,200	No	**15.0**	**B**	0.299	58.1	2,110	67.0	63.1
26	I-880 SB	Hegenberger Road Off-Ramp	5,997	8,800	No	847	4,200	No	**14.7**	**B**	0.309	57.9	2,053	67.2	63.1
34	I-880 SB	Davis Street Off-Ramp	6,851	8,800	No	730	2,100	No	**34.4**	**D**	0.299	58.1	1,932	67.7	62.6
38	I-580 EB	Seminary Avenue Off-Ramp	4,504	8,800	No	743	2,100	No	**26.6**	**C**	0.300	58.1	1,270	70.3	63.4
43	I-580 EB	Edwards Avenue Off-Ramp	7,505	8,800	No	485	2,100	No	**35.7**	**E**	0.277	58.6	2,116	67.0	62.8
45	I-580 EB	Keller Avenue Off-Ramp	7,336	8,800	No	495	2,100	No	**34.2**	**D**	0.278	58.6	2,069	67.1	62.8
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,930	8,800	No	740	2,100	No	**35.7**	**E**	0.300	58.1	1,954	67.6	62.6
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,380	8,800	No	659	2,100	No	**28.7**	**D**	0.292	58.3	1,517	69.3	63.3
55	I-580 WB	Keller Avenue Off-Ramp	5,719	8,800	No	357	2,100	No	**27.4**	**C**	0.265	58.9	1,613	68.9	63.8
60	I-580 WB	Seminary Avenue Off-Ramp	6,527	8,800	No	289	2,100	No	**29.4**	**D**	0.259	59.0	1,841	68.0	63.6
61	I-580 WB	SR 13 Off-Ramp	3,934	8,800	No	2,596	4,400	No	**17.8**	**B**	0.272	58.8	1,456	69.5	63.1

Leisch Method for Weaving Analysis

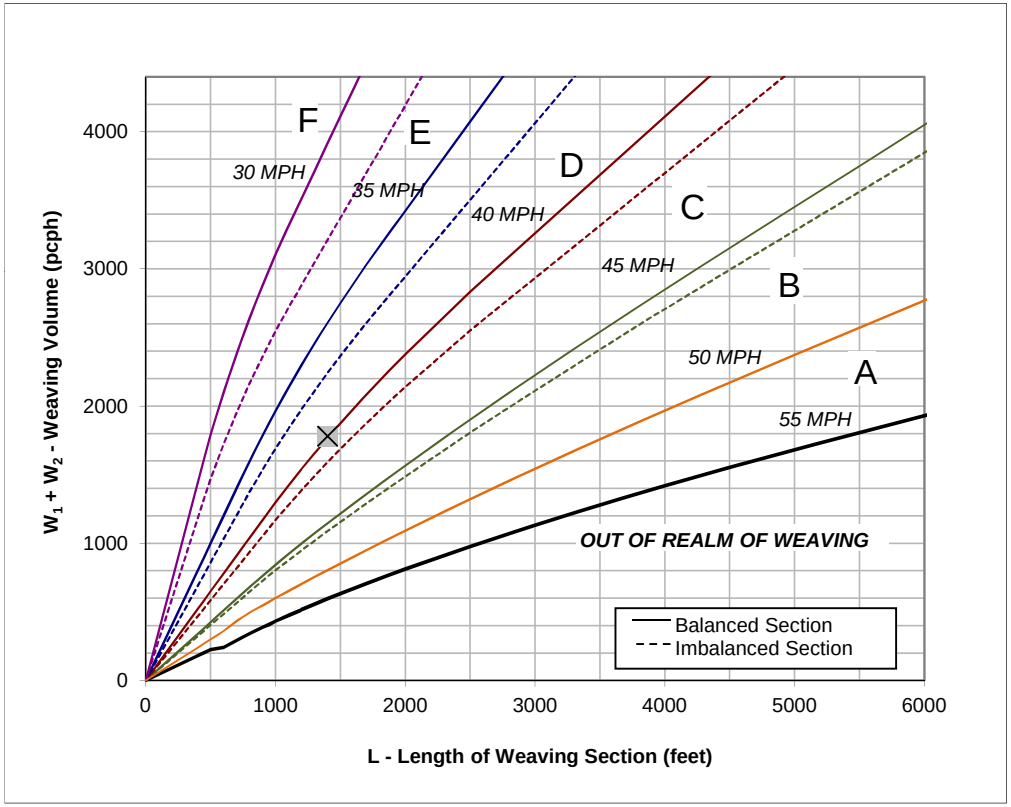
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,400

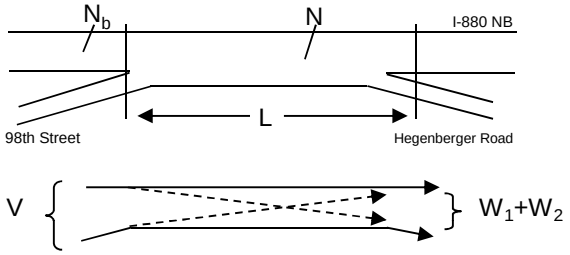
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,622	Volume (vph)*	976	Volume (vph)*	788
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,721	Volume (pcph)	986	Volume (pcph)	796

Project Information

Project	Coliseum City SP/EIR
Scenario	Existing Conditions - PM Peak
Freeway	I-880 NB
On-ramp	98th Street
Off-ramp	Hegenberger Road



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **38.1**
4. Weaving Intensity Factor (k) **2.70**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,615**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

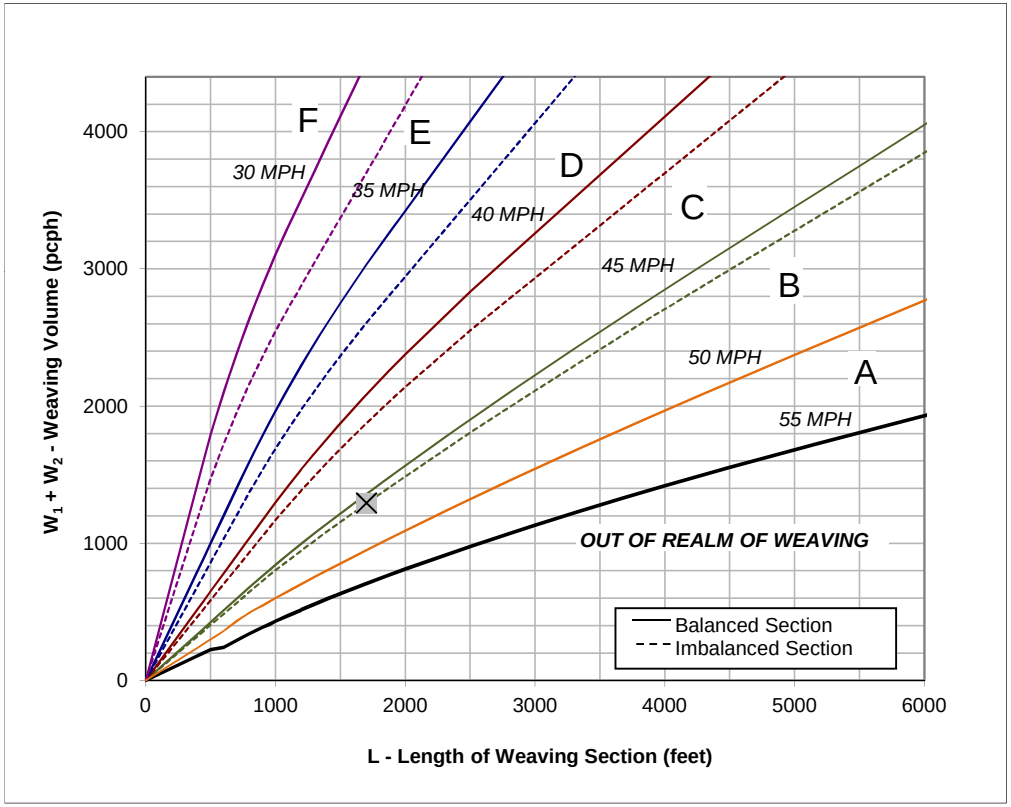
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,700

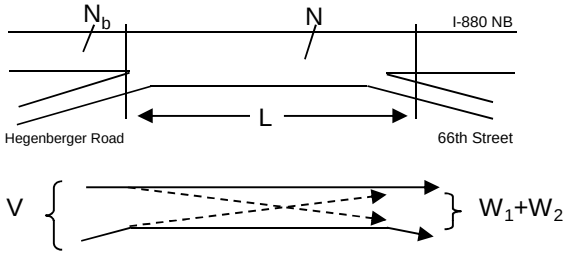
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,698	Volume (vph)*	864	Volume (vph)*	418
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,798	Volume (pcph)	873	Volume (pcph)	422

Project Information

Project	Coliseum City SP/EIR
Scenario	Existing Conditions - PM Peak
Freeway	I-880 NB
On-ramp	Hegenberger Road
Off-ramp	66th Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   45 MPH and **50 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **44.9**
4. Weaving Intensity Factor (k) **1.98**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,442**
6. Level of Service (LOS) **C**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

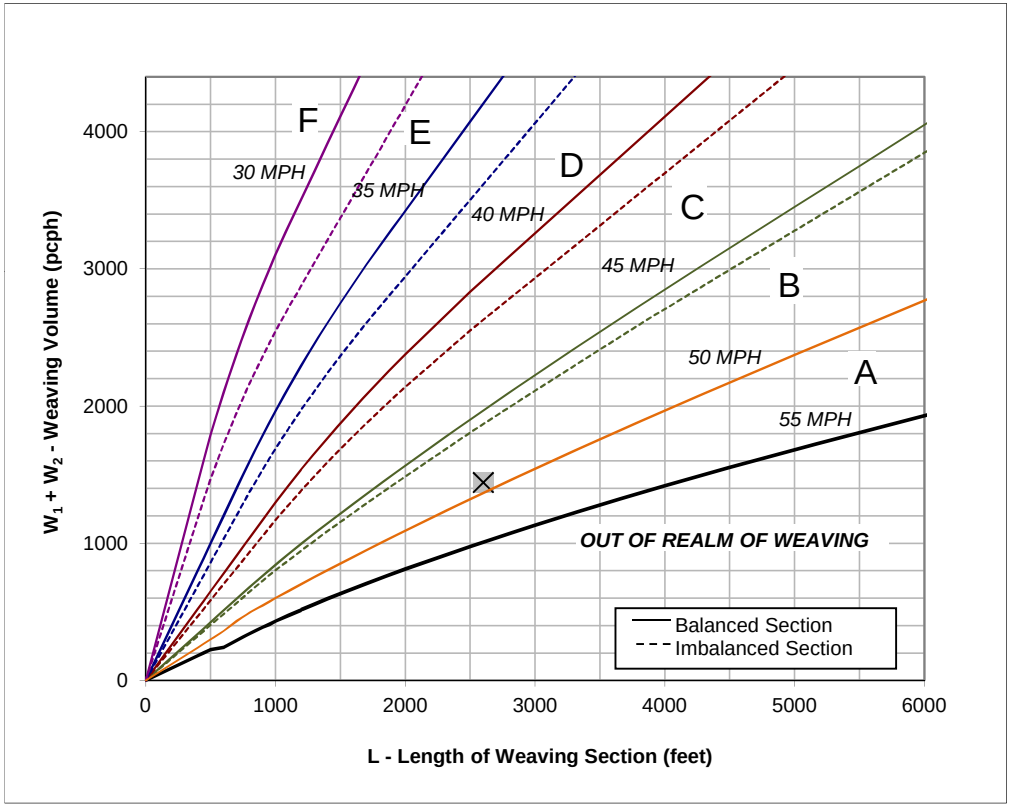
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,600

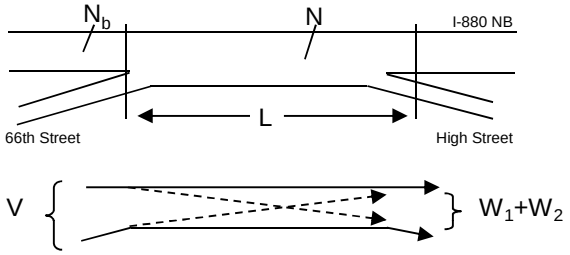
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,952	Volume (vph)*	672	Volume (vph)*	758
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,056	Volume (pcph)	679	Volume (pcph)	766

Project Information

Project	Coliseum City SP/EIR
Scenario	Existing Conditions - PM Peak
Freeway	I-880 NB
On-ramp	66th Street
Off-ramp	High Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   45 MPH and **50 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **49.2**
4. Weaving Intensity Factor (k) **1.32**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,455**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

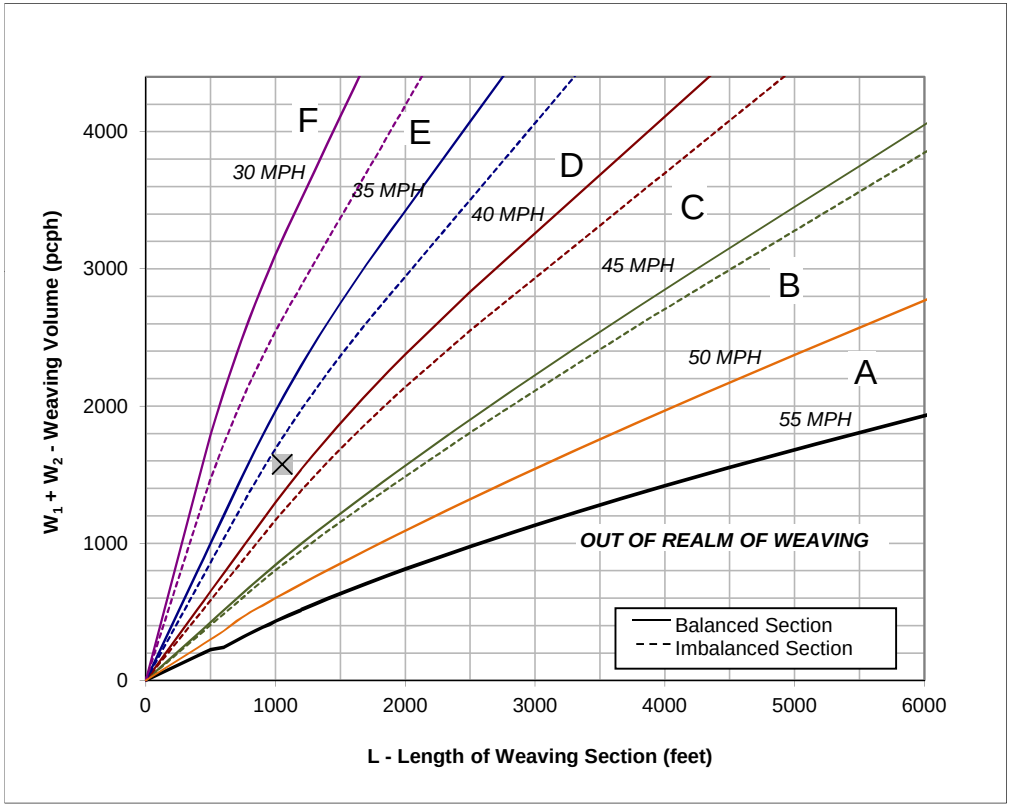
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,050

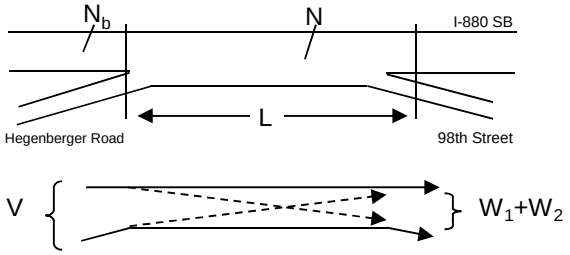
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,811	Volume (vph)*	1,005	Volume (vph)*	556
Truck Percentage	1%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,845	Volume (pcph)	1,015	Volume (pcph)	562

Project Information

Project	Coliseum City SP/EIR
Scenario	Existing Conditions - PM Peak
Freeway	I-880 SB
On-ramp	Hegenberger Road
Off-ramp	98th Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   35 MPH and **40 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **36.7**
4. Weaving Intensity Factor (k) **2.80**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,571**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

HCM 2010
Basic Freeway Segments
Operational Analysis

Jurisdiction Caltrans District 4 | Agency or Company Caltrans
Analysis Year Existing AM | Date 1/21/2014
Scenario Existing Plus Project | Project Description Coliseum City SP/EIR

General Information *Flow Rate Calculation*

	Freeway/ Direction	From/To	Analysis Time Period	Volume (vph)	PHF	Lanes	HOV Lane?	HOV Lane Volume	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_p (pcphpl)
1	I-880 NB	South of Davis Street	AM	7,770	1.00	5	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,601
4	I-880 NB	Davis Street to 98th Street	AM	7,930	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,042
18	I-880 NB	North of High Street	AM	7,450	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,918
19	I-880 SB	North of High Street	AM	7,190	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,851
22	I-880 SB	High Street to 66th Street	AM	6,930	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,784
25	I-880 SB	66th Street to Hegenberger Road	AM	6,540	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,684
33	I-880 SB	98th Street to Davis Street	AM	6,480	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,669
37	I-580 EB	West of Seminary Avenue Off-Ramp	AM	3,860	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	965
39	I-580 EB	West of SR 13 Merge	AM	3,660	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	915
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	AM	6,110	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,528
44	I-580 EB	Edwards Avenue to Keller Avenue	AM	5,510	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,378
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	AM	5,520	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,380
50	I-580 EB	East of 98th Avenue/Golf Links Road	AM	5,280	1.00	5	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,056
51	I-580 WB	East of 98th Avenue/Golf Links Road	AM	5,400	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,350
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	AM	5,310	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,328
57	I-580 WB	Keller Avenue to Edwards Avenue	AM	5,660	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,415
59	I-580 WB	Edwards Avenue to Seminary Avenue	AM	6,680	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,670
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	AM	4,180	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,045
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	AM	4,410	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,103

HCM 2010
Basic Freeway Segments
Operational Analysis

General Information			*Speed Calculation*									*Results*		
	Freeway/		Lane		R. Shoulder		TRD	Calculated	Measured	FFS	v_p/c	Speed, S	Density, D	Level of
	Direction	From/To	Width (ft)	f_{LW}	Width (ft)	f_{LC}	(per mi)	FFS (mph)	FFS (mph)	(mph)		(mph)	(pcplpm)	Service
1	I-880 NB	South of Davis Street	12	0	10	0	2.3	68.9	65.0	70	0.67	68.1	**23.5**	**C**
4	I-880 NB	Davis Street to 98th Street	12	0	14	0	2.3	68.9	65.0	70	0.85	61.8	**33.1**	**D**
18	I-880 NB	North of High Street	11	1.9	1	1	2.5	65.5	65.0	65	0.82	61.2	**31.4**	**D**
19	I-880 SB	North of High Street	11	1.9	1	1	2.3	66.0	65.0	65	0.79	62.1	**29.8**	**D**
22	I-880 SB	High Street to 66th Street	12	0	10	0	2.3	68.9	65.0	70	0.74	66.0	**27.0**	**D**
25	I-880 SB	66th Street to Hegenberger Road	12	0	14	0	2.3	68.9	65.0	70	0.70	67.3	**25.0**	**C**
33	I-880 SB	98th Street to Davis Street	12	0	12	0	2.3	68.9	65.0	70	0.70	67.5	**24.7**	**C**
37	I-580 EB	West of Seminary Avenue Off-Ramp	12	0	9	0	2.5	68.4	65.0	70	0.40	70.0	**13.8**	**B**
39	I-580 EB	West of SR 13 Merge	12	0	12	0	2.2	69.2	65.0	70	0.38	70.0	**13.1**	**B**
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	12	0	12	0	2.2	69.2	65.0	70	0.64	68.8	**22.2**	**C**
44	I-580 EB	Edwards Avenue to Keller Avenue	12	0	11	0	2.2	69.2	65.0	70	0.57	69.6	**19.8**	**C**
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.58	69.6	**19.8**	**C**
50	I-580 EB	East of 98th Avenue/Golf Links Road	12	0	9	0	2	69.6	65.0	70	0.44	70.0	**15.1**	**B**
51	I-580 WB	East of 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.56	69.7	**19.4**	**C**
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	12	0	10	0	2.5	68.4	65.0	70	0.55	69.8	**19.0**	**C**
57	I-580 WB	Keller Avenue to Edwards Avenue	12	0	12	0	2.3	68.9	65.0	70	0.59	69.5	**20.4**	**C**
59	I-580 WB	Edwards Avenue to Seminary Avenue	12	0	8	0	2.3	68.9	65.0	70	0.70	67.4	**24.8**	**C**
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	12	0	12	0	2.3	68.9	65.0	70	0.44	70.0	**14.9**	**B**
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	12	0	10	0	2.5	68.4	65.0	70	0.46	70.0	**15.8**	**B**

HCM 2010
Merge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: Existing AM
Scenario: Existing Plus Project

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information				*Freeway Data*						*Freeway Volume Adjustment*							
	Freeway/ Direction	On-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
3	I-880 NB	Davis Street On-Ramp	AM	4	65	7,232	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
7	I-880 NB	98th Street WB On-Ramp	AM	5	65	7,072	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
11	I-880 NB	Hegenberger SB On-Ramp	AM	5	65	7,012	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
14	I-880 NB	Coliseum Way/66th Street On-Ramp	AM	4	65	6,480	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
17	I-880 NB	High Street On-Ramp	AM	4	65	6,640	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
21	I-880 SB	High Street/Oakport Street On-Ramp	AM	4	65	6,105	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
24	I-880 SB	66th Street On-Ramp	AM	4	65	6,126	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
27	I-880 SB	Hegenberger SB Loop On-Ramp	AM	4	65	5,560	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
31	I-880 SB	98th Street WB Loop On-Ramp	AM	4	65	5,548	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
32	I-880 SB	98th Street EB On-Ramp	AM	4	65	5,929	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
40	I-580 EB	SR 13 Merge	AM	4	65	3,663	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
41	I-580 EB	Seminary Avenue On-Ramp	AM	4	65	5,686	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	4,638	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	4,697	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
56	I-580 WB	Keller Avenue On-Ramp	AM	4	65	5,106	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
58	I-580 WB	Edwards Avenue On-Ramp	AM	4	65	5,655	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	AM	4	65	4,176	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	Flow Rate v_F (pcph)
3	I-880 NB	Davis Street On-Ramp	7,449
7	I-880 NB	98th Street WB On-Ramp	7,284
11	I-880 NB	Hegenberger SB On-Ramp	7,222
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,674
17	I-880 NB	High Street On-Ramp	6,839
21	I-880 SB	High Street/Oakport Street On-Ramp	6,288
24	I-880 SB	66th Street On-Ramp	6,310
27	I-880 SB	Hegenberger SB Loop On-Ramp	5,727
31	I-880 SB	98th Street WB Loop On-Ramp	5,714
32	I-880 SB	98th Street EB On-Ramp	6,107
40	I-580 EB	SR 13 Merge	3,663
41	I-580 EB	Seminary Avenue On-Ramp	5,686
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	4,638
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,697
56	I-580 WB	Keller Avenue On-Ramp	5,106
58	I-580 WB	Edwards Avenue On-Ramp	5,655
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,176

HCM 2010
Merge Ramp Junctions
Capacity Analysis

	General Information		Effective	*On-Ramp Data*							*On-Ramp Volume Adjustment*								
	Freeway/ Direction	On-ramp	Flow Rate v_p (pcph)	Type	Lanes	S_{FR} (mph)	V_R (vph)	Accel Lane (ft) L_{A1}	L_{A2}	L_{Aeff}	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_R (pcph)
3	I-880 NB	Davis Street On-Ramp	7,449	Right	1	40.0	421	450		450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	425
7	I-880 NB	98th Street WB On-Ramp	5,317	Right	1	50.0	361	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	365
11	I-880 NB	Hegenberger SB On-Ramp	5,272	Right	1	25.0	233	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	235
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,674	Right	2	50.0	814	300	1,500	2,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	822
17	I-880 NB	High Street On-Ramp	6,839	Right	1	50.0	813	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	821
21	I-880 SB	High Street/Oakport Street On-Ramp	6,288	Right	1	40.0	829	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	837
24	I-880 SB	66th Street On-Ramp	6,310	Right	1	50.0	414	550		550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	418
27	I-880 SB	Hegenberger SB Loop On-Ramp	5,727	Right	1	30.0	510	1,350		1,350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	515
31	I-880 SB	98th Street WB Loop On-Ramp	5,714	Right	1	25.0	381	250		250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	385
32	I-880 SB	98th Street EB On-Ramp	6,107	Right	1	35.0	550	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	556
40	I-580 EB	SR 13 Merge	3,663	Major	1	65.0	2,300	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,323
41	I-580 EB	Seminary Avenue On-Ramp	5,686	Right	1	50.0	423	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	427
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	4,638	Right	1	50.0	642	800		800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	648
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,697	Right	1	50.0	615	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	621
56	I-580 WB	Keller Avenue On-Ramp	5,106	Right	1	50.0	549	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	554
58	I-580 WB	Edwards Avenue On-Ramp	5,655	Right	1	50.0	1,025	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	1,035
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,176	Right	1	50.0	238	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	240

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_U (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	1,900	272	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	289
7	I-880 NB	98th Street WB On-Ramp	On	1,100	444	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	472
11	I-880 NB	Hegenberger SB On-Ramp	On	1,750	498	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	529
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	4,550	765	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	813
17	I-880 NB	High Street On-Ramp	Off	3,300	654	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	695
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	3,650	1,081	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,149
24	I-880 SB	66th Street On-Ramp	Off	3,400	808	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	859
27	I-880 SB	Hegenberger SB Loop On-Ramp	Off	1,350	980	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,042
31	I-880 SB	98th Street WB Loop On-Ramp	Off	1,200	854	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	908
32	I-880 SB	98th Street EB On-Ramp	On	750	381	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	405
40	I-580 EB	SR 13 Merge	Off	3,700	245	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	260
41	I-580 EB	Seminary Avenue On-Ramp	On	1,000	2,033	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,161
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Off	2,000	877	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	932
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	1,900	703	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	747
56	I-580 WB	Keller Avenue On-Ramp	Off	2,300	206	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	219
58	I-580 WB	Edwards Avenue On-Ramp	On	2,800	549	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	584
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	Off	1,950	2,289	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	2,434

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	4,000	1,297	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,310
7	I-880 NB	98th Street WB On-Ramp	Off	1,700	919	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	928
11	I-880 NB	Hegenberger SB On-Ramp	Off	2,100	765	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	773
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	3,200	654	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	661
17	I-880 NB	High Street On-Ramp	No										1.00	
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	2,550	808	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	816
24	I-880 SB	66th Street On-Ramp	Off	3,100	980	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	990
27	I-880 SB	Hegenberger SB Loop On-Ramp	On	1,350	332	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	335
31	I-880 SB	98th Street WB Loop On-Ramp	On	750	550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	556
32	I-880 SB	98th Street EB On-Ramp	Off	3,700	830	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	838
40	I-580 EB	SR 13 Merge	On	1,000	423	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	427
41	I-580 EB	Seminary Avenue On-Ramp	Off	950	597	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	603
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No										1.00	
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	5,400	206	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	208
56	I-580 WB	Keller Avenue On-Ramp	On	2,800	1,025	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,035
58	I-580 WB	Edwards Avenue On-Ramp	Off	1,200	215	1	Level	2%	0%	1.5	1.2	0.99	1.00	217
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No										1.00	

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*						
	Freeway/		L_{EQ}		P_{FM} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_{Fo}	Max v_{Fo}		v_3, v_{av34}
	Direction	On-ramp	13-6	13-7	13-3	13-4	13-5	P_{FM}	(pcph)	(pcph)	(pcph)	LOS F?	(pcph)	(pcph)	LOS F?	(pcphpl)
3	I-880 NB	Davis Street On-Ramp	1,575	8,304	0.590	0.610	0.635	0.165	1,226	7,449	8,800	No	7,874	8,800	No	3,111
7	I-880 NB	98th Street WB On-Ramp	1,562	6,550	0.586		0.692	0.172	916	5,317	11,000	No	5,682	11,000	No	2,201
11	I-880 NB	Hegenberger SB On-Ramp	217	5,453	0.586		0.645	0.188	993	5,272	11,000	No	5,508	11,000	No	2,140
14	I-880 NB	Coliseum Way/66th Street On-Ramp	2,750	1,976	0.636	0.750	0.603	0.209	1,395	6,674	8,800	No	7,497	8,800	No	2,640
17	I-880 NB	High Street On-Ramp	1,919		0.582	0.669		0.115	788	6,839	8,800	No	7,660	8,800	No	3,026
21	I-880 SB	High Street/Oakport Street On-Ramp	1,392	5,355	0.589	0.731	0.633	0.113	711	6,288	8,800	No	7,125	8,800	No	2,788
24	I-880 SB	66th Street On-Ramp	1,897	5,876	0.593	0.687	0.633	0.166	1,044	6,310	8,800	No	6,728	8,800	No	2,633
27	I-880 SB	Hegenberger SB Loop On-Ramp	1,102	1,320	0.615	0.631		0.153	879	5,727	8,800	No	6,242	8,800	No	2,424
31	I-880 SB	98th Street WB Loop On-Ramp	321	4,074	0.585	0.640		0.170	970	5,714	8,800	No	6,099	8,800	No	2,372
32	I-880 SB	98th Street EB On-Ramp	987	5,916	0.586		0.608	0.148	906	6,107	8,800	No	6,662	8,800	No	2,600
40	I-580 EB	SR 13 Merge	2,456	2,803	0.589	0.667		0.614	2,248	3,663	8,800	No	5,986	8,800	No	708
41	I-580 EB	Seminary Avenue On-Ramp	1,654	4,255	0.586		0.716	0.164	935	5,686	8,800	No	6,113	8,800	No	2,376
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	1,699		0.600	0.619		0.137	634	4,638	8,800	No	5,286	8,800	No	2,002
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	1,506	1,415	0.587	0.612	0.559	0.140	658	4,697	8,800	No	5,318	8,800	No	2,019
56	I-580 WB	Keller Avenue On-Ramp	1,580	7,040	0.587	0.633		0.148	758	5,106	8,800	No	5,660	8,800	No	2,174
58	I-580 WB	Edwards Avenue On-Ramp	1,756	1,593	0.585		0.596	0.144	815	5,655	9,600	No	6,690	8,800	No	2,420
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,269	######	0.585	0.789		0.244	1,017	4,176	9,600	No	4,416	8,800	No	1,580

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	v_3, v_{av34} > 2,700?	v_3, v_{av34} >1.5*v_{12}/2?	v_{12a} (pcph)
3	I-880 NB	Davis Street On-Ramp	Yes	Yes	2,980
7	I-880 NB	98th Street WB On-Ramp	No	Yes	2,127
11	I-880 NB	Hegenberger SB On-Ramp	No	Yes	2,109
14	I-880 NB	Coliseum Way/66th Street On-Ramp	No	Yes	2,670
17	I-880 NB	High Street On-Ramp	Yes	Yes	2,736
21	I-880 SB	High Street/Oakport Street On-Ramp	Yes	Yes	2,515
24	I-880 SB	66th Street On-Ramp	No	Yes	2,524
27	I-880 SB	Hegenberger SB Loop On-Ramp	No	Yes	2,291
31	I-880 SB	98th Street WB Loop On-Ramp	No	Yes	2,286
32	I-880 SB	98th Street EB On-Ramp	No	Yes	2,443
40	I-580 EB	SR 13 Merge	No	No	2,248
41	I-580 EB	Seminary Avenue On-Ramp	No	Yes	2,274
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No	Yes	1,855
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	No	Yes	1,879
56	I-580 WB	Keller Avenue On-Ramp	No	Yes	2,042
58	I-580 WB	Edwards Avenue On-Ramp	No	Yes	2,262
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No	Yes	1,670

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information						*Results*		*Speed Estimation*				
	Freeway/ Direction	On-ramp	v_{R12a} (pcph)	Max v_{R12a} (pcph)	Exceeds Max v_{R12a}?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. M_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
3	I-880 NB	Davis Street On-Ramp	3,405	4,600	No	425	2,000	No	**29.0**	**D**	0.402	55.7	2,235	58.8	57.4
7	I-880 NB	98th Street WB On-Ramp	2,492	4,600	No	365	2,100	No	**22.9**	**C**	0.338	57.2	1,595	61.1	59.3
11	I-880 NB	Hegenberger SB On-Ramp	2,344	4,600	No	235	1,900	No	**21.8**	**C**	0.347	57.0	1,582	61.1	59.3
14	I-880 NB	Coliseum Way/66th Street On-Ramp	3,492	4,600	No	822	4,200	No	**19.2**	**B**	0.239	59.5	2,002	59.6	59.5
17	I-880 NB	High Street On-Ramp	3,557	4,600	No	821	2,100	No	**31.9**	**D**	0.443	54.8	2,052	59.4	57.2
21	I-880 SB	High Street/Oakport Street On-Ramp	3,353	4,600	No	837	2,000	No	**28.7**	**D**	0.400	55.8	1,886	60.0	57.9
24	I-880 SB	66th Street On-Ramp	2,942	4,600	No	418	2,100	No	**24.8**	**C**	0.340	57.2	1,893	60.0	58.7
27	I-880 SB	Hegenberger SB Loop On-Ramp	2,806	4,600	No	515	1,900	No	**18.7**	**B**	0.305	58.0	1,718	60.6	59.4
31	I-880 SB	98th Street WB Loop On-Ramp	2,671	4,600	No	385	1,900	No	**24.6**	**C**	0.365	56.6	1,714	60.6	58.8
32	I-880 SB	98th Street EB On-Ramp	2,998	4,600	No	556	2,000	No	**26.7**	**C**	0.378	56.3	1,832	60.2	58.4
40	I-580 EB	SR 13 Merge	4,571	4,600	No	2,323	2,350	No	**N/A**	**-**	0.646	50.1	708	64.3	52.9
41	I-580 EB	Seminary Avenue On-Ramp	2,702	4,600	No	427	2,100	No	**24.5**	**C**	0.349	57.0	1,706	60.7	59.0
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	2,504	4,600	No	648	2,100	No	**19.7**	**B**	0.289	58.4	1,391	61.8	60.1
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	2,500	4,600	No	621	2,100	No	**22.5**	**C**	0.334	57.3	1,409	61.7	59.6
56	I-580 WB	Keller Avenue On-Ramp	2,597	4,600	No	554	2,100	No	**23.3**	**C**	0.338	57.2	1,532	61.3	59.3
58	I-580 WB	Edwards Avenue On-Ramp	3,297	4,600	No	1,035	2,100	No	**29.1**	**D**	0.401	55.8	1,697	60.7	58.2
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,911	4,600	No	240	2,100	No	**18.7**	**B**	0.322	57.6	1,253	62.3	60.2

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

Jurisdiction Caltrans District 4
Analysis Year Existing AM
Scenario Existing Plus Project

Agency or Company Caltrans
Date 1/21/2014
Project Description Coliseum City SP/EIR

General Information				*Mainline Data*						*Mainline Volume Adjustment*							
	Freeway/ Direction	Off-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
2	I-880 NB	Davis Street Off-Ramp	AM	5	65	7,774	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
5	I-880 NB	98th Street Off-Ramp	AM	4	65	7,925	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
20	I-880 SB	42nd Avenue/High Street Off-Ramp	AM	4	65	7,186	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
23	I-880 SB	66th Street Off-Ramp	AM	4	65	6,934	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
26	I-880 SB	Hegenberger Road Off-Ramp	AM	4	65	6,540	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
34	I-880 SB	Davis Street Off-Ramp	AM	4	65	6,479	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
38	I-580 EB	Seminary Avenue Off-Ramp	AM	4	65	3,858	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
43	I-580 EB	Edwards Avenue Off-Ramp	AM	4	65	6,109	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
45	I-580 EB	Keller Avenue Off-Ramp	AM	4	65	5,512	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	5,515	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	5,400	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
55	I-580 WB	Keller Avenue Off-Ramp	AM	4	65	5,312	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
60	I-580 WB	Seminary Avenue Off-Ramp	AM	4	65	6,680	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
61	I-580 WB	SR 13 Off-Ramp	AM	4	65	6,465	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Flow Rate v_F (pcph)
2	I-880 NB	Davis Street Off-Ramp	8,007
5	I-880 NB	98th Street Off-Ramp	8,163
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,402
23	I-880 SB	66th Street Off-Ramp	7,142
26	I-880 SB	Hegenberger Road Off-Ramp	6,736
34	I-880 SB	Davis Street Off-Ramp	6,673
38	I-580 EB	Seminary Avenue Off-Ramp	3,858
43	I-580 EB	Edwards Avenue Off-Ramp	6,109
45	I-580 EB	Keller Avenue Off-Ramp	5,512
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	5,515
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,400
55	I-580 WB	Keller Avenue Off-Ramp	5,312
60	I-580 WB	Seminary Avenue Off-Ramp	6,680
61	I-580 WB	SR 13 Off-Ramp	6,465

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			Effective	*Off-Ramp Data*							*Off-Ramp Volume Adjustment*								
	Freeway/		Flow Rate			S_{FR}	V_R	Decel Lane (ft)					Truck/						Flow Rate
	Direction	Off-ramp	v_p (pcph)	Type	Lanes	(mph)	(vph)	L_{D1}	L_{D2}	L_{Deff}	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_R (pcph)
2	I-880 NB	Davis Street Off-Ramp	6,406	Right	1	50.0	542	1,500		1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	547
5	I-880 NB	98th Street Off-Ramp	8,163	Right	1	50.0	1,297	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,310
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,402	Right	1	50.0	1,081	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,092
23	I-880 SB	66th Street Off-Ramp	7,142	Right	2	50.0	808	150	1,200	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	816
26	I-880 SB	Hegenberger Road Off-Ramp	6,736	Right	2	50.0	980	100	1,250	1,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	990
34	I-880 SB	Davis Street Off-Ramp	6,673	Right	1	50.0	830	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	838
38	I-580 EB	Seminary Avenue Off-Ramp	3,858	Right	1	50.0	472	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	477
43	I-580 EB	Edwards Avenue Off-Ramp	6,109	Right	1	50.0	597	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	603
45	I-580 EB	Keller Avenue Off-Ramp	5,512	Right	1	50.0	383	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	387
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	5,515	Right	1	50.0	877	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	886
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,400	Right	1	50.0	703	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	710
55	I-580 WB	Keller Avenue Off-Ramp	5,312	Right	1	50.0	206	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	208
60	I-580 WB	Seminary Avenue Off-Ramp	6,680	Right	1	50.0	215	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	217
61	I-580 WB	SR 13 Off-Ramp	6,465	Major	2	65.0	2,289	350	800	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,312

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_u (pcph)
2	I-880 NB	Davis Street Off-Ramp	No											
5	I-880 NB	98th Street Off-Ramp	On	4,000	421	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	425
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No											
23	I-880 SB	66th Street Off-Ramp	On	2,550	414	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	418
26	I-880 SB	Hegenberger Road Off-Ramp	On	3,100	510	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	515
34	I-880 SB	Davis Street Off-Ramp	On	3,700	355	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	359
38	I-580 EB	Seminary Avenue Off-Ramp	No											
43	I-580 EB	Edwards Avenue Off-Ramp	On	950	423	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	427
45	I-580 EB	Keller Avenue Off-Ramp	Off	2,500	597	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	603
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	5,300	386	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	390
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No											
55	I-580 WB	Keller Avenue Off-Ramp	On	5,400	615	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	621
60	I-580 WB	Seminary Avenue Off-Ramp	On	1,200	1,025	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,035
61	I-580 WB	SR 13 Off-Ramp	Off	1,250	215	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	217

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
2	I-880 NB	Davis Street Off-Ramp	On	1,900	272	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	275
5	I-880 NB	98th Street Off-Ramp	On	1,250	444	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	448
20	I-880 SB	42nd Avenue/High Street Off-Ramp	On	3,650	829	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	837
23	I-880 SB	66th Street Off-Ramp	On	3,400	414	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	418
26	I-880 SB	Hegenberger Road Off-Ramp	On	1,350	510	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	515
34	I-880 SB	Davis Street Off-Ramp	On	1,950	355	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	359
38	I-580 EB	Seminary Avenue Off-Ramp	On	3,700	2,300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,323
43	I-580 EB	Edwards Avenue Off-Ramp	Off	2,500	383	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	387
45	I-580 EB	Keller Avenue Off-Ramp	On	2,300	386	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	390
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	2,000	642	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	648
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	On	1,900	615	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	621
55	I-580 WB	Keller Avenue Off-Ramp	On	2,300	549	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	554
60	I-580 WB	Seminary Avenue Off-Ramp	Off	1,250	2,289	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,312
61	I-580 WB	SR 13 Off-Ramp	On	1,900	238	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	240

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

			General Information		*v_{12} Estimation*					*Capacity Checks*							
	Freeway/		L_{EQ}		P_{FD} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_3, v_{av34}	v_3, v_{av34}	v_3, v_{av34}	v_{12a}	Max v_{12a}
	Direction	Off-ramp	13-12	13-13	13-9	13-10	13-11	P_{FD}	(pcph)	(pcph)	(pcph)	LOS F?	(pcphpl)	> 2,700?	>1.5*v_{12}/2?	(pcph)	(pcph)
2	I-880 NB	Davis Street Off-Ramp		370	0.575			0.436	3,102	6,406	11,000	No	1,652	No	No	3,102	4,400
5	I-880 NB	98th Street Off-Ramp	2,671	1,106	0.496	0.463		0.436	4,298	8,163	8,800	No	1,932	No	No	4,298	4,400
20	I-880 SB	42nd Avenue/High Street Off-Ramp		1,641	0.525			0.436	3,843	7,402	8,800	No	1,779	No	No	3,843	4,400
23	I-880 SB	66th Street Off-Ramp	2,414	674	0.544	0.538		0.260	2,461	7,142	8,800	No	2,341	No	Yes	2,857	4,400
26	I-880 SB	Hegenberger Road Off-Ramp	3,418	905	0.546	0.555		0.260	2,484	6,736	8,800	No	2,126	No	Yes	2,694	4,400
34	I-880 SB	Davis Street Off-Ramp	2,230	572	0.555	0.515		0.436	3,382	6,673	8,800	No	1,645	No	No	3,382	4,400
38	I-580 EB	Seminary Avenue Off-Ramp		2,731	0.642			0.436	1,951	3,858	8,800	No	954	No	No	1,951	4,400
43	I-580 EB	Edwards Avenue Off-Ramp	2,579	528	0.580	0.580	0.507	0.436	3,004	6,109	8,800	No	1,553	No	No	3,004	4,400
45	I-580 EB	Keller Avenue Off-Ramp	3,581	469	0.604			0.436	2,621	5,512	8,800	No	1,445	No	No	2,621	4,400
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	2,987	1,003	0.581	0.546		0.436	2,904	5,515	8,800	No	1,305	No	No	2,904	4,400
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp		868	0.592			0.436	2,755	5,400	8,800	No	1,323	No	No	2,755	4,400
55	I-580 WB	Keller Avenue Off-Ramp	3,502	614	0.618	0.579		0.436	2,433	5,312	9,600	No	1,439	No	No	2,433	4,400
60	I-580 WB	Seminary Avenue Off-Ramp	4,974	2,700	0.583	0.583	0.707	0.436	3,035	6,680	9,600	No	1,823	No	No	3,035	4,400
61	I-580 WB	SR 13 Off-Ramp	4,936	2,670	0.492			0.260	3,392	6,465	9,600	No	1,537	No	No	3,392	4,400

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Exceeds Max v_{12a}?
2	I-880 NB	Davis Street Off-Ramp	No
5	I-880 NB	98th Street Off-Ramp	No
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No
23	I-880 SB	66th Street Off-Ramp	No
26	I-880 SB	Hegenberger Road Off-Ramp	No
34	I-880 SB	Davis Street Off-Ramp	No
38	I-580 EB	Seminary Avenue Off-Ramp	No
43	I-580 EB	Edwards Avenue Off-Ramp	No
45	I-580 EB	Keller Avenue Off-Ramp	No
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	No
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No
55	I-580 WB	Keller Avenue Off-Ramp	No
60	I-580 WB	Seminary Avenue Off-Ramp	No
61	I-580 WB	SR 13 Off-Ramp	No

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	Off-ramp	v_{Fo} (pcph)	Max v_{Fo} (pcph)	LOS F?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. D_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
2	I-880 NB	Davis Street Off-Ramp	5,858	11,000	No	547	2,100	No	**17.4**	**B**	0.282	58.5	1,652	68.8	63.4
5	I-880 NB	98th Street Off-Ramp	6,853	8,800	No	1,310	2,100	No	**39.9**	**E**	0.351	56.9	1,932	67.7	61.6
20	I-880 SB	42nd Avenue/High Street Off-Ramp	6,310	8,800	No	1,092	2,100	No	**34.6**	**D**	0.331	57.4	1,779	68.3	62.1
23	I-880 SB	66th Street Off-Ramp	6,326	8,800	No	816	4,200	No	**15.3**	**B**	0.306	58.0	2,143	66.8	63.0
26	I-880 SB	Hegenberger Road Off-Ramp	5,746	8,800	No	990	4,200	No	**14.4**	**B**	0.322	57.6	2,021	67.3	63.1
34	I-880 SB	Davis Street Off-Ramp	5,835	8,800	No	838	2,100	No	**31.5**	**D**	0.308	57.9	1,645	68.8	62.8
38	I-580 EB	Seminary Avenue Off-Ramp	3,381	8,800	No	477	2,100	No	**20.1**	**C**	0.276	58.7	954	71.3	64.3
43	I-580 EB	Edwards Avenue Off-Ramp	5,506	8,800	No	603	2,100	No	**29.2**	**D**	0.287	58.4	1,553	69.1	63.4
45	I-580 EB	Keller Avenue Off-Ramp	5,125	8,800	No	387	2,100	No	**25.0**	**C**	0.268	58.8	1,445	69.6	64.0
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	4,629	8,800	No	886	2,100	No	**28.3**	**D**	0.313	57.8	1,305	70.1	63.0
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	4,690	8,800	No	710	2,100	No	**26.6**	**C**	0.297	58.2	1,323	70.0	63.4
55	I-580 WB	Keller Avenue Off-Ramp	5,104	8,800	No	208	2,100	No	**23.8**	**C**	0.252	59.2	1,439	69.6	64.4
60	I-580 WB	Seminary Avenue Off-Ramp	6,463	8,800	No	217	2,100	No	**28.6**	**D**	0.253	59.2	1,823	68.1	63.7
61	I-580 WB	SR 13 Off-Ramp	4,153	8,800	No	2,312	4,400	No	**17.6**	**B**	0.246	59.3	1,537	69.2	63.7

Leisch Method for Weaving Analysis

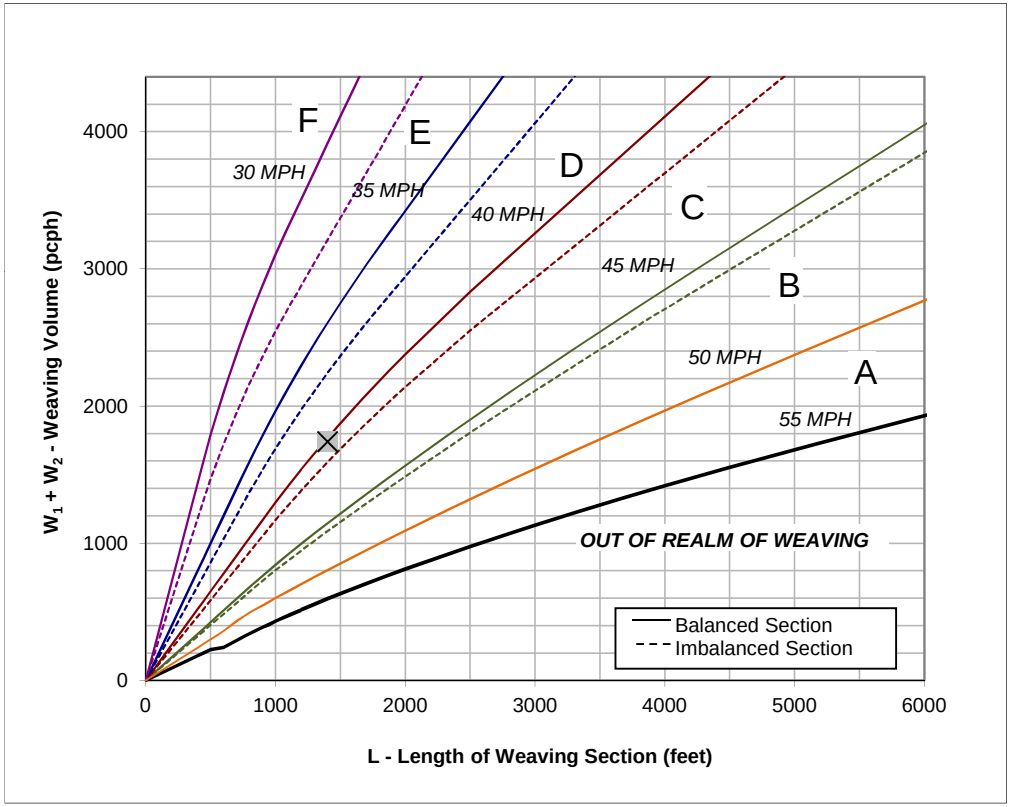
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,400

	Total Weaving Section (V)	On-ramp to Mainline (W_1)	Mainline to Off-ramp (W_2)
Volume (vph)*	7,433	805	919
Truck Percentage	4%	2%	2%
PCE for Trucks	1.5	1.5	1.5
Volume (pcph)	7,582	813	928

Project Information

Project	Coliseum City SP/EIR
Scenario	EPP - AM Peak
Freeway	I-880 NB
On-ramp	98th Street
Off-ramp	Hegenberger Road



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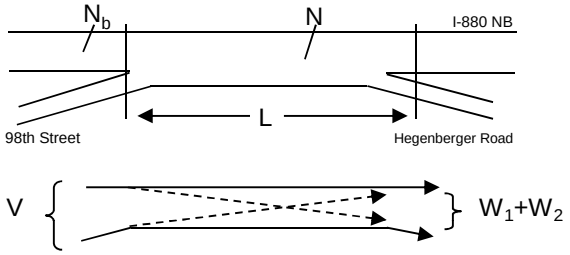


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **38.5**
4. Weaving Intensity Factor (k) **2.67**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,787**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

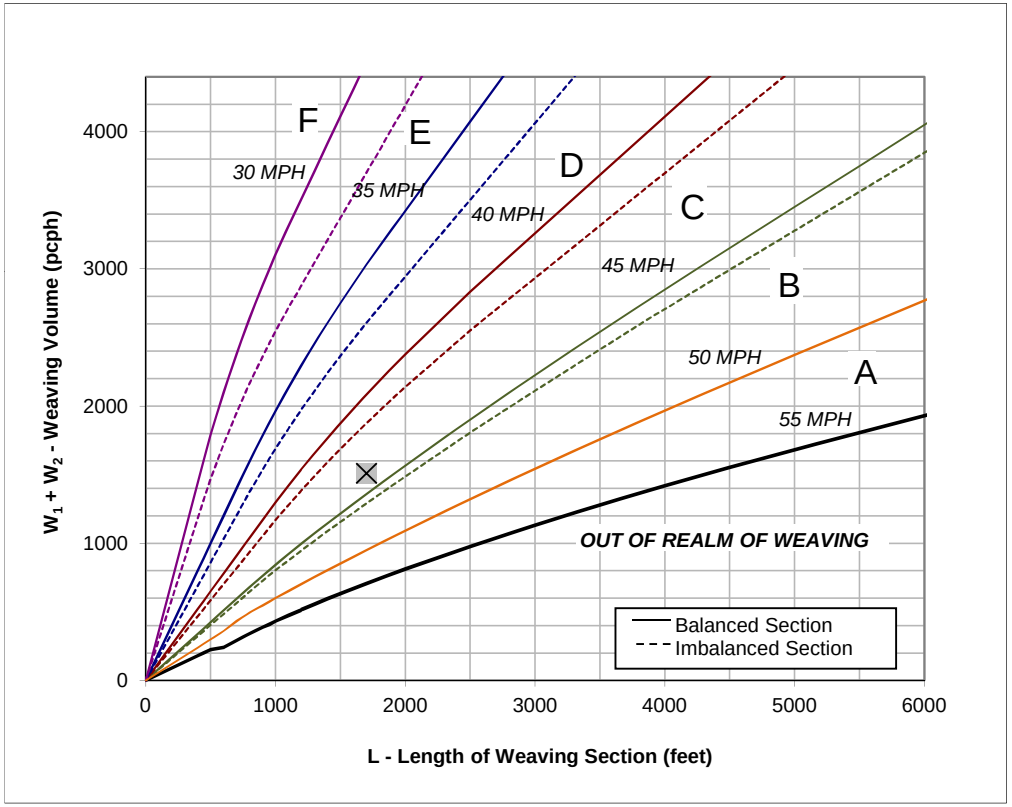
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,700

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,245	Volume (vph)*	731	Volume (vph)*	765
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,390	Volume (pcph)	738	Volume (pcph)	773

Project Information

Project	Coliseum City SP/EIR
Scenario	EPP - AM Peak
Freeway	I-880 NB
On-ramp	Hegenberger Road
Off-ramp	66th Street



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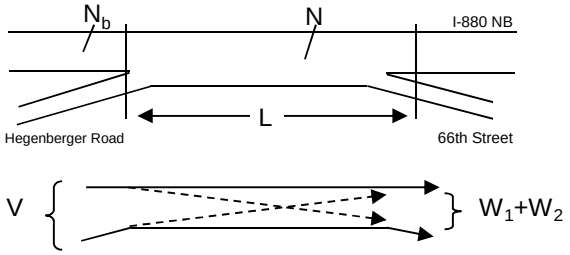


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **43.1**
4. Weaving Intensity Factor (k) **2.21**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,656**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

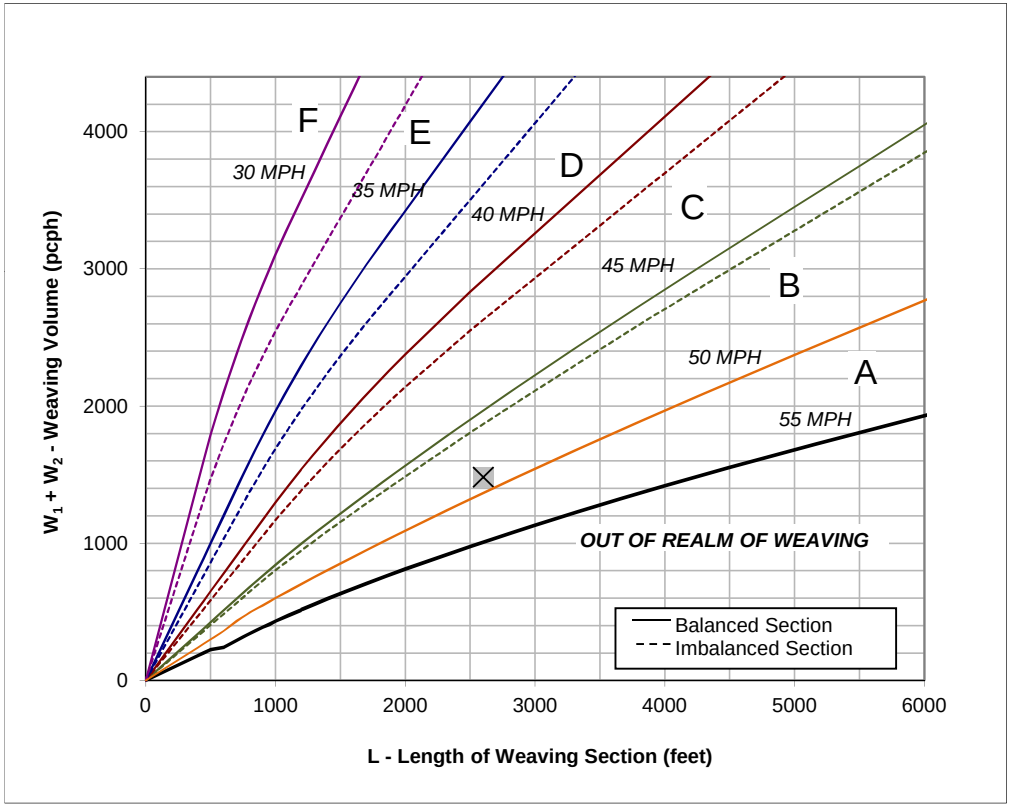
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,600

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,294	Volume (vph)*	814	Volume (vph)*	654
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,440	Volume (pcph)	822	Volume (pcph)	661

Project Information

Project	Coliseum City SP/EIR
Scenario	EPP - AM Peak
Freeway	I-880 NB
On-ramp	66th Street
Off-ramp	High Street



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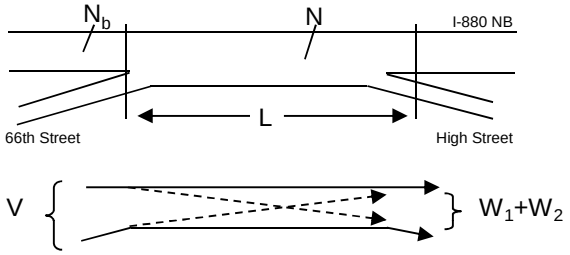


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   50 MPH and **55 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **48.3**
4. Weaving Intensity Factor (k) **1.47**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,550**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

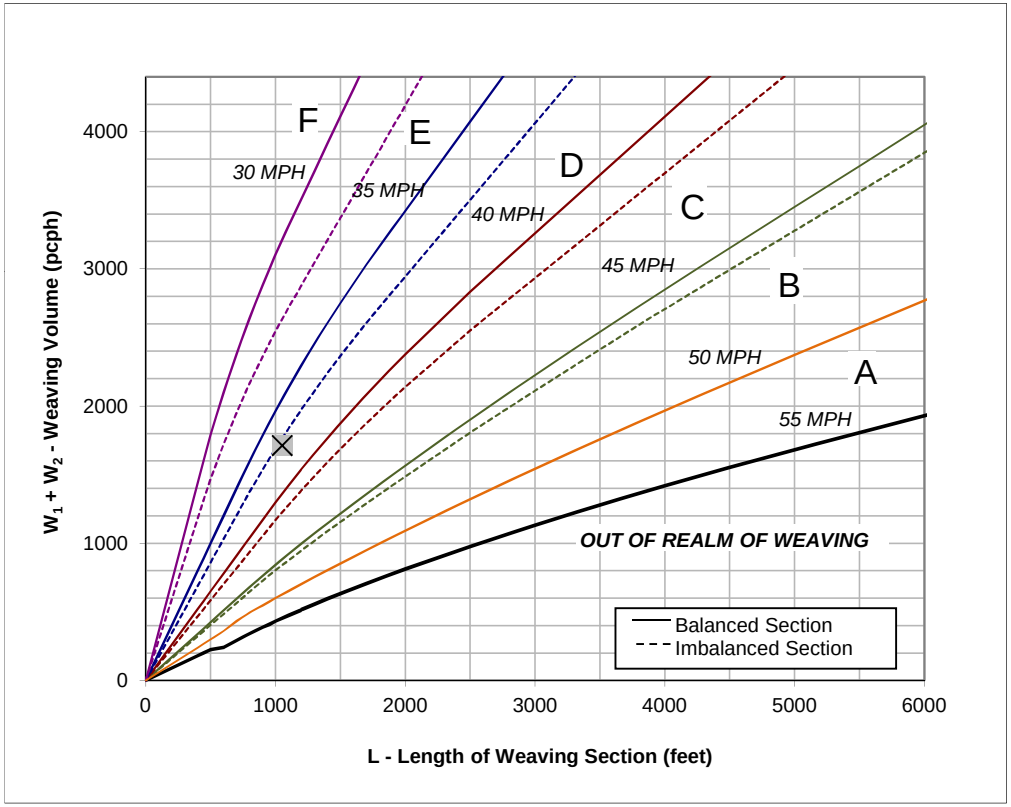
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,050

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,402	Volume (vph)*	842	Volume (vph)*	854
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,498	Volume (pcph)	850	Volume (pcph)	863

Project Information

Project	Coliseum City SP/EIR
Scenario	EPP - AM Peak
Freeway	I-880 SB
On-ramp	Hegenberger Road
Off-ramp	98th Street



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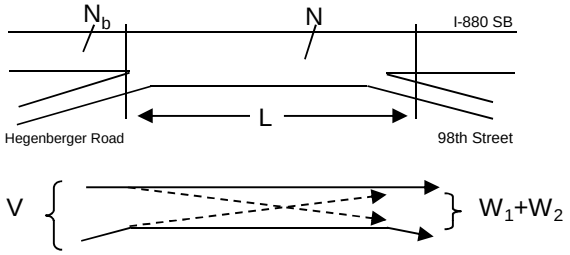


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   35 MPH and **40 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **35.5**
4. Weaving Intensity Factor (k) **2.87**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,617**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

HCM 2010
Basic Freeway Segments
Operational Analysis

Jurisdiction Caltrans District 4 | Agency or Company Caltrans
Analysis Year Existing PM | Date 1/21/2014
Scenario Existing Plus Project | Project Description Coliseum City SP/EIR

General Information | *Flow Rate Calculation*

	Freeway/ Direction	From/To	Analysis Time Period	Volume (vph)	PHF	Lanes	HOV Lane?	HOV Lane Volume	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_p (pcphpl)
1	I-880 NB	South of Davis Street	PM	7,640	1.00	5	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,574
4	I-880 NB	Davis Street to 98th Street	PM	7,560	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,947
18	I-880 NB	North of High Street	PM	7,230	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,862
19	I-880 SB	North of High Street	PM	7,270	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,872
22	I-880 SB	High Street to 66th Street	PM	7,110	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,831
25	I-880 SB	66th Street to Hegenberger Road	PM	6,940	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,787
33	I-880 SB	98th Street to Davis Street	PM	8,000	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,060
37	I-580 EB	West of Seminary Avenue Off-Ramp	PM	5,250	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,313
39	I-580 EB	West of SR 13 Merge	PM	4,840	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,210
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	PM	8,040	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	2,010
44	I-580 EB	Edwards Avenue to Keller Avenue	PM	7,860	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,965
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	PM	7,700	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,925
50	I-580 EB	East of 98th Avenue/Golf Links Road	PM	7,610	1.00	5	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,522
51	I-580 WB	East of 98th Avenue/Golf Links Road	PM	6,050	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,513
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	PM	6,140	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,535
57	I-580 WB	Keller Avenue to Edwards Avenue	PM	6,090	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,523
59	I-580 WB	Edwards Avenue to Seminary Avenue	PM	6,910	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,728
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	PM	3,960	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	990
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	PM	4,220	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,055

HCM 2010
Basic Freeway Segments
Operational Analysis

General Information			*Speed Calculation*									*Results*		
	Freeway/		Lane		R. Shoulder		TRD	Calculated	Measured	FFS	v_p/c	Speed, S	Density, D	Level of
	Direction	From/To	Width (ft)	f_{LW}	Width (ft)	f_{LC}	(per mi)	FFS (mph)	FFS (mph)	(mph)		(mph)	(pcplpm)	Service
1	I-880 NB	South of Davis Street	12	0	10	0	2.3	68.9	65.0	70	0.66	68.4	**23.0**	**C**
4	I-880 NB	Davis Street to 98th Street	12	0	14	0	2.3	68.9	65.0	70	0.81	63.5	**30.6**	**D**
18	I-880 NB	North of High Street	11	1.9	1	1	2.5	65.5	65.0	65	0.79	62.0	**30.0**	**D**
19	I-880 SB	North of High Street	11	1.9	1	1	2.3	66.0	65.0	65	0.80	61.8	**30.3**	**D**
22	I-880 SB	High Street to 66th Street	12	0	10	0	2.3	68.9	65.0	70	0.76	65.4	**28.0**	**D**
25	I-880 SB	66th Street to Hegenberger Road	12	0	14	0	2.3	68.9	65.0	70	0.74	66.0	**27.1**	**D**
33	I-880 SB	98th Street to Davis Street	12	0	12	0	2.3	68.9	65.0	70	0.86	61.4	**33.5**	**D**
37	I-580 EB	West of Seminary Avenue Off-Ramp	12	0	9	0	2.5	68.4	65.0	70	0.55	69.9	**18.8**	**C**
39	I-580 EB	West of SR 13 Merge	12	0	12	0	2.2	69.2	65.0	70	0.50	70.0	**17.3**	**B**
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	12	0	12	0	2.2	69.2	65.0	70	0.84	62.4	**32.2**	**D**
44	I-580 EB	Edwards Avenue to Keller Avenue	12	0	11	0	2.2	69.2	65.0	70	0.82	63.2	**31.1**	**D**
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.80	63.9	**30.1**	**D**
50	I-580 EB	East of 98th Avenue/Golf Links Road	12	0	9	0	2	69.6	65.0	70	0.63	68.8	**22.1**	**C**
51	I-580 WB	East of 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.63	68.9	**22.0**	**C**
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	12	0	10	0	2.5	68.4	65.0	70	0.64	68.7	**22.3**	**C**
57	I-580 WB	Keller Avenue to Edwards Avenue	12	0	12	0	2.3	68.9	65.0	70	0.63	68.8	**22.1**	**C**
59	I-580 WB	Edwards Avenue to Seminary Avenue	12	0	8	0	2.3	68.9	65.0	70	0.72	66.8	**25.9**	**C**
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	12	0	12	0	2.3	68.9	65.0	70	0.41	70.0	**14.1**	**B**
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	12	0	10	0	2.5	68.4	65.0	70	0.44	70.0	**15.1**	**B**

HCM 2010
Merge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: Existing PM
Scenario: Existing Plus Project

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information				*Freeway Data*						*Freeway Volume Adjustment*							
	Freeway/ Direction	On-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
3	I-880 NB	Davis Street On-Ramp	PM	4	65	6,778	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
7	I-880 NB	98th Street WB On-Ramp	PM	5	65	6,827	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
11	I-880 NB	Hegenberger SB On-Ramp	PM	5	65	6,826	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
14	I-880 NB	Coliseum Way/66th Street On-Ramp	PM	4	65	6,440	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
17	I-880 NB	High Street On-Ramp	PM	4	65	6,464	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
21	I-880 SB	High Street/Oakport Street On-Ramp	PM	4	65	6,329	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
24	I-880 SB	66th Street On-Ramp	PM	4	65	6,185	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
27	I-880 SB	Hegenberger SB Loop On-Ramp	PM	4	65	6,076	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
31	I-880 SB	98th Street WB Loop On-Ramp	PM	4	65	6,825	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
32	I-880 SB	98th Street EB On-Ramp	PM	4	65	7,204	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
40	I-580 EB	SR 13 Merge	PM	4	65	4,838	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
41	I-580 EB	Seminary Avenue On-Ramp	PM	4	65	7,069	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	PM	4	65	6,947	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	PM	4	65	5,387	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
56	I-580 WB	Keller Avenue On-Ramp	PM	4	65	5,783	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
58	I-580 WB	Edwards Avenue On-Ramp	PM	4	65	6,086	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	PM	4	65	3,960	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	Flow Rate v_F (pcph)
3	I-880 NB	Davis Street On-Ramp	6,981
7	I-880 NB	98th Street WB On-Ramp	7,032
11	I-880 NB	Hegenberger SB On-Ramp	7,031
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,633
17	I-880 NB	High Street On-Ramp	6,658
21	I-880 SB	High Street/Oakport Street On-Ramp	6,519
24	I-880 SB	66th Street On-Ramp	6,371
27	I-880 SB	Hegenberger SB Loop On-Ramp	6,258
31	I-880 SB	98th Street WB Loop On-Ramp	7,030
32	I-880 SB	98th Street EB On-Ramp	7,420
40	I-580 EB	SR 13 Merge	4,838
41	I-580 EB	Seminary Avenue On-Ramp	7,069
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	6,947
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	5,387
56	I-580 WB	Keller Avenue On-Ramp	5,783
58	I-580 WB	Edwards Avenue On-Ramp	6,086
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	3,960

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information	*On-Ramp Data*						*On-Ramp Volume Adjustment*								
	Freeway/ Direction	On-ramp	Effective Flow Rate v_p (pcph)	Type	Lanes	S_{FR} (mph)	V_R (vph)	Accel Lane (ft) L_{A1}	L_{A2}	L_{Aeff}	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_R (pcph)
3	I-880 NB	Davis Street On-Ramp	6,981	Right	1	40.0	347	450		450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	350
7	I-880 NB	98th Street WB On-Ramp	5,133	Right	1	50.0	315	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	318
11	I-880 NB	Hegenberger SB On-Ramp	5,132	Right	1	25.0	242	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	244
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,633	Right	2	50.0	792	300	1,500	2,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	800
17	I-880 NB	High Street On-Ramp	6,658	Right	1	50.0	766	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	774
21	I-880 SB	High Street/Oakport Street On-Ramp	6,519	Right	1	40.0	781	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	789
24	I-880 SB	66th Street On-Ramp	6,371	Right	1	50.0	750	550		550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	758
27	I-880 SB	Hegenberger SB Loop On-Ramp	6,258	Right	1	30.0	620	1,350		1,350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	626
31	I-880 SB	98th Street WB Loop On-Ramp	7,030	Right	1	25.0	379	250		250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	383
32	I-880 SB	98th Street EB On-Ramp	7,420	Right	1	35.0	796	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	804
40	I-580 EB	SR 13 Merge	4,838	Major	1	65.0	2,588	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,614
41	I-580 EB	Seminary Avenue On-Ramp	7,069	Right	1	50.0	971	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	981
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	6,947	Right	1	50.0	659	800		800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	666
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	5,387	Right	1	50.0	749	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	756
56	I-580 WB	Keller Avenue On-Ramp	5,783	Right	1	50.0	303	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	306
58	I-580 WB	Edwards Avenue On-Ramp	6,086	Right	1	50.0	820	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	828
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	3,960	Right	1	50.0	257	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	260

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_U (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	1,900	434	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	461
7	I-880 NB	98th Street WB On-Ramp	On	1,100	711	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	756
11	I-880 NB	Hegenberger SB On-Ramp	On	1,750	692	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	736
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	4,550	628	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	668
17	I-880 NB	High Street On-Ramp	Off	3,300	768	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	817
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	3,650	939	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	998
24	I-880 SB	66th Street On-Ramp	Off	3,400	925	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	983
27	I-880 SB	Hegenberger SB Loop On-Ramp	Off	1,350	859	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	913
31	I-880 SB	98th Street WB Loop On-Ramp	Off	1,200	586	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	623
32	I-880 SB	98th Street EB On-Ramp	On	750	379	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	403
40	I-580 EB	SR 13 Merge	Off	3,700	479	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	509
41	I-580 EB	Seminary Avenue On-Ramp	On	1,000	2,261	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,404
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Off	2,000	753	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	801
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	1,900	662	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	704
56	I-580 WB	Keller Avenue On-Ramp	Off	2,300	353	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	375
58	I-580 WB	Edwards Avenue On-Ramp	On	2,800	303	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	322
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	Off	1,950	2,660	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	2,828

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	4,000	1,443	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,457
7	I-880 NB	98th Street WB On-Ramp	Off	1,700	1,008	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,018
11	I-880 NB	Hegenberger SB On-Ramp	Off	2,100	628	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	634
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	3,200	768	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	776
17	I-880 NB	High Street On-Ramp	No										1.00	
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	2,550	925	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	934
24	I-880 SB	66th Street On-Ramp	Off	3,100	859	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	868
27	I-880 SB	Hegenberger SB Loop On-Ramp	On	1,350	715	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	722
31	I-880 SB	98th Street WB Loop On-Ramp	On	750	796	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	804
32	I-880 SB	98th Street EB On-Ramp	Off	3,700	743	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	750
40	I-580 EB	SR 13 Merge	On	1,000	971	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	981
41	I-580 EB	Seminary Avenue On-Ramp	Off	950	500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	505
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No										1.00	
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	5,400	353	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	357
56	I-580 WB	Keller Avenue On-Ramp	On	2,800	820	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	828
58	I-580 WB	Edwards Avenue On-Ramp	Off	1,200	286	1	Level	2%	0%	1.5	1.2	0.99	1.00	289
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No										1.00	

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*						
	Freeway/		L_{EQ}		P_{FM} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_{Fo}	Max v_{Fo}		v_3, v_{av34}
	Direction	On-ramp	13-6	13-7	13-3	13-4	13-5	P_{FM}	(pcph)	(pcph)	(pcph)	LOS F?	(pcph)	(pcph)	LOS F?	(pcphpl)
3	I-880 NB	Davis Street On-Ramp	1,459	9,239	0.590	0.618	0.644	0.174	1,215	6,981	8,800	No	7,332	8,800	No	2,883
7	I-880 NB	98th Street WB On-Ramp	1,513	7,185	0.586		0.706	0.178	914	5,133	11,000	No	5,451	11,000	No	2,110
11	I-880 NB	Hegenberger SB On-Ramp	189	4,476	0.586		0.628	0.187	961	5,132	11,000	No	5,377	11,000	No	2,086
14	I-880 NB	Coliseum Way/66th Street On-Ramp	2,736	2,320	0.636	0.750	0.612	0.209	1,386	6,633	8,800	No	7,433	8,800	No	2,623
17	I-880 NB	High Street On-Ramp	1,870		0.582	0.672		0.121	806	6,658	8,800	No	7,432	8,800	No	2,926
21	I-880 SB	High Street/Oakport Street On-Ramp	1,431	6,130	0.589	0.728	0.645	0.119	777	6,519	8,800	No	7,308	8,800	No	2,871
24	I-880 SB	66th Street On-Ramp	1,983	5,150	0.593	0.682	0.622	0.123	784	6,371	8,800	No	7,128	8,800	No	2,793
27	I-880 SB	Hegenberger SB Loop On-Ramp	1,239	2,843	0.615	0.622		0.140	873	6,258	8,800	No	6,884	8,800	No	2,693
31	I-880 SB	98th Street WB Loop On-Ramp	602	5,896	0.585	0.622		0.170	1,195	7,030	8,800	No	7,413	8,800	No	2,918
32	I-880 SB	98th Street EB On-Ramp	1,321	5,296	0.586		0.602	0.117	870	7,420	8,800	No	8,224	8,800	No	3,275
40	I-580 EB	SR 13 Merge	2,770	6,435	0.589	0.647		-0.109	-527	4,838	8,800	No	7,452	8,800	No	2,683
41	I-580 EB	Seminary Avenue On-Ramp	2,069	3,564	0.586		0.688	0.095	673	7,069	8,800	No	8,050	8,800	No	3,198
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	2,197		0.600	0.587		0.135	935	6,947	8,800	No	7,613	8,800	No	3,006
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	1,683	2,425	0.587	0.601	0.566	0.123	664	5,387	8,800	No	6,143	8,800	No	2,362
56	I-580 WB	Keller Avenue On-Ramp	1,671	5,632	0.587	0.627		0.180	1,038	5,783	8,800	No	6,089	8,800	No	2,372
58	I-580 WB	Edwards Avenue On-Ramp	1,804	2,119	0.585		0.612	0.170	1,035	6,086	9,600	No	6,914	8,800	No	2,526
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,227	######	0.585	0.791		0.241	955	3,960	9,600	No	4,220	8,800	No	1,503

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	v_3, v_{av34} > 2,700?	v_3, v_{av34} >1.5*v_{12}/2?	v_{12a} (pcph)
3	I-880 NB	Davis Street On-Ramp	Yes	Yes	2,793
7	I-880 NB	98th Street WB On-Ramp	No	Yes	2,053
11	I-880 NB	Hegenberger SB On-Ramp	No	Yes	2,053
14	I-880 NB	Coliseum Way/66th Street On-Ramp	No	Yes	2,653
17	I-880 NB	High Street On-Ramp	Yes	Yes	2,663
21	I-880 SB	High Street/Oakport Street On-Ramp	Yes	Yes	2,608
24	I-880 SB	66th Street On-Ramp	Yes	Yes	2,548
27	I-880 SB	Hegenberger SB Loop On-Ramp	No	Yes	2,503
31	I-880 SB	98th Street WB Loop On-Ramp	Yes	Yes	2,812
32	I-880 SB	98th Street EB On-Ramp	Yes	Yes	2,968
40	I-580 EB	SR 13 Merge	No	Yes	1,935
41	I-580 EB	Seminary Avenue On-Ramp	Yes	Yes	2,828
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Yes	Yes	2,779
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	No	Yes	2,155
56	I-580 WB	Keller Avenue On-Ramp	No	Yes	2,313
58	I-580 WB	Edwards Avenue On-Ramp	No	Yes	2,434
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No	Yes	1,584

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	On-ramp	v_{R12a} (pcph)	Max v_{R12a} (pcph)	Exceeds Max v_{R12a}?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. M_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
3	I-880 NB	Davis Street On-Ramp	3,143	4,600	No	350	2,000	No	**27.0**	**C**	0.375	56.4	2,094	59.3	58.0
7	I-880 NB	98th Street WB On-Ramp	2,371	4,600	No	318	2,100	No	**21.9**	**C**	0.333	57.3	1,540	61.3	59.5
11	I-880 NB	Hegenberger SB On-Ramp	2,297	4,600	No	244	1,900	No	**21.4**	**C**	0.345	57.1	1,540	61.3	59.4
14	I-880 NB	Coliseum Way/66th Street On-Ramp	3,453	4,600	No	800	4,200	No	**18.9**	**B**	0.234	59.6	1,990	59.6	59.6
17	I-880 NB	High Street On-Ramp	3,437	4,600	No	774	2,100	No	**31.0**	**D**	0.427	55.2	1,997	59.6	57.5
21	I-880 SB	High Street/Oakport Street On-Ramp	3,396	4,600	No	789	2,000	No	**29.1**	**D**	0.405	55.7	1,956	59.8	57.8
24	I-880 SB	66th Street On-Ramp	3,306	4,600	No	758	2,100	No	**27.5**	**C**	0.372	56.4	1,911	59.9	58.3
27	I-880 SB	Hegenberger SB Loop On-Ramp	3,130	4,600	No	626	1,900	No	**21.1**	**C**	0.329	57.4	1,877	60.0	58.8
31	I-880 SB	98th Street WB Loop On-Ramp	3,195	4,600	No	383	1,900	No	**28.6**	**D**	0.404	55.7	2,109	59.2	57.7
32	I-880 SB	98th Street EB On-Ramp	3,772	4,600	No	804	2,000	No	**32.6**	**D**	0.470	54.2	2,226	58.8	56.6
40	I-580 EB	SR 13 Merge	4,549	4,600	No	2,614	2,350	**Yes**	**-**	**F**	-	-	-	-	-
41	I-580 EB	Seminary Avenue On-Ramp	3,808	4,600	No	981	2,100	No	**32.8**	**D**	0.467	54.3	2,121	59.2	56.7
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	3,444	4,600	No	666	2,100	No	**27.0**	**C**	0.363	56.6	2,084	59.3	58.1
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	2,911	4,600	No	756	2,100	No	**25.6**	**C**	0.358	56.8	1,616	61.0	58.9
56	I-580 WB	Keller Avenue On-Ramp	2,619	4,600	No	306	2,100	No	**23.6**	**C**	0.340	57.2	1,735	60.6	59.1
58	I-580 WB	Edwards Avenue On-Ramp	3,263	4,600	No	828	2,100	No	**29.0**	**D**	0.398	55.8	1,826	60.2	58.1
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,844	4,600	No	260	2,100	No	**18.2**	**B**	0.321	57.6	1,188	62.5	60.3

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: Existing PM
Scenario: Existing Plus Project

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

	General Information			*Mainline Data*						*Mainline Volume Adjustment*							
	Freeway/ Direction	Off-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
2	I-880 NB	Davis Street Off-Ramp	PM	5	65	7,640	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
5	I-880 NB	98th Street Off-Ramp	PM	4	65	7,559	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
20	I-880 SB	42nd Avenue/High Street Off-Ramp	PM	4	65	7,268	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
23	I-880 SB	66th Street Off-Ramp	PM	4	65	7,110	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
26	I-880 SB	Hegenberger Road Off-Ramp	PM	4	65	6,935	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
34	I-880 SB	Davis Street Off-Ramp	PM	4	65	8,000	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
38	I-580 EB	Seminary Avenue Off-Ramp	PM	4	65	5,247	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
43	I-580 EB	Edwards Avenue Off-Ramp	PM	4	65	8,040	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
45	I-580 EB	Keller Avenue Off-Ramp	PM	4	65	7,861	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	PM	4	65	7,700	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	PM	4	65	6,049	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
55	I-580 WB	Keller Avenue Off-Ramp	PM	4	65	6,136	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
60	I-580 WB	Seminary Avenue Off-Ramp	PM	4	65	6,906	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
61	I-580 WB	SR 13 Off-Ramp	PM	4	65	3,960	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Flow Rate v_F (pcph)
2	I-880 NB	Davis Street Off-Ramp	7,869
5	I-880 NB	98th Street Off-Ramp	7,786
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,486
23	I-880 SB	66th Street Off-Ramp	7,323
26	I-880 SB	Hegenberger Road Off-Ramp	7,143
34	I-880 SB	Davis Street Off-Ramp	8,240
38	I-580 EB	Seminary Avenue Off-Ramp	5,247
43	I-580 EB	Edwards Avenue Off-Ramp	8,040
45	I-580 EB	Keller Avenue Off-Ramp	7,861
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	7,700
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	6,049
55	I-580 WB	Keller Avenue Off-Ramp	6,136
60	I-580 WB	Seminary Avenue Off-Ramp	6,906
61	I-580 WB	SR 13 Off-Ramp	3,960

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			Effective	*Off-Ramp Data*							*Off-Ramp Volume Adjustment*								
	Freeway/ Direction	Off-ramp	Flow Rate v_p (pcph)	Type	Lanes	S_{FR} (mph)	V_R (vph)	Decel Lane (ft) L_{D1}	L_{D2}	L_{Deff}	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_R (pcph)
2	I-880 NB	Davis Street Off-Ramp	6,295	Right	1	50.0	862	1,500		1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	871
5	I-880 NB	98th Street Off-Ramp	7,786	Right	1	50.0	1,443	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,457
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,486	Right	1	50.0	939	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	948
23	I-880 SB	66th Street Off-Ramp	7,323	Right	2	50.0	925	150	1,200	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	934
26	I-880 SB	Hegenberger Road Off-Ramp	7,143	Right	2	50.0	859	100	1,250	1,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	868
34	I-880 SB	Davis Street Off-Ramp	8,240	Right	1	50.0	743	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	750
38	I-580 EB	Seminary Avenue Off-Ramp	5,247	Right	1	50.0	766	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	774
43	I-580 EB	Edwards Avenue Off-Ramp	8,040	Right	1	50.0	500	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	505
45	I-580 EB	Keller Avenue Off-Ramp	7,861	Right	1	50.0	490	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	495
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	7,700	Right	1	50.0	753	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	761
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	6,049	Right	1	50.0	662	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	669
55	I-580 WB	Keller Avenue Off-Ramp	6,136	Right	1	50.0	353	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	357
60	I-580 WB	Seminary Avenue Off-Ramp	6,906	Right	1	50.0	286	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	289
61	I-580 WB	SR 13 Off-Ramp	3,960	Major	2	65.0	2,660	350	800	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,687

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_u (pcph)
2	I-880 NB	Davis Street Off-Ramp	No											
5	I-880 NB	98th Street Off-Ramp	On	4,000	347	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	350
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No											
23	I-880 SB	66th Street Off-Ramp	On	2,550	750	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	758
26	I-880 SB	Hegenberger Road Off-Ramp	On	3,100	620	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	626
34	I-880 SB	Davis Street Off-Ramp	On	3,700	434	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	438
38	I-580 EB	Seminary Avenue Off-Ramp	No											
43	I-580 EB	Edwards Avenue Off-Ramp	On	950	971	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	981
45	I-580 EB	Keller Avenue Off-Ramp	Off	2,500	500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	505
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	5,300	329	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	332
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No											
55	I-580 WB	Keller Avenue Off-Ramp	On	5,400	749	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	756
60	I-580 WB	Seminary Avenue Off-Ramp	On	1,200	820	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	828
61	I-580 WB	SR 13 Off-Ramp	Off	1,250	286	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	289

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
2	I-880 NB	Davis Street Off-Ramp	On	1,900	434	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	438
5	I-880 NB	98th Street Off-Ramp	On	1,250	711	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	718
20	I-880 SB	42nd Avenue/High Street Off-Ramp	On	3,650	781	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	789
23	I-880 SB	66th Street Off-Ramp	On	3,400	750	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	758
26	I-880 SB	Hegenberger Road Off-Ramp	On	1,350	620	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	626
34	I-880 SB	Davis Street Off-Ramp	On	1,950	434	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	438
38	I-580 EB	Seminary Avenue Off-Ramp	On	3,700	2,588	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,614
43	I-580 EB	Edwards Avenue Off-Ramp	Off	2,500	490	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	495
45	I-580 EB	Keller Avenue Off-Ramp	On	2,300	329	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	332
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	2,000	659	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	666
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	On	1,900	749	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	756
55	I-580 WB	Keller Avenue Off-Ramp	On	2,300	303	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	306
60	I-580 WB	Seminary Avenue Off-Ramp	Off	1,250	2,660	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,687
61	I-580 WB	SR 13 Off-Ramp	On	1,900	257	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	260

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*							
	Freeway/		L_{EQ}		P_{FD} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_3, v_{av34}	v_3, v_{av34}	v_3, v_{av34}	v_{12a}	Max v_{12a}
	Direction	Off-ramp	13-12	13-13	13-9	13-10	13-11	P_{FD}	(pcph)	(pcph)	(pcph)	LOS F?	(pcphpl)	> 2,700?	>1.5*v_{12}/2?	(pcph)	(pcph)
2	I-880 NB	Davis Street Off-Ramp		699	0.563			0.436	3,236	6,295	11,000	No	1,530	No	No	3,236	4,400
5	I-880 NB	98th Street Off-Ramp	2,516	1,978	0.498	0.466		0.436	4,217	7,786	8,800	No	1,785	No	No	4,217	4,400
20	I-880 SB	42nd Avenue/High Street Off-Ramp		1,407	0.529			0.436	3,799	7,486	8,800	No	1,844	No	No	3,799	4,400
23	I-880 SB	66th Street Off-Ramp	4,497	1,327	0.534	0.534		0.260	2,595	7,323	8,800	No	2,364	No	Yes	2,929	4,400
26	I-880 SB	Hegenberger Road Off-Ramp	3,698	1,041	0.542	0.542		0.260	2,499	7,143	8,800	No	2,322	No	Yes	2,857	4,400
34	I-880 SB	Davis Street Off-Ramp	2,154	719	0.519	0.467		0.436	4,016	8,240	8,800	No	2,112	No	No	4,016	4,400
38	I-580 EB	Seminary Avenue Off-Ramp		3,752	0.593			0.436	2,724	5,247	8,800	No	1,261	No	No	2,724	4,400
43	I-580 EB	Edwards Avenue Off-Ramp	4,508	701	0.536	0.536	0.472	0.436	3,790	8,040	8,800	No	2,125	No	No	3,790	4,400
45	I-580 EB	Keller Avenue Off-Ramp	2,358	464	0.541			0.436	3,707	7,861	8,800	No	2,077	No	No	3,707	4,400
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	1,746	1,068	0.533	0.455		0.436	3,786	7,700	8,800	No	1,957	No	No	3,786	4,400
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp		1,066	0.578			0.436	3,014	6,049	8,800	No	1,517	No	No	3,014	4,400
55	I-580 WB	Keller Avenue Off-Ramp	4,088	372	0.590	0.562		0.436	2,876	6,136	9,600	No	1,630	No	No	2,876	4,400
60	I-580 WB	Seminary Avenue Off-Ramp	3,984	3,267	0.574	0.574	0.739	0.436	3,174	6,906	9,600	No	1,866	No	No	3,174	4,400
61	I-580 WB	SR 13 Off-Ramp	-6,861	8,131	0.537			0.260	3,018	3,960	9,600	No	471	No	No	3,018	4,400

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Exceeds Max v_{12a}?
2	I-880 NB	Davis Street Off-Ramp	No
5	I-880 NB	98th Street Off-Ramp	No
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No
23	I-880 SB	66th Street Off-Ramp	No
26	I-880 SB	Hegenberger Road Off-Ramp	No
34	I-880 SB	Davis Street Off-Ramp	No
38	I-580 EB	Seminary Avenue Off-Ramp	No
43	I-580 EB	Edwards Avenue Off-Ramp	No
45	I-580 EB	Keller Avenue Off-Ramp	No
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	No
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No
55	I-580 WB	Keller Avenue Off-Ramp	No
60	I-580 WB	Seminary Avenue Off-Ramp	No
61	I-580 WB	SR 13 Off-Ramp	No

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	Off-ramp	v_{Fo} (pcph)	Max v_{Fo} (pcph)	LOS F?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. D_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
2	I-880 NB	Davis Street Off-Ramp	5,425	11,000	No	871	2,100	No	**18.6**	**B**	0.311	57.8	1,530	69.2	62.9
5	I-880 NB	98th Street Off-Ramp	6,328	8,800	No	1,457	2,100	No	**39.2**	**E**	0.364	56.6	1,785	68.2	61.4
20	I-880 SB	42nd Avenue/High Street Off-Ramp	6,538	8,800	No	948	2,100	No	**34.2**	**D**	0.318	57.7	1,844	68.0	62.3
23	I-880 SB	66th Street Off-Ramp	6,389	8,800	No	934	4,200	No	**15.9**	**B**	0.317	57.7	2,197	66.6	62.8
26	I-880 SB	Hegenberger Road Off-Ramp	6,275	8,800	No	868	4,200	No	**15.8**	**B**	0.311	57.8	2,143	66.8	62.9
34	I-880 SB	Davis Street Off-Ramp	7,490	8,800	No	750	2,100	No	**37.0**	**E**	0.301	58.1	2,112	67.0	62.3
38	I-580 EB	Seminary Avenue Off-Ramp	4,473	8,800	No	774	2,100	No	**26.8**	**C**	0.303	58.0	1,261	70.3	63.3
43	I-580 EB	Edwards Avenue Off-Ramp	7,535	8,800	No	505	2,100	No	**35.9**	**E**	0.278	58.6	2,125	66.9	62.7
45	I-580 EB	Keller Avenue Off-Ramp	7,366	8,800	No	495	2,100	No	**34.3**	**D**	0.278	58.6	2,077	67.1	62.8
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,939	8,800	No	761	2,100	No	**35.9**	**E**	0.301	58.1	1,957	67.6	62.5
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,380	8,800	No	669	2,100	No	**28.8**	**D**	0.293	58.3	1,517	69.3	63.3
55	I-580 WB	Keller Avenue Off-Ramp	5,779	8,800	No	357	2,100	No	**27.6**	**C**	0.265	58.9	1,630	68.8	63.8
60	I-580 WB	Seminary Avenue Off-Ramp	6,617	8,800	No	289	2,100	No	**29.7**	**D**	0.259	59.0	1,866	67.9	63.5
61	I-580 WB	SR 13 Off-Ramp	1,273	8,800	No	2,687	4,400	No	**10.8**	**B**	0.280	58.6	471	71.3	61.2

Leisch Method for Weaving Analysis

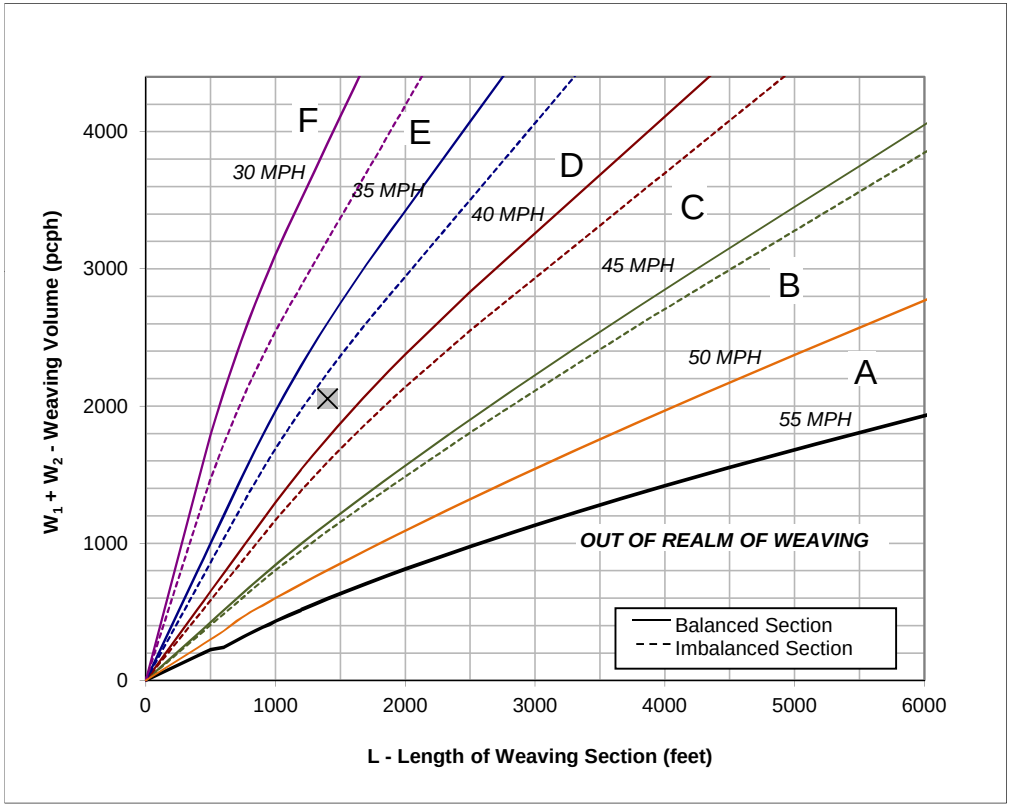
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,400

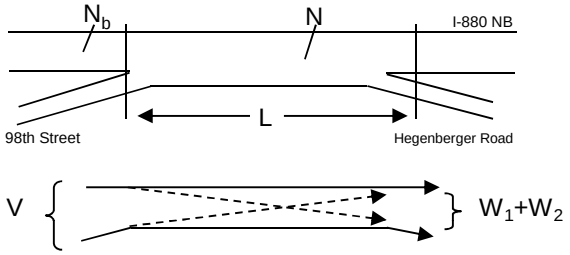
	Total Weaving Section (V)	On-ramp to Mainline (W_1)	Mainline to Off-ramp (W_2)
Volume (vph)*	7,142	1,026	1,008
Truck Percentage	3%	2%	2%
PCE for Trucks	1.5	1.5	1.5
Volume (pcph)	7,249	1,036	1,018

Project Information

Project	Coliseum City SP/EIR
Scenario	EPP - PM Peak
Freeway	I-880 NB
On-ramp	98th Street
Off-ramp	Hegenberger Road



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **35.4**
4. Weaving Intensity Factor (k) **2.87**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,831**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

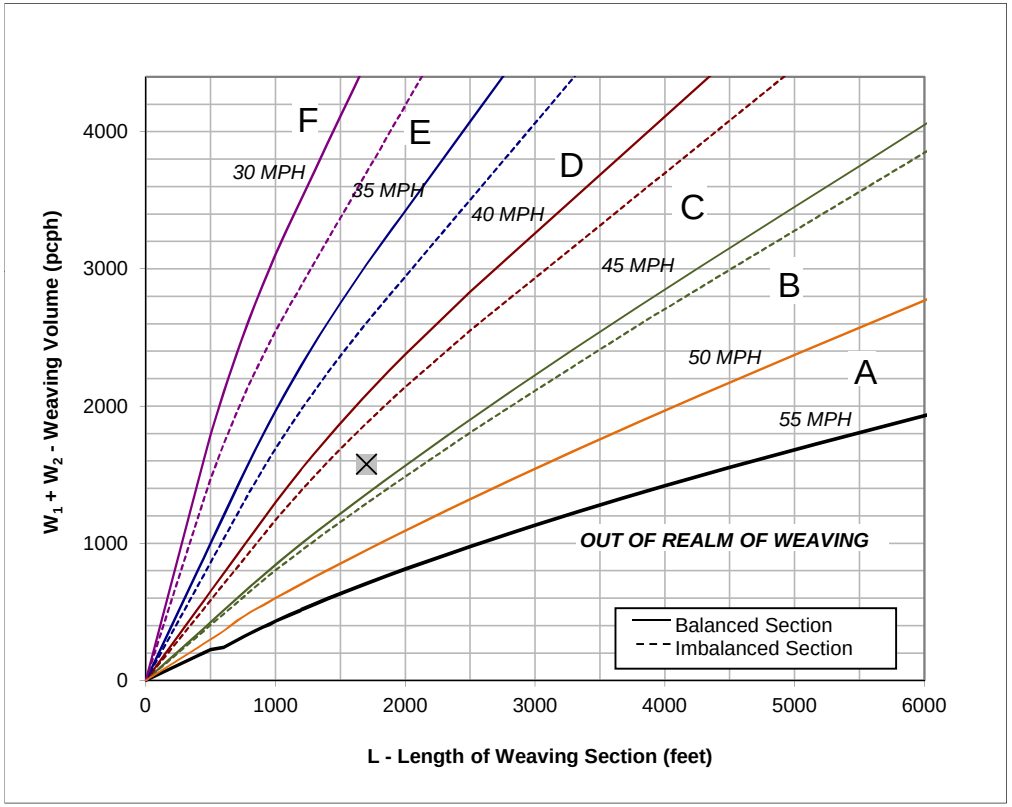
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,700

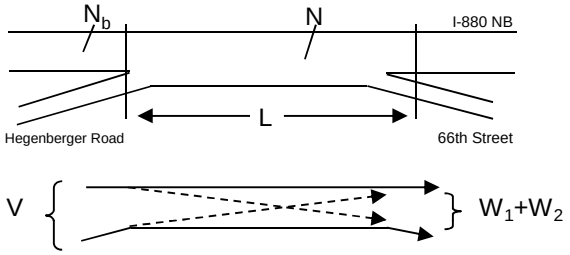
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,068	Volume (vph)*	934	Volume (vph)*	628
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,174	Volume (pcph)	943	Volume (pcph)	634

Project Information

Project	Coliseum City SP/EIR
Scenario	EPP - PM Peak
Freeway	I-880 NB
On-ramp	Hegenberger Road
Off-ramp	66th Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   45 MPH and **50 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **40.8**
4. Weaving Intensity Factor (k) **2.46**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,620**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

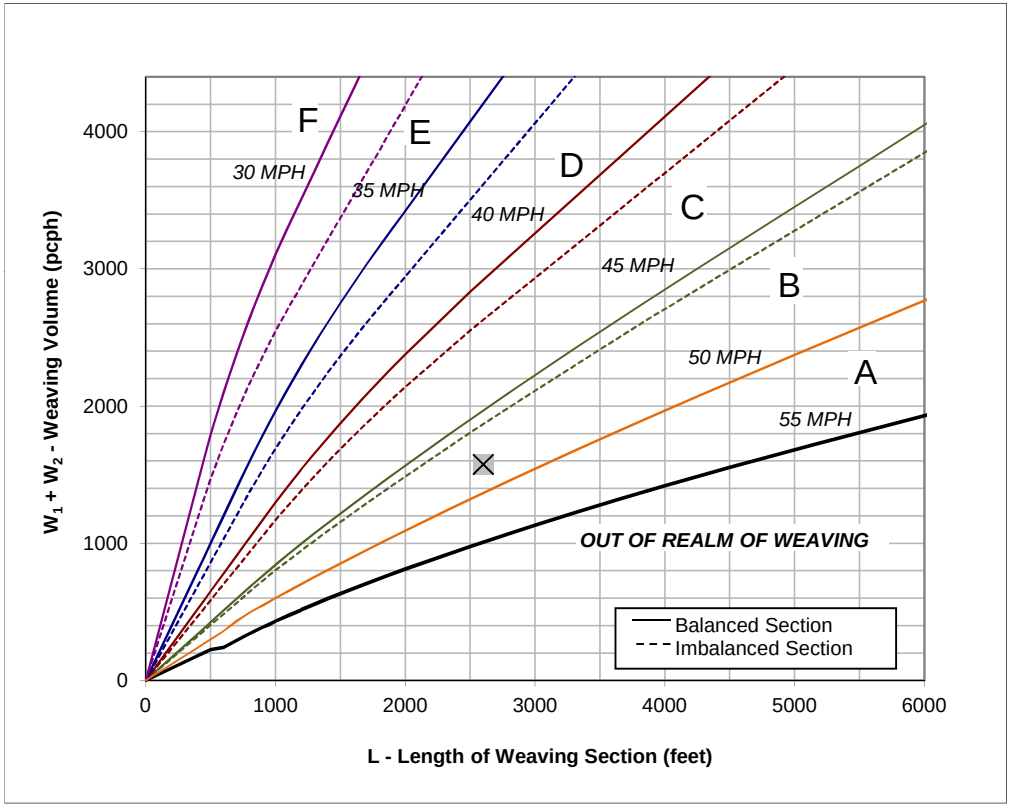
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,600

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,232	Volume (vph)*	792	Volume (vph)*	768
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,340	Volume (pcph)	800	Volume (pcph)	776

Project Information

Project	Coliseum City SP/EIR
Scenario	EPP - PM Peak
Freeway	I-880 NB
On-ramp	66th Street
Off-ramp	High Street



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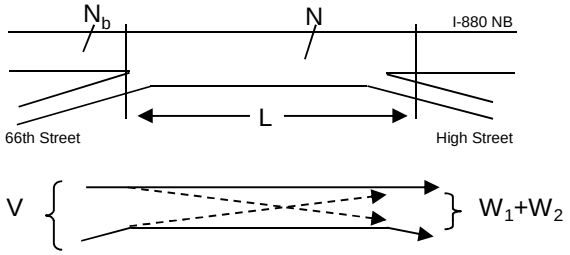


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   45 MPH and **50 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **47.9**
4. Weaving Intensity Factor (k) **1.54**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,551**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

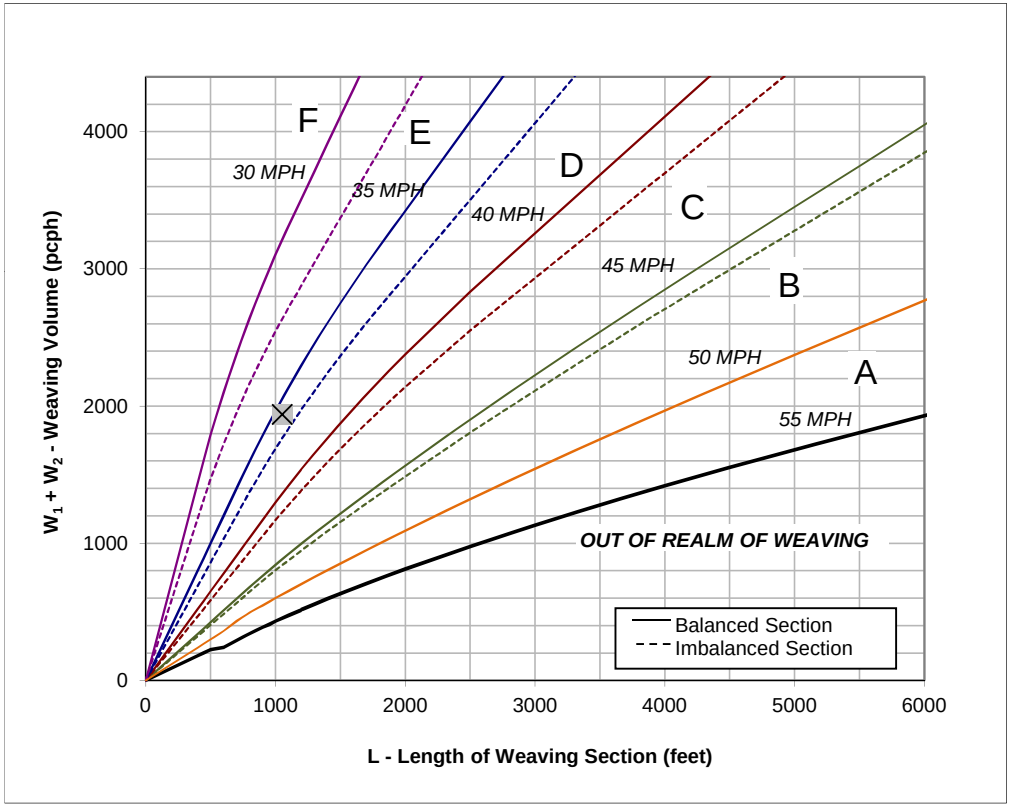
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,050

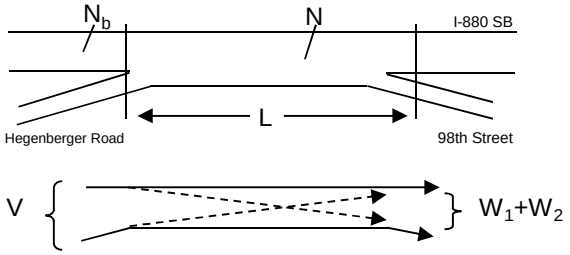
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,411	Volume (vph)*	1,335	Volume (vph)*	586
Truck Percentage	1%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,448	Volume (pcph)	1,348	Volume (pcph)	592

Project Information

Project	Coliseum City SP/EIR
Scenario	EPP - PM Peak
Freeway	I-880 SB
On-ramp	Hegenberger Road
Off-ramp	98th Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   35 MPH and **40 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **33.4**
4. Weaving Intensity Factor (k) **2.96**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,722**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

HCM 2010
Basic Freeway Segments
Operational Analysis

Jurisdiction: Caltrans District 4
Analysis Year: 2035 AM
Scenario: 2035 No Project

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information | *Flow Rate Calculation*

	Freeway/ Direction	From/To	Analysis Time Period	Volume (vph)	PHF	Lanes	HOV Lane?	HOV Lane Volume	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_p (pcphpl)
1	I-880 NB	South of Davis Street	AM	7,800	1.00	5	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,607
4	I-880 NB	Davis Street to 98th Street	AM	7,930	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,042
18	I-880 NB	North of High Street	AM	7,600	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,957
19	I-880 SB	North of High Street	AM	8,180	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,106
22	I-880 SB	High Street to 66th Street	AM	7,920	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,039
25	I-880 SB	66th Street to Hegenberger Road	AM	7,780	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,003
33	I-880 SB	98th Street to Davis Street	AM	7,020	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,808
37	I-580 EB	West of Seminary Avenue Off-Ramp	AM	4,320	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,080
39	I-580 EB	West of SR 13 Merge	AM	4,070	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,018
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	AM	6,730	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,683
44	I-580 EB	Edwards Avenue to Keller Avenue	AM	6,060	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,515
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	AM	6,050	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,513
50	I-580 EB	East of 98th Avenue/Golf Links Road	AM	5,910	1.00	5	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,182
51	I-580 WB	East of 98th Avenue/Golf Links Road	AM	5,530	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,383
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	AM	5,470	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,368
57	I-580 WB	Keller Avenue to Edwards Avenue	AM	5,890	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,473
59	I-580 WB	Edwards Avenue to Seminary Avenue	AM	6,920	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,730
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	AM	4,260	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,065
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	AM	4,540	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,135

HCM 2010
Basic Freeway Segments
Operational Analysis

General Information			*Speed Calculation*									*Results*		
	Freeway/ Direction	From/To	Lane Width (ft)	f_{LW}	R. Shoulder Width (ft)	f_{LC}	TRD (per mi)	Calculated FFS (mph)	Measured FFS (mph)	FFS (mph)	v_p/c	Speed, S (mph)	Density, D (pcplpm)	Level of Service
1	I-880 NB	South of Davis Street	12	0	10	0	2.3	68.9	65.0	70	0.67	68.1	**23.6**	**C**
4	I-880 NB	Davis Street to 98th Street	12	0	14	0	2.3	68.9	65.0	70	0.85	61.8	**33.1**	**D**
18	I-880 NB	North of High Street	11	1.9	1	1	2.5	65.5	65.0	65	0.83	60.6	**32.3**	**D**
19	I-880 SB	North of High Street	11	1.9	1	1	2.3	66.0	65.0	65	0.90	57.9	**36.4**	**E**
22	I-880 SB	High Street to 66th Street	12	0	10	0	2.3	68.9	65.0	70	0.85	61.8	**33.0**	**D**
25	I-880 SB	66th Street to Hegenberger Road	12	0	14	0	2.3	68.9	65.0	70	0.83	62.5	**32.0**	**D**
33	I-880 SB	98th Street to Davis Street	12	0	12	0	2.3	68.9	65.0	70	0.75	65.7	**27.5**	**D**
37	I-580 EB	West of Seminary Avenue Off-Ramp	12	0	9	0	2.5	68.4	65.0	70	0.45	70.0	**15.4**	**B**
39	I-580 EB	West of SR 13 Merge	12	0	12	0	2.2	69.2	65.0	70	0.42	70.0	**14.5**	**B**
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	12	0	12	0	2.2	69.2	65.0	70	0.70	67.3	**25.0**	**C**
44	I-580 EB	Edwards Avenue to Keller Avenue	12	0	11	0	2.2	69.2	65.0	70	0.63	68.8	**22.0**	**C**
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.63	68.9	**22.0**	**C**
50	I-580 EB	East of 98th Avenue/Golf Links Road	12	0	9	0	2	69.6	65.0	70	0.49	70.0	**16.9**	**B**
51	I-580 WB	East of 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.58	69.6	**19.9**	**C**
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	12	0	10	0	2.5	68.4	65.0	70	0.57	69.7	**19.6**	**C**
57	I-580 WB	Keller Avenue to Edwards Avenue	12	0	12	0	2.3	68.9	65.0	70	0.61	69.1	**21.3**	**C**
59	I-580 WB	Edwards Avenue to Seminary Avenue	12	0	8	0	2.3	68.9	65.0	70	0.72	66.7	**25.9**	**C**
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	12	0	12	0	2.3	68.9	65.0	70	0.44	70.0	**15.2**	**B**
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	12	0	10	0	2.5	68.4	65.0	70	0.47	70.0	**16.2**	**B**

HCM 2010
Merge Ramp Junctions
Capacity Analysis

Jurisdiction Caltrans District 4
Analysis Year 2035 AM
Scenario 2035 No Project

Agency or Company Caltrans
Date 1/21/2014
Project Description Coliseum City SP/EIR

General Information | *Freeway Data* | *Freeway Volume Adjustment*

	Freeway/ Direction	On-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
3	I-880 NB	Davis Street On-Ramp	AM	4	65	7,000	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
7	I-880 NB	98th Street WB On-Ramp	AM	5	65	7,170	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
11	I-880 NB	Hegenberger SB On-Ramp	AM	5	65	7,100	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
14	I-880 NB	Coliseum Way/66th Street On-Ramp	AM	4	65	6,560	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
17	I-880 NB	High Street On-Ramp	AM	4	65	6,610	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
21	I-880 SB	High Street/Oakport Street On-Ramp	AM	4	65	6,660	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
24	I-880 SB	66th Street On-Ramp	AM	4	65	7,280	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
31	I-880 SB	98th Street WB Loop On-Ramp	AM	4	65	5,570	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
32	I-880 SB	98th Street EB On-Ramp	AM	4	65	6,060	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
40	I-580 EB	SR 13 Merge	AM	4	65	4,070	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
41	I-580 EB	Seminary Avenue On-Ramp	AM	4	65	6,210	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	5,030	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	4,750	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
56	I-580 WB	Keller Avenue On-Ramp	AM	4	65	5,220	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
58	I-580 WB	Edwards Avenue On-Ramp	AM	4	65	5,890	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	AM	4	65	4,260	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	Flow Rate v_F (pcph)
3	I-880 NB	Davis Street On-Ramp	7,210
7	I-880 NB	98th Street WB On-Ramp	7,385
11	I-880 NB	Hegenberger SB On-Ramp	7,313
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,757
17	I-880 NB	High Street On-Ramp	6,808
21	I-880 SB	High Street/Oakport Street On-Ramp	6,860
24	I-880 SB	66th Street On-Ramp	7,498
31	I-880 SB	98th Street WB Loop On-Ramp	5,737
32	I-880 SB	98th Street EB On-Ramp	6,242
40	I-580 EB	SR 13 Merge	4,070
41	I-580 EB	Seminary Avenue On-Ramp	6,210
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	5,030
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,750
56	I-580 WB	Keller Avenue On-Ramp	5,220
58	I-580 WB	Edwards Avenue On-Ramp	5,890
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,260

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			Effective	*On-Ramp Data*							*On-Ramp Volume Adjustment*								
	Freeway/		Flow Rate			S_{FR}	V_R	Accel Lane (ft)					Truck/						Flow Rate
	Direction	On-ramp	v_p (pcph)	Type	Lanes	(mph)	(vph)	L_{A1}	L_{A2}	L_{Aeff}	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_R (pcph)
3	I-880 NB	Davis Street On-Ramp	7,210	Right	1	40.0	560	450		450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	566
7	I-880 NB	98th Street WB On-Ramp	5,391	Right	1	50.0	330	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	333
11	I-880 NB	Hegenberger SB On-Ramp	5,338	Right	1	25.0	250	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	253
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,757	Right	2	50.0	800	300	1,500	2,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	808
17	I-880 NB	High Street On-Ramp	6,808	Right	1	50.0	990	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,000
21	I-880 SB	High Street/Oakport Street On-Ramp	6,860	Right	1	40.0	1,260	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,273
24	I-880 SB	66th Street On-Ramp	7,498	Right	1	50.0	500	550		550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	505
31	I-880 SB	98th Street WB Loop On-Ramp	5,737	Right	1	25.0	490	250		250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	495
32	I-880 SB	98th Street EB On-Ramp	6,242	Right	1	35.0	960	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	970
40	I-580 EB	SR 13 Merge	4,070	Major	1	65.0	2,400	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,424
41	I-580 EB	Seminary Avenue On-Ramp	6,210	Right	1	50.0	520	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	525
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	5,030	Right	1	50.0	880	800		800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	889
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,750	Right	1	50.0	720	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	727
56	I-580 WB	Keller Avenue On-Ramp	5,220	Right	1	50.0	670	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	677
58	I-580 WB	Edwards Avenue On-Ramp	5,890	Right	1	50.0	1,030	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	1,040
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,260	Right	1	50.0	280	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	283

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/			Distance	Volume			Truck/							Flow Rate
	Direction	On-ramp	Exists?	L_{UP}	(vph)	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_U (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	1,900	272	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	289
7	I-880 NB	98th Street WB On-Ramp	On	1,100	444	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	472
11	I-880 NB	Hegenberger SB On-Ramp	On	1,750	498	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	529
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	4,550	765	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	813
17	I-880 NB	High Street On-Ramp	Off	3,300	654	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	695
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	3,650	1,081	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,149
24	I-880 SB	66th Street On-Ramp	Off	3,400	808	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	859
31	I-880 SB	98th Street WB Loop On-Ramp	Off	1,200	854	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	908
32	I-880 SB	98th Street EB On-Ramp	On	750	381	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	405
40	I-580 EB	SR 13 Merge	Off	3,700	472	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	502
41	I-580 EB	Seminary Avenue On-Ramp	On	1,000	2,300	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,445
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Off	2,000	877	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	932
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	1,900	703	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	747
56	I-580 WB	Keller Avenue On-Ramp	Off	2,300	206	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	219
58	I-580 WB	Edwards Avenue On-Ramp	On	2,800	549	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	584
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	Off	1,950	2,289	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	2,434

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/			Distance	Volume			Truck/							Flow Rate
	Direction	On-ramp	Exists?	L_{DOWN}	(vph)	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_D (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	4,000	1,297	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,310
7	I-880 NB	98th Street WB On-Ramp	Off	1,700	919	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	928
11	I-880 NB	Hegenberger SB On-Ramp	Off	2,100	765	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	773
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	3,200	654	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	661
17	I-880 NB	High Street On-Ramp	No										1.00	
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	2,550	808	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	816
24	I-880 SB	66th Street On-Ramp	Off	3,100	980	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	990
31	I-880 SB	98th Street WB Loop On-Ramp	On	750	550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	556
32	I-880 SB	98th Street EB On-Ramp	Off	3,700	830	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	838
40	I-580 EB	SR 13 Merge	On	1,000	423	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	427
41	I-580 EB	Seminary Avenue On-Ramp	Off	950	597	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	603
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No										1.00	
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	5,400	206	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	208
56	I-580 WB	Keller Avenue On-Ramp	On	2,800	1,025	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,035
58	I-580 WB	Edwards Avenue On-Ramp	Off	1,200	215	1	Level	2%	0%	1.5	1.2	0.99	1.00	217
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No										1.00	

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*						
	Freeway/		L_{EQ}		P_{FM} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_{Fo}	Max v_{Fo}		v_3, v_{av34}
	Direction	On-ramp	13-6	13-7	13-3	13-4	13-5	P_{FM}	(pcph)	(pcph)	(pcph)	LOS F?	(pcph)	(pcph)	LOS F?	(pcphpl)
3	I-880 NB	Davis Street On-Ramp	1,554	8,304	0.590	0.612	0.635	0.147	1,061	7,210	8,800	No	7,776	8,800	No	3,075
7	I-880 NB	98th Street WB On-Ramp	1,571	6,550	0.586		0.692	0.176	950	5,391	11,000	No	5,724	11,000	No	2,221
11	I-880 NB	Hegenberger SB On-Ramp	235	5,453	0.586		0.645	0.186	994	5,338	11,000	No	5,591	11,000	No	2,172
14	I-880 NB	Coliseum Way/66th Street On-Ramp	2,764	1,976	0.636	0.749	0.603	0.209	1,412	6,757	8,800	No	7,565	8,800	No	2,672
17	I-880 NB	High Street On-Ramp	1,951		0.582	0.667		0.093	632	6,808	8,800	No	7,808	8,800	No	3,088
21	I-880 SB	High Street/Oakport Street On-Ramp	1,608	5,355	0.589	0.717	0.633	0.059	403	6,860	8,800	No	8,132	8,800	No	3,228
24	I-880 SB	66th Street On-Ramp	2,170	5,876	0.593	0.670	0.633	0.155	1,160	7,498	8,800	No	8,003	8,800	No	3,169
31	I-880 SB	98th Street WB Loop On-Ramp	350	4,074	0.585	0.638		0.156	895	5,737	8,800	No	6,232	8,800	No	2,421
32	I-880 SB	98th Street EB On-Ramp	1,105	5,916	0.586		0.608	0.097	603	6,242	8,800	No	7,211	8,800	No	2,819
40	I-580 EB	SR 13 Merge	2,565	2,803	0.589	0.660		0.601	2,446	4,070	8,800	No	6,494	8,800	No	812
41	I-580 EB	Seminary Avenue On-Ramp	1,788	4,255	0.586		0.716	0.152	945	6,210	8,800	No	6,735	8,800	No	2,633
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	1,835		0.600	0.610		0.107	537	5,030	8,800	No	5,919	8,800	No	2,247
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	1,541	1,415	0.587	0.610	0.559	0.127	603	4,750	8,800	No	5,477	8,800	No	2,074
56	I-580 WB	Keller Avenue On-Ramp	1,630	7,040	0.587	0.629		0.133	695	5,220	8,800	No	5,897	8,800	No	2,262
58	I-580 WB	Edwards Avenue On-Ramp	1,807	1,593	0.585		0.596	0.144	845	5,890	9,600	No	6,930	8,800	No	2,522
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,296	######	0.585	0.787		0.238	1,015	4,260	9,600	No	4,543	8,800	No	1,623

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	v_3, v_{av34} > 2,700?	v_3, v_{av34} >1.5*v_{12}/2?	v_{12a} (pcph)
3	I-880 NB	Davis Street On-Ramp	Yes	Yes	2,884
7	I-880 NB	98th Street WB On-Ramp	No	Yes	2,156
11	I-880 NB	Hegenberger SB On-Ramp	No	Yes	2,135
14	I-880 NB	Coliseum Way/66th Street On-Ramp	No	Yes	2,703
17	I-880 NB	High Street On-Ramp	Yes	Yes	2,723
21	I-880 SB	High Street/Oakport Street On-Ramp	Yes	Yes	2,744
24	I-880 SB	66th Street On-Ramp	Yes	Yes	2,999
31	I-880 SB	98th Street WB Loop On-Ramp	No	Yes	2,295
32	I-880 SB	98th Street EB On-Ramp	Yes	Yes	2,497
40	I-580 EB	SR 13 Merge	No	No	2,446
41	I-580 EB	Seminary Avenue On-Ramp	No	Yes	2,484
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No	Yes	2,012
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	No	Yes	1,900
56	I-580 WB	Keller Avenue On-Ramp	No	Yes	2,088
58	I-580 WB	Edwards Avenue On-Ramp	No	Yes	2,356
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No	Yes	1,704

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information						*Results*		*Speed Estimation*				
	Freeway/		v_{R12a}	Max v_{R12a}	Exceeds	v_R	Max v_R		Density, D	Level of	Int. Var.	Inf. Area	v_{OA}	Out Lns.	All vehs.
	Direction	On-ramp	(pcph)	(pcph)	Max v_{R12a}?	(pcph)	(pcph)	LOS F?	(pcplpm)	Service	M_S	S_R (mph)	(pcphpl)	S_O (mph)	S (mph)
3	I-880 NB	Davis Street On-Ramp	3,450	4,600	No	566	2,000	No	**29.3**	**D**	0.408	55.6	2,163	59.0	57.5
7	I-880 NB	98th Street WB On-Ramp	2,490	4,600	No	333	2,100	No	**22.9**	**C**	0.338	57.2	1,617	61.0	59.3
11	I-880 NB	Hegenberger SB On-Ramp	2,388	4,600	No	253	1,900	No	**22.1**	**C**	0.348	57.0	1,602	61.0	59.2
14	I-880 NB	Coliseum Way/66th Street On-Ramp	3,511	4,600	No	808	4,200	No	**19.3**	**B**	0.242	59.4	2,027	59.5	59.5
17	I-880 NB	High Street On-Ramp	3,723	4,600	No	1,000	2,100	No	**33.1**	**D**	0.467	54.2	2,042	59.4	56.8
21	I-880 SB	High Street/Oakport Street On-Ramp	4,017	4,600	No	1,273	2,000	No	**33.7**	**D**	0.505	53.4	2,058	59.4	56.3
24	I-880 SB	66th Street On-Ramp	3,504	4,600	No	505	2,100	No	**29.1**	**D**	0.396	55.9	2,250	58.7	57.4
31	I-880 SB	98th Street WB Loop On-Ramp	2,790	4,600	No	495	1,900	No	**25.4**	**C**	0.372	56.4	1,721	60.6	58.7
32	I-880 SB	98th Street EB On-Ramp	3,466	4,600	No	970	2,000	No	**30.2**	**D**	0.425	55.2	1,873	60.1	57.6
40	I-580 EB	SR 13 Merge	4,870	4,600	**Yes**	2,424	2,350	**Yes**	**-**	**F**	-	-	-	-	-
41	I-580 EB	Seminary Avenue On-Ramp	3,009	4,600	No	525	2,100	No	**26.8**	**C**	0.370	56.5	1,863	60.1	58.4
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	2,901	4,600	No	889	2,100	No	**22.7**	**C**	0.312	57.8	1,509	61.4	59.6
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	2,627	4,600	No	727	2,100	No	**23.4**	**C**	0.340	57.2	1,425	61.7	59.4
56	I-580 WB	Keller Avenue On-Ramp	2,765	4,600	No	677	2,100	No	**24.5**	**C**	0.348	57.0	1,566	61.2	59.1
58	I-580 WB	Edwards Avenue On-Ramp	3,396	4,600	No	1,040	2,100	No	**29.9**	**D**	0.412	55.5	1,767	60.4	57.9
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,987	4,600	No	283	2,100	No	**19.3**	**B**	0.324	57.5	1,278	62.2	60.1

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

Jurisdiction Caltrans District 4
Analysis Year 2035 AM
Scenario 2035 No Project

Agency or Company Caltrans
Date 1/21/2014
Project Description Coliseum City SP/EIR

General Information | *Mainline Data* | *Mainline Volume Adjustment*

	Freeway/ Direction	Off-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
2	I-880 NB	Davis Street Off-Ramp	AM	5	65	7,800	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
5	I-880 NB	98th Street Off-Ramp	AM	4	65	7,930	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
20	I-880 SB	42nd Avenue/High Street Off-Ramp	AM	4	65	8,180	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
23	I-880 SB	66th Street Off-Ramp	AM	4	65	7,920	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
26	I-880 SB	Hegenberger Road Off-Ramp	AM	4	65	7,780	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
34	I-880 SB	Davis Street Off-Ramp	AM	4	65	7,020	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
38	I-580 EB	Seminary Avenue Off-Ramp	AM	4	65	4,315	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
43	I-580 EB	Edwards Avenue Off-Ramp	AM	4	65	6,730	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
45	I-580 EB	Keller Avenue Off-Ramp	AM	4	65	6,060	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	6,050	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	5,530	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
55	I-580 WB	Keller Avenue Off-Ramp	AM	4	65	5,470	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
60	I-580 WB	Seminary Avenue Off-Ramp	AM	4	65	6,920	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
61	I-580 WB	SR 13 Off-Ramp	AM	4	65	6,660	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Flow Rate v_F (pcph)
2	I-880 NB	Davis Street Off-Ramp	8,034
5	I-880 NB	98th Street Off-Ramp	8,168
20	I-880 SB	42nd Avenue/High Street Off-Ramp	8,425
23	I-880 SB	66th Street Off-Ramp	8,158
26	I-880 SB	Hegenberger Road Off-Ramp	8,013
34	I-880 SB	Davis Street Off-Ramp	7,231
38	I-580 EB	Seminary Avenue Off-Ramp	4,315
43	I-580 EB	Edwards Avenue Off-Ramp	6,730
45	I-580 EB	Keller Avenue Off-Ramp	6,060
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,050
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,530
55	I-580 WB	Keller Avenue Off-Ramp	5,470
60	I-580 WB	Seminary Avenue Off-Ramp	6,920
61	I-580 WB	SR 13 Off-Ramp	6,660

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			Effective	*Off-Ramp Data*							*Off-Ramp Volume Adjustment*								
	Freeway/		Flow Rate			S_{FR}	V_R	Decel Lane (ft)					Truck/						Flow Rate
	Direction	Off-ramp	v_p (pcph)	Type	Lanes	(mph)	(vph)	L_{D1}	L_{D2}	L_{Deff}	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_R (pcph)
2	I-880 NB	Davis Street Off-Ramp	6,427	Right	1	50.0	800	1,500		1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	808
5	I-880 NB	98th Street Off-Ramp	8,168	Right	1	50.0	1,160	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,172
20	I-880 SB	42nd Avenue/High Street Off-Ramp	8,425	Right	1	50.0	1,520	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,535
23	I-880 SB	66th Street Off-Ramp	8,158	Right	2	50.0	640	150	1,200	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	646
26	I-880 SB	Hegenberger Road Off-Ramp	8,013	Right	2	50.0	2,010	100	1,250	1,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,030
34	I-880 SB	Davis Street Off-Ramp	7,231	Right	1	50.0	700	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	707
38	I-580 EB	Seminary Avenue Off-Ramp	4,315	Right	1	50.0	780	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	788
43	I-580 EB	Edwards Avenue Off-Ramp	6,730	Right	1	50.0	670	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	677
45	I-580 EB	Keller Avenue Off-Ramp	6,060	Right	1	50.0	420	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,050	Right	1	50.0	1,020	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,030
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,530	Right	1	50.0	780	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	788
55	I-580 WB	Keller Avenue Off-Ramp	5,470	Right	1	50.0	250	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	253
60	I-580 WB	Seminary Avenue Off-Ramp	6,920	Right	1	50.0	260	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	263
61	I-580 WB	SR 13 Off-Ramp	6,660	Major	2	65.0	2,400	350	800	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,424

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_u (pcph)
2	I-880 NB	Davis Street Off-Ramp	No											
5	I-880 NB	98th Street Off-Ramp	On	4,000	560	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	566
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No											
23	I-880 SB	66th Street Off-Ramp	On	2,550	1,260	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,273
26	I-880 SB	Hegenberger Road Off-Ramp	On	3,100	500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	505
34	I-880 SB	Davis Street Off-Ramp	On	3,700	960	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	970
38	I-580 EB	Seminary Avenue Off-Ramp	No											
43	I-580 EB	Edwards Avenue Off-Ramp	On	950	520	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	525
45	I-580 EB	Keller Avenue Off-Ramp	Off	2,500	670	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	677
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	5,300	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No											
55	I-580 WB	Keller Avenue Off-Ramp	On	5,400	720	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	727
60	I-580 WB	Seminary Avenue Off-Ramp	On	1,200	1,030	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,040
61	I-580 WB	SR 13 Off-Ramp	Off	1,250	260	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	263

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
2	I-880 NB	Davis Street Off-Ramp	On	1,900	370	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	374
5	I-880 NB	98th Street Off-Ramp	On	1,250	400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	404
20	I-880 SB	42nd Avenue/High Street Off-Ramp	On	3,650	1,260	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,273
23	I-880 SB	66th Street Off-Ramp	On	3,400	500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	505
26	I-880 SB	Hegenberger Road Off-Ramp	On	1,350	450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	455
34	I-880 SB	Davis Street Off-Ramp	On	1,950	700	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	707
38	I-580 EB	Seminary Avenue Off-Ramp	On	3,700	2,400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,424
43	I-580 EB	Edwards Avenue Off-Ramp	Off	2,500	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
45	I-580 EB	Keller Avenue Off-Ramp	On	2,300	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	2,000	880	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	889
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	On	1,900	720	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	727
55	I-580 WB	Keller Avenue Off-Ramp	On	2,300	670	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	677
60	I-580 WB	Seminary Avenue Off-Ramp	Off	1,250	2,400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,424
61	I-580 WB	SR 13 Off-Ramp	On	1,900	280	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	283

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*							
	Freeway/		L_{EQ}		P_{FD} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_3, v_{av34}	v_3, v_{av34}	v_3, v_{av34}	v_{12a}	Max v_{12a}
	Direction	Off-ramp	13-12	13-13	13-9	13-10	13-11	P_{FD}	(pcph)	(pcph)	(pcph)	LOS F?	(pcphpl)	> 2,700?	>1.5*v_{12}/2?	(pcph)	(pcph)
2	I-880 NB	Davis Street Off-Ramp		578	0.562			0.436	3,258	6,427	11,000	No	1,585	No	No	3,258	4,400
5	I-880 NB	98th Street Off-Ramp	3,331	885	0.502	0.484		0.436	4,222	8,168	8,800	No	1,973	No	No	4,222	4,400
20	I-880 SB	42nd Avenue/High Street Off-Ramp		4,054	0.479			0.436	4,539	8,425	8,800	No	1,943	No	No	4,539	4,400
23	I-880 SB	66th Street Off-Ramp	6,075	776	0.526	0.526		0.260	2,599	8,158	8,800	No	2,779	Yes	Yes	3,263	4,400
26	I-880 SB	Hegenberger Road Off-Ramp	4,999	3,146	0.466	0.503		0.260	3,586	8,013	8,800	No	2,214	No	No	3,586	4,400
34	I-880 SB	Davis Street Off-Ramp	5,282	1,075	0.547	0.547		0.436	3,551	7,231	8,800	No	1,840	No	No	3,551	4,400
38	I-580 EB	Seminary Avenue Off-Ramp		3,361	0.616			0.436	2,326	4,315	8,800	No	995	No	No	2,326	4,400
43	I-580 EB	Edwards Avenue Off-Ramp	3,012	619	0.561	0.561	0.496	0.436	3,316	6,730	8,800	No	1,707	No	No	3,316	4,400
45	I-580 EB	Keller Avenue Off-Ramp	3,799	518	0.589			0.436	2,881	6,060	8,800	No	1,589	No	No	2,881	4,400
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	3,141	1,542	0.561	0.528		0.436	3,219	6,050	8,800	No	1,416	No	No	3,219	4,400
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp		1,066	0.586			0.436	2,855	5,530	8,800	No	1,337	No	No	2,855	4,400
55	I-580 WB	Keller Avenue Off-Ramp	4,094	767	0.612	0.585		0.436	2,527	5,470	9,600	No	1,471	No	No	2,527	4,400
60	I-580 WB	Seminary Avenue Off-Ramp	4,949	2,915	0.575	0.575	0.713	0.436	3,165	6,920	9,600	No	1,877	No	No	3,165	4,400
61	I-580 WB	SR 13 Off-Ramp	6,572	6,666	0.482			0.260	3,525	6,660	9,600	No	1,567	No	No	3,525	4,400

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Exceeds Max v_{12a}?
2	I-880 NB	Davis Street Off-Ramp	No
5	I-880 NB	98th Street Off-Ramp	No
20	I-880 SB	42nd Avenue/High Street Off-Ramp	**Yes**
23	I-880 SB	66th Street Off-Ramp	No
26	I-880 SB	Hegenberger Road Off-Ramp	No
34	I-880 SB	Davis Street Off-Ramp	No
38	I-580 EB	Seminary Avenue Off-Ramp	No
43	I-580 EB	Edwards Avenue Off-Ramp	No
45	I-580 EB	Keller Avenue Off-Ramp	No
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	No
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No
55	I-580 WB	Keller Avenue Off-Ramp	No
60	I-580 WB	Seminary Avenue Off-Ramp	No
61	I-580 WB	SR 13 Off-Ramp	No

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	Off-ramp	v_{Fo} (pcph)	Max v_{Fo} (pcph)	LOS F?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. D_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
2	I-880 NB	Davis Street Off-Ramp	5,619	11,000	No	808	2,100	No	**18.8**	**B**	0.306	58.0	1,585	69.0	62.9
5	I-880 NB	98th Street Off-Ramp	6,996	8,800	No	1,172	2,100	No	**39.2**	**E**	0.338	57.2	1,973	67.5	61.8
20	I-880 SB	42nd Avenue/High Street Off-Ramp	6,890	8,800	No	1,535	2,100	No	**40.6**	**E**	0.371	56.5	1,943	67.6	61.1
23	I-880 SB	66th Street Off-Ramp	7,511	8,800	No	646	4,200	No	**18.8**	**B**	0.291	58.3	2,447	65.7	62.5
26	I-880 SB	Hegenberger Road Off-Ramp	5,983	8,800	No	2,030	4,200	No	**22.0**	**C**	0.416	55.4	2,214	66.6	61.1
34	I-880 SB	Davis Street Off-Ramp	6,524	8,800	No	707	2,100	No	**33.0**	**D**	0.297	58.2	1,840	68.0	62.8
38	I-580 EB	Seminary Avenue Off-Ramp	3,527	8,800	No	788	2,100	No	**23.4**	**C**	0.304	58.0	995	71.3	63.5
43	I-580 EB	Edwards Avenue Off-Ramp	6,053	8,800	No	677	2,100	No	**31.9**	**D**	0.294	58.2	1,707	68.5	63.0
45	I-580 EB	Keller Avenue Off-Ramp	5,636	8,800	No	424	2,100	No	**27.2**	**C**	0.271	58.8	1,589	69.0	63.7
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	5,020	8,800	No	1,030	2,100	No	**31.0**	**D**	0.326	57.5	1,416	69.7	62.6
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	4,742	8,800	No	788	2,100	No	**27.5**	**C**	0.304	58.0	1,337	70.0	63.2
55	I-580 WB	Keller Avenue Off-Ramp	5,218	8,800	No	253	2,100	No	**24.6**	**C**	0.256	59.1	1,471	69.5	64.3
60	I-580 WB	Seminary Avenue Off-Ramp	6,657	8,800	No	263	2,100	No	**29.7**	**D**	0.257	59.1	1,877	67.9	63.6
61	I-580 WB	SR 13 Off-Ramp	4,236	8,800	No	2,424	4,400	No	**18.1**	**B**	0.256	59.1	1,567	69.1	63.4

Leisch Method for Weaving Analysis

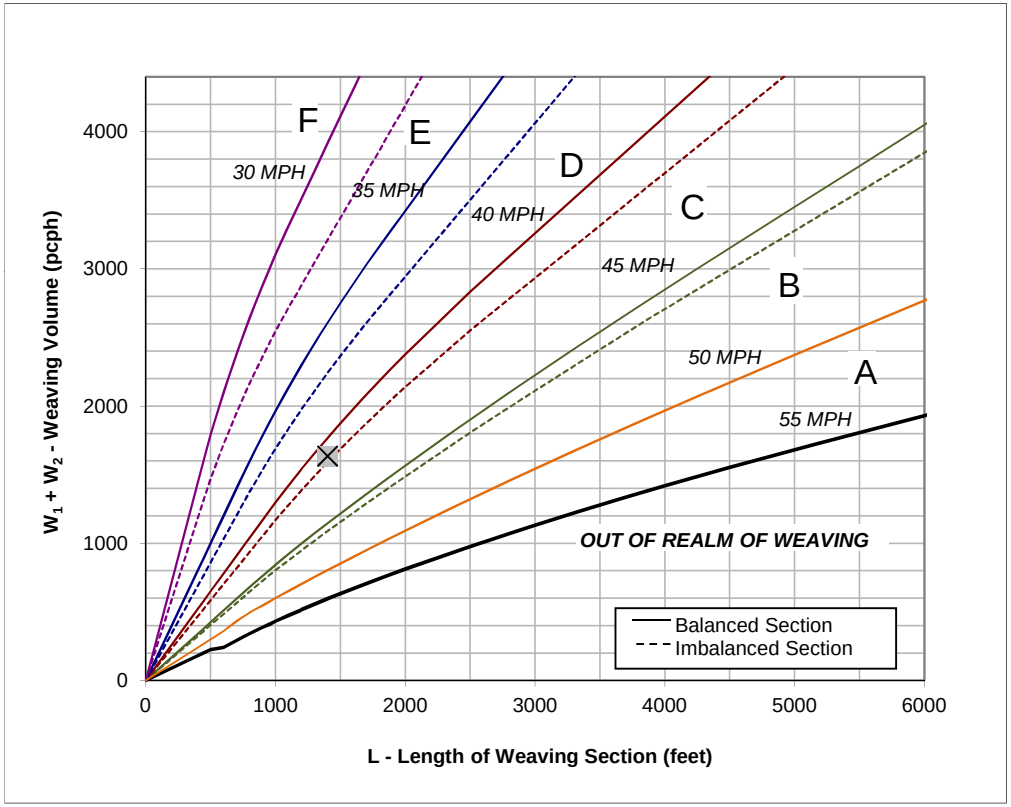
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,400

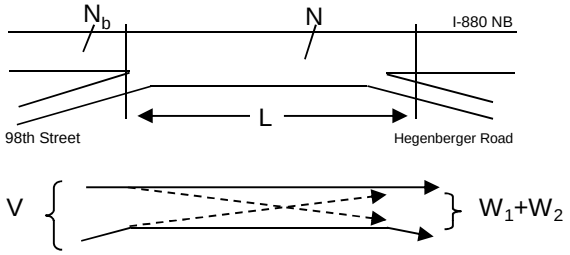
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,500	Volume (vph)*	730	Volume (vph)*	890
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,650	Volume (pcph)	737	Volume (pcph)	899

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 NP - AM Peak
Freeway	I-880 NB
On-ramp	98th Street
Off-ramp	Hegenberger Road



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **39.5**
4. Weaving Intensity Factor (k) **2.58**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,763**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

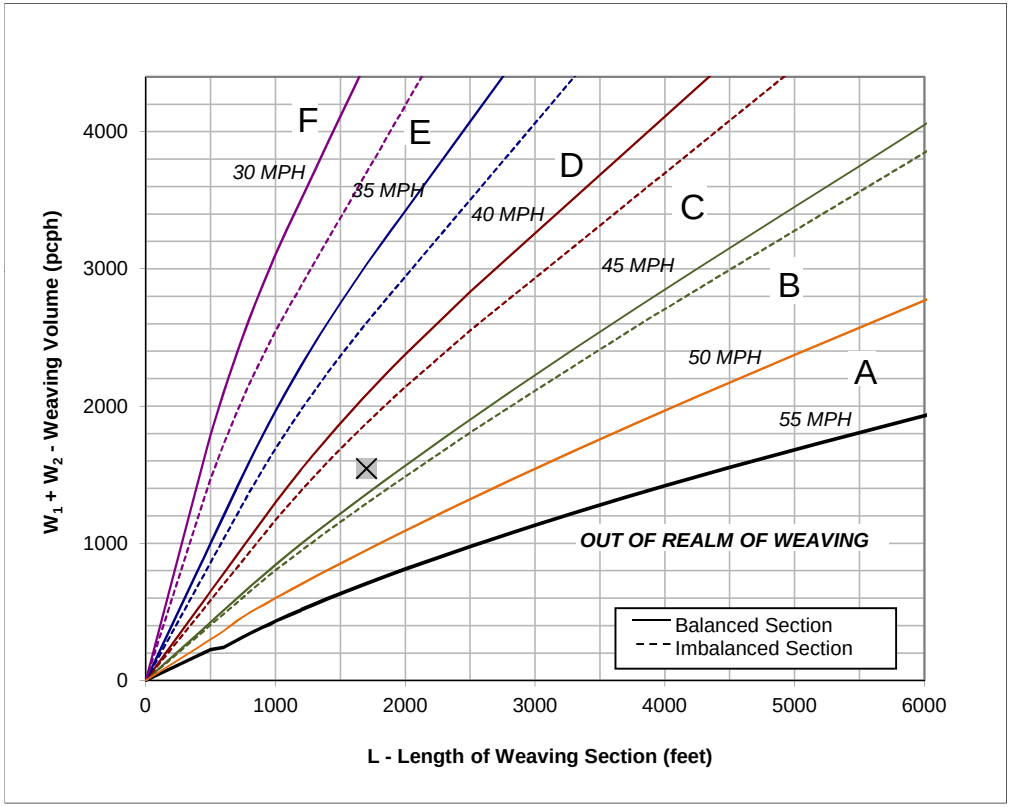
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,700

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,350	Volume (vph)*	740	Volume (vph)*	790
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,497	Volume (pcph)	747	Volume (pcph)	798

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 NP - AM Peak
Freeway	I-880 NB
On-ramp	Hegenberger Road
Off-ramp	66th Street



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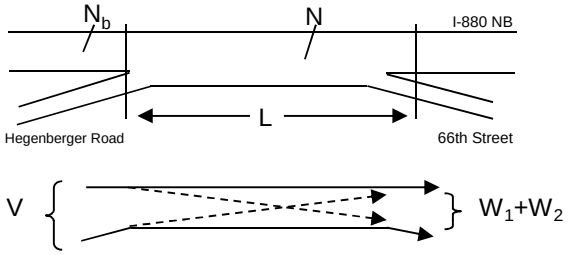


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **42.8**
4. Weaving Intensity Factor (k) **2.24**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,685**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

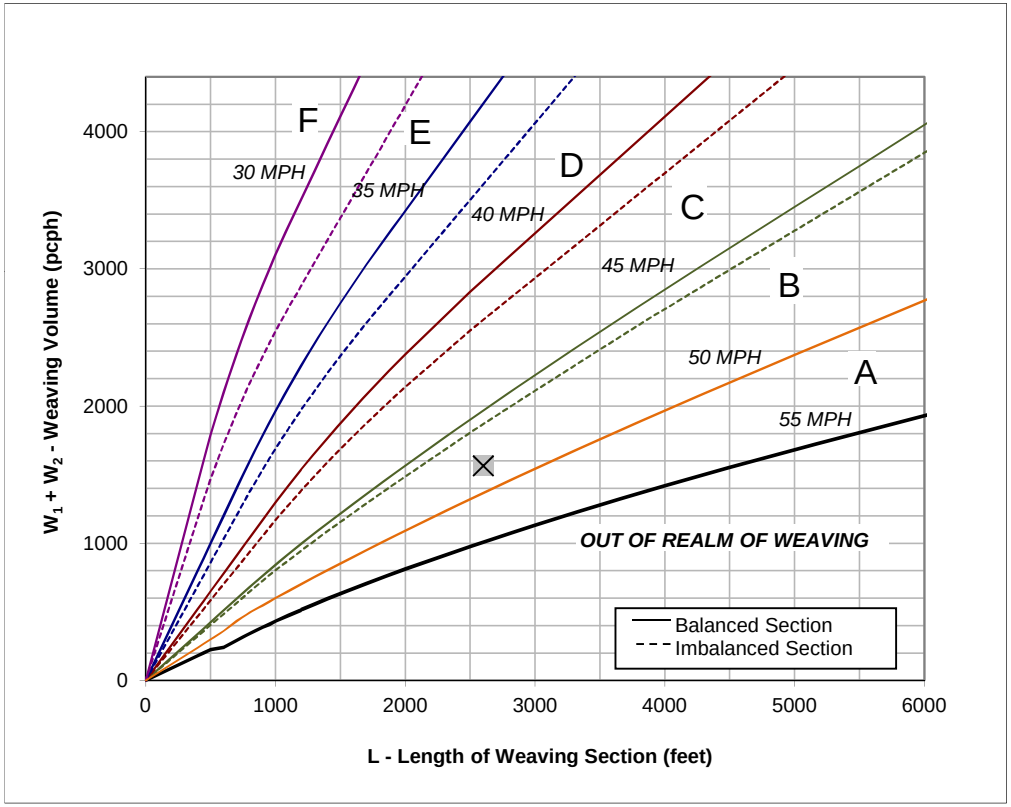
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,600

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,360	Volume (vph)*	800	Volume (vph)*	750
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,507	Volume (pcph)	808	Volume (pcph)	758

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 NP - AM Peak
Freeway	I-880 NB
On-ramp	66th Street
Off-ramp	High Street



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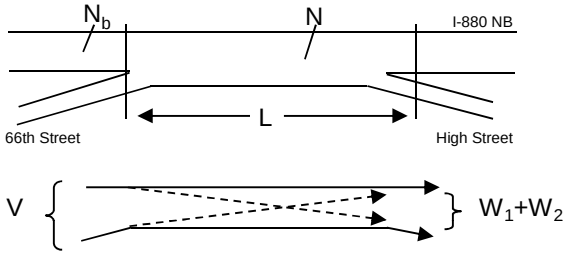


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   50 MPH and **55 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **47.2**
4. Weaving Intensity Factor (k) **1.65**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,599**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

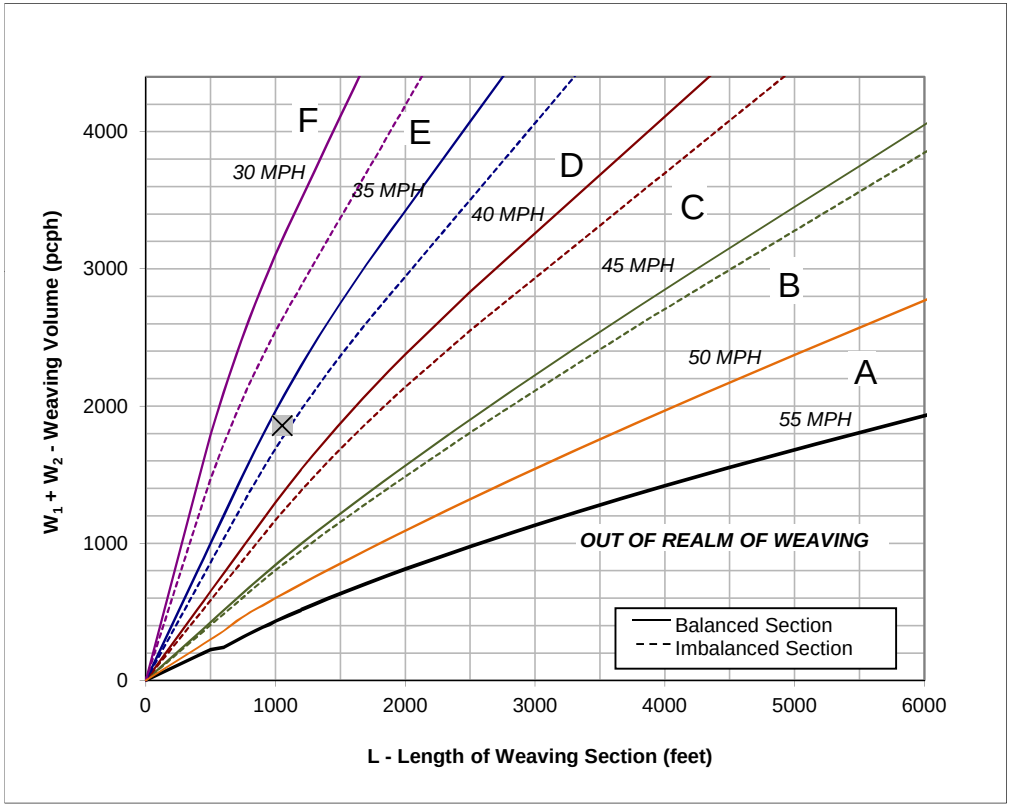
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,050

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,590	Volume (vph)*	820	Volume (vph)*	1,020
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,689	Volume (pcph)	828	Volume (pcph)	1,030

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 NP - AM Peak
Freeway	I-880 SB
On-ramp	Hegenberger Road
Off-ramp	98th Street



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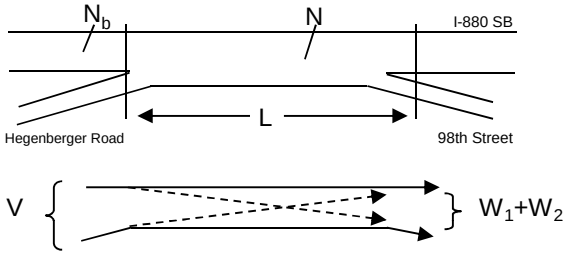


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   35 MPH and **40 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **34.1**
4. Weaving Intensity Factor (k) **2.94**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,658**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

HCM 2010
Basic Freeway Segments
Operational Analysis

Jurisdiction Caltrans District 4 | Agency or Company Caltrans
Analysis Year 2035 PM | Date 1/21/2014
Scenario 2035 No Project | Project Description Coliseum City SP/EIR

General Information | *Flow Rate Calculation*

	Freeway/ Direction	From/To	Analysis Time Period	Volume (vph)	PHF	Lanes	HOV Lane?	HOV Lane Volume	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_p (pcphpl)
1	I-880 NB	South of Davis Street	AM	7,230	1.00	5	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,489
4	I-880 NB	Davis Street to 98th Street	AM	7,300	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,880
18	I-880 NB	North of High Street	AM	7,400	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,906
19	I-880 SB	North of High Street	AM	8,250	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,124
22	I-880 SB	High Street to 66th Street	AM	8,000	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,060
25	I-880 SB	66th Street to Hegenberger Road	AM	7,960	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,050
33	I-880 SB	98th Street to Davis Street	AM	8,460	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,178
37	I-580 EB	West of Seminary Avenue Off-Ramp	AM	5,880	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,470
39	I-580 EB	West of SR 13 Merge	AM	5,400	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,350
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	AM	8,580	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	2,145
44	I-580 EB	Edwards Avenue to Keller Avenue	AM	8,010	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	2,003
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	AM	7,850	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,963
50	I-580 EB	East of 98th Avenue/Golf Links Road	AM	7,610	1.00	5	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,522
51	I-580 WB	East of 98th Avenue/Golf Links Road	AM	6,430	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,608
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	AM	6,490	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,623
57	I-580 WB	Keller Avenue to Edwards Avenue	AM	6,440	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,610
59	I-580 WB	Edwards Avenue to Seminary Avenue	AM	7,070	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,768
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	AM	4,120	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,030
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	AM	4,410	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,103

HCM 2010
Basic Freeway Segments
Operational Analysis

General Information			*Speed Calculation*									*Results*		
	Freeway/		Lane		R. Shoulder		TRD	Calculated	Measured	FFS	v_p/c	Speed, S	Density, D	Level of
	Direction	From/To	Width (ft)	f_{LW}	Width (ft)	f_{LC}	(per mi)	FFS (mph)	FFS (mph)	(mph)		(mph)	(pcplpm)	Service
1	I-880 NB	South of Davis Street	12	0	10	0	2.3	68.9	65.0	70	0.62	69.0	**21.6**	**C**
4	I-880 NB	Davis Street to 98th Street	12	0	14	0	2.3	68.9	65.0	70	0.78	64.6	**29.1**	**D**
18	I-880 NB	North of High Street	11	1.9	1	1	2.5	65.5	65.0	65	0.81	61.4	**31.0**	**D**
19	I-880 SB	North of High Street	11	1.9	1	1	2.3	66.0	65.0	65	0.90	57.6	**36.9**	**E**
22	I-880 SB	High Street to 66th Street	12	0	10	0	2.3	68.9	65.0	70	0.86	61.4	**33.5**	**D**
25	I-880 SB	66th Street to Hegenberger Road	12	0	14	0	2.3	68.9	65.0	70	0.85	61.6	**33.3**	**D**
33	I-880 SB	98th Street to Davis Street	12	0	12	0	2.3	68.9	65.0	70	0.91	58.9	**37.0**	**E**
37	I-580 EB	West of Seminary Avenue Off-Ramp	12	0	9	0	2.5	68.4	65.0	70	0.61	69.2	**21.3**	**C**
39	I-580 EB	West of SR 13 Merge	12	0	12	0	2.2	69.2	65.0	70	0.56	69.7	**19.4**	**C**
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	12	0	12	0	2.2	69.2	65.0	70	0.89	59.6	**36.0**	**E**
44	I-580 EB	Edwards Avenue to Keller Avenue	12	0	11	0	2.2	69.2	65.0	70	0.83	62.5	**32.0**	**D**
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.82	63.3	**31.0**	**D**
50	I-580 EB	East of 98th Avenue/Golf Links Road	12	0	9	0	2	69.6	65.0	70	0.63	68.8	**22.1**	**C**
51	I-580 WB	East of 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.67	68.1	**23.6**	**C**
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	12	0	10	0	2.5	68.4	65.0	70	0.68	67.9	**23.9**	**C**
57	I-580 WB	Keller Avenue to Edwards Avenue	12	0	12	0	2.3	68.9	65.0	70	0.67	68.1	**23.7**	**C**
59	I-580 WB	Edwards Avenue to Seminary Avenue	12	0	8	0	2.3	68.9	65.0	70	0.74	66.3	**26.7**	**D**
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	12	0	12	0	2.3	68.9	65.0	70	0.43	70.0	**14.7**	**B**
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	12	0	10	0	2.5	68.4	65.0	70	0.46	70.0	**15.8**	**B**

HCM 2010
Merge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: 2035 PM
Scenario: 2035 No Project

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information | *Freeway Data* | *Freeway Volume Adjustment*

	Freeway/ Direction	On-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
3	I-880 NB	Davis Street On-Ramp	AM	4	65	6,160	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
7	I-880 NB	98th Street WB On-Ramp	AM	5	65	6,620	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
11	I-880 NB	Hegenberger SB On-Ramp	AM	5	65	6,830	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
14	I-880 NB	Coliseum Way/66th Street On-Ramp	AM	4	65	6,640	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
17	I-880 NB	High Street On-Ramp	AM	4	65	6,590	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
21	I-880 SB	High Street/Oakport Street On-Ramp	AM	4	65	7,060	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
24	I-880 SB	66th Street On-Ramp	AM	4	65	7,300	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
27	I-880 SB	Hegenberger SB Loop On-Ramp	AM	4	65	6,330	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
31	I-880 SB	98th Street WB Loop On-Ramp	AM	4	65	6,940	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
32	I-880 SB	98th Street EB On-Ramp	AM	4	65	7,230	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
40	I-580 EB	SR 13 Merge	AM	4	65	5,400	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
41	I-580 EB	Seminary Avenue On-Ramp	AM	4	65	7,550	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
46	I-580 EB	Keller Avenue On-Ramp	AM	4	65	7,500	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	6,890	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	5,600	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
56	I-580 WB	Keller Avenue On-Ramp	AM	4	65	6,080	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
58	I-580 WB	Edwards Avenue On-Ramp	AM	4	65	6,440	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	AM	4	65	4,120	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	Flow Rate v_F (pcph)
3	I-880 NB	Davis Street On-Ramp	6,345
7	I-880 NB	98th Street WB On-Ramp	6,819
11	I-880 NB	Hegenberger SB On-Ramp	7,035
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,839
17	I-880 NB	High Street On-Ramp	6,788
21	I-880 SB	High Street/Oakport Street On-Ramp	7,272
24	I-880 SB	66th Street On-Ramp	7,519
27	I-880 SB	Hegenberger SB Loop On-Ramp	6,520
31	I-880 SB	98th Street WB Loop On-Ramp	7,148
32	I-880 SB	98th Street EB On-Ramp	7,447
40	I-580 EB	SR 13 Merge	5,400
41	I-580 EB	Seminary Avenue On-Ramp	7,550
46	I-580 EB	Keller Avenue On-Ramp	7,500
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	6,890
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	5,600
56	I-580 WB	Keller Avenue On-Ramp	6,080
58	I-580 WB	Edwards Avenue On-Ramp	6,440
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,120

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			Effective	*On-Ramp Data*							*On-Ramp Volume Adjustment*								
	Freeway/ Direction	On-ramp	Flow Rate v_p (pcph)	Type	Lanes	S_{FR} (mph)	V_R (vph)	Accel Lane (ft) L_{A1}	L_{A2}	L_{Aeff}	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_R (pcph)
3	I-880 NB	Davis Street On-Ramp	6,345	Right	1	40.0	510	450		450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	515
7	I-880 NB	98th Street WB On-Ramp	4,978	Right	1	50.0	330	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	333
11	I-880 NB	Hegenberger SB On-Ramp	5,135	Right	1	25.0	230	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	232
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,839	Right	2	50.0	900	300	1,500	2,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	909
17	I-880 NB	High Street On-Ramp	6,788	Right	1	50.0	810	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	818
21	I-880 SB	High Street/Oakport Street On-Ramp	7,272	Right	1	40.0	940	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	949
24	I-880 SB	66th Street On-Ramp	7,519	Right	1	50.0	660	550		550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	667
27	I-880 SB	Hegenberger SB Loop On-Ramp	6,520	Right	1	30.0	420	1,350		1,350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
31	I-880 SB	98th Street WB Loop On-Ramp	7,148	Right	1	25.0	290	250		250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	293
32	I-880 SB	98th Street EB On-Ramp	7,447	Right	1	35.0	1,230	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,242
40	I-580 EB	SR 13 Merge	5,400	Major	1	65.0	2,600	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,626
41	I-580 EB	Seminary Avenue On-Ramp	7,550	Right	1	50.0	1,030	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,040
46	I-580 EB	Keller Avenue On-Ramp	7,500	Right	1	50.0	350	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	6,890	Right	1	50.0	720	800		800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	727
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	5,600	Right	1	50.0	890	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	899
56	I-580 WB	Keller Avenue On-Ramp	6,080	Right	1	50.0	360	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	364
58	I-580 WB	Edwards Avenue On-Ramp	6,440	Right	1	50.0	630	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	636
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,120	Right	1	50.0	350	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	354

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_U (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	1,900		0.95	Level	2%	0%	1.5	1.2	0.990	1.00	
7	I-880 NB	98th Street WB On-Ramp	On	1,100	750	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	797
11	I-880 NB	Hegenberger SB On-Ramp	On	1,750	680	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	723
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	4,550	420	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	447
17	I-880 NB	High Street On-Ramp	Off	3,300	950	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,010
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	3,650	1,190	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,265
24	I-880 SB	66th Street On-Ramp	Off	3,400	700	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	744
27	I-880 SB	Hegenberger SB Loop On-Ramp	Off	1,350	1,630	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,733
31	I-880 SB	98th Street WB Loop On-Ramp	Off	1,200	590	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	627
32	I-880 SB	98th Street EB On-Ramp	On	750	290	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	308
40	I-580 EB	SR 13 Merge	Off	3,700	479	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	509
41	I-580 EB	Seminary Avenue On-Ramp	On	1,000	2,261	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,404
46	I-580 EB	Keller Avenue On-Ramp	Off	2,300	420	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	447
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Off	2,000	1,020	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,084
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	1,900	830	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	882
56	I-580 WB	Keller Avenue On-Ramp	Off	2,300	410	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	436
58	I-580 WB	Edwards Avenue On-Ramp	On	2,800	360	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	383
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	Off	1,950	2,600	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	2,764

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	4,000	1,430	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,444
7	I-880 NB	98th Street WB On-Ramp	Off	1,700	800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	808
11	I-880 NB	Hegenberger SB On-Ramp	Off	2,100	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	3,200	950	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	960
17	I-880 NB	High Street On-Ramp	No										1.00	
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	2,550	700	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	707
24	I-880 SB	66th Street On-Ramp	Off	3,100	1,630	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,646
27	I-880 SB	Hegenberger SB Loop On-Ramp	On	1,350	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
31	I-880 SB	98th Street WB Loop On-Ramp	On	750	1,230	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,242
32	I-880 SB	98th Street EB On-Ramp	Off	3,700	870	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	879
40	I-580 EB	SR 13 Merge	On	1,000	1,030	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,040
41	I-580 EB	Seminary Avenue On-Ramp	Off	950	570	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	576
46	I-580 EB	Keller Avenue On-Ramp	Off	5,300	960	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	970
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No										1.00	
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	5,400	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
56	I-580 WB	Keller Avenue On-Ramp	On	2,800	630	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	636
58	I-580 WB	Edwards Avenue On-Ramp	Off	1,200	350	1	Level	2%	0%	1.5	1.2	0.99	1.00	354
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No										1.00	

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*						
	Freeway/		L_{EQ}		P_{FM} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_{Fo}	Max v_{Fo}		v_3, v_{av34}
	Direction	On-ramp	13-6	13-7	13-3	13-4	13-5	P_{FM}	(pcph)	(pcph)	(pcph)	LOS F?	(pcph)	(pcph)	LOS F?	(pcphpl)
3	I-880 NB	Davis Street On-Ramp	1,358	9,156	0.590	0.624	0.644	0.153	973	6,345	8,800	No	6,860	8,800	No	2,686
7	I-880 NB	98th Street WB On-Ramp	1,483	5,702	0.586		0.674	0.176	877	4,978	11,000	No	5,311	11,000	No	2,050
11	I-880 NB	Hegenberger SB On-Ramp	187	2,994	0.586		0.602	0.189	969	5,135	11,000	No	5,368	11,000	No	2,083
14	I-880 NB	Coliseum Way/66th Street On-Ramp	2,804	2,870	0.636	0.746	0.627	0.209	1,429	6,839	8,800	No	7,748	8,800	No	2,705
17	I-880 NB	High Street On-Ramp	1,907		0.582	0.669		0.116	784	6,788	8,800	No	7,606	8,800	No	3,002
21	I-880 SB	High Street/Oakport Street On-Ramp	1,627	4,639	0.589	0.716	0.622	0.099	721	7,272	8,800	No	8,221	8,800	No	3,275
24	I-880 SB	66th Street On-Ramp	2,209	9,773	0.593	0.668	0.688	0.134	1,011	7,519	8,800	No	8,186	8,800	No	3,254
27	I-880 SB	Hegenberger SB Loop On-Ramp	1,252	1,670	0.615	0.621		0.165	1,074	6,520	8,800	No	6,944	8,800	No	2,723
31	I-880 SB	98th Street WB Loop On-Ramp	608	9,111	0.585	0.622		0.181	1,295	7,148	8,800	No	7,441	8,800	No	2,927
32	I-880 SB	98th Street EB On-Ramp	1,421	6,201	0.586		0.611	0.063	466	7,447	8,800	No	8,689	8,800	No	3,491
40	I-580 EB	SR 13 Merge	2,893	6,826	0.589	0.639		-0.110	-596	5,400	8,800	No	8,026	8,800	No	2,998
41	I-580 EB	Seminary Avenue On-Ramp	2,185	4,063	0.586		0.708	0.088	663	7,550	8,800	No	8,590	8,800	No	3,444
46	I-580 EB	Keller Avenue On-Ramp	2,071	6,362	0.589	0.603	0.597	0.174	1,302	7,500	8,800	No	7,854	8,800	No	3,099
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	2,198		0.600	0.587		0.127	874	6,890	8,800	No	7,617	8,800	No	3,008
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	1,759	2,816	0.587	0.596	0.569	0.105	590	5,600	8,800	No	6,499	8,800	No	2,505
56	I-580 WB	Keller Avenue On-Ramp	1,747	4,327	0.587	0.622		0.172	1,048	6,080	8,800	No	6,444	8,800	No	2,516
58	I-580 WB	Edwards Avenue On-Ramp	1,838	2,593	0.585		0.626	0.194	1,249	6,440	9,600	No	7,076	8,800	No	2,595
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,281	######	0.585	0.788		0.229	945	4,120	9,600	No	4,474	8,800	No	1,588

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	v_3, v_{av34} > 2,700?	v_3, v_{av34} >1.5*v_{12}/2?	v_{12a} (pcph)
3	I-880 NB	Davis Street On-Ramp	No	Yes	2,538
7	I-880 NB	98th Street WB On-Ramp	No	Yes	1,991
11	I-880 NB	Hegenberger SB On-Ramp	No	Yes	2,054
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Yes	Yes	2,736
17	I-880 NB	High Street On-Ramp	Yes	Yes	2,715
21	I-880 SB	High Street/Oakport Street On-Ramp	Yes	Yes	2,909
24	I-880 SB	66th Street On-Ramp	Yes	Yes	3,008
27	I-880 SB	Hegenberger SB Loop On-Ramp	Yes	Yes	2,608
31	I-880 SB	98th Street WB Loop On-Ramp	Yes	Yes	2,859
32	I-880 SB	98th Street EB On-Ramp	Yes	Yes	2,979
40	I-580 EB	SR 13 Merge	Yes	Yes	2,160
41	I-580 EB	Seminary Avenue On-Ramp	Yes	Yes	3,020
46	I-580 EB	Keller Avenue On-Ramp	Yes	Yes	3,000
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Yes	Yes	2,756
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	No	Yes	2,240
56	I-580 WB	Keller Avenue On-Ramp	No	Yes	2,432
58	I-580 WB	Edwards Avenue On-Ramp	No	Yes	2,576
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No	Yes	1,648

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information						*Results*		*Speed Estimation*				
	Freeway/ Direction	On-ramp	v_{R12a} (pcph)	Max v_{R12a} (pcph)	Exceeds Max v_{R12a}?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. M_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
3	I-880 NB	Davis Street On-Ramp	3,053	4,600	No	515	2,000	No	**26.2**	**C**	0.368	56.5	1,903	59.9	58.4
7	I-880 NB	98th Street WB On-Ramp	2,324	4,600	No	333	2,100	No	**21.6**	**C**	0.331	57.4	1,493	61.4	59.6
11	I-880 NB	Hegenberger SB On-Ramp	2,286	4,600	No	232	1,900	No	**21.3**	**C**	0.344	57.1	1,541	61.3	59.4
14	I-880 NB	Coliseum Way/66th Street On-Ramp	3,645	4,600	No	909	4,200	No	**20.3**	**C**	0.260	59.0	2,052	59.4	59.2
17	I-880 NB	High Street On-Ramp	3,533	4,600	No	818	2,100	No	**31.7**	**D**	0.440	54.9	2,036	59.5	57.3
21	I-880 SB	High Street/Oakport Street On-Ramp	3,858	4,600	No	949	2,000	No	**32.6**	**D**	0.474	54.1	2,182	58.9	56.6
24	I-880 SB	66th Street On-Ramp	3,674	4,600	No	667	2,100	No	**30.4**	**D**	0.420	55.3	2,256	58.7	57.1
27	I-880 SB	Hegenberger SB Loop On-Ramp	3,032	4,600	No	424	1,900	No	**20.5**	**C**	0.321	57.6	1,956	59.8	58.8
31	I-880 SB	98th Street WB Loop On-Ramp	3,152	4,600	No	293	1,900	No	**28.4**	**D**	0.400	55.8	2,144	59.1	57.6
32	I-880 SB	98th Street EB On-Ramp	4,221	4,600	No	1,242	2,000	No	**35.9**	**E**	0.566	52.0	2,234	58.8	55.3
40	I-580 EB	SR 13 Merge	4,786	4,600	**Yes**	2,626	2,350	**Yes**	**-**	**F**	-	-	-	-	-
41	I-580 EB	Seminary Avenue On-Ramp	4,060	4,600	No	1,040	2,100	No	**34.8**	**D**	0.517	53.1	2,265	58.6	55.9
46	I-580 EB	Keller Avenue On-Ramp	3,354	4,600	No	354	2,100	No	**29.0**	**D**	0.393	56.0	2,250	58.7	57.5
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	3,483	4,600	No	727	2,100	No	**27.3**	**C**	0.368	56.5	2,067	59.4	58.0
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	3,139	4,600	No	899	2,100	No	**27.4**	**C**	0.376	56.4	1,680	60.8	58.5
56	I-580 WB	Keller Avenue On-Ramp	2,796	4,600	No	364	2,100	No	**24.9**	**C**	0.350	57.0	1,824	60.2	58.8
58	I-580 WB	Edwards Avenue On-Ramp	3,212	4,600	No	636	2,100	No	**28.7**	**D**	0.393	56.0	1,932	59.8	58.0
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	2,002	4,600	No	354	2,100	No	**19.4**	**B**	0.325	57.5	1,236	62.4	60.1

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

Jurisdiction Caltrans District 4
Analysis Year 2035 PM
Scenario 2035 No Project

Agency or Company Caltrans
Date 1/21/2014
Project Description Coliseum City SP/EIR

General Information | *Mainline Data* | *Mainline Volume Adjustment*

	Freeway/ Direction	Off-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
2	I-880 NB	Davis Street Off-Ramp	AM	5	65	7,230	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
5	I-880 NB	98th Street Off-Ramp	AM	4	65	7,300	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
20	I-880 SB	42nd Avenue/High Street Off-Ramp	AM	4	65	8,250	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
23	I-880 SB	66th Street Off-Ramp	AM	4	65	8,000	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
26	I-880 SB	Hegenberger Road Off-Ramp	AM	4	65	7,960	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
34	I-880 SB	Davis Street Off-Ramp	AM	4	65	8,460	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
38	I-580 EB	Seminary Avenue Off-Ramp	AM	4	65	5,879	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
43	I-580 EB	Edwards Avenue Off-Ramp	AM	4	65	8,580	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
45	I-580 EB	Keller Avenue Off-Ramp	AM	4	65	8,010	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	7,850	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	6,430	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
55	I-580 WB	Keller Avenue Off-Ramp	AM	4	65	6,490	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
60	I-580 WB	Seminary Avenue Off-Ramp	AM	4	65	7,070	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
61	I-580 WB	SR 13 Off-Ramp	AM	4	65	6,720	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Flow Rate v_F (pcph)
2	I-880 NB	Davis Street Off-Ramp	7,447
5	I-880 NB	98th Street Off-Ramp	7,519
20	I-880 SB	42nd Avenue/High Street Off-Ramp	8,498
23	I-880 SB	66th Street Off-Ramp	8,240
26	I-880 SB	Hegenberger Road Off-Ramp	8,199
34	I-880 SB	Davis Street Off-Ramp	8,714
38	I-580 EB	Seminary Avenue Off-Ramp	5,879
43	I-580 EB	Edwards Avenue Off-Ramp	8,580
45	I-580 EB	Keller Avenue Off-Ramp	8,010
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	7,850
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	6,430
55	I-580 WB	Keller Avenue Off-Ramp	6,490
60	I-580 WB	Seminary Avenue Off-Ramp	7,070
61	I-580 WB	SR 13 Off-Ramp	6,720

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			Effective	*Off-Ramp Data*							*Off-Ramp Volume Adjustment*								
	Freeway/		Flow Rate			S_{FR}	V_R	Decel Lane (ft)					Truck/						Flow Rate
	Direction	Off-ramp	v_p (pcph)	Type	Lanes	(mph)	(vph)	L_{D1}	L_{D2}	L_{Deff}	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_R (pcph)
2	I-880 NB	Davis Street Off-Ramp	5,958	Right	1	50.0	1,070	1,500		1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,081
5	I-880 NB	98th Street Off-Ramp	7,519	Right	1	50.0	1,430	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,444
20	I-880 SB	42nd Avenue/High Street Off-Ramp	8,498	Right	1	50.0	1,190	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,202
23	I-880 SB	66th Street Off-Ramp	8,240	Right	2	50.0	700	150	1,200	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	707
26	I-880 SB	Hegenberger Road Off-Ramp	8,199	Right	2	50.0	1,630	100	1,250	1,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,646
34	I-880 SB	Davis Street Off-Ramp	8,714	Right	1	50.0	870	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	879
38	I-580 EB	Seminary Avenue Off-Ramp	5,879	Right	1	50.0	1,070	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,081
43	I-580 EB	Edwards Avenue Off-Ramp	8,580	Right	1	50.0	570	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	576
45	I-580 EB	Keller Avenue Off-Ramp	8,010	Right	1	50.0	510	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	515
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	7,850	Right	1	50.0	960	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	970
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	6,430	Right	1	50.0	830	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	838
55	I-580 WB	Keller Avenue Off-Ramp	6,490	Right	1	50.0	410	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
60	I-580 WB	Seminary Avenue Off-Ramp	7,070	Right	1	50.0	350	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354
61	I-580 WB	SR 13 Off-Ramp	6,720	Major	2	65.0	2,600	350	800	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,626

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_u (pcph)
2	I-880 NB	Davis Street Off-Ramp	No											
5	I-880 NB	98th Street Off-Ramp	On	4,000	510	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	515
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No											
23	I-880 SB	66th Street Off-Ramp	On	2,550	940	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	949
26	I-880 SB	Hegenberger Road Off-Ramp	On	3,100	660	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	667
34	I-880 SB	Davis Street Off-Ramp	On	3,700	1,230	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,242
38	I-580 EB	Seminary Avenue Off-Ramp	No											
43	I-580 EB	Edwards Avenue Off-Ramp	On	950	1,030	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,040
45	I-580 EB	Keller Avenue Off-Ramp	Off	2,500	570	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	576
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	5,300	350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No											
55	I-580 WB	Keller Avenue Off-Ramp	On	5,400	890	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	899
60	I-580 WB	Seminary Avenue Off-Ramp	On	1,200	630	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	636
61	I-580 WB	SR 13 Off-Ramp	Off	1,250	350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
2	I-880 NB	Davis Street Off-Ramp	On	1,900	630	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	636
5	I-880 NB	98th Street Off-Ramp	On	1,250	750	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	758
20	I-880 SB	42nd Avenue/High Street Off-Ramp	On	3,650	940	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	949
23	I-880 SB	66th Street Off-Ramp	On	3,400	660	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	667
26	I-880 SB	Hegenberger Road Off-Ramp	On	1,350	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
34	I-880 SB	Davis Street Off-Ramp	On	1,950	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
38	I-580 EB	Seminary Avenue Off-Ramp	On	3,700	2,600	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,626
43	I-580 EB	Edwards Avenue Off-Ramp	Off	2,500	510	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	515
45	I-580 EB	Keller Avenue Off-Ramp	On	2,300	350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	2,000	720	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	727
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	On	1,900	890	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	899
55	I-580 WB	Keller Avenue Off-Ramp	On	2,300	360	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	364
60	I-580 WB	Seminary Avenue Off-Ramp	Off	1,250	2,600	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,626
61	I-580 WB	SR 13 Off-Ramp	On	1,900	290	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	293

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

			General Information		*v_{12} Estimation*					*Capacity Checks*							
	Freeway/		L_{EQ}	P_{FD} Equations					v_{12}	v_{Fi}	Max v_{Fi}		v_3, v_{av34}	v_3, v_{av34}	v_3, v_{av34}	v_{12a}	Max v_{12a}
	Direction	Off-ramp	13-12	13-13	13-9	13-10	13-11	P_{FD}	(pcph)	(pcph)	(pcph)	LOS F?	(pcphpl)	> 2,700?	>1.5*v_{12}/2?	(pcph)	(pcph)
2	I-880 NB	Davis Street Off-Ramp		1,135	0.561			0.436	3,207	5,958	11,000	No	1,375	No	No	3,207	4,400
5	I-880 NB	98th Street Off-Ramp	3,839	2,012	0.506	0.502		0.436	4,093	7,519	8,800	No	1,713	No	No	4,093	4,400
20	I-880 SB	42nd Avenue/High Street Off-Ramp		2,185	0.492			0.436	4,383	8,498	8,800	No	2,057	No	No	4,383	4,400
23	I-880 SB	66th Street Off-Ramp	4,591	1,066	0.521	0.521		0.260	2,666	8,240	8,800	No	2,787	Yes	Yes	3,296	4,400
26	I-880 SB	Hegenberger Road Off-Ramp	4,958	1,514	0.479	0.479		0.260	3,350	8,199	8,800	No	2,424	No	No	3,350	4,400
34	I-880 SB	Davis Street Off-Ramp	6,071	776	0.502	0.502		0.436	4,295	8,714	8,800	No	2,209	No	No	4,295	4,400
38	I-580 EB	Seminary Avenue Off-Ramp		4,664	0.563			0.436	3,173	5,879	8,800	No	1,353	No	No	3,173	4,400
43	I-580 EB	Edwards Avenue Off-Ramp	4,632	777	0.519	0.519	0.462	0.436	4,066	8,580	8,800	No	2,257	No	No	4,066	4,400
45	I-580 EB	Keller Avenue Off-Ramp	2,664	502	0.536			0.436	3,783	8,010	8,800	No	2,114	No	No	3,783	4,400
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	1,988	1,344	0.519	0.451		0.436	3,969	7,850	8,800	No	1,940	No	No	3,969	4,400
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp		1,416	0.561			0.436	3,276	6,430	8,800	No	1,577	No	No	3,276	4,400
55	I-580 WB	Keller Avenue Off-Ramp	4,761	461	0.579	0.564		0.436	3,063	6,490	9,600	No	1,713	No	No	3,063	4,400
60	I-580 WB	Seminary Avenue Off-Ramp	3,078	3,310	0.567	0.567	0.730	0.436	3,282	7,070	9,600	No	1,894	No	No	3,282	4,400
61	I-580 WB	SR 13 Off-Ramp	13,605	-8,606	0.471			0.260	3,690	6,720	9,600	No	1,515	No	No	3,690	4,400

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Exceeds Max v_{12a}?
2	I-880 NB	Davis Street Off-Ramp	No
5	I-880 NB	98th Street Off-Ramp	No
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No
23	I-880 SB	66th Street Off-Ramp	No
26	I-880 SB	Hegenberger Road Off-Ramp	No
34	I-880 SB	Davis Street Off-Ramp	No
38	I-580 EB	Seminary Avenue Off-Ramp	No
43	I-580 EB	Edwards Avenue Off-Ramp	No
45	I-580 EB	Keller Avenue Off-Ramp	No
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	No
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No
55	I-580 WB	Keller Avenue Off-Ramp	No
60	I-580 WB	Seminary Avenue Off-Ramp	No
61	I-580 WB	SR 13 Off-Ramp	No

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	Off-ramp	v_{Fo} (pcph)	Max v_{Fo} (pcph)	LOS F?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. D_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
2	I-880 NB	Davis Street Off-Ramp	4,877	11,000	No	1,081	2,100	No	**18.3**	**B**	0.330	57.4	1,375	69.8	62.5
5	I-880 NB	98th Street Off-Ramp	6,075	8,800	No	1,444	2,100	No	**38.1**	**E**	0.363	56.7	1,713	68.5	61.5
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,296	8,800	No	1,202	2,100	No	**39.2**	**E**	0.341	57.2	2,057	67.2	61.6
23	I-880 SB	66th Street Off-Ramp	7,533	8,800	No	707	4,200	No	**19.1**	**B**	0.297	58.2	2,472	65.6	62.4
26	I-880 SB	Hegenberger Road Off-Ramp	6,553	8,800	No	1,646	4,200	No	**20.0**	**C**	0.381	56.2	2,424	65.7	61.5
34	I-880 SB	Davis Street Off-Ramp	7,835	8,800	No	879	2,100	No	**39.4**	**E**	0.312	57.8	2,209	66.6	62.0
38	I-580 EB	Seminary Avenue Off-Ramp	4,798	8,800	No	1,081	2,100	No	**30.6**	**D**	0.330	57.4	1,353	69.9	62.6
43	I-580 EB	Edwards Avenue Off-Ramp	8,004	8,800	No	576	2,100	No	**38.3**	**E**	0.285	58.4	2,257	66.4	62.4
45	I-580 EB	Keller Avenue Off-Ramp	7,495	8,800	No	515	2,100	No	**35.0**	**D**	0.279	58.6	2,114	67.0	62.7
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,880	8,800	No	970	2,100	No	**37.5**	**E**	0.320	57.6	1,940	67.6	62.2
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,592	8,800	No	838	2,100	No	**31.1**	**D**	0.308	57.9	1,577	69.1	62.9
55	I-580 WB	Keller Avenue Off-Ramp	6,076	8,800	No	414	2,100	No	**29.2**	**D**	0.270	58.8	1,713	68.5	63.6
60	I-580 WB	Seminary Avenue Off-Ramp	6,717	8,800	No	354	2,100	No	**30.7**	**D**	0.265	58.9	1,894	67.8	63.4
61	I-580 WB	SR 13 Off-Ramp	4,094	8,800	No	2,626	4,400	No	**18.3**	**B**	0.274	58.7	1,515	69.3	63.0

Leisch Method for Weaving Analysis

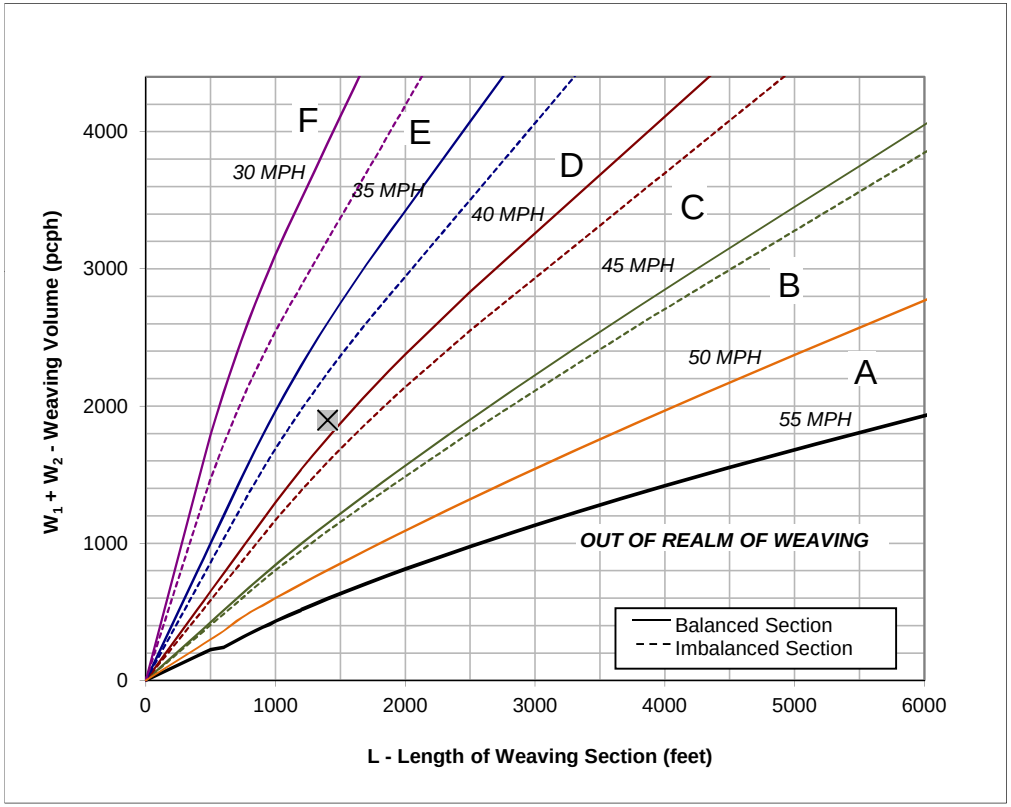
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,400

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,950	Volume (vph)*	1,080	Volume (vph)*	800
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,054	Volume (pcph)	1,091	Volume (pcph)	808

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 NP - PM Peak
Freeway	I-880 NB
On-ramp	98th Street
Off-ramp	Hegenberger Road



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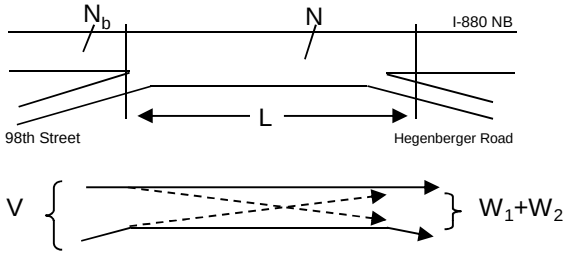


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **36.9**
4. Weaving Intensity Factor (k) **2.78**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,699**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

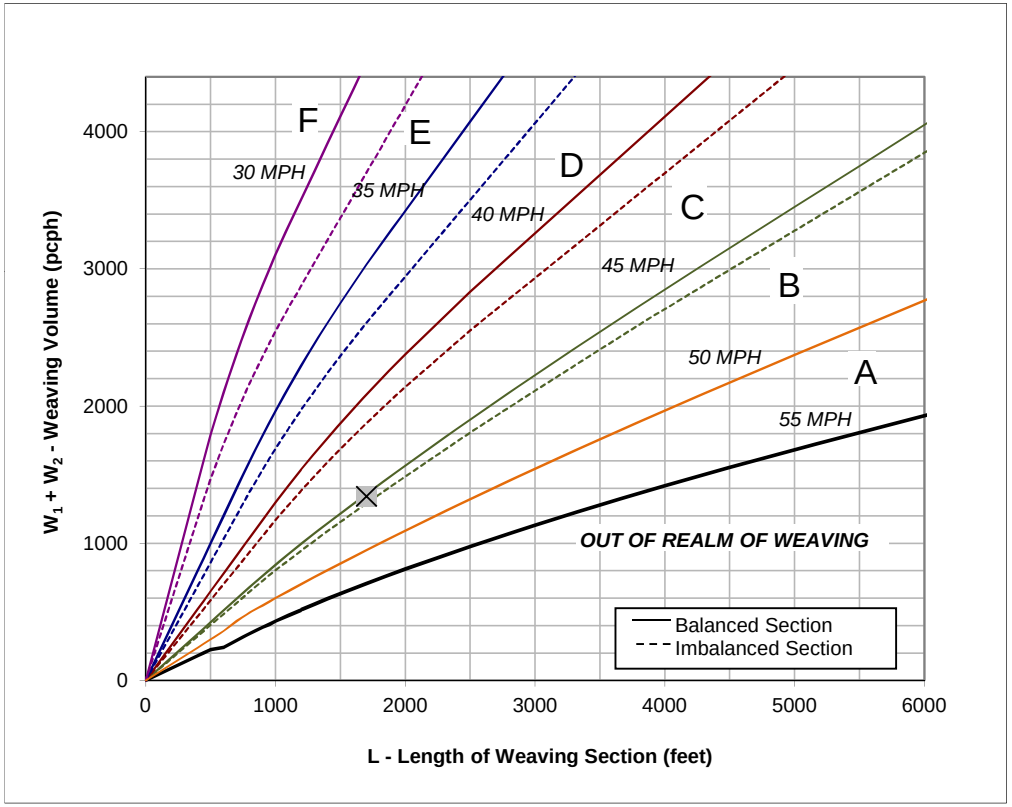
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,700

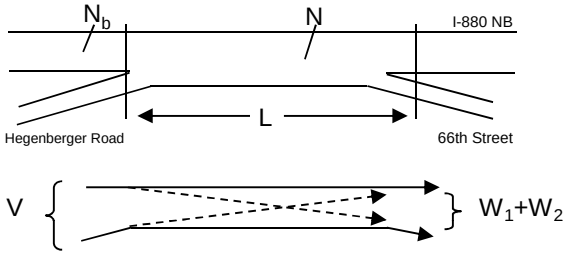
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,060	Volume (vph)*	910	Volume (vph)*	420
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,166	Volume (pcph)	919	Volume (pcph)	424

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 NP - PM Peak
Freeway	I-880 NB
On-ramp	Hegenberger Road
Off-ramp	66th Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   45 MPH and **50 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **44.2**
4. Weaving Intensity Factor (k) **2.07**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,524**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

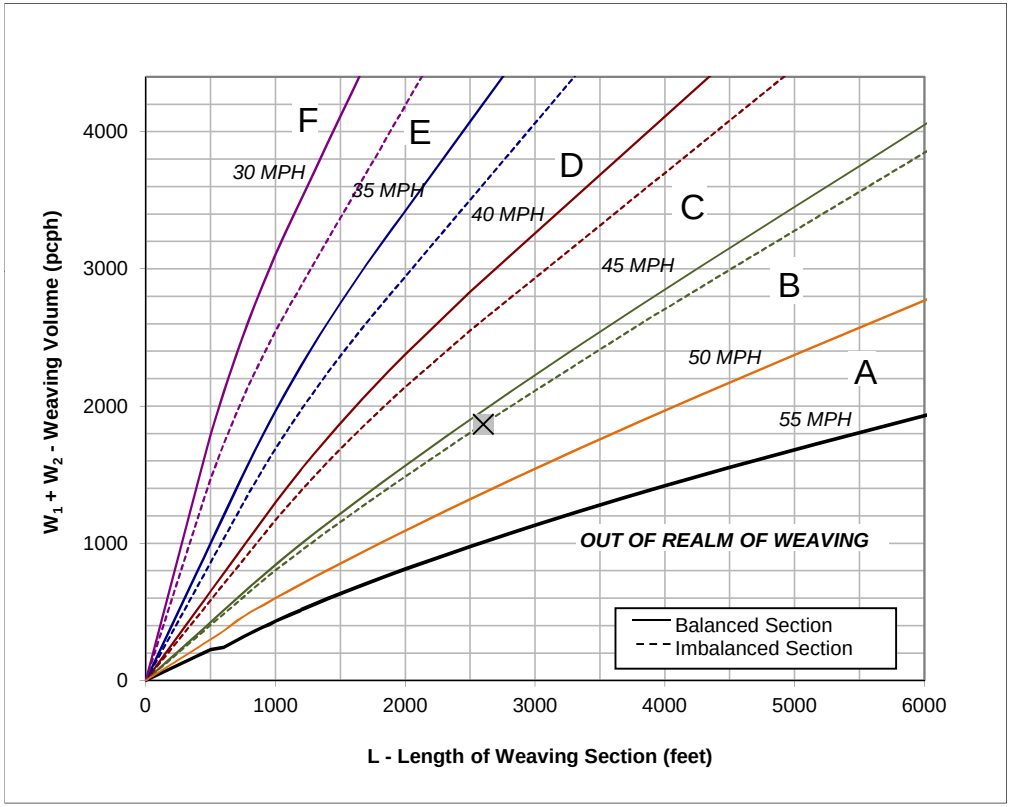
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,600

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,540	Volume (vph)*	900	Volume (vph)*	950
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,653	Volume (pcph)	909	Volume (pcph)	960

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 NP - PM Peak
Freeway	I-880 NB
On-ramp	66th Street
Off-ramp	High Street



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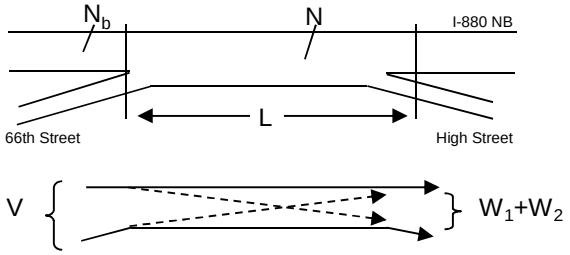


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   45 MPH and **50 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **45.0**
4. Weaving Intensity Factor (k) **1.97**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,706**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

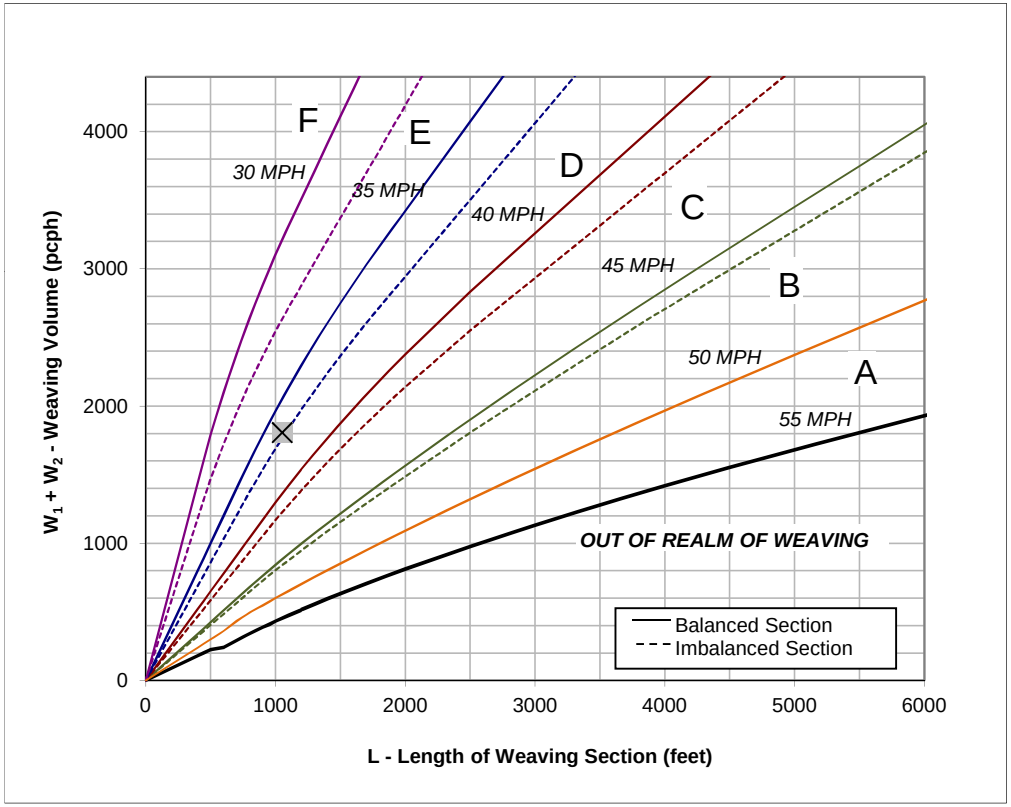
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,050

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,530	Volume (vph)*	1,200	Volume (vph)*	590
Truck Percentage	1%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,568	Volume (pcph)	1,212	Volume (pcph)	596

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 NP - PM Peak
Freeway	I-880 SB
On-ramp	Hegenberger Road
Off-ramp	98th Street



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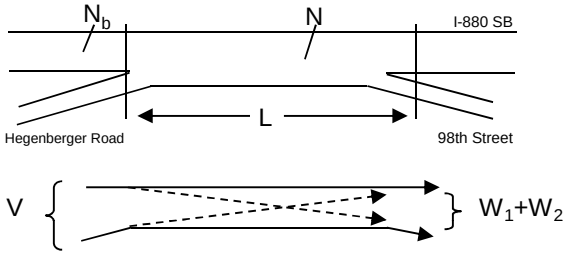


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   35 MPH and **40 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **34.6**
4. Weaving Intensity Factor (k) **2.91**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,742**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

HCM 2010
Basic Freeway Segments
Operational Analysis

Jurisdiction Caltrans District 4 | Agency or Company Caltrans
Analysis Year 2035 AM | Date 1/21/2014
Scenario 2035 Plus Project | Project Description Coliseum City SP/EIR

General Information | *Flow Rate Calculation*

	Freeway/ Direction	From/To	Analysis Time Period	Volume (vph)	PHF	Lanes	HOV Lane?	HOV Lane Volume	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_p (pcphpl)
1	I-880 NB	South of Davis Street	AM	8,100	1.00	5	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,669
4	I-880 NB	Davis Street to 98th Street	AM	8,230	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,119
18	I-880 NB	North of High Street	AM	7,880	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,029
19	I-880 SB	North of High Street	AM	8,410	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,166
22	I-880 SB	High Street to 66th Street	AM	8,110	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,088
25	I-880 SB	66th Street to Hegenberger Road	AM	7,950	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,047
33	I-880 SB	98th Street to Davis Street	AM	7,400	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,906
37	I-580 EB	West of Seminary Avenue Off-Ramp	AM	4,320	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,080
39	I-580 EB	West of SR 13 Merge	AM	4,120	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,030
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	AM	6,780	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,695
44	I-580 EB	Edwards Avenue to Keller Avenue	AM	6,090	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,523
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	AM	6,080	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,520
50	I-580 EB	East of 98th Avenue/Golf Links Road	AM	5,930	1.00	5	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,186
51	I-580 WB	East of 98th Avenue/Golf Links Road	AM	5,570	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,393
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	AM	5,510	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,378
57	I-580 WB	Keller Avenue to Edwards Avenue	AM	5,930	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,483
59	I-580 WB	Edwards Avenue to Seminary Avenue	AM	6,990	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,748
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	AM	4,260	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,065
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	AM	4,550	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,138

HCM 2010
Basic Freeway Segments
Operational Analysis

General Information			*Speed Calculation*									*Results*		
	Freeway/		Lane		R. Shoulder		TRD	Calculated	Measured	FFS	v_p/c	Speed, S	Density, D	Level of
	Direction	From/To	Width (ft)	f_{LW}	Width (ft)	f_{LC}	(per mi)	FFS (mph)	FFS (mph)	(mph)		(mph)	(pcplpm)	Service
1	I-880 NB	South of Davis Street	12	0	10	0	2.3	68.9	65.0	70	0.70	67.5	**24.7**	**C**
4	I-880 NB	Davis Street to 98th Street	12	0	14	0	2.3	68.9	65.0	70	0.88	60.2	**35.2**	**E**
18	I-880 NB	North of High Street	11	1.9	1	1	2.5	65.5	65.0	65	0.86	59.4	**34.2**	**D**
19	I-880 SB	North of High Street	11	1.9	1	1	2.3	66.0	65.0	65	0.92	56.7	**38.2**	**E**
22	I-880 SB	High Street to 66th Street	12	0	10	0	2.3	68.9	65.0	70	0.87	60.8	**34.3**	**D**
25	I-880 SB	66th Street to Hegenberger Road	12	0	14	0	2.3	68.9	65.0	70	0.85	61.7	**33.2**	**D**
33	I-880 SB	98th Street to Davis Street	12	0	12	0	2.3	68.9	65.0	70	0.79	64.2	**29.7**	**D**
37	I-580 EB	West of Seminary Avenue Off-Ramp	12	0	9	0	2.5	68.4	65.0	70	0.45	70.0	**15.4**	**B**
39	I-580 EB	West of SR 13 Merge	12	0	12	0	2.2	69.2	65.0	70	0.43	70.0	**14.7**	**B**
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	12	0	12	0	2.2	69.2	65.0	70	0.71	67.2	**25.2**	**C**
44	I-580 EB	Edwards Avenue to Keller Avenue	12	0	11	0	2.2	69.2	65.0	70	0.63	68.8	**22.1**	**C**
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.63	68.8	**22.1**	**C**
50	I-580 EB	East of 98th Avenue/Golf Links Road	12	0	9	0	2	69.6	65.0	70	0.49	70.0	**16.9**	**B**
51	I-580 WB	East of 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.58	69.6	**20.0**	**C**
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	12	0	10	0	2.5	68.4	65.0	70	0.57	69.6	**19.8**	**C**
57	I-580 WB	Keller Avenue to Edwards Avenue	12	0	12	0	2.3	68.9	65.0	70	0.62	69.1	**21.5**	**C**
59	I-580 WB	Edwards Avenue to Seminary Avenue	12	0	8	0	2.3	68.9	65.0	70	0.73	66.5	**26.3**	**D**
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	12	0	12	0	2.3	68.9	65.0	70	0.44	70.0	**15.2**	**B**
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	12	0	10	0	2.5	68.4	65.0	70	0.47	70.0	**16.3**	**B**

HCM 2010
Merge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: 2035 AM
Scenario: 2035 Plus Project

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information				*Freeway Data*						*Freeway Volume Adjustment*							
	Freeway/ Direction	On-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
3	I-880 NB	Davis Street On-Ramp	AM	4	65	7,290	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
7	I-880 NB	98th Street WB On-Ramp	AM	5	65	7,460	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
11	I-880 NB	Hegenberger SB On-Ramp	AM	5	65	7,260	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
14	I-880 NB	Coliseum Way/66th Street On-Ramp	AM	4	65	6,650	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
17	I-880 NB	High Street On-Ramp	AM	4	65	6,820	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
21	I-880 SB	High Street/Oakport Street On-Ramp	AM	4	65	6,840	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
24	I-880 SB	66th Street On-Ramp	AM	4	65	7,350	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
27	I-880 SB	Hegenberger SB Loop On-Ramp	AM	4	65	5,920	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
31	I-880 SB	98th Street WB Loop On-Ramp	AM	4	65	5,940	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
32	I-880 SB	98th Street EB On-Ramp	AM	4	65	6,440	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
40	I-580 EB	SR 13 Merge	AM	4	65	4,120	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
41	I-580 EB	Seminary Avenue On-Ramp	AM	4	65	6,250	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	5,040	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	4,760	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
56	I-580 WB	Keller Avenue On-Ramp	AM	4	65	5,260	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
58	I-580 WB	Edwards Avenue On-Ramp	AM	4	65	5,930	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	AM	4	65	4,260	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	Flow Rate v_F (pcph)
3	I-880 NB	Davis Street On-Ramp	7,509
7	I-880 NB	98th Street WB On-Ramp	7,684
11	I-880 NB	Hegenberger SB On-Ramp	7,478
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,850
17	I-880 NB	High Street On-Ramp	7,025
21	I-880 SB	High Street/Oakport Street On-Ramp	7,045
24	I-880 SB	66th Street On-Ramp	7,571
27	I-880 SB	Hegenberger SB Loop On-Ramp	6,098
31	I-880 SB	98th Street WB Loop On-Ramp	6,118
32	I-880 SB	98th Street EB On-Ramp	6,633
40	I-580 EB	SR 13 Merge	4,120
41	I-580 EB	Seminary Avenue On-Ramp	6,250
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	5,040
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,760
56	I-580 WB	Keller Avenue On-Ramp	5,260
58	I-580 WB	Edwards Avenue On-Ramp	5,930
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,260

HCM 2010
Merge Ramp Junctions
Capacity Analysis

	General Information		Effective	*On-Ramp Data*							*On-Ramp Volume Adjustment*								
	Freeway/ Direction	On-ramp	Flow Rate v_p (pcph)	Type	Lanes	S_{FR} (mph)	V_R (vph)	Accel Lane (ft) L_{A1}	L_{A2}	L_{Aeff}	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_R (pcph)
3	I-880 NB	Davis Street On-Ramp	7,509	Right	1	40.0	570	450		450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	576
7	I-880 NB	98th Street WB On-Ramp	5,494	Right	1	50.0	340	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	343
11	I-880 NB	Hegenberger SB On-Ramp	5,459	Right	1	25.0	270	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	273
14	I-880 NB	Coliseum Way/66th Street On-Ramp	6,850	Right	2	50.0	930	300	1,500	2,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	939
17	I-880 NB	High Street On-Ramp	7,025	Right	1	50.0	1,060	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,071
21	I-880 SB	High Street/Oakport Street On-Ramp	7,045	Right	1	40.0	1,270	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,283
24	I-880 SB	66th Street On-Ramp	7,571	Right	1	50.0	600	550		550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	606
27	I-880 SB	Hegenberger SB Loop On-Ramp	6,098	Right	1	30.0	680	1,350		1,350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	687
31	I-880 SB	98th Street WB Loop On-Ramp	6,118	Right	1	25.0	500	250		250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	505
32	I-880 SB	98th Street EB On-Ramp	6,633	Right	1	35.0	960	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	970
40	I-580 EB	SR 13 Merge	4,120	Major	1	65.0	2,450	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,475
41	I-580 EB	Seminary Avenue On-Ramp	6,250	Right	1	50.0	530	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	535
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	5,040	Right	1	50.0	890	800		800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	899
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,760	Right	1	50.0	750	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	758
56	I-580 WB	Keller Avenue On-Ramp	5,260	Right	1	50.0	670	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	677
58	I-580 WB	Edwards Avenue On-Ramp	5,930	Right	1	50.0	1,060	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	1,071
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,260	Right	1	50.0	290	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	293

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_U (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	1,900	810	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	861
7	I-880 NB	98th Street WB On-Ramp	On	1,100	420	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	447
11	I-880 NB	Hegenberger SB On-Ramp	On	1,750	510	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	542
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	4,550	880	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	936
17	I-880 NB	High Street On-Ramp	Off	3,300	760	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	808
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	3,650	1,570	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,669
24	I-880 SB	66th Street On-Ramp	Off	3,400	760	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	808
27	I-880 SB	Hegenberger SB Loop On-Ramp	Off	1,350	2,030	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,158
31	I-880 SB	98th Street WB Loop On-Ramp	Off	1,200	1,050	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,116
32	I-880 SB	98th Street EB On-Ramp	On	750	500	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	532
40	I-580 EB	SR 13 Merge	Off	3,700	245	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	260
41	I-580 EB	Seminary Avenue On-Ramp	On	1,000	2,033	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,161
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Off	2,000	1,040	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,106
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	1,900	810	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	861
56	I-580 WB	Keller Avenue On-Ramp	Off	2,300	250	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	266
58	I-580 WB	Edwards Avenue On-Ramp	On	2,800	670	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	712
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	Off	1,950	2,460	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	2,615

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	4,000	1,190	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,202
7	I-880 NB	98th Street WB On-Ramp	Off	1,700	1,050	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,061
11	I-880 NB	Hegenberger SB On-Ramp	Off	2,100	880	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	889
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	3,200	760	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	768
17	I-880 NB	High Street On-Ramp	No										1.00	
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	2,550	760	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	768
24	I-880 SB	66th Street On-Ramp	Off	3,100	2,030	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,050
27	I-880 SB	Hegenberger SB Loop On-Ramp	On	1,350	390	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	394
31	I-880 SB	98th Street WB Loop On-Ramp	On	750	710	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	717
32	I-880 SB	98th Street EB On-Ramp	Off	3,700	1,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,111
40	I-580 EB	SR 13 Merge	On	1,000	530	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	535
41	I-580 EB	Seminary Avenue On-Ramp	Off	950	690	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	697
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No										1.00	
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	5,400	250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	253
56	I-580 WB	Keller Avenue On-Ramp	On	2,800	1,060	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,071
58	I-580 WB	Edwards Avenue On-Ramp	Off	1,200	270	1	Level	2%	0%	1.5	1.2	0.99	1.00	273
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No										1.00	

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*						
	Freeway/		L_{EQ}		P_{FM} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_{Fo}	Max v_{Fo}		v_3, v_{av34}
	Direction	On-ramp	13-6	13-7	13-3	13-4	13-5	P_{FM}	(pcph)	(pcph)	(pcph)	LOS F?	(pcph)	(pcph)	LOS F?	(pcphpl)
3	I-880 NB	Davis Street On-Ramp	1,620	7,619	0.590	0.608	0.628	0.146	1,095	7,509	8,800	No	8,084	8,800	No	3,207
7	I-880 NB	98th Street WB On-Ramp	1,595	7,484	0.586		0.713	0.175	961	5,494	11,000	No	5,837	11,000	No	2,267
11	I-880 NB	Hegenberger SB On-Ramp	265	6,272	0.586		0.660	0.184	1,003	5,459	11,000	No	5,731	11,000	No	2,228
14	I-880 NB	Coliseum Way/66th Street On-Ramp	2,812	2,296	0.636	0.746	0.612	0.209	1,432	6,850	8,800	No	7,789	8,800	No	2,709
17	I-880 NB	High Street On-Ramp	2,012		0.582	0.663		0.084	590	7,025	8,800	No	8,095	8,800	No	3,217
21	I-880 SB	High Street/Oakport Street On-Ramp	1,650	5,037	0.589	0.715	0.628	0.057	405	7,045	8,800	No	8,328	8,800	No	3,320
24	I-880 SB	66th Street On-Ramp	2,207	12,172	0.593	0.668	0.723	0.142	1,075	7,571	8,800	No	8,177	8,800	No	3,248
27	I-880 SB	Hegenberger SB Loop On-Ramp	1,218	1,550	0.615	0.623		0.132	805	6,098	8,800	No	6,784	8,800	No	2,647
31	I-880 SB	98th Street WB Loop On-Ramp	433	5,259	0.585	0.633		0.155	946	6,118	8,800	No	6,623	8,800	No	2,586
32	I-880 SB	98th Street EB On-Ramp	1,188	7,841	0.586		0.628	0.097	641	6,633	8,800	No	7,603	8,800	No	2,996
40	I-580 EB	SR 13 Merge	2,587	3,512	0.589	0.659		0.595	2,450	4,120	8,800	No	6,595	8,800	No	835
41	I-580 EB	Seminary Avenue On-Ramp	1,798	4,918	0.586		0.741	0.151	943	6,250	8,800	No	6,785	8,800	No	2,653
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	1,839		0.600	0.610		0.105	531	5,040	8,800	No	5,939	8,800	No	2,254
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	1,549	1,717	0.587	0.609	0.561	0.123	586	4,760	8,800	No	5,518	8,800	No	2,087
56	I-580 WB	Keller Avenue On-Ramp	1,639	7,281	0.587	0.629		0.133	701	5,260	8,800	No	5,937	8,800	No	2,280
58	I-580 WB	Edwards Avenue On-Ramp	1,822	2,000	0.585		0.608	0.140	829	5,930	9,600	No	7,001	8,800	No	2,551
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,298	######	0.585	0.787		0.237	1,009	4,260	9,600	No	4,553	8,800	No	1,625

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	v_3, v_{av34} > 2,700?	v_3, v_{av34} >1.5*v_{12}/2?	v_{12a} (pcph)
3	I-880 NB	Davis Street On-Ramp	Yes	Yes	3,003
7	I-880 NB	98th Street WB On-Ramp	No	Yes	2,198
11	I-880 NB	Hegenberger SB On-Ramp	No	Yes	2,184
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Yes	Yes	2,740
17	I-880 NB	High Street On-Ramp	Yes	Yes	2,810
21	I-880 SB	High Street/Oakport Street On-Ramp	Yes	Yes	2,818
24	I-880 SB	66th Street On-Ramp	Yes	Yes	3,028
27	I-880 SB	Hegenberger SB Loop On-Ramp	No	Yes	2,439
31	I-880 SB	98th Street WB Loop On-Ramp	No	Yes	2,447
32	I-880 SB	98th Street EB On-Ramp	Yes	Yes	2,653
40	I-580 EB	SR 13 Merge	No	No	2,450
41	I-580 EB	Seminary Avenue On-Ramp	No	Yes	2,500
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No	Yes	2,016
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	No	Yes	1,904
56	I-580 WB	Keller Avenue On-Ramp	No	Yes	2,104
58	I-580 WB	Edwards Avenue On-Ramp	No	Yes	2,372
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No	Yes	1,704

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information						*Results*		*Speed Estimation*				
	Freeway/ Direction	On-ramp	v_{R12a} (pcph)	Max v_{R12a} (pcph)	Exceeds Max v_{R12a}?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. M_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
3	I-880 NB	Davis Street On-Ramp	3,579	4,600	No	576	2,000	No	**30.3**	**D**	0.425	55.2	2,253	58.7	57.1
7	I-880 NB	98th Street WB On-Ramp	2,541	4,600	No	343	2,100	No	**23.3**	**C**	0.340	57.2	1,648	60.9	59.2
11	I-880 NB	Hegenberger SB On-Ramp	2,456	4,600	No	273	1,900	No	**22.6**	**C**	0.351	56.9	1,638	60.9	59.1
14	I-880 NB	Coliseum Way/66th Street On-Ramp	3,679	4,600	No	939	4,200	No	**20.6**	**C**	0.265	58.9	2,055	59.4	59.2
17	I-880 NB	High Street On-Ramp	3,880	4,600	No	1,071	2,100	No	**34.3**	**D**	0.495	53.6	2,107	59.2	56.4
21	I-880 SB	High Street/Oakport Street On-Ramp	4,101	4,600	No	1,283	2,000	No	**34.4**	**D**	0.525	52.9	2,114	59.2	55.9
24	I-880 SB	66th Street On-Ramp	3,634	4,600	No	606	2,100	No	**30.1**	**D**	0.414	55.5	2,271	58.6	57.2
27	I-880 SB	Hegenberger SB Loop On-Ramp	3,126	4,600	No	687	1,900	No	**21.1**	**C**	0.329	57.4	1,829	60.2	58.9
31	I-880 SB	98th Street WB Loop On-Ramp	2,952	4,600	No	505	1,900	No	**26.7**	**C**	0.383	56.2	1,835	60.2	58.3
32	I-880 SB	98th Street EB On-Ramp	3,623	4,600	No	970	2,000	No	**31.4**	**D**	0.446	54.7	1,990	59.6	57.2
40	I-580 EB	SR 13 Merge	4,924	4,600	**Yes**	2,475	2,350	**Yes**	**-**	**F**	-	-	-	-	-
41	I-580 EB	Seminary Avenue On-Ramp	3,035	4,600	No	535	2,100	No	**27.0**	**C**	0.372	56.4	1,875	60.1	58.4
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	2,915	4,600	No	899	2,100	No	**22.8**	**C**	0.313	57.8	1,512	61.4	59.6
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	2,662	4,600	No	758	2,100	No	**23.7**	**C**	0.342	57.1	1,428	61.7	59.4
56	I-580 WB	Keller Avenue On-Ramp	2,781	4,600	No	677	2,100	No	**24.7**	**C**	0.349	57.0	1,578	61.1	59.1
58	I-580 WB	Edwards Avenue On-Ramp	3,443	4,600	No	1,071	2,100	No	**30.3**	**D**	0.418	55.4	1,779	60.4	57.8
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,997	4,600	No	293	2,100	No	**19.3**	**B**	0.325	57.5	1,278	62.2	60.1

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

Jurisdiction Caltrans District 4
Analysis Year 2035 AM
Scenario 2035 Plus Project

Agency or Company Caltrans
Date 1/21/2014
Project Description Coliseum City SP/EIR

General Information				*Mainline Data*						*Mainline Volume Adjustment*							
	Freeway/ Direction	Off-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
2	I-880 NB	Davis Street Off-Ramp	AM	5	65	8,100	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
5	I-880 NB	98th Street Off-Ramp	AM	4	65	8,230	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
20	I-880 SB	42nd Avenue/High Street Off-Ramp	AM	4	65	8,410	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
23	I-880 SB	66th Street Off-Ramp	AM	4	65	8,110	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
26	I-880 SB	Hegenberger Road Off-Ramp	AM	4	65	7,950	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
34	I-880 SB	Davis Street Off-Ramp	AM	4	65	7,400	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
38	I-580 EB	Seminary Avenue Off-Ramp	AM	4	65	4,315	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
43	I-580 EB	Edwards Avenue Off-Ramp	AM	4	65	6,780	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
45	I-580 EB	Keller Avenue Off-Ramp	AM	4	65	6,090	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	6,080	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	5,570	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
55	I-580 WB	Keller Avenue Off-Ramp	AM	4	65	5,510	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
60	I-580 WB	Seminary Avenue Off-Ramp	AM	4	65	6,990	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
61	I-580 WB	SR 13 Off-Ramp	AM	4	65	6,720	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Flow Rate v_F (pcph)
2	I-880 NB	Davis Street Off-Ramp	8,343
5	I-880 NB	98th Street Off-Ramp	8,477
20	I-880 SB	42nd Avenue/High Street Off-Ramp	8,662
23	I-880 SB	66th Street Off-Ramp	8,353
26	I-880 SB	Hegenberger Road Off-Ramp	8,189
34	I-880 SB	Davis Street Off-Ramp	7,622
38	I-580 EB	Seminary Avenue Off-Ramp	4,315
43	I-580 EB	Edwards Avenue Off-Ramp	6,780
45	I-580 EB	Keller Avenue Off-Ramp	6,090
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,080
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,570
55	I-580 WB	Keller Avenue Off-Ramp	5,510
60	I-580 WB	Seminary Avenue Off-Ramp	6,990
61	I-580 WB	SR 13 Off-Ramp	6,720

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			Effective	*Off-Ramp Data*							*Off-Ramp Volume Adjustment*								
	Freeway/		Flow Rate			S_{FR}	V_R	Decel Lane (ft)					Truck/						Flow Rate
	Direction	Off-ramp	v_p (pcph)	Type	Lanes	(mph)	(vph)	L_{D1}	L_{D2}	L_{Deff}	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_R (pcph)
2	I-880 NB	Davis Street Off-Ramp	6,674	Right	1	50.0	810	1,500		1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	818
5	I-880 NB	98th Street Off-Ramp	8,477	Right	1	50.0	1,190	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,202
20	I-880 SB	42nd Avenue/High Street Off-Ramp	8,662	Right	1	50.0	1,570	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,586
23	I-880 SB	66th Street Off-Ramp	8,353	Right	2	50.0	760	150	1,200	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	768
26	I-880 SB	Hegenberger Road Off-Ramp	8,189	Right	2	50.0	2,030	100	1,250	1,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,050
34	I-880 SB	Davis Street Off-Ramp	7,622	Right	1	50.0	710	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	717
38	I-580 EB	Seminary Avenue Off-Ramp	4,315	Right	1	50.0	790	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	798
43	I-580 EB	Edwards Avenue Off-Ramp	6,780	Right	1	50.0	690	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	697
45	I-580 EB	Keller Avenue Off-Ramp	6,090	Right	1	50.0	420	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,080	Right	1	50.0	1,040	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,050
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,570	Right	1	50.0	810	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	818
55	I-580 WB	Keller Avenue Off-Ramp	5,510	Right	1	50.0	250	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	253
60	I-580 WB	Seminary Avenue Off-Ramp	6,990	Right	1	50.0	270	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	273
61	I-580 WB	SR 13 Off-Ramp	6,720	Major	2	65.0	2,460	350	800	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,485

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_u (pcph)
2	I-880 NB	Davis Street Off-Ramp	No											
5	I-880 NB	98th Street Off-Ramp	On	4,000	570	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	576
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No											
23	I-880 SB	66th Street Off-Ramp	On	2,550	1,270	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,283
26	I-880 SB	Hegenberger Road Off-Ramp	On	3,100	600	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	606
34	I-880 SB	Davis Street Off-Ramp	On	3,700	960	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	970
38	I-580 EB	Seminary Avenue Off-Ramp	No											
43	I-580 EB	Edwards Avenue Off-Ramp	On	950	530	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	535
45	I-580 EB	Keller Avenue Off-Ramp	Off	2,500	690	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	697
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	5,300	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No											
55	I-580 WB	Keller Avenue Off-Ramp	On	5,400	750	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	758
60	I-580 WB	Seminary Avenue Off-Ramp	On	1,200	1,060	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,071
61	I-580 WB	SR 13 Off-Ramp	Off	1,250	270	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	273

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
2	I-880 NB	Davis Street Off-Ramp	On	1,900	370	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	374
5	I-880 NB	98th Street Off-Ramp	On	1,250	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
20	I-880 SB	42nd Avenue/High Street Off-Ramp	On	3,650	1,270	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,283
23	I-880 SB	66th Street Off-Ramp	On	3,400	600	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	606
26	I-880 SB	Hegenberger Road Off-Ramp	On	1,350	680	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	687
34	I-880 SB	Davis Street Off-Ramp	On	1,950	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
38	I-580 EB	Seminary Avenue Off-Ramp	On	3,700	2,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,475
43	I-580 EB	Edwards Avenue Off-Ramp	Off	2,500	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
45	I-580 EB	Keller Avenue Off-Ramp	On	2,300	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	2,000	890	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	899
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	On	1,900	750	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	758
55	I-580 WB	Keller Avenue Off-Ramp	On	2,300	670	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	677
60	I-580 WB	Seminary Avenue Off-Ramp	Off	1,250	2,460	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,485
61	I-580 WB	SR 13 Off-Ramp	On	1,900	290	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	293

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

			General Information		*v_{12} Estimation*						*Capacity Checks*							
	Freeway/		L_{EQ}		P_{FD} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_3, v_{av34}	v_3, v_{av34}	v_3, v_{av34}	v_{12a}	Max v_{12a}
	Direction	Off-ramp	13-12	13-13	13-9	13-10	13-11	P_{FD}	(pcph)	(pcph)	(pcph)	LOS F?	(pcphpl)	> 2,700?	>1.5*v_{12}/2?	(pcph)	(pcph)
2	I-880 NB	Davis Street Off-Ramp		589	0.556			0.436	3,371	6,674	11,000	No	1,651	No	No	3,371	4,400
5	I-880 NB	98th Street Off-Ramp	3,297	975	0.493	0.473		0.436	4,374	8,477	8,800	No	2,052	No	No	4,374	4,400
20	I-880 SB	42nd Avenue/High Street Off-Ramp		4,459	0.471			0.436	4,671	8,662	8,800	No	1,996	No	No	4,671	4,400
23	I-880 SB	66th Street Off-Ramp	6,264	1,011	0.516	0.516		0.260	2,740	8,353	8,800	No	2,807	Yes	Yes	3,341	4,400
26	I-880 SB	Hegenberger Road Off-Ramp	5,854	5,226	0.461	0.516		0.260	3,646	8,189	8,800	No	2,271	No	No	3,646	4,400
34	I-880 SB	Davis Street Off-Ramp	5,055	646	0.536	0.536		0.436	3,728	7,622	8,800	No	1,947	No	No	3,728	4,400
38	I-580 EB	Seminary Avenue Off-Ramp		3,449	0.615			0.436	2,331	4,315	8,800	No	992	No	No	2,331	4,400
43	I-580 EB	Edwards Avenue Off-Ramp	3,077	628	0.558	0.558	0.495	0.436	3,349	6,780	8,800	No	1,715	No	No	3,349	4,400
45	I-580 EB	Keller Avenue Off-Ramp	3,897	519	0.588			0.436	2,894	6,090	8,800	No	1,598	No	No	2,894	4,400
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	3,161	1,583	0.560	0.527		0.436	3,243	6,080	8,800	No	1,418	No	No	3,243	4,400
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp		1,131	0.583			0.436	2,890	5,570	8,800	No	1,340	No	No	2,890	4,400
55	I-580 WB	Keller Avenue Off-Ramp	4,243	769	0.611	0.587		0.436	2,545	5,510	9,600	No	1,483	No	No	2,545	4,400
60	I-580 WB	Seminary Avenue Off-Ramp	5,073	3,009	0.573	0.573	0.717	0.436	3,201	6,990	9,600	No	1,894	No	No	3,201	4,400
61	I-580 WB	SR 13 Off-Ramp	7,424	16,144	0.478			0.260	3,586	6,720	9,600	No	1,567	No	No	3,586	4,400

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Exceeds Max v_{12a}?
2	I-880 NB	Davis Street Off-Ramp	No
5	I-880 NB	98th Street Off-Ramp	No
20	I-880 SB	42nd Avenue/High Street Off-Ramp	**Yes**
23	I-880 SB	66th Street Off-Ramp	No
26	I-880 SB	Hegenberger Road Off-Ramp	No
34	I-880 SB	Davis Street Off-Ramp	No
38	I-580 EB	Seminary Avenue Off-Ramp	No
43	I-580 EB	Edwards Avenue Off-Ramp	No
45	I-580 EB	Keller Avenue Off-Ramp	No
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	No
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No
55	I-580 WB	Keller Avenue Off-Ramp	No
60	I-580 WB	Seminary Avenue Off-Ramp	No
61	I-580 WB	SR 13 Off-Ramp	No

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information								*Results*		*Speed Estimation*				
	Freeway/ Direction	Off-ramp	v_{Fo} (pcph)	Max v_{Fo} (pcph)	LOS F?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. D_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
2	I-880 NB	Davis Street Off-Ramp	5,856	11,000	No	818	2,100	No	**19.7**	**B**	0.307	57.9	1,651	68.8	62.8
5	I-880 NB	98th Street Off-Ramp	7,275	8,800	No	1,202	2,100	No	**40.5**	**E**	0.341	57.2	2,052	67.2	61.6
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,077	8,800	No	1,586	2,100	No	**41.7**	**E**	0.376	56.4	1,996	67.4	61.0
23	I-880 SB	66th Street Off-Ramp	7,586	8,800	No	768	4,200	No	**19.5**	**B**	0.302	58.1	2,506	65.4	62.3
26	I-880 SB	Hegenberger Road Off-Ramp	6,138	8,800	No	2,050	4,200	No	**22.6**	**C**	0.418	55.4	2,271	66.3	61.0
34	I-880 SB	Davis Street Off-Ramp	6,905	8,800	No	717	2,100	No	**34.5**	**D**	0.298	58.2	1,947	67.6	62.6
38	I-580 EB	Seminary Avenue Off-Ramp	3,517	8,800	No	798	2,100	No	**23.4**	**C**	0.305	58.0	992	71.3	63.4
43	I-580 EB	Edwards Avenue Off-Ramp	6,083	8,800	No	697	2,100	No	**32.2**	**D**	0.296	58.2	1,715	68.5	63.0
45	I-580 EB	Keller Avenue Off-Ramp	5,666	8,800	No	424	2,100	No	**27.3**	**C**	0.271	58.8	1,598	69.0	63.7
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	5,030	8,800	No	1,050	2,100	No	**31.2**	**D**	0.328	57.5	1,418	69.7	62.6
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	4,752	8,800	No	818	2,100	No	**27.8**	**C**	0.307	57.9	1,340	70.0	63.2
55	I-580 WB	Keller Avenue Off-Ramp	5,258	8,800	No	253	2,100	No	**24.8**	**C**	0.256	59.1	1,483	69.4	64.3
60	I-580 WB	Seminary Avenue Off-Ramp	6,717	8,800	No	273	2,100	No	**30.0**	**D**	0.258	59.1	1,894	67.8	63.5
61	I-580 WB	SR 13 Off-Ramp	4,235	8,800	No	2,485	4,400	No	**18.3**	**B**	0.262	59.0	1,567	69.1	63.3

Leisch Method for Weaving Analysis

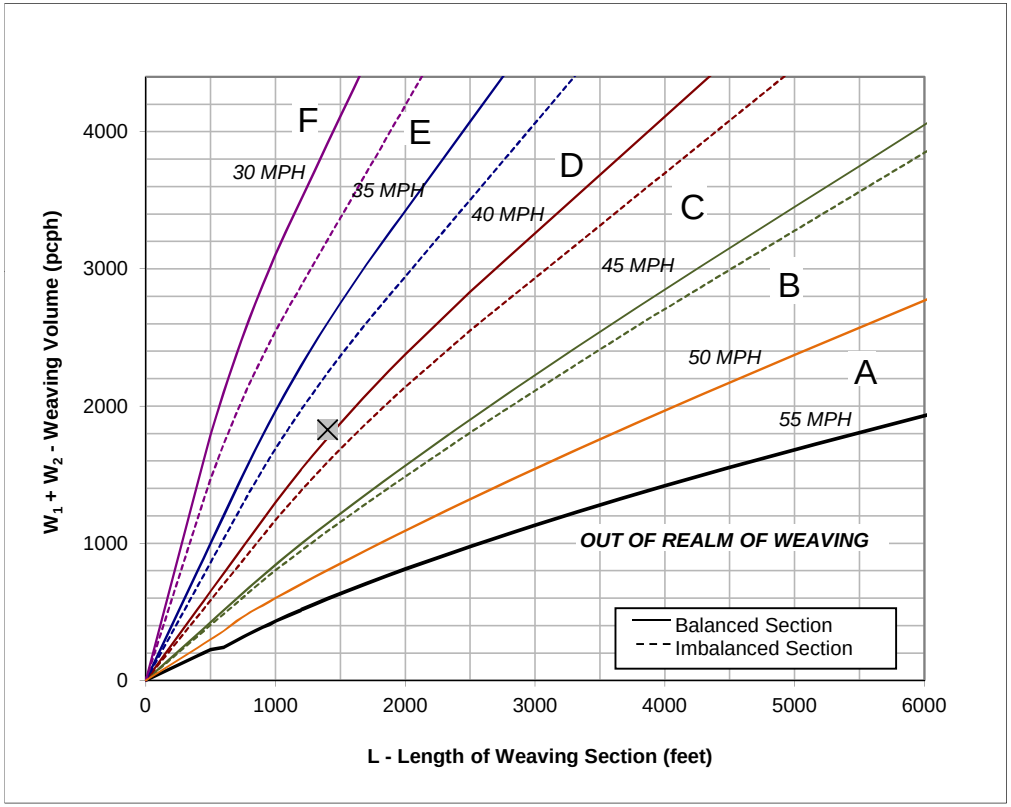
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,400

	Total Weaving Section (V)	On-ramp to Mainline (W_1)	Mainline to Off-ramp (W_2)
Volume (vph)*	7,800	760	1,050
Truck Percentage	4%	2%	2%
PCE for Trucks	1.5	1.5	1.5
Volume (pcph)	7,956	768	1,061

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 PP - AM Peak
Freeway	I-880 NB
On-ramp	98th Street
Off-ramp	Hegenberger Road



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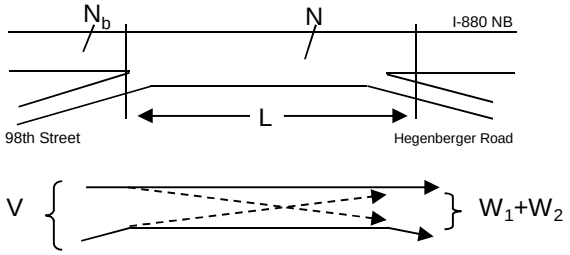


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **37.6**
4. Weaving Intensity Factor (k) **2.74**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,858**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

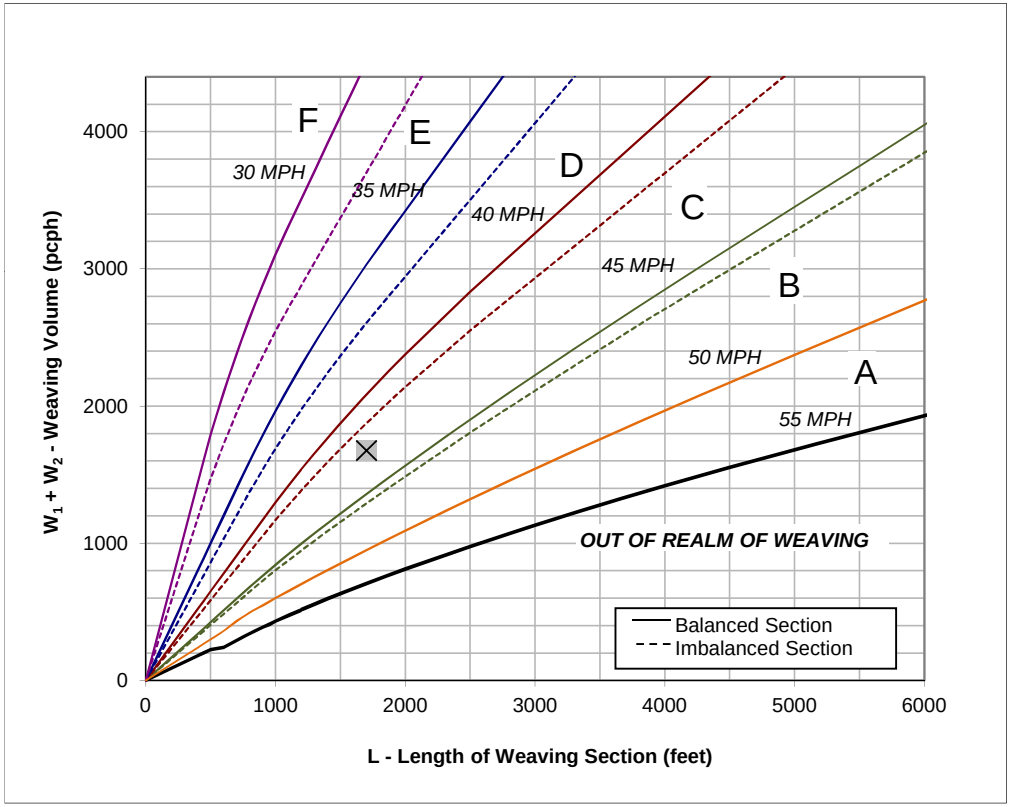
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,700

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,530	Volume (vph)*	780	Volume (vph)*	880
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,681	Volume (pcph)	788	Volume (pcph)	889

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 PP - AM Peak
Freeway	I-880 NB
On-ramp	Hegenberger Road
Off-ramp	66th Street



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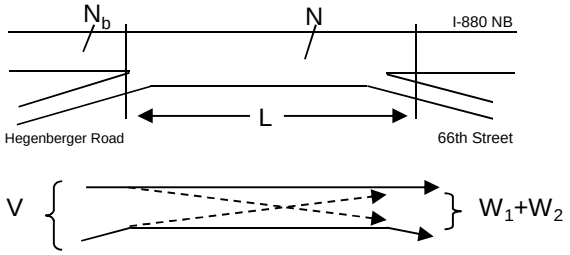


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **41.7**
4. Weaving Intensity Factor (k) **2.37**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,752**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

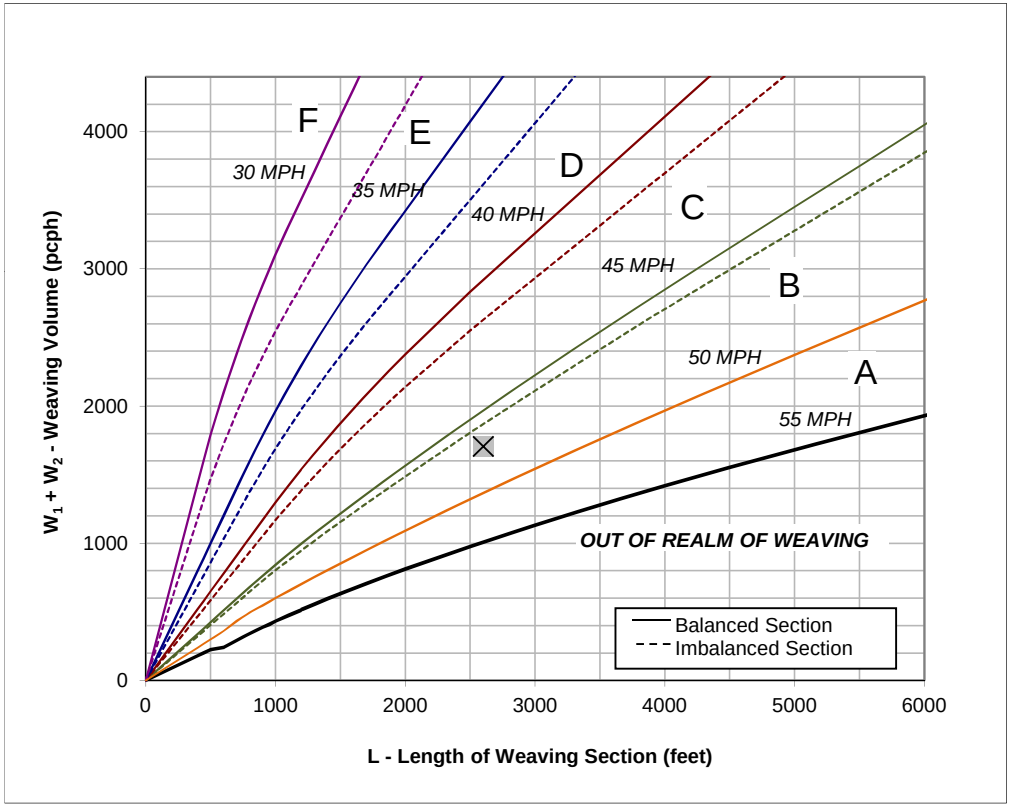
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,600

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,580	Volume (vph)*	930	Volume (vph)*	760
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,732	Volume (pcph)	939	Volume (pcph)	768

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 PP - AM Peak
Freeway	I-880 NB
On-ramp	66th Street
Off-ramp	High Street



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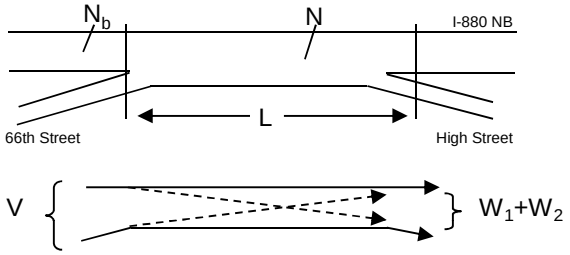


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   50 MPH and **55 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **45.2**
4. Weaving Intensity Factor (k) **1.94**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,690**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

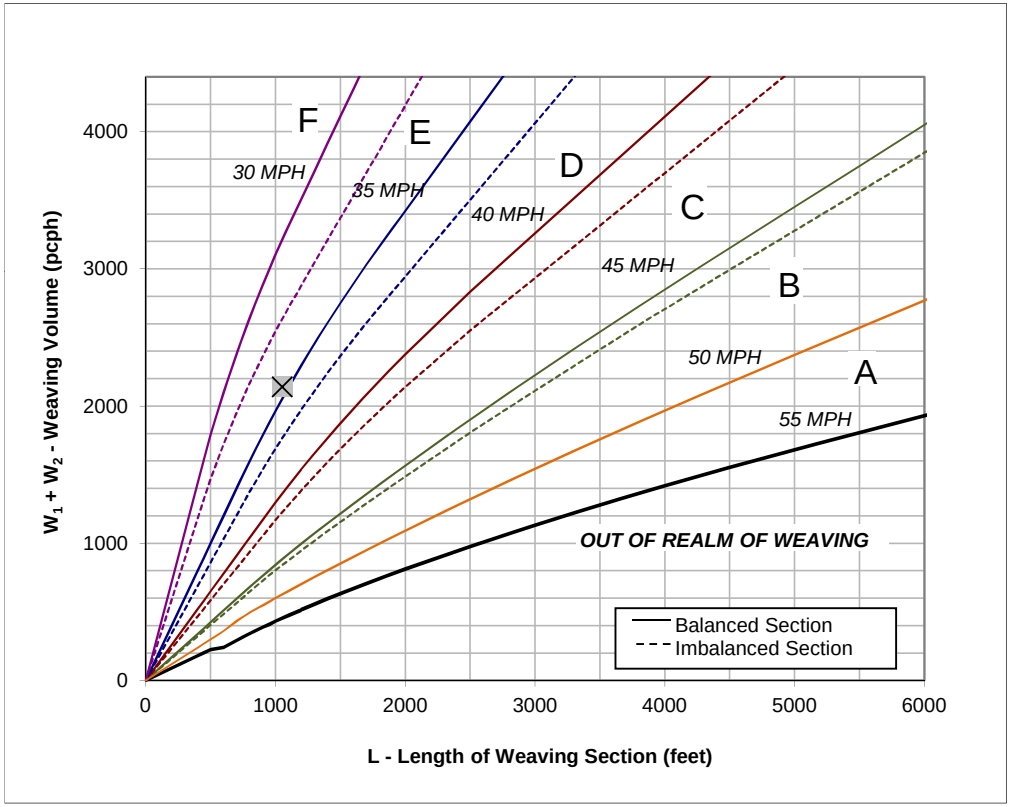
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,050

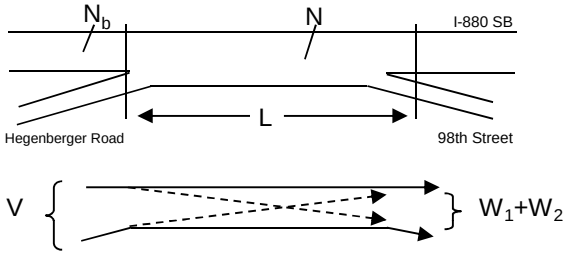
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,990	Volume (vph)*	1,070	Volume (vph)*	1,050
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,095	Volume (pcph)	1,081	Volume (pcph)	1,061

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 PP - AM Peak
Freeway	I-880 SB
On-ramp	Hegenberger Road
Off-ramp	98th Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   35 MPH and **40 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **31.5**
4. Weaving Intensity Factor (k) **3.00**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,843**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

HCM 2010
Basic Freeway Segments
Operational Analysis

Jurisdiction Caltrans District 4 | Agency or Company Caltrans
Analysis Year 2035 PM | Date 1/21/2014
Scenario 2035 Plus Project | Project Description Coliseum City SP/EIR

General Information | *Flow Rate Calculation*

	Freeway/ Direction	From/To	Analysis Time Period	Volume (vph)	PHF	Lanes	HOV Lane?	HOV Lane Volume	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_p (pcphpl)
1	I-880 NB	South of Davis Street	AM	7,720	1.00	5	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,590
4	I-880 NB	Davis Street to 98th Street	AM	7,810	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,011
18	I-880 NB	North of High Street	AM	7,730	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,990
19	I-880 SB	North of High Street	AM	8,560	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,204
22	I-880 SB	High Street to 66th Street	AM	8,280	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,132
25	I-880 SB	66th Street to Hegenberger Road	AM	8,250	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,124
33	I-880 SB	98th Street to Davis Street	AM	9,100	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,343
37	I-580 EB	West of Seminary Avenue Off-Ramp	AM	5,880	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,470
39	I-580 EB	West of SR 13 Merge	AM	5,470	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,368
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	AM	8,630	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	2,158
44	I-580 EB	Edwards Avenue to Keller Avenue	AM	8,040	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	2,010
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	AM	7,880	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,970
50	I-580 EB	East of 98th Avenue/Golf Links Road	AM	7,630	1.00	5	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,526
51	I-580 WB	East of 98th Avenue/Golf Links Road	AM	6,440	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,610
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	AM	6,550	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,638
57	I-580 WB	Keller Avenue to Edwards Avenue	AM	6,500	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,625
59	I-580 WB	Edwards Avenue to Seminary Avenue	AM	7,160	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,790
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	AM	4,120	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,030
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	AM	4,420	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,105

HCM 2010
Basic Freeway Segments
Operational Analysis

General Information			*Speed Calculation*									*Results*		
	Freeway/		Lane		R. Shoulder		TRD	Calculated	Measured	FFS	v_p/c	Speed, S	Density, D	Level of
	Direction	From/To	Width (ft)	f_{LW}	Width (ft)	f_{LC}	(per mi)	FFS (mph)	FFS (mph)	(mph)		(mph)	(pcplpm)	Service
1	I-880 NB	South of Davis Street	12	0	10	0	2.3	68.9	65.0	70	0.66	68.2	**23.3**	**C**
4	I-880 NB	Davis Street to 98th Street	12	0	14	0	2.3	68.9	65.0	70	0.84	62.4	**32.2**	**D**
18	I-880 NB	North of High Street	11	1.9	1	1	2.5	65.5	65.0	65	0.85	60.1	**33.1**	**D**
19	I-880 SB	North of High Street	11	1.9	1	1	2.3	66.0	65.0	65	0.94	55.8	**39.5**	**E**
22	I-880 SB	High Street to 66th Street	12	0	10	0	2.3	68.9	65.0	70	0.89	59.9	**35.6**	**E**
25	I-880 SB	66th Street to Hegenberger Road	12	0	14	0	2.3	68.9	65.0	70	0.89	60.1	**35.4**	**E**
33	I-880 SB	98th Street to Davis Street	12	0	12	0	2.3	68.9	65.0	70	0.98	54.8	**42.7**	**E**
37	I-580 EB	West of Seminary Avenue Off-Ramp	12	0	9	0	2.5	68.4	65.0	70	0.61	69.2	**21.3**	**C**
39	I-580 EB	West of SR 13 Merge	12	0	12	0	2.2	69.2	65.0	70	0.57	69.7	**19.6**	**C**
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	12	0	12	0	2.2	69.2	65.0	70	0.90	59.4	**36.3**	**E**
44	I-580 EB	Edwards Avenue to Keller Avenue	12	0	11	0	2.2	69.2	65.0	70	0.84	62.4	**32.2**	**D**
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.82	63.1	**31.2**	**D**
50	I-580 EB	East of 98th Avenue/Golf Links Road	12	0	9	0	2	69.6	65.0	70	0.64	68.8	**22.2**	**C**
51	I-580 WB	East of 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.67	68.1	**23.7**	**C**
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	12	0	10	0	2.5	68.4	65.0	70	0.68	67.8	**24.2**	**C**
57	I-580 WB	Keller Avenue to Edwards Avenue	12	0	12	0	2.3	68.9	65.0	70	0.68	67.9	**23.9**	**C**
59	I-580 WB	Edwards Avenue to Seminary Avenue	12	0	8	0	2.3	68.9	65.0	70	0.75	66.0	**27.1**	**D**
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	12	0	12	0	2.3	68.9	65.0	70	0.43	70.0	**14.7**	**B**
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	12	0	10	0	2.5	68.4	65.0	70	0.46	70.0	**15.8**	**B**

HCM 2010
Merge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: 2035 PM
Scenario: 2035 Plus Project

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information				*Freeway Data*						*Freeway Volume Adjustment*							
	Freeway/ Direction	On-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
3	I-880 NB	Davis Street On-Ramp	AM	4	65	6,640	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
7	I-880 NB	98th Street WB On-Ramp	AM	5	65	7,130	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
11	I-880 NB	Hegenberger SB On-Ramp	AM	5	65	7,180	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
14	I-880 NB	Coliseum Way/66th Street On-Ramp	AM	4	65	6,800	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
17	I-880 NB	High Street On-Ramp	AM	4	65	6,860	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
21	I-880 SB	High Street/Oakport Street On-Ramp	AM	4	65	7,330	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
24	I-880 SB	66th Street On-Ramp	AM	4	65	7,380	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
27	I-880 SB	Hegenberger SB Loop On-Ramp	AM	4	65	6,600	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
31	I-880 SB	98th Street WB Loop On-Ramp	AM	4	65	7,510	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
32	I-880 SB	98th Street EB On-Ramp	AM	4	65	7,860	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
40	I-580 EB	SR 13 Merge	AM	4	65	5,470	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
41	I-580 EB	Seminary Avenue On-Ramp	AM	4	65	7,590	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	6,900	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	6,440	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
56	I-580 WB	Keller Avenue On-Ramp	AM	4	65	6,550	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
58	I-580 WB	Edwards Avenue On-Ramp	AM	4	65	7,160	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	AM	4	65	6,810	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	Flow Rate v_F (pcph)
3	I-880 NB	Davis Street On-Ramp	6,839
7	I-880 NB	98th Street WB On-Ramp	7,344
11	I-880 NB	Hegenberger SB On-Ramp	7,395
14	I-880 NB	Coliseum Way/66th Street On-Ramp	7,004
17	I-880 NB	High Street On-Ramp	7,066
21	I-880 SB	High Street/Oakport Street On-Ramp	7,550
24	I-880 SB	66th Street On-Ramp	7,601
27	I-880 SB	Hegenberger SB Loop On-Ramp	6,798
31	I-880 SB	98th Street WB Loop On-Ramp	7,735
32	I-880 SB	98th Street EB On-Ramp	8,096
40	I-580 EB	SR 13 Merge	5,470
41	I-580 EB	Seminary Avenue On-Ramp	7,590
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	6,900
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	6,440
56	I-580 WB	Keller Avenue On-Ramp	6,550
58	I-580 WB	Edwards Avenue On-Ramp	7,160
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	6,810

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			Effective	*On-Ramp Data*							*On-Ramp Volume Adjustment*								
	Freeway/ Direction	On-ramp	Flow Rate v_p (pcph)	Type	Lanes	S_{FR} (mph)	V_R (vph)	Accel Lane (ft) L_{A1}	L_{A2}	L_{Aeff}	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_R (pcph)
3	I-880 NB	Davis Street On-Ramp	6,839	Right	1	40.0	520	450		450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	525
7	I-880 NB	98th Street WB On-Ramp	5,361	Right	1	50.0	340	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	343
11	I-880 NB	Hegenberger SB On-Ramp	5,399	Right	1	25.0	250	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	253
14	I-880 NB	Coliseum Way/66th Street On-Ramp	7,004	Right	2	50.0	1,020	300	1,500	2,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,030
17	I-880 NB	High Street On-Ramp	7,066	Right	1	50.0	870	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	879
21	I-880 SB	High Street/Oakport Street On-Ramp	7,550	Right	1	40.0	950	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	960
24	I-880 SB	66th Street On-Ramp	7,601	Right	1	50.0	870	550		550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	879
27	I-880 SB	Hegenberger SB Loop On-Ramp	6,798	Right	1	30.0	700	1,350		1,350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	707
31	I-880 SB	98th Street WB Loop On-Ramp	7,735	Right	1	25.0	350	250		250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354
32	I-880 SB	98th Street EB On-Ramp	8,096	Right	1	35.0	1,240	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,252
40	I-580 EB	SR 13 Merge	5,470	Major	1	65.0	2,670	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,697
41	I-580 EB	Seminary Avenue On-Ramp	7,590	Right	1	50.0	1,040	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,050
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	6,900	Right	1	50.0	730	800		800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	737
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	6,440	Right	1	50.0	950	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	960
56	I-580 WB	Keller Avenue On-Ramp	6,550	Right	1	50.0	360	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	364
58	I-580 WB	Edwards Avenue On-Ramp	7,160	Right	1	50.0	660	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	667
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	6,810	Right	1	50.0	300	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	303

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_U (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	1,900	1,080	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,148
7	I-880 NB	98th Street WB On-Ramp	On	1,100	790	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	840
11	I-880 NB	Hegenberger SB On-Ramp	On	1,750	730	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	776
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	4,550	630	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	670
17	I-880 NB	High Street On-Ramp	Off	3,300	960	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,021
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	3,650	1,230	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,308
24	I-880 SB	66th Street On-Ramp	Off	3,400	900	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	957
27	I-880 SB	Hegenberger SB Loop On-Ramp	Off	1,350	1,650	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,754
31	I-880 SB	98th Street WB Loop On-Ramp	Off	1,200	620	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	659
32	I-880 SB	98th Street EB On-Ramp	On	750	350	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	372
40	I-580 EB	SR 13 Merge	Off	3,700	479	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	509
41	I-580 EB	Seminary Avenue On-Ramp	On	1,000	2,261	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,404
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Off	2,000	980	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,042
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	1,900	840	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	893
56	I-580 WB	Keller Avenue On-Ramp	Off	2,300	410	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	436
58	I-580 WB	Edwards Avenue On-Ramp	On	2,800	360	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	383
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	Off	1,950	2,690	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	2,860

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	4,000	1,190	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,202
7	I-880 NB	98th Street WB On-Ramp	Off	1,700	1,050	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,061
11	I-880 NB	Hegenberger SB On-Ramp	Off	2,100	880	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	889
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	3,200	760	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	768
17	I-880 NB	High Street On-Ramp	No										1.00	
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	2,550	760	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	768
24	I-880 SB	66th Street On-Ramp	Off	3,100	2,030	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,050
27	I-880 SB	Hegenberger SB Loop On-Ramp	On	1,350	390	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	394
31	I-880 SB	98th Street WB Loop On-Ramp	On	750	710	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	717
32	I-880 SB	98th Street EB On-Ramp	Off	3,700	1,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,111
40	I-580 EB	SR 13 Merge	On	1,000	530	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	535
41	I-580 EB	Seminary Avenue On-Ramp	Off	950	690	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	697
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No										1.00	
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	5,400	250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	253
56	I-580 WB	Keller Avenue On-Ramp	On	2,800	1,060	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,071
58	I-580 WB	Edwards Avenue On-Ramp	Off	1,200	270	1	Level	2%	0%	1.5	1.2	0.99	1.00	273
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No										1.00	

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*						
	Freeway/		L_{EQ}	P_{FM} Equations					v_{12}	v_{Fi}	Max v_{Fi}		v_{Fo}	Max v_{Fo}		v_3, v_{av34}
	Direction	On-ramp	13-6	13-7	13-3	13-4	13-5	P_{FM}	(pcph)	(pcph)	(pcph)	LOS F?	(pcph)	(pcph)	LOS F?	(pcphpl)
3	I-880 NB	Davis Street On-Ramp	1,466	7,619	0.590	0.617	0.628	0.152	1,041	6,839	8,800	No	7,364	8,800	No	2,899
7	I-880 NB	98th Street WB On-Ramp	1,567	7,484	0.586		0.713	0.175	938	5,361	11,000	No	5,704	11,000	No	2,212
11	I-880 NB	Hegenberger SB On-Ramp	248	6,272	0.586		0.660	0.186	1,005	5,399	11,000	No	5,651	11,000	No	2,197
14	I-880 NB	Coliseum Way/66th Street On-Ramp	2,865	2,296	0.636	0.742	0.612	0.209	1,464	7,004	8,800	No	8,034	8,800	No	2,770
17	I-880 NB	High Street On-Ramp	1,980		0.582	0.665		0.108	763	7,066	8,800	No	7,945	8,800	No	3,151
21	I-880 SB	High Street/Oakport Street On-Ramp	1,688	5,037	0.589	0.712	0.628	0.098	739	7,550	8,800	No	8,509	8,800	No	3,406
24	I-880 SB	66th Street On-Ramp	2,272	12,172	0.593	0.664	0.723	0.108	821	7,601	8,800	No	8,480	8,800	No	3,390
27	I-880 SB	Hegenberger SB Loop On-Ramp	1,372	1,550	0.615	0.614		0.129	880	6,798	8,800	No	7,505	8,800	No	2,959
31	I-880 SB	98th Street WB Loop On-Ramp	747	5,259	0.585	0.613		0.174	1,343	7,735	8,800	No	8,089	8,800	No	3,196
32	I-880 SB	98th Street EB On-Ramp	1,562	7,841	0.586		0.628	0.061	496	8,096	8,800	No	9,348	8,800	**Yes**	3,800
40	I-580 EB	SR 13 Merge	2,923	3,512	0.589	0.638		-0.119	-653	5,470	8,800	No	8,167	8,800	No	3,061
41	I-580 EB	Seminary Avenue On-Ramp	2,195	4,918	0.586		0.741	0.087	657	7,590	8,800	No	8,640	8,800	No	3,467
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	2,203		0.600	0.587		0.126	867	6,900	8,800	No	7,637	8,800	No	3,017
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	1,952	1,717	0.587	0.584	0.561	0.098	630	6,440	8,800	No	7,400	8,800	No	2,905
56	I-580 WB	Keller Avenue On-Ramp	1,848	7,281	0.587	0.616		0.172	1,129	6,550	8,800	No	6,914	8,800	No	2,711
58	I-580 WB	Edwards Avenue On-Ramp	1,999	2,000	0.585		0.608	0.190	1,362	7,160	9,600	No	7,827	8,800	No	2,899
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,846	######	0.585	0.752		0.236	1,605	6,810	9,600	No	7,113	8,800	No	2,603

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	v_3, v_{av34} > 2,700?	v_3, v_{av34} >1.5*v_{12}/2?	v_{12a} (pcph)
3	I-880 NB	Davis Street On-Ramp	Yes	Yes	2,736
7	I-880 NB	98th Street WB On-Ramp	No	Yes	2,144
11	I-880 NB	Hegenberger SB On-Ramp	No	Yes	2,159
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Yes	Yes	2,802
17	I-880 NB	High Street On-Ramp	Yes	Yes	2,826
21	I-880 SB	High Street/Oakport Street On-Ramp	Yes	Yes	3,020
24	I-880 SB	66th Street On-Ramp	Yes	Yes	3,041
27	I-880 SB	Hegenberger SB Loop On-Ramp	Yes	Yes	2,719
31	I-880 SB	98th Street WB Loop On-Ramp	Yes	Yes	3,094
32	I-880 SB	98th Street EB On-Ramp	Yes	Yes	3,238
40	I-580 EB	SR 13 Merge	Yes	Yes	2,188
41	I-580 EB	Seminary Avenue On-Ramp	Yes	Yes	3,036
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Yes	Yes	2,760
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Yes	Yes	2,576
56	I-580 WB	Keller Avenue On-Ramp	Yes	Yes	2,620
58	I-580 WB	Edwards Avenue On-Ramp	Yes	Yes	1,760
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No	Yes	2,724

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information						*Results*		*Speed Estimation*				
	Freeway/ Direction	On-ramp	v_{R12a} (pcph)	Max v_{R12a} (pcph)	Exceeds Max v_{R12a}?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. M_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
3	I-880 NB	Davis Street On-Ramp	3,261	4,600	No	525	2,000	No	**27.8**	**C**	0.387	56.1	2,052	59.4	57.9
7	I-880 NB	98th Street WB On-Ramp	2,488	4,600	No	343	2,100	No	**22.8**	**C**	0.338	57.2	1,608	61.0	59.3
11	I-880 NB	Hegenberger SB On-Ramp	2,412	4,600	No	253	1,900	No	**22.3**	**C**	0.350	57.0	1,620	61.0	59.2
14	I-880 NB	Coliseum Way/66th Street On-Ramp	3,832	4,600	No	1,030	4,200	No	**21.7**	**C**	0.291	58.3	2,101	59.2	58.8
17	I-880 NB	High Street On-Ramp	3,705	4,600	No	879	2,100	No	**33.0**	**D**	0.465	54.3	2,120	59.2	56.8
21	I-880 SB	High Street/Oakport Street On-Ramp	3,979	4,600	No	960	2,000	No	**33.6**	**D**	0.498	53.6	2,265	58.6	56.1
24	I-880 SB	66th Street On-Ramp	3,919	4,600	No	879	2,100	No	**32.2**	**D**	0.462	54.4	2,280	58.6	56.6
27	I-880 SB	Hegenberger SB Loop On-Ramp	3,426	4,600	No	707	1,900	No	**23.4**	**C**	0.360	56.7	2,039	59.5	58.2
31	I-880 SB	98th Street WB Loop On-Ramp	3,448	4,600	No	354	1,900	No	**30.6**	**D**	0.431	55.1	2,321	58.3	56.9
32	I-880 SB	98th Street EB On-Ramp	4,491	4,600	No	1,252	2,000	No	**-**	**F**	-	-	-	-	-
40	I-580 EB	SR 13 Merge	4,885	4,600	**Yes**	2,697	2,350	**Yes**	**-**	**F**	-	-	-	-	-
41	I-580 EB	Seminary Avenue On-Ramp	4,086	4,600	No	1,050	2,100	No	**35.0**	**D**	0.523	53.0	2,277	58.6	55.8
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	3,497	4,600	No	737	2,100	No	**27.4**	**C**	0.370	56.5	2,070	59.3	58.0
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	3,536	4,600	No	960	2,100	No	**30.4**	**D**	0.420	55.3	1,932	59.8	57.6
56	I-580 WB	Keller Avenue On-Ramp	2,984	4,600	No	364	2,100	No	**26.4**	**C**	0.363	56.6	1,965	59.7	58.4
58	I-580 WB	Edwards Avenue On-Ramp	2,427	4,600	No	667	2,100	No	**22.5**	**C**	0.340	57.2	2,700	56.1	56.4
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	3,027	4,600	No	303	2,100	No	**27.4**	**C**	0.376	56.3	2,043	59.4	58.1

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

Jurisdiction Caltrans District 4
Analysis Year 2035 PM
Scenario 2035 Plus Project

Agency or Company Caltrans
Date 1/21/2014
Project Description Coliseum City SP/EIR

General Information				*Mainline Data*						*Mainline Volume Adjustment*							
	Freeway/ Direction	Off-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
2	I-880 NB	Davis Street Off-Ramp	AM	5	65	7,720	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
5	I-880 NB	98th Street Off-Ramp	AM	4	65	7,810	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
20	I-880 SB	42nd Avenue/High Street Off-Ramp	AM	4	65	8,560	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
23	I-880 SB	66th Street Off-Ramp	AM	4	65	8,280	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
26	I-880 SB	Hegenberger Road Off-Ramp	AM	4	65	8,250	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
34	I-880 SB	Davis Street Off-Ramp	AM	4	65	9,100	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
38	I-580 EB	Seminary Avenue Off-Ramp	AM	4	65	5,879	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
43	I-580 EB	Edwards Avenue Off-Ramp	AM	4	65	8,630	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
45	I-580 EB	Keller Avenue Off-Ramp	AM	4	65	8,040	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	7,880	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	6,440	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
55	I-580 WB	Keller Avenue Off-Ramp	AM	4	65	6,550	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
60	I-580 WB	Seminary Avenue Off-Ramp	AM	4	65	7,160	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
61	I-580 WB	SR 13 Off-Ramp	AM	4	65	6,810	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Flow Rate v_F (pcph)
2	I-880 NB	Davis Street Off-Ramp	7,952
5	I-880 NB	98th Street Off-Ramp	8,044
20	I-880 SB	42nd Avenue/High Street Off-Ramp	8,817
23	I-880 SB	66th Street Off-Ramp	8,528
26	I-880 SB	Hegenberger Road Off-Ramp	8,498
34	I-880 SB	Davis Street Off-Ramp	9,373
38	I-580 EB	Seminary Avenue Off-Ramp	5,879
43	I-580 EB	Edwards Avenue Off-Ramp	8,630
45	I-580 EB	Keller Avenue Off-Ramp	8,040
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	7,880
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	6,440
55	I-580 WB	Keller Avenue Off-Ramp	6,550
60	I-580 WB	Seminary Avenue Off-Ramp	7,160
61	I-580 WB	SR 13 Off-Ramp	6,810

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			Effective	*Off-Ramp Data*							*Off-Ramp Volume Adjustment*								
	Freeway/		Flow Rate			S_{FR}	V_R	Decel Lane (ft)					Truck/						Flow Rate
	Direction	Off-ramp	v_p (pcph)	Type	Lanes	(mph)	(vph)	L_{D1}	L_{D2}	L_{Deff}	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_R (pcph)
2	I-880 NB	Davis Street Off-Ramp	6,361	Right	1	50.0	1,080	1,500		1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,091
5	I-880 NB	98th Street Off-Ramp	8,044	Right	1	50.0	1,470	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,485
20	I-880 SB	42nd Avenue/High Street Off-Ramp	8,817	Right	1	50.0	1,230	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,242
23	I-880 SB	66th Street Off-Ramp	8,528	Right	2	50.0	900	150	1,200	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	909
26	I-880 SB	Hegenberger Road Off-Ramp	8,498	Right	2	50.0	1,650	100	1,250	1,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,667
34	I-880 SB	Davis Street Off-Ramp	9,373	Right	1	50.0	890	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	899
38	I-580 EB	Seminary Avenue Off-Ramp	5,879	Right	1	50.0	1,100	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,111
43	I-580 EB	Edwards Avenue Off-Ramp	8,630	Right	1	50.0	590	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	596
45	I-580 EB	Keller Avenue Off-Ramp	8,040	Right	1	50.0	510	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	515
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	7,880	Right	1	50.0	980	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	990
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	6,440	Right	1	50.0	840	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	848
55	I-580 WB	Keller Avenue Off-Ramp	6,550	Right	1	50.0	410	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
60	I-580 WB	Seminary Avenue Off-Ramp	7,160	Right	1	50.0	350	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354
61	I-580 WB	SR 13 Off-Ramp	6,810	Major	2	65.0	2,690	350	800	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,717

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_u (pcph)
2	I-880 NB	Davis Street Off-Ramp	No											
5	I-880 NB	98th Street Off-Ramp	On	4,000	520	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	525
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No											
23	I-880 SB	66th Street Off-Ramp	On	2,550	950	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	960
26	I-880 SB	Hegenberger Road Off-Ramp	On	3,100	870	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	879
34	I-880 SB	Davis Street Off-Ramp	On	3,700	1,240	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,252
38	I-580 EB	Seminary Avenue Off-Ramp	No											
43	I-580 EB	Edwards Avenue Off-Ramp	On	950	1,040	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,050
45	I-580 EB	Keller Avenue Off-Ramp	Off	2,500	590	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	596
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	5,300	350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No											
55	I-580 WB	Keller Avenue Off-Ramp	On	5,400	950	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	960
60	I-580 WB	Seminary Avenue Off-Ramp	On	1,200	660	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	667
61	I-580 WB	SR 13 Off-Ramp	Off	1,250	350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
2	I-880 NB	Davis Street Off-Ramp	On	1,900	370	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	374
5	I-880 NB	98th Street Off-Ramp	On	1,250	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
20	I-880 SB	42nd Avenue/High Street Off-Ramp	On	3,650	1,270	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,283
23	I-880 SB	66th Street Off-Ramp	On	3,400	600	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	606
26	I-880 SB	Hegenberger Road Off-Ramp	On	1,350	680	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	687
34	I-880 SB	Davis Street Off-Ramp	On	1,950	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
38	I-580 EB	Seminary Avenue Off-Ramp	On	3,700	2,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,475
43	I-580 EB	Edwards Avenue Off-Ramp	Off	2,500	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
45	I-580 EB	Keller Avenue Off-Ramp	On	2,300	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	2,000	890	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	899
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	On	1,900	750	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	758
55	I-580 WB	Keller Avenue Off-Ramp	On	2,300	670	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	677
60	I-580 WB	Seminary Avenue Off-Ramp	Off	1,250	2,460	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,485
61	I-580 WB	SR 13 Off-Ramp	On	1,900	290	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	293

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

			General Information		*v_{12} Estimation*					*Capacity Checks*							
	Freeway/		L_{EQ}	P_{FD} Equations					v_{12}	v_{Fi}	Max v_{Fi}		v_3, v_{av34}	v_3, v_{av34}	v_3, v_{av34}	v_{12a}	Max v_{12a}
	Direction	Off-ramp	13-12	13-13	13-9	13-10	13-11	P_{FD}	(pcph)	(pcph)	(pcph)	LOS F?	(pcphpl)	> 2,700?	>1.5*v_{12}/2?	(pcph)	(pcph)
2	I-880 NB	Davis Street Off-Ramp		687	0.551			0.436	3,389	6,361	11,000	No	1,486	No	No	3,389	4,400
5	I-880 NB	98th Street Off-Ramp	3,668	1,231	0.491	0.483		0.436	4,345	8,044	8,800	No	1,850	No	No	4,345	4,400
20	I-880 SB	42nd Avenue/High Street Off-Ramp		3,133	0.482			0.436	4,545	8,817	8,800	**Yes**	2,136	No	No	4,545	4,400
23	I-880 SB	66th Street Off-Ramp	4,844	1,119	0.505	0.505		0.260	2,890	8,528	8,800	No	2,819	Yes	Yes	3,411	4,400
26	I-880 SB	Hegenberger Road Off-Ramp	6,286	2,610	0.471	0.471		0.260	3,443	8,498	8,800	No	2,527	No	No	3,443	4,400
34	I-880 SB	Davis Street Off-Ramp	5,738	799	0.484	0.484		0.436	4,594	9,373	8,800	**Yes**	2,390	No	No	4,594	4,400
38	I-580 EB	Seminary Avenue Off-Ramp		4,483	0.562			0.436	3,190	5,879	8,800	No	1,345	No	No	3,190	4,400
43	I-580 EB	Edwards Avenue Off-Ramp	4,685	649	0.517	0.517	0.456	0.436	4,099	8,630	8,800	No	2,266	No	No	4,099	4,400
45	I-580 EB	Keller Avenue Off-Ramp	2,749	589	0.535			0.436	3,796	8,040	8,800	No	2,122	No	No	3,796	4,400
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	1,997	1,688	0.517	0.450		0.436	3,994	7,880	8,800	No	1,943	No	No	3,994	4,400
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp		1,201	0.560			0.436	3,286	6,440	8,800	No	1,577	No	No	3,286	4,400
55	I-580 WB	Keller Avenue Off-Ramp	5,045	859	0.577	0.569		0.436	3,089	6,550	9,600	No	1,730	No	No	3,089	4,400
60	I-580 WB	Seminary Avenue Off-Ramp	3,192	3,143	0.565	0.565	0.714	0.436	3,321	7,160	9,600	No	1,919	No	No	3,321	4,400
61	I-580 WB	SR 13 Off-Ramp	16,717	-4,157	0.465			0.260	3,781	6,810	9,600	No	1,514	No	No	3,781	4,400

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Exceeds Max v_{12a}?
2	I-880 NB	Davis Street Off-Ramp	No
5	I-880 NB	98th Street Off-Ramp	No
20	I-880 SB	42nd Avenue/High Street Off-Ramp	**Yes**
23	I-880 SB	66th Street Off-Ramp	No
26	I-880 SB	Hegenberger Road Off-Ramp	No
34	I-880 SB	Davis Street Off-Ramp	**Yes**
38	I-580 EB	Seminary Avenue Off-Ramp	No
43	I-580 EB	Edwards Avenue Off-Ramp	No
45	I-580 EB	Keller Avenue Off-Ramp	No
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	No
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No
55	I-580 WB	Keller Avenue Off-Ramp	No
60	I-580 WB	Seminary Avenue Off-Ramp	No
61	I-580 WB	SR 13 Off-Ramp	No

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	Off-ramp	v_{Fo} (pcph)	Max v_{Fo} (pcph)	LOS F?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. D_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
2	I-880 NB	Davis Street Off-Ramp	5,270	11,000	No	1,091	2,100	No	**19.9**	**B**	0.331	57.4	1,486	69.4	62.4
5	I-880 NB	98th Street Off-Ramp	6,560	8,800	No	1,485	2,100	No	**40.3**	**E**	0.367	56.6	1,850	68.0	61.3
20	I-880 SB	42nd Avenue/High Street Off-Ramp	7,575	8,800	No	1,242	2,100	No	**-**	**F**	-	-	-	-	-
23	I-880 SB	66th Street Off-Ramp	7,619	8,800	No	909	4,200	No	**20.1**	**C**	0.315	57.8	2,559	65.2	62.0
26	I-880 SB	Hegenberger Road Off-Ramp	6,831	8,800	No	1,667	4,200	No	**20.8**	**C**	0.383	56.2	2,527	65.3	61.3
34	I-880 SB	Davis Street Off-Ramp	8,474	8,800	No	899	2,100	No	**-**	**F**	-	-	-	-	-
38	I-580 EB	Seminary Avenue Off-Ramp	4,768	8,800	No	1,111	2,100	No	**30.8**	**D**	0.333	57.3	1,345	70.0	62.5
43	I-580 EB	Edwards Avenue Off-Ramp	8,034	8,800	No	596	2,100	No	**38.6**	**E**	0.287	58.4	2,266	66.4	62.3
45	I-580 EB	Keller Avenue Off-Ramp	7,525	8,800	No	515	2,100	No	**35.1**	**E**	0.279	58.6	2,122	66.9	62.7
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,890	8,800	No	990	2,100	No	**37.7**	**E**	0.322	57.6	1,943	67.6	62.1
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,592	8,800	No	848	2,100	No	**31.2**	**D**	0.309	57.9	1,577	69.1	62.9
55	I-580 WB	Keller Avenue Off-Ramp	6,136	8,800	No	414	2,100	No	**29.5**	**D**	0.270	58.8	1,730	68.5	63.5
60	I-580 WB	Seminary Avenue Off-Ramp	6,807	8,800	No	354	2,100	No	**31.0**	**D**	0.265	58.9	1,919	67.7	63.3
61	I-580 WB	SR 13 Off-Ramp	4,093	8,800	No	2,717	4,400	No	**18.6**	**B**	0.283	58.5	1,514	69.3	62.9

Leisch Method for Weaving Analysis

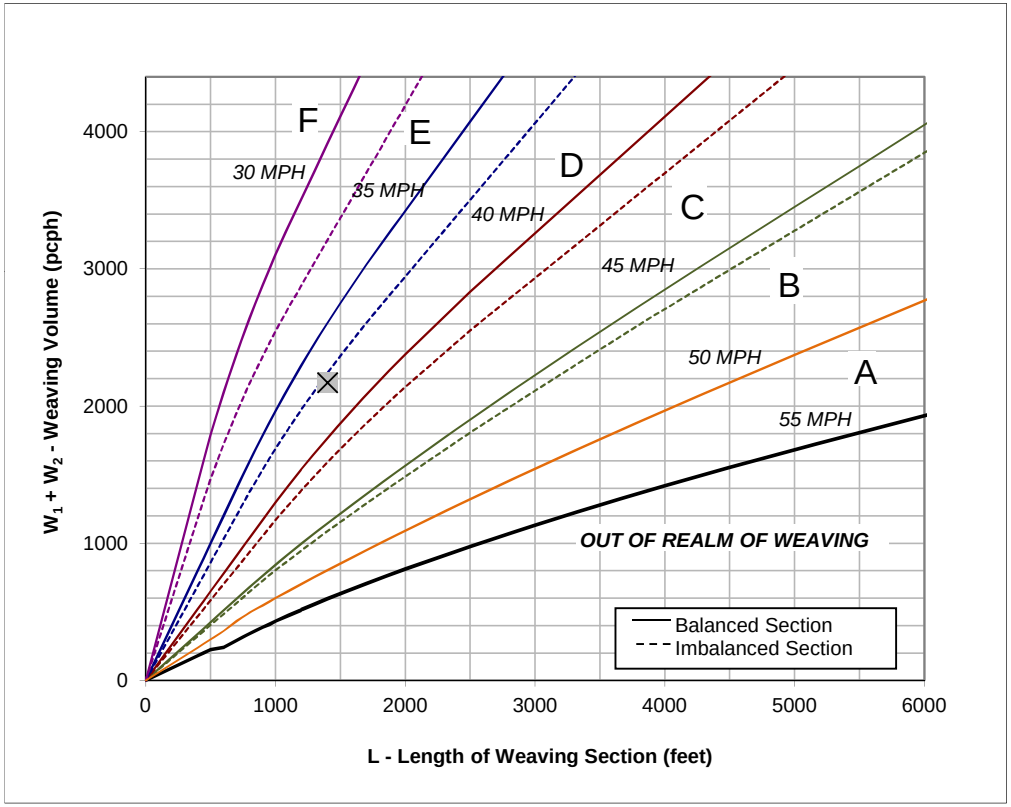
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,400

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 PP - PM Peak
Freeway	I-880 NB
On-ramp	98th Street
Off-ramp	Hegenberger Road

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,470	Volume (vph)*	1,130	Volume (vph)*	1,020
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,582	Volume (pcph)	1,141	Volume (pcph)	1,030



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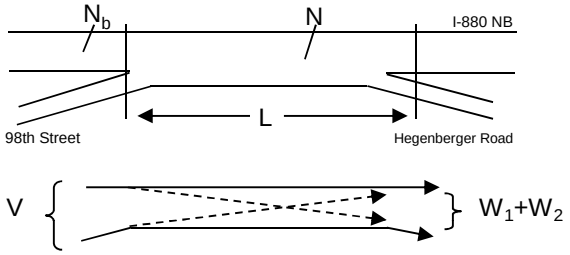


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **34.2**
4. Weaving Intensity Factor (k) **2.93**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,914**
6. Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

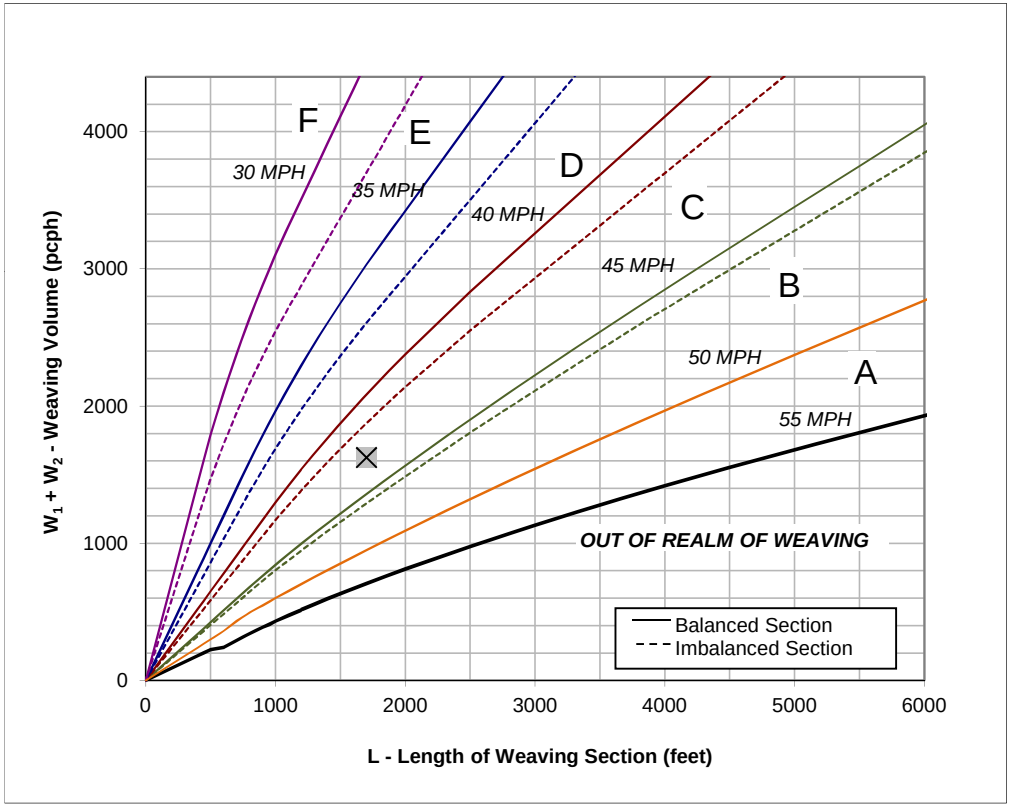
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,700

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,430	Volume (vph)*	980	Volume (vph)*	630
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,541	Volume (pcph)	990	Volume (pcph)	636

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 PP - PM Peak
Freeway	I-880 NB
On-ramp	Hegenberger Road
Off-ramp	66th Street



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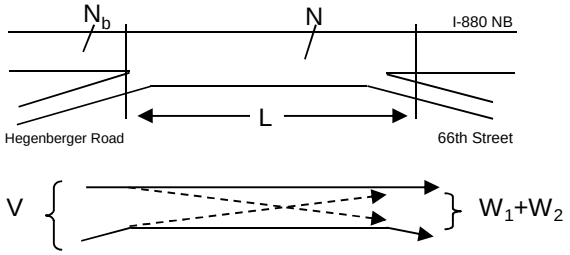


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   45 MPH and **50 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **40.1**
4. Weaving Intensity Factor (k) **2.53**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,703**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

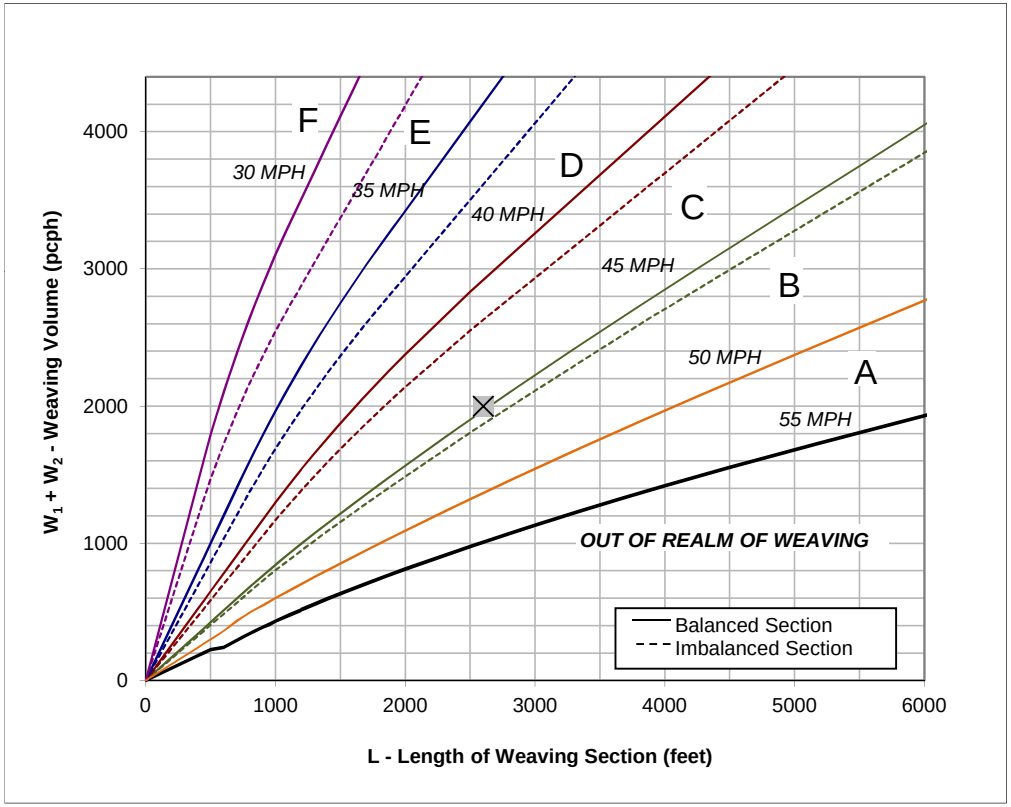
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,600

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,820	Volume (vph)*	1,020	Volume (vph)*	960
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,937	Volume (pcph)	1,030	Volume (pcph)	970

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 PP - PM Peak
Freeway	I-880 NB
On-ramp	66th Street
Off-ramp	High Street



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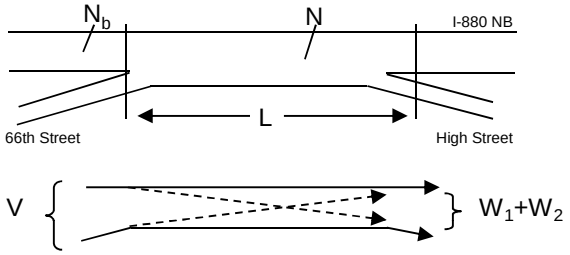


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   45 MPH and **50 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **43.7**
4. Weaving Intensity Factor (k) **2.14**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,808**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

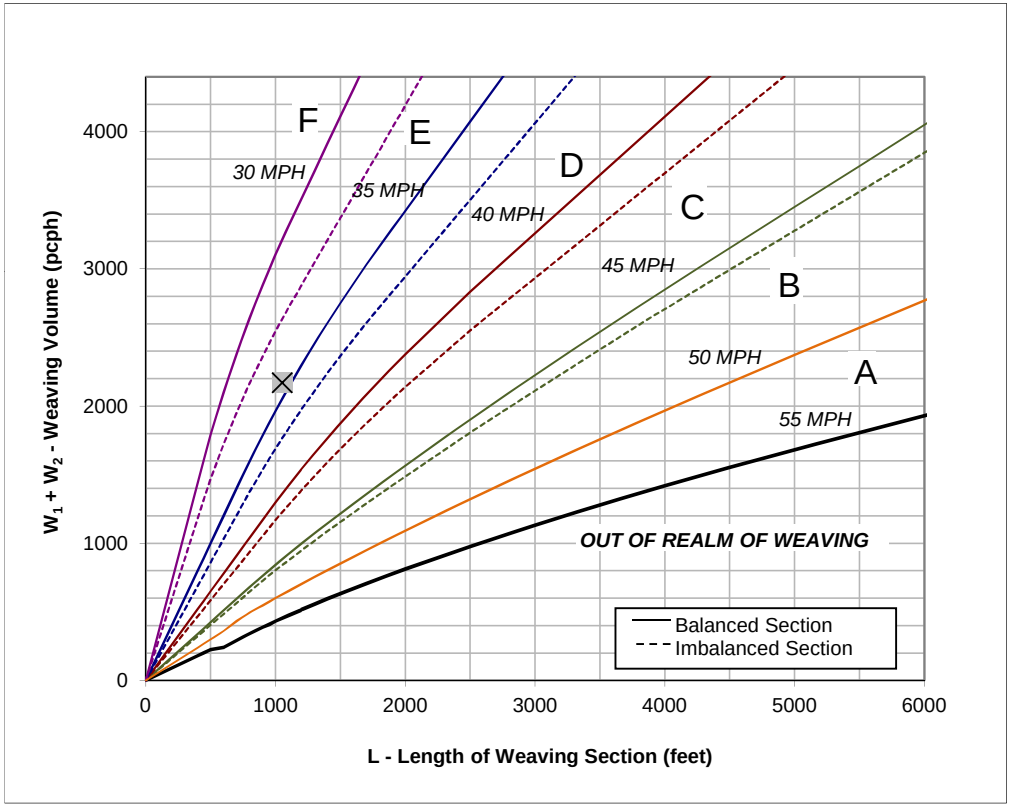
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,050

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	8,130	Volume (vph)*	1,530	Volume (vph)*	620
Truck Percentage	1%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	8,171	Volume (pcph)	1,545	Volume (pcph)	626

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 PP - PM Peak
Freeway	I-880 SB
On-ramp	Hegenberger Road
Off-ramp	98th Street



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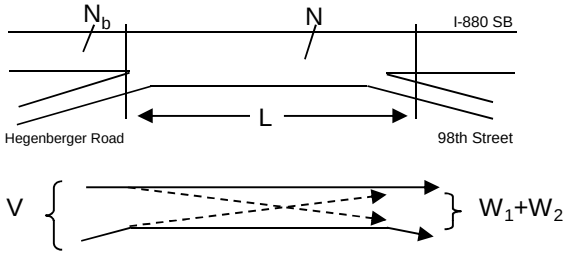


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   35 MPH and **40 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **31.2**
4. Weaving Intensity Factor (k) **3.00**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,885**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

HCM 2010
Basic Freeway Segments
Operational Analysis

Jurisdiction Caltrans District 4 | Agency or Company Caltrans
Analysis Year 2035 AM | Date 1/21/2014
Scenario 2035 Plus Buildout | Project Description Coliseum City SP/EIR

General Information | *Flow Rate Calculation*

	Freeway/ Direction	From/To	Analysis Time Period	Volume (vph)	PHF	Lanes	HOV Lane?	HOV Lane Volume	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_p (pcphpl)
1	I-880 NB	South of Davis Street	AM	8,340	1.00	5	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,718
4	I-880 NB	Davis Street to 98th Street	AM	8,480	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,184
18	I-880 NB	North of High Street 98th Street WB On-Ramp	AM	8,250	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,124
19	I-880 SB	North of High Street	AM	9,380	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,415
22	I-880 SB	Hegenberger SB On-Ramp	AM	9,030	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,325
25	I-880 SB	66th Street to Hegenberger Road	AM	8,370	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,155
33	I-880 SB	98th Street to Davis Street	AM	7,750	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,996
37	I-580 EB	West of Seminary Avenue Off-Ramp	AM	4,320	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,080
39	I-580 EB	West of SR 13 Merge	AM	4,190	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,048
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	AM	6,820	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,705
44	I-580 EB	Edwards Avenue to Keller Avenue	AM	6,100	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,525
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	AM	6,090	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,523
50	I-580 EB	East of 98th Avenue/Golf Links Road	AM	5,930	1.00	5	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,186
51	I-580 WB	East of 98th Avenue/Golf Links Road	AM	5,630	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,408
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	AM	5,570	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,393
57	I-580 WB	Keller Avenue to Edwards Avenue	AM	5,990	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,498
59	I-580 WB	Edwards Avenue to Seminary Avenue	AM	7,090	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,773
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	AM	4,260	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,065
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	AM	4,550	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,138

HCM 2010
Basic Freeway Segments
Operational Analysis

General Information			*Speed Calculation*									*Results*		
	Freeway/		Lane		R. Shoulder		TRD	Calculated	Measured	FFS	v_p/c	Speed, S	Density, D	Level of
	Direction	From/To	Width (ft)	f_{LW}	Width (ft)	f_{LC}	(per mi)	FFS (mph)	FFS (mph)	(mph)		(mph)	(pcplpm)	Service
1	I-880 NB	South of Davis Street	12	0	10	0	2.3	68.9	65.0	70	0.72	66.9	**25.7**	**C**
4	I-880 NB	Davis Street to 98th Street	12	0	14	0	2.3	68.9	65.0	70	0.91	58.8	**37.2**	**E**
18	I-880 NB	North of High Street	11	1.9	1	1	2.5	65.5	65.0	65	0.90	57.6	**36.9**	**E**
		98th Street WB On-Ramp												
19	I-880 SB	North of High Street	11	1.9	1	1	2.3	66.0	65.0	65	1.03	-	**-**	**F**
22	I-880 SB	Hegenberger SB On-Ramp	12	0	10	0	2.3	68.9	65.0	70	0.97	55.3	**42.0**	**E**
25	I-880 SB	66th Street to Hegenberger Road	12	0	14	0	2.3	68.9	65.0	70	0.90	59.4	**36.3**	**E**
33	I-880 SB	98th Street to Davis Street	12	0	12	0	2.3	68.9	65.0	70	0.83	62.7	**31.9**	**D**
37	I-580 EB	West of Seminary Avenue Off-Ramp	12	0	9	0	2.5	68.4	65.0	70	0.45	70.0	**15.4**	**B**
39	I-580 EB	West of SR 13 Merge	12	0	12	0	2.2	69.2	65.0	70	0.44	70.0	**15.0**	**B**
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	12	0	12	0	2.2	69.2	65.0	70	0.71	67.0	**25.4**	**C**
44	I-580 EB	Edwards Avenue to Keller Avenue	12	0	11	0	2.2	69.2	65.0	70	0.64	68.8	**22.2**	**C**
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.63	68.8	**22.1**	**C**
50	I-580 EB	East of 98th Avenue/Golf Links Road	12	0	9	0	2	69.6	65.0	70	0.49	70.0	**16.9**	**B**
51	I-580 WB	East of 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.59	69.5	**20.3**	**C**
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	12	0	10	0	2.5	68.4	65.0	70	0.58	69.6	**20.0**	**C**
57	I-580 WB	Keller Avenue to Edwards Avenue	12	0	12	0	2.3	68.9	65.0	70	0.62	69.0	**21.7**	**C**
59	I-580 WB	Edwards Avenue to Seminary Avenue	12	0	8	0	2.3	68.9	65.0	70	0.74	66.2	**26.8**	**D**
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	12	0	12	0	2.3	68.9	65.0	70	0.44	70.0	**15.2**	**B**
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	12	0	10	0	2.5	68.4	65.0	70	0.47	70.0	**16.3**	**B**

HCM 2010
Merge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: 2035 AM
Scenario: 2035 Plus Buildout

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

	General Information			*Freeway Data*						*Freeway Volume Adjustment*							
	Freeway/ Direction	On-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
3	I-880 NB	Davis Street On-Ramp	AM	4	65	7,530	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
7	I-880 NB	98th Street WB On-Ramp	AM	5	65	7,710	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
11	I-880 NB	Hegenberger SB On-Ramp	AM	5	65	7,450	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
14	I-880 NB	Coliseum Way/66th Street On-Ramp	AM	4	65	6,830	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
17	I-880 NB	High Street On-Ramp	AM	4	65	7,140	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
21	I-880 SB	High Street/Oakport Street On-Ramp	AM	4	65	7,750	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
24	I-880 SB	66th Street On-Ramp	AM	4	65	7,680	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
27	I-880 SB	Hegenberger SB Loop On-Ramp	AM	4	65	6,150	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
31	I-880 SB	98th Street WB Loop On-Ramp	AM	4	65	6,240	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
32	I-880 SB	98th Street EB Slip On-Ramp	AM	4	65	6,760	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
40	I-580 EB	SR 13 Merge	AM	4	65	4,190	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
41	I-580 EB	Seminary Avenue On-Ramp	AM	4	65	6,290	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	5,040	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	AM	4	65	4,760	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
56	I-580 WB	Keller Avenue On-Ramp	AM	4	65	5,320	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
58	I-580 WB	Edwards Avenue On-Ramp	AM	4	65	5,990	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	AM	4	65	4,260	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	Flow Rate v_F (pcph)
3	I-880 NB	Davis Street On-Ramp	7,756
7	I-880 NB	98th Street WB On-Ramp	7,941
11	I-880 NB	Hegenberger SB On-Ramp	7,674
14	I-880 NB	Coliseum Way/66th Street On-Ramp	7,035
17	I-880 NB	High Street On-Ramp	7,354
21	I-880 SB	High Street/Oakport Street On-Ramp	7,983
24	I-880 SB	66th Street On-Ramp	7,910
27	I-880 SB	Hegenberger SB Loop On-Ramp	6,335
31	I-880 SB	98th Street WB Loop On-Ramp	6,427
32	I-880 SB	98th Street EB Slip On-Ramp	6,963
40	I-580 EB	SR 13 Merge	4,190
41	I-580 EB	Seminary Avenue On-Ramp	6,290
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	5,040
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,760
56	I-580 WB	Keller Avenue On-Ramp	5,320
58	I-580 WB	Edwards Avenue On-Ramp	5,990
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,260

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information		*On-Ramp Data*						*On-Ramp Volume Adjustment*								
	Freeway/ Direction	On-ramp	Effective Flow Rate v_p (pcph)	Type	Lanes	S_{FR} (mph)	V_R (vph)	Accel Lane (ft) L_{A1}	L_{A2}	L_{Aeff}	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_R (pcph)
3	I-880 NB	Davis Street On-Ramp	7,756	Right	1	40.0	570	450		450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	576
7	I-880 NB	98th Street WB On-Ramp	5,678	Right	1	50.0	360	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	364
11	I-880 NB	Hegenberger SB On-Ramp	5,487	Right	1	25.0	270	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	273
14	I-880 NB	Coliseum Way/66th Street On-Ramp	7,035	Right	2	50.0	1,080	300	1,500	2,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,091
17	I-880 NB	High Street On-Ramp	7,354	Right	1	50.0	1,110	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,121
21	I-880 SB	High Street/Oakport Street On-Ramp	7,983	Right	1	40.0	1,280	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,293
24	I-880 SB	66th Street On-Ramp	7,910	Right	1	50.0	690	550		550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	697
27	I-880 SB	Hegenberger SB Loop On-Ramp	6,335	Right	1	30.0	700	1,350		1,350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	707
31	I-880 SB	98th Street WB Loop On-Ramp	6,427	Right	1	25.0	520	250		250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	525
32	I-880 SB	98th Street EB Slip On-Ramp	6,963	Right	1	35.0	990	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,000
40	I-580 EB	SR 13 Merge	4,190	Major	1	65.0	2,520	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,545
41	I-580 EB	Seminary Avenue On-Ramp	6,290	Right	1	50.0	530	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	535
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	5,040	Right	1	50.0	890	800		800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	899
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,760	Right	1	50.0	810	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	818
56	I-580 WB	Keller Avenue On-Ramp	5,320	Right	1	50.0	670	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	677
58	I-580 WB	Edwards Avenue On-Ramp	5,990	Right	1	50.0	1,100	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	1,111
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,260	Right	1	50.0	290	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	293

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_U (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	1,900	810	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	861
7	I-880 NB	98th Street WB On-Ramp	On	1,100	430	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	457
11	I-880 NB	Hegenberger SB On-Ramp	On	1,750	640	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	680
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	4,550	890	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	946
17	I-880 NB	High Street On-Ramp	Off	3,300	770	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	819
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	3,650	1,630	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,733
24	I-880 SB	66th Street On-Ramp	Off	3,400	1,350	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,435
27	I-880 SB	Hegenberger SB Loop On-Ramp	Off	1,350	2,220	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,360
31	I-880 SB	98th Street WB Loop On-Ramp	Off	1,200	1,180	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,255
32	I-880 SB	98th Street EB Slip On-Ramp	On	750	520	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	553
40	I-580 EB	SR 13 Merge	Off	3,700	820	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	872
41	I-580 EB	Seminary Avenue On-Ramp	On	1,000	2,520	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,679
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Off	2,000	1,050	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,116
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	1,900	870	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	925
56	I-580 WB	Keller Avenue On-Ramp	Off	2,300	250	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	266
58	I-580 WB	Edwards Avenue On-Ramp	On	2,800	670	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	712
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	Off	1,950	2,560	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	2,722

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	4,000	1,200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,212
7	I-880 NB	98th Street WB On-Ramp	Off	1,700	1,260	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,273
11	I-880 NB	Hegenberger SB On-Ramp	Off	2,100	890	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	899
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	3,200	770	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	778
17	I-880 NB	High Street On-Ramp	No										1.00	
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	2,550	1,350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,364
24	I-880 SB	66th Street On-Ramp	Off	3,100	2,220	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,242
27	I-880 SB	Hegenberger SB Loop On-Ramp	On	1,350	570	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	576
31	I-880 SB	98th Street WB Loop On-Ramp	On	750	990	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,000
32	I-880 SB	98th Street EB Slip On-Ramp	Off	3,700	710	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	717
40	I-580 EB	SR 13 Merge	On	1,000	820	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	828
41	I-580 EB	Seminary Avenue On-Ramp	Off	950	720	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	727
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No										1.00	
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	5,400	250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	253
56	I-580 WB	Keller Avenue On-Ramp	On	2,800	1,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,111
58	I-580 WB	Edwards Avenue On-Ramp	Off	1,200	270	1	Level	2%	0%	1.5	1.2	0.99	1.00	273
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No										1.00	

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*						
	Freeway/		L_{EQ}		P_{FM} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_{Fo}	Max v_{Fo}		v_3, v_{av34}
	Direction	On-ramp	13-6	13-7	13-3	13-4	13-5	P_{FM}	(pcph)	(pcph)	(pcph)	LOS F?	(pcph)	(pcph)	LOS F?	(pcphpl)
3	I-880 NB	Davis Street On-Ramp	1,673	7,683	0.590	0.604	0.628	0.146	1,131	7,756	8,800	No	8,332	8,800	No	3,312
7	I-880 NB	98th Street WB On-Ramp	1,639	8,981	0.586		0.745	0.172	979	5,678	11,000	No	6,042	11,000	No	2,350
11	I-880 NB	Hegenberger SB On-Ramp	271	6,344	0.586		0.661	0.184	1,008	5,487	11,000	No	5,759	11,000	No	2,239
14	I-880 NB	Coliseum Way/66th Street On-Ramp	2,884	2,326	0.636	0.741	0.613	0.209	1,470	7,035	8,800	No	8,126	8,800	No	2,782
17	I-880 NB	High Street On-Ramp	2,093		0.582	0.658		0.078	571	7,354	8,800	No	8,475	8,800	No	3,392
21	I-880 SB	High Street/Oakport Street On-Ramp	1,852	8,947	0.589	0.702	0.689	0.056	449	7,983	8,800	No	9,275	8,800	**Yes**	3,767
24	I-880 SB	66th Street On-Ramp	2,299	13,311	0.593	0.662	0.739	0.131	1,034	7,910	8,800	No	8,607	8,800	No	3,438
27	I-880 SB	Hegenberger SB Loop On-Ramp	1,273	2,266	0.615	0.620		0.129	820	6,335	8,800	No	7,042	8,800	No	2,757
31	I-880 SB	98th Street WB Loop On-Ramp	504	7,333	0.585	0.628		0.152	978	6,427	8,800	No	6,952	8,800	No	2,725
32	I-880 SB	98th Street EB Slip On-Ramp	1,265	5,061	0.586		0.600	0.093	646	6,963	8,800	No	7,963	8,800	No	3,158
40	I-580 EB	SR 13 Merge	2,617	5,434	0.589	0.657		0.586	2,455	4,190	8,800	No	6,735	8,800	No	868
41	I-580 EB	Seminary Avenue On-Ramp	1,807	5,132	0.586		0.750	0.151	949	6,290	8,800	No	6,825	8,800	No	2,670
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	1,839		0.600	0.610		0.105	531	5,040	8,800	No	5,939	8,800	No	2,254
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	1,562	1,717	0.587	0.608	0.561	0.116	550	4,760	8,800	No	5,578	8,800	No	2,105
56	I-580 WB	Keller Avenue On-Ramp	1,652	7,555	0.587	0.628		0.133	709	5,320	8,800	No	5,997	8,800	No	2,306
58	I-580 WB	Edwards Avenue On-Ramp	1,844	2,000	0.585		0.608	0.135	807	5,990	9,600	No	7,101	8,800	No	2,592
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,298	######	0.585	0.787		0.237	1,009	4,260	9,600	No	4,553	8,800	No	1,625

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	v_3, v_{av34} > 2,700?	v_3, v_{av34} >1.5*v_{12}/2?	v_{12a} (pcph)
3	I-880 NB	Davis Street On-Ramp	Yes	Yes	3,102
7	I-880 NB	98th Street WB On-Ramp	No	Yes	2,271
11	I-880 NB	Hegenberger SB On-Ramp	No	Yes	2,195
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Yes	Yes	2,814
17	I-880 NB	High Street On-Ramp	Yes	Yes	2,942
21	I-880 SB	High Street/Oakport Street On-Ramp	Yes	Yes	3,193
24	I-880 SB	66th Street On-Ramp	Yes	Yes	3,164
27	I-880 SB	Hegenberger SB Loop On-Ramp	Yes	Yes	2,534
31	I-880 SB	98th Street WB Loop On-Ramp	Yes	Yes	2,571
32	I-880 SB	98th Street EB Slip On-Ramp	Yes	Yes	2,785
40	I-580 EB	SR 13 Merge	No	No	2,455
41	I-580 EB	Seminary Avenue On-Ramp	No	Yes	2,516
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No	Yes	2,016
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	No	Yes	1,904
56	I-580 WB	Keller Avenue On-Ramp	No	Yes	2,128
58	I-580 WB	Edwards Avenue On-Ramp	No	Yes	2,396
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No	Yes	1,704

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information						*Results*		*Speed Estimation*				
	Freeway/ Direction	On-ramp	v_{R12a} (pcph)	Max v_{R12a} (pcph)	Exceeds Max v_{R12a}?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. M_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
3	I-880 NB	Davis Street On-Ramp	3,678	4,600	No	576	2,000	No	**31.1**	**D**	0.439	54.9	2,327	58.3	56.8
7	I-880 NB	98th Street WB On-Ramp	2,635	4,600	No	364	2,100	No	**24.0**	**C**	0.345	57.1	1,703	60.7	59.0
11	I-880 NB	Hegenberger SB On-Ramp	2,467	4,600	No	273	1,900	No	**22.7**	**C**	0.352	56.9	1,646	60.9	59.1
14	I-880 NB	Coliseum Way/66th Street On-Ramp	3,905	4,600	No	1,091	4,200	No	**22.3**	**C**	0.305	58.0	2,110	59.2	58.6
17	I-880 NB	High Street On-Ramp	4,063	4,600	No	1,121	2,100	No	**35.7**	**E**	0.533	52.7	2,206	58.9	55.8
21	I-880 SB	High Street/Oakport Street On-Ramp	4,486	4,600	No	1,293	2,000	No	**-**	**F**	-	-	-	-	-
24	I-880 SB	66th Street On-Ramp	3,861	4,600	No	697	2,100	No	**31.8**	**D**	0.451	54.6	2,373	58.0	56.4
27	I-880 SB	Hegenberger SB Loop On-Ramp	3,241	4,600	No	707	1,900	No	**22.0**	**C**	0.340	57.2	1,900	60.0	58.7
31	I-880 SB	98th Street WB Loop On-Ramp	3,096	4,600	No	525	1,900	No	**27.8**	**C**	0.395	55.9	1,928	59.9	58.0
32	I-880 SB	98th Street EB Slip On-Ramp	3,785	4,600	No	1,000	2,000	No	**32.7**	**D**	0.472	54.1	2,089	59.3	56.7
40	I-580 EB	SR 13 Merge	5,000	4,600	**Yes**	2,545	2,350	**Yes**	**-**	**F**	-	-	-	-	-
41	I-580 EB	Seminary Avenue On-Ramp	3,051	4,600	No	535	2,100	No	**27.1**	**C**	0.373	56.4	1,887	60.0	58.3
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	2,915	4,600	No	899	2,100	No	**22.8**	**C**	0.313	57.8	1,512	61.4	59.6
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	2,722	4,600	No	818	2,100	No	**24.1**	**C**	0.345	57.1	1,428	61.7	59.3
56	I-580 WB	Keller Avenue On-Ramp	2,805	4,600	No	677	2,100	No	**24.8**	**C**	0.350	56.9	1,596	61.1	59.1
58	I-580 WB	Edwards Avenue On-Ramp	3,507	4,600	No	1,111	2,100	No	**30.8**	**D**	0.426	55.2	1,797	60.3	57.7
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,997	4,600	No	293	2,100	No	**19.3**	**B**	0.325	57.5	1,278	62.2	60.1

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: 2035 AM
Scenario: 2035 Plus Buildout

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information | *Mainline Data* | *Mainline Volume Adjustment*

	Freeway/ Direction	Off-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
2	I-880 NB	Davis Street Off-Ramp	AM	5	65	8,340	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
5	I-880 NB	98th Street Off-Ramp	AM	4	65	8,480	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
20	I-880 SB	42nd Avenue/High Street Off-Ramp	AM	4	65	9,380	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
23	I-880 SB	66th Street Off-Ramp	AM	4	65	9,030	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
26	I-880 SB	Hegenberger Road Off-Ramp	AM	4	65	8,370	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
34	I-880 SB	Davis Street Off-Ramp	AM	4	65	7,750	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
38	I-580 EB	Seminary Avenue Off-Ramp	AM	4	65	4,315	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
43	I-580 EB	Edwards Avenue Off-Ramp	AM	4	65	6,820	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
45	I-580 EB	Keller Avenue Off-Ramp	AM	4	65	6,100	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	6,090	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	AM	4	65	5,630	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
55	I-580 WB	Keller Avenue Off-Ramp	AM	4	65	5,570	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
60	I-580 WB	Seminary Avenue Off-Ramp	AM	4	65	7,090	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
61	I-580 WB	SR 13 Off-Ramp	AM	4	65	6,820	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Flow Rate v_F (pcph)
2	I-880 NB	Davis Street Off-Ramp	8,590
5	I-880 NB	98th Street Off-Ramp	8,734
20	I-880 SB	42nd Avenue/High Street Off-Ramp	9,661
23	I-880 SB	66th Street Off-Ramp	9,301
26	I-880 SB	Hegenberger Road Off-Ramp	8,621
34	I-880 SB	Davis Street Off-Ramp	7,983
38	I-580 EB	Seminary Avenue Off-Ramp	4,315
43	I-580 EB	Edwards Avenue Off-Ramp	6,820
45	I-580 EB	Keller Avenue Off-Ramp	6,100
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,090
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,630
55	I-580 WB	Keller Avenue Off-Ramp	5,570
60	I-580 WB	Seminary Avenue Off-Ramp	7,090
61	I-580 WB	SR 13 Off-Ramp	6,820

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			Effective	*Off-Ramp Data*							*Off-Ramp Volume Adjustment*								
	Freeway/		Flow Rate			S_{FR}	V_R	Decel Lane (ft)					Truck/						Flow Rate
	Direction	Off-ramp	v_p (pcph)	Type	Lanes	(mph)	(vph)	L_{D1}	L_{D2}	L_{Deff}	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_R (pcph)
2	I-880 NB	Davis Street Off-Ramp	6,872	Right	1	50.0	810	1,500		1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	818
5	I-880 NB	98th Street Off-Ramp	8,734	Right	1	50.0	1,200	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,212
20	I-880 SB	42nd Avenue/High Street Off-Ramp	9,661	Right	1	50.0	1,630	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,646
23	I-880 SB	66th Street Off-Ramp	9,301	Right	2	50.0	1,350	150	1,200	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,364
26	I-880 SB	Hegenberger Road Off-Ramp	8,621	Right	2	50.0	2,220	100	1,250	1,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,242
34	I-880 SB	Davis Street Off-Ramp	7,983	Right	1	50.0	710	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	717
38	I-580 EB	Seminary Avenue Off-Ramp	4,315	Right	1	50.0	820	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	828
43	I-580 EB	Edwards Avenue Off-Ramp	6,820	Right	1	50.0	720	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	727
45	I-580 EB	Keller Avenue Off-Ramp	6,100	Right	1	50.0	420	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,090	Right	1	50.0	1,050	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,061
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,630	Right	1	50.0	870	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	879
55	I-580 WB	Keller Avenue Off-Ramp	5,570	Right	1	50.0	250	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	253
60	I-580 WB	Seminary Avenue Off-Ramp	7,090	Right	1	50.0	270	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	273
61	I-580 WB	SR 13 Off-Ramp	6,820	Major	2	65.0	2,560	350	800	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,586

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_u (pcph)
2	I-880 NB	Davis Street Off-Ramp	No											
5	I-880 NB	98th Street Off-Ramp	On	4,000	570	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	576
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No											
23	I-880 SB	66th Street Off-Ramp	On	2,550	1,280	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,293
26	I-880 SB	Hegenberger Road Off-Ramp	On	3,100	690	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	697
34	I-880 SB	Davis Street Off-Ramp	On	3,700	990	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,000
38	I-580 EB	Seminary Avenue Off-Ramp	No											
43	I-580 EB	Edwards Avenue Off-Ramp	On	950	530	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	535
45	I-580 EB	Keller Avenue Off-Ramp	Off	2,500	720	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	727
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	5,300	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No											
55	I-580 WB	Keller Avenue Off-Ramp	On	5,400	810	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	818
60	I-580 WB	Seminary Avenue Off-Ramp	On	1,200	1,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,111
61	I-580 WB	SR 13 Off-Ramp	Off	1,250	270	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	273

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
2	I-880 NB	Davis Street Off-Ramp	On	1,900	380	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	384
5	I-880 NB	98th Street Off-Ramp	On	1,250	430	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	434
20	I-880 SB	42nd Avenue/High Street Off-Ramp	On	3,650	1,280	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,293
23	I-880 SB	66th Street Off-Ramp	On	3,400	690	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	697
26	I-880 SB	Hegenberger Road Off-Ramp	On	1,350	700	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	707
34	I-880 SB	Davis Street Off-Ramp	On	1,950	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
38	I-580 EB	Seminary Avenue Off-Ramp	On	3,700	2,520	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,545
43	I-580 EB	Edwards Avenue Off-Ramp	Off	2,500	420	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	424
45	I-580 EB	Keller Avenue Off-Ramp	On	2,300	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	2,000	890	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	899
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	On	1,900	810	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	818
55	I-580 WB	Keller Avenue Off-Ramp	On	2,300	670	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	677
60	I-580 WB	Seminary Avenue Off-Ramp	Off	1,250	2,560	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,586
61	I-580 WB	SR 13 Off-Ramp	On	1,900	290	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	293

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*							
	Freeway/		L_{EQ}		P_{FD} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_3, v_{av34}	v_3, v_{av34}	v_3, v_{av34}	v_{12a}	Max v_{12a}
	Direction	Off-ramp	13-12	13-13	13-9	13-10	13-11	P_{FD}	(pcph)	(pcph)	(pcph)	LOS F?	(pcphpl)	> 2,700?	>1.5*v_{12}/2?	(pcph)	(pcph)
2	I-880 NB	Davis Street Off-Ramp		611	0.551			0.436	3,458	6,872	11,000	No	1,707	No	No	3,458	4,400
5	I-880 NB	98th Street Off-Ramp	3,202	1,026	0.486	0.463		0.436	4,492	8,734	8,800	No	2,121	No	No	4,492	4,400
20	I-880 SB	42nd Avenue/High Street Off-Ramp		5,540	0.443			0.436	5,141	9,661	8,800	**Yes**	2,260	No	No	5,141	4,400
23	I-880 SB	66th Street Off-Ramp	7,131	1,995	0.465	0.465		0.260	3,427	9,301	8,800	**Yes**	2,937	Yes	Yes	3,720	4,400
26	I-880 SB	Hegenberger Road Off-Ramp	7,048	15,122	0.441	0.441		0.260	3,901	8,621	8,800	No	2,360	No	No	3,901	4,400
34	I-880 SB	Davis Street Off-Ramp	4,997	673	0.527	0.527		0.436	3,885	7,983	8,800	No	2,049	No	No	3,885	4,400
38	I-580 EB	Seminary Avenue Off-Ramp		3,603	0.614			0.436	2,348	4,315	8,800	No	983	No	No	2,348	4,400
43	I-580 EB	Edwards Avenue Off-Ramp	3,102	639	0.556	0.556	0.494	0.436	3,384	6,820	8,800	No	1,718	No	No	3,384	4,400
45	I-580 EB	Keller Avenue Off-Ramp	4,061	519	0.588			0.436	2,899	6,100	8,800	No	1,601	No	No	2,899	4,400
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	3,174	1,594	0.559	0.527		0.436	3,253	6,090	8,800	No	1,418	No	No	3,253	4,400
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp		1,267	0.579			0.436	2,950	5,630	8,800	No	1,340	No	No	2,950	4,400
55	I-580 WB	Keller Avenue Off-Ramp	4,547	770	0.609	0.591		0.436	2,571	5,570	9,600	No	1,500	No	No	2,571	4,400
60	I-580 WB	Seminary Avenue Off-Ramp	5,208	3,144	0.570	0.570	0.725	0.436	3,245	7,090	9,600	No	1,922	No	No	3,245	4,400
61	I-580 WB	SR 13 Off-Ramp	8,697	######	0.471			0.260	3,687	6,820	9,600	No	1,567	No	No	3,687	4,400

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Exceeds Max v_{12a}?
2	I-880 NB	Davis Street Off-Ramp	No
5	I-880 NB	98th Street Off-Ramp	**Yes**
20	I-880 SB	42nd Avenue/High Street Off-Ramp	**Yes**
23	I-880 SB	66th Street Off-Ramp	No
26	I-880 SB	Hegenberger Road Off-Ramp	No
34	I-880 SB	Davis Street Off-Ramp	No
38	I-580 EB	Seminary Avenue Off-Ramp	No
43	I-580 EB	Edwards Avenue Off-Ramp	No
45	I-580 EB	Keller Avenue Off-Ramp	No
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	No
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No
55	I-580 WB	Keller Avenue Off-Ramp	No
60	I-580 WB	Seminary Avenue Off-Ramp	No
61	I-580 WB	SR 13 Off-Ramp	No

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	Off-ramp	v_{Fo} (pcph)	Max v_{Fo} (pcph)	LOS F?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. D_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
2	I-880 NB	Davis Street Off-Ramp	6,054	11,000	No	818	2,100	No	**20.5**	**C**	0.307	57.9	1,707	68.5	62.8
5	I-880 NB	98th Street Off-Ramp	7,522	8,800	No	1,212	2,100	No	**41.5**	**E**	0.342	57.1	2,121	66.9	61.5
20	I-880 SB	42nd Avenue/High Street Off-Ramp	8,015	8,800	No	1,646	2,100	No	**-**	**F**	-	-	-	-	-
23	I-880 SB	66th Street Off-Ramp	7,937	8,800	No	1,364	4,200	No	**-**	**F**	-	-	-	-	-
26	I-880 SB	Hegenberger Road Off-Ramp	6,379	8,800	No	2,242	4,200	No	**24.7**	**C**	0.435	55.0	2,360	66.0	60.5
34	I-880 SB	Davis Street Off-Ramp	7,265	8,800	No	717	2,100	No	**35.9**	**E**	0.298	58.2	2,049	67.2	62.5
38	I-580 EB	Seminary Avenue Off-Ramp	3,487	8,800	No	828	2,100	No	**23.5**	**C**	0.308	57.9	983	71.3	63.3
43	I-580 EB	Edwards Avenue Off-Ramp	6,093	8,800	No	727	2,100	No	**32.5**	**D**	0.298	58.1	1,718	68.5	62.9
45	I-580 EB	Keller Avenue Off-Ramp	5,676	8,800	No	424	2,100	No	**27.4**	**C**	0.271	58.8	1,601	69.0	63.7
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	5,030	8,800	No	1,061	2,100	No	**31.3**	**D**	0.328	57.4	1,418	69.7	62.6
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	4,751	8,800	No	879	2,100	No	**28.3**	**D**	0.312	57.8	1,340	70.0	63.0
55	I-580 WB	Keller Avenue Off-Ramp	5,318	8,800	No	253	2,100	No	**25.0**	**C**	0.256	59.1	1,500	69.4	64.2
60	I-580 WB	Seminary Avenue Off-Ramp	6,817	8,800	No	273	2,100	No	**30.4**	**D**	0.258	59.1	1,922	67.7	63.5
61	I-580 WB	SR 13 Off-Ramp	4,234	8,800	No	2,586	4,400	No	**18.6**	**B**	0.271	58.8	1,567	69.1	63.1

Leisch Method for Weaving Analysis

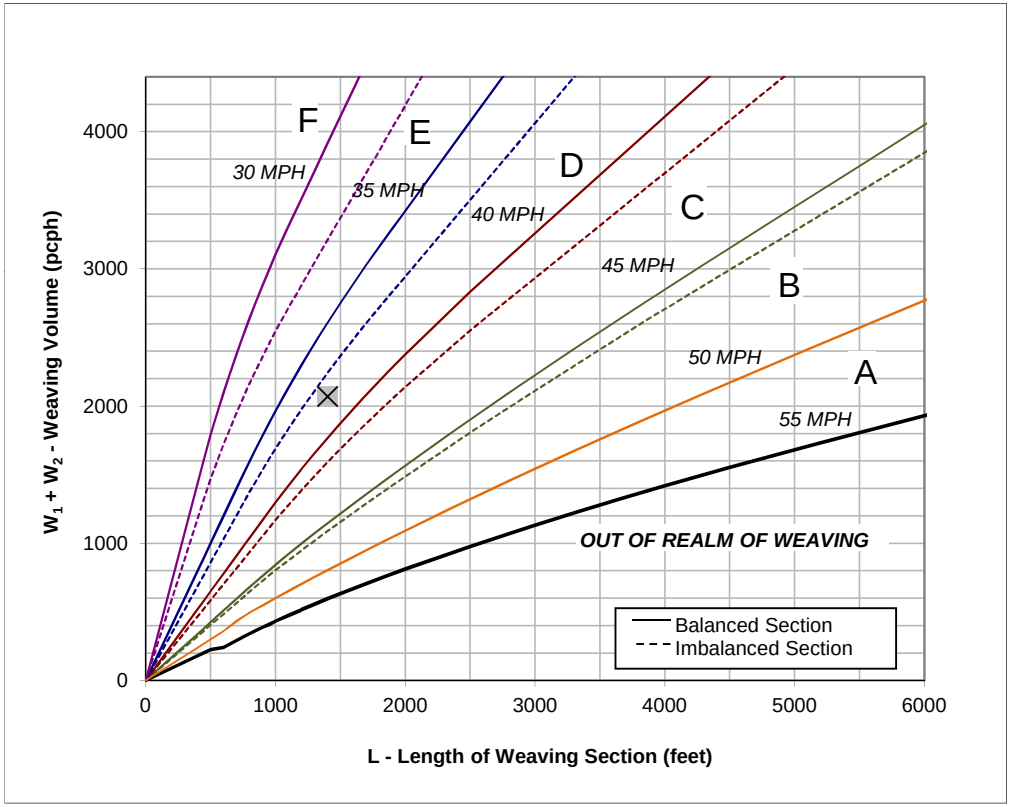
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,400

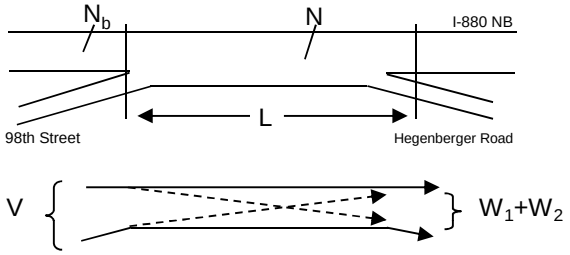
	Total Weaving Section (V)	On-ramp to Mainline (W_1)	Mainline to Off-ramp (W_2)
Volume (vph)*	8,070	790	1,260
Truck Percentage	4%	2%	2%
PCE for Trucks	1.5	1.5	1.5
Volume (pcph)	8,231	798	1,273

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 BO - AM Peak
Freeway	I-880 NB
On-ramp	98th Street
Off-ramp	Hegenberger Road



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **35.2**
4. Weaving Intensity Factor (k) **2.88**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,947**
6. Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

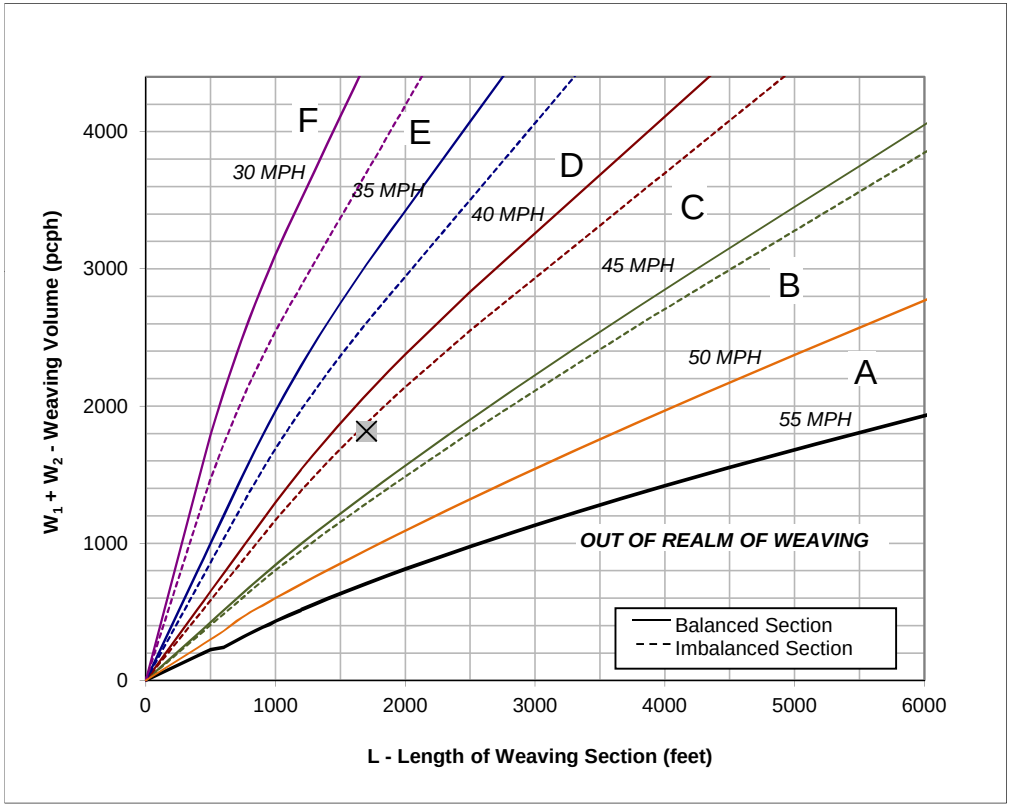
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,700

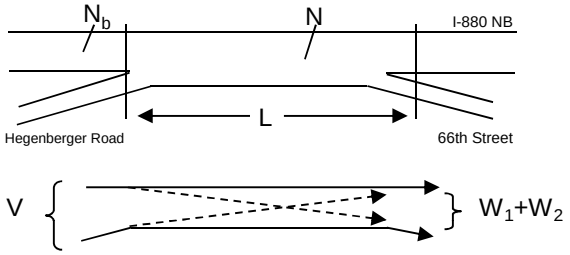
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,720	Volume (vph)*	910	Volume (vph)*	890
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,874	Volume (pcph)	919	Volume (pcph)	899

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 BO - AM Peak
Freeway	I-880 NB
On-ramp	Hegenberger Road
Off-ramp	66th Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **40.5**
4. Weaving Intensity Factor (k) **2.49**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,843**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

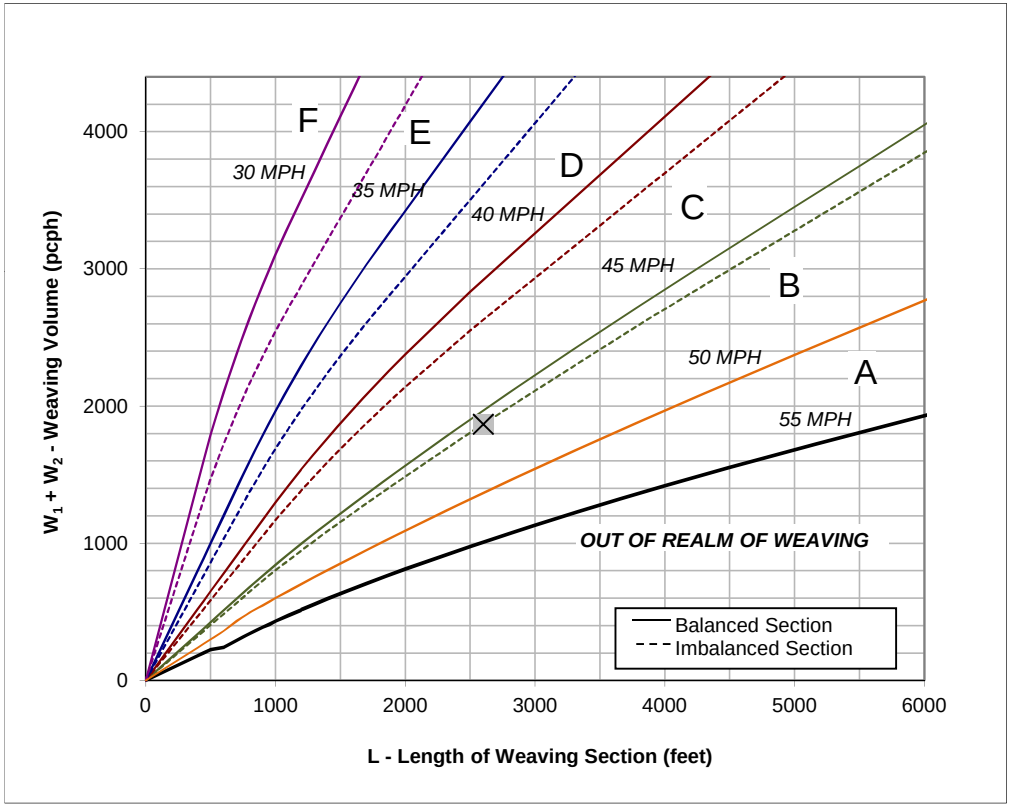
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,600

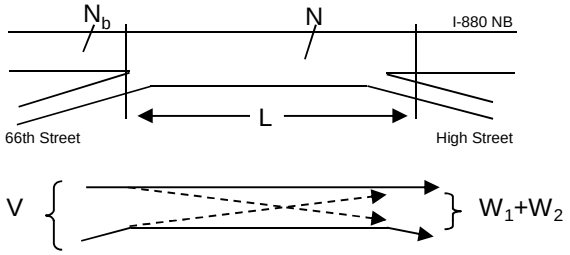
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,910	Volume (vph)*	1,080	Volume (vph)*	770
Truck Percentage	4%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	8,068	Volume (pcph)	1,091	Volume (pcph)	778

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 BO - AM Peak
Freeway	I-880 NB
On-ramp	66th Street
Off-ramp	High Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   50 MPH and **55 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **42.9**
4. Weaving Intensity Factor (k) **2.23**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,805**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

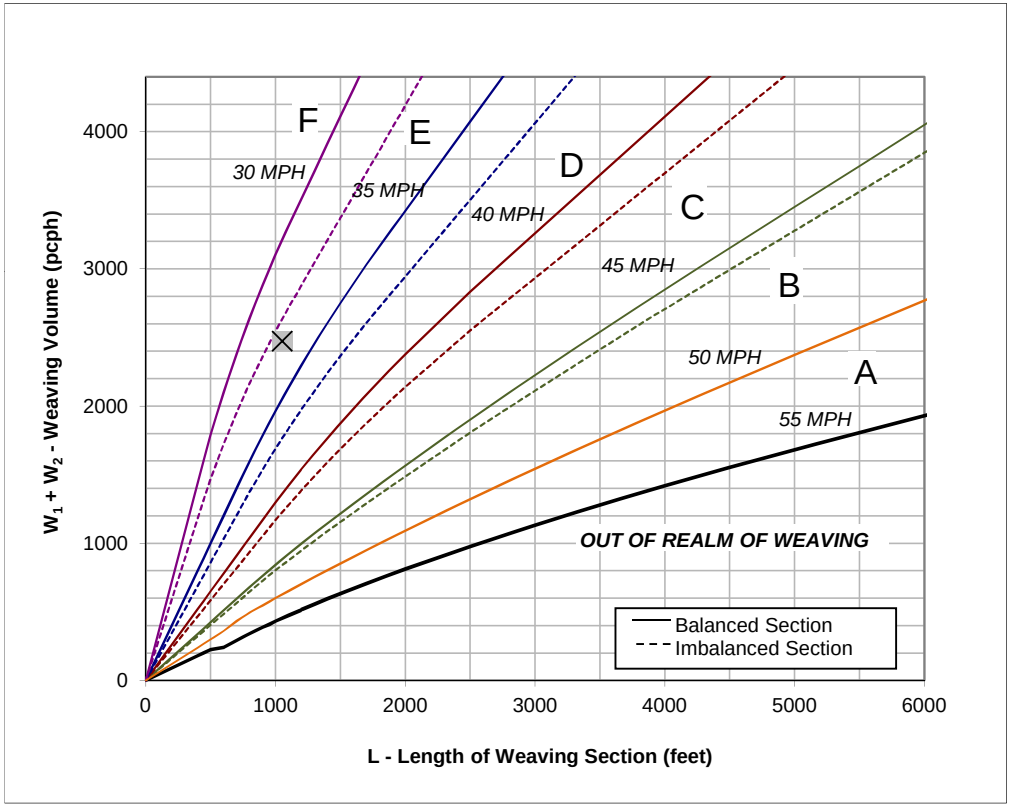
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,050

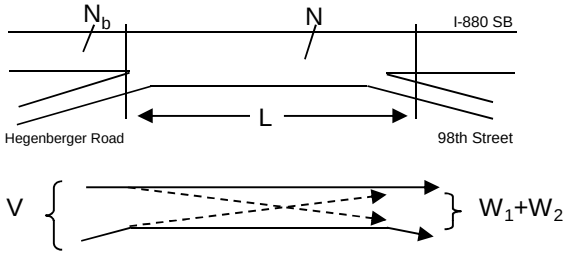
	Total Weaving Section (V)	On-ramp to Mainline (W_1)	Mainline to Off-ramp (W_2)
Volume (vph)*	7,420	1,270	1,180
Truck Percentage	3%	2%	2%
PCE for Trucks	1.5	1.5	1.5
Volume (pcph)	7,531	1,283	1,192

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 BO - AM Peak
Freeway	I-880 SB
On-ramp	Hegenberger Road
Off-ramp	98th Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   35 MPH and **40 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **28.4**
4. Weaving Intensity Factor (k) **3.00**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,983**
6. Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

HCM 2010
Basic Freeway Segments
Operational Analysis

Jurisdiction: Caltrans District 4
Analysis Year: 2035 PM
Scenario: 2035 Plus Buildout

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information | *Flow Rate Calculation*

	Freeway/ Direction	From/To	Analysis Time Period	Volume (vph)	PHF	Lanes	HOV Lane?	HOV Lane Volume	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_p (pcphpl)
1	I-880 NB	South of Davis Street	PM	8,000	1.00	5	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	1,648
4	I-880 NB	Davis Street to 98th Street	PM	8,100	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,086
18	I-880 NB	North of High Street	PM	8,300	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,137
19	I-880 SB	North of High Street	PM	9,080	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,338
22	I-880 SB	High Street to 66th Street	PM	8,760	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,256
25	I-880 SB	66th Street to Hegenberger Road	PM	8,510	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,191
33	I-880 SB	98th Street to Davis Street	PM	9,620	1.00	4	No	0	Level	6%	0%	1.5	1.2	0.971	1.00	2,477
37	I-580 EB	West of Seminary Avenue Off-Ramp	PM	5,880	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,470
39	I-580 EB	West of SR 13 Merge	PM	5,540	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,385
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	PM	8,710	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	2,178
44	I-580 EB	Edwards Avenue to Keller Avenue	PM	8,060	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	2,015
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	PM	7,900	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,975
50	I-580 EB	East of 98th Avenue/Golf Links Road	PM	7,650	1.00	5	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,530
51	I-580 WB	East of 98th Avenue/Golf Links Road	PM	6,470	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,618
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	PM	6,600	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,650
57	I-580 WB	Keller Avenue to Edwards Avenue	PM	6,550	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,638
59	I-580 WB	Edwards Avenue to Seminary Avenue	PM	7,240	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,810
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	PM	4,120	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,030
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	PM	4,420	1.00	4	No	0	Level	0%	0%	1.5	1.2	1.000	1.00	1,105

HCM 2010
Basic Freeway Segments
Operational Analysis

General Information			*Speed Calculation*									*Results*		
	Freeway/ Direction	From/To	Lane Width (ft)	f_{LW}	R. Shoulder Width (ft)	f_{LC}	TRD (per mi)	Calculated FFS (mph)	Measured FFS (mph)	FFS (mph)	v_p/c	Speed, S (mph)	Density, D (pcplpm)	Level of Service
1	I-880 NB	South of Davis Street	12	0	10	0	2.3	68.9	65.0	70	0.69	67.7	**24.4**	**C**
4	I-880 NB	Davis Street to 98th Street	12	0	14	0	2.3	68.9	65.0	70	0.87	60.9	**34.2**	**D**
18	I-880 NB	North of High Street	11	1.9	1	1	2.5	65.5	65.0	65	0.91	57.3	**37.3**	**E**
19	I-880 SB	North of High Street	11	1.9	1	1	2.3	66.0	65.0	65	0.99	52.5	**44.5**	**E**
22	I-880 SB	High Street to 66th Street	12	0	10	0	2.3	68.9	65.0	70	0.94	57.1	**39.5**	**E**
25	I-880 SB	66th Street to Hegenberger Road	12	0	14	0	2.3	68.9	65.0	70	0.91	58.6	**37.4**	**E**
33	I-880 SB	98th Street to Davis Street	12	0	12	0	2.3	68.9	65.0	70	1.03	-	**-**	**F**
37	I-580 EB	West of Seminary Avenue Off-Ramp	12	0	9	0	2.5	68.4	65.0	70	0.61	69.2	**21.3**	**C**
39	I-580 EB	West of SR 13 Merge	12	0	12	0	2.2	69.2	65.0	70	0.58	69.6	**19.9**	**C**
42	I-580 EB	Seminary Avenue On-Ramp to Edwards Avenue	12	0	12	0	2.2	69.2	65.0	70	0.91	58.9	**37.0**	**E**
44	I-580 EB	Edwards Avenue to Keller Avenue	12	0	11	0	2.2	69.2	65.0	70	0.84	62.3	**32.3**	**D**
47	I-580 EB	Keller Avenue to 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.82	63.0	**31.3**	**D**
50	I-580 EB	East of 98th Avenue/Golf Links Road	12	0	9	0	2	69.6	65.0	70	0.64	68.7	**22.3**	**C**
51	I-580 WB	East of 98th Avenue/Golf Links Road	12	0	12	0	2.3	68.9	65.0	70	0.67	68.0	**23.8**	**C**
54	I-580 WB	98th Avenue/Golf Links Road to Keller Avenue	12	0	10	0	2.5	68.4	65.0	70	0.69	67.7	**24.4**	**C**
57	I-580 WB	Keller Avenue to Edwards Avenue	12	0	12	0	2.3	68.9	65.0	70	0.68	67.8	**24.2**	**C**
59	I-580 WB	Edwards Avenue to Seminary Avenue	12	0	8	0	2.3	68.9	65.0	70	0.75	65.7	**27.6**	**D**
62	I-580 WB	SR 13 Diverge to Mountain Boulevard/Rusting Av	12	0	12	0	2.3	68.9	65.0	70	0.43	70.0	**14.7**	**B**
64	I-580 WB	West of Mountain Boulevard/Rusting Avenue	12	0	10	0	2.5	68.4	65.0	70	0.46	70.0	**15.8**	**B**

HCM 2010
Merge Ramp Junctions
Capacity Analysis

Jurisdiction: Caltrans District 4
Analysis Year: 2035 PM
Scenario: 2035 Plus Buildout

Agency or Company: Caltrans
Date: 1/21/2014
Project Description: Coliseum City SP/EIR

General Information				*Freeway Data*						*Freeway Volume Adjustment*							
	Freeway/ Direction	On-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
3	I-880 NB	Davis Street On-Ramp	PM	4	65	6,890	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
7	I-880 NB	98th Street WB On-Ramp	PM	5	65	7,410	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
11	I-880 NB	Hegenberger SB On-Ramp	PM	5	65	7,670	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
14	I-880 NB	Coliseum Way/66th Street On-Ramp	PM	4	65	7,120	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
17	I-880 NB	High Street On-Ramp	PM	4	65	7,380	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
21	I-880 SB	High Street/Oakport Street On-Ramp	PM	4	65	7,790	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
24	I-880 SB	66th Street On-Ramp	PM	4	65	7,500	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
27	I-880 SB	Hegenberger SB Loop On-Ramp	PM	4	65	6,800	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
31	I-880 SB	98th Street WB Loop On-Ramp	PM	4	65	7,970	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
32	I-880 SB	98th Street EB On-Ramp	PM	4	65	8,320	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
40	I-580 EB	SR 13 Merge	PM	4	65	5,540	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
41	I-580 EB	Seminary Avenue On-Ramp	PM	4	65	7,650	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	PM	4	65	6,920	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	PM	4	65	4,760	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
56	I-580 WB	Keller Avenue On-Ramp	PM	4	65	5,320	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
58	I-580 WB	Edwards Avenue On-Ramp	PM	4	65	5,990	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	PM	4	65	4,260	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.00	1.00

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	Flow Rate v_F (pcph)
3	I-880 NB	Davis Street On-Ramp	7,097
7	I-880 NB	98th Street WB On-Ramp	7,632
11	I-880 NB	Hegenberger SB On-Ramp	7,900
14	I-880 NB	Coliseum Way/66th Street On-Ramp	7,334
17	I-880 NB	High Street On-Ramp	7,601
21	I-880 SB	High Street/Oakport Street On-Ramp	8,024
24	I-880 SB	66th Street On-Ramp	7,725
27	I-880 SB	Hegenberger SB Loop On-Ramp	7,004
31	I-880 SB	98th Street WB Loop On-Ramp	8,209
32	I-880 SB	98th Street EB On-Ramp	8,570
40	I-580 EB	SR 13 Merge	5,540
41	I-580 EB	Seminary Avenue On-Ramp	7,650
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	6,920
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,760
56	I-580 WB	Keller Avenue On-Ramp	5,320
58	I-580 WB	Edwards Avenue On-Ramp	5,990
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,260

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information		*On-Ramp Data*						*On-Ramp Volume Adjustment*								
	Freeway/ Direction	On-ramp	Effective Flow Rate v_p (pcph)	Type	Lanes	S_{FR} (mph)	V_R (vph)	Accel Lane (ft) L_{A1}	L_{A2}	L_{Aeff}	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_R (pcph)
3	I-880 NB	Davis Street On-Ramp	7,097	Right	1	40.0	530	450		450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	535
7	I-880 NB	98th Street WB On-Ramp	5,457	Right	1	50.0	340	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	343
11	I-880 NB	Hegenberger SB On-Ramp	5,649	Right	1	25.0	250	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	253
14	I-880 NB	Coliseum Way/66th Street On-Ramp	7,334	Right	2	50.0	1,230	300	1,500	2,100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,242
17	I-880 NB	High Street On-Ramp	7,601	Right	1	50.0	920	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	929
21	I-880 SB	High Street/Oakport Street On-Ramp	8,024	Right	1	40.0	970	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	980
24	I-880 SB	66th Street On-Ramp	7,725	Right	1	50.0	1,010	550		550	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,020
27	I-880 SB	Hegenberger SB Loop On-Ramp	7,004	Right	1	30.0	720	1,350		1,350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	727
31	I-880 SB	98th Street WB Loop On-Ramp	8,209	Right	1	25.0	350	250		250	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354
32	I-880 SB	98th Street EB On-Ramp	8,570	Right	1	35.0	1,300	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,313
40	I-580 EB	SR 13 Merge	5,540	Major	1	65.0	2,740	400		400	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,767
41	I-580 EB	Seminary Avenue On-Ramp	7,650	Right	1	50.0	1,060	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,071
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	6,920	Right	1	50.0	730	800		800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	737
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	4,760	Right	1	50.0	990	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,000
56	I-580 WB	Keller Avenue On-Ramp	5,320	Right	1	50.0	360	350		350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	364
58	I-580 WB	Edwards Avenue On-Ramp	5,990	Right	1	50.0	690	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	697
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	4,260	Right	1	50.0	300	250		250	1.00	Level	2%	0%	1.5	1.2	0.99	1.00	303

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_U (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	1,900	1,110	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,180
7	I-880 NB	98th Street WB On-Ramp	On	1,100	800	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	851
11	I-880 NB	Hegenberger SB On-Ramp	On	1,750	990	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,053
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	4,550	800	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	851
17	I-880 NB	High Street On-Ramp	Off	3,300	970	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,031
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	3,650	1,290	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,371
24	I-880 SB	66th Street On-Ramp	Off	3,400	1,260	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,340
27	I-880 SB	Hegenberger SB Loop On-Ramp	Off	1,350	1,710	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,818
31	I-880 SB	98th Street WB Loop On-Ramp	Off	1,200	620	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	659
32	I-880 SB	98th Street EB On-Ramp	On	750	350	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	372
40	I-580 EB	SR 13 Merge	Off	3,700	1,110	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,180
41	I-580 EB	Seminary Avenue On-Ramp	On	1,000	2,740	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	2,913
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Off	2,000	980	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	1,042
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	1,900	860	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	914
56	I-580 WB	Keller Avenue On-Ramp	Off	2,300	410	0.95	Level	2%	0%	1.5	1.2	0.990	1.00	436
58	I-580 WB	Edwards Avenue On-Ramp	On	2,800	360	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	383
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	Off	1,950	2,760	0.95	Level	2%	0%	1.5	1.2	0.99	1.00	2,934

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	On-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
3	I-880 NB	Davis Street On-Ramp	Off	4,000	1,490	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,505
7	I-880 NB	98th Street WB On-Ramp	Off	1,700	1,070	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,081
11	I-880 NB	Hegenberger SB On-Ramp	Off	2,100	800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	808
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Off	3,200	970	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	980
17	I-880 NB	High Street On-Ramp	No										1.00	
21	I-880 SB	High Street/Oakport Street On-Ramp	Off	2,550	1,260	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,273
24	I-880 SB	66th Street On-Ramp	Off	3,100	1,710	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,727
27	I-880 SB	Hegenberger SB Loop On-Ramp	On	1,350	1,070	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,081
31	I-880 SB	98th Street WB Loop On-Ramp	On	750	1,300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,313
32	I-880 SB	98th Street EB On-Ramp	Off	3,700	930	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	939
40	I-580 EB	SR 13 Merge	On	1,000	1,110	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,121
41	I-580 EB	Seminary Avenue On-Ramp	Off	950	650	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	657
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	No										1.00	
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	Off	5,400	410	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
56	I-580 WB	Keller Avenue On-Ramp	On	2,800	690	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	697
58	I-580 WB	Edwards Avenue On-Ramp	Off	1,200	360	1	Level	2%	0%	1.5	1.2	0.99	1.00	364
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No										1.00	

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information			*v_{12} Estimation*							*Capacity Checks*						
	Freeway/		L_{EQ}		P_{FM} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_{Fo}	Max v_{Fo}		v_3, v_{av34}
	Direction	On-ramp	13-6	13-7	13-3	13-4	13-5	P_{FM}	(pcph)	(pcph)	(pcph)	LOS F?	(pcph)	(pcph)	LOS F?	(pcphpl)
3	I-880 NB	Davis Street On-Ramp	1,523	9,540	0.590	0.614	0.648	0.151	1,071	7,097	8,800	No	7,632	8,800	No	3,013
7	I-880 NB	98th Street WB On-Ramp	1,588	7,627	0.586		0.716	0.175	954	5,457	11,000	No	5,800	11,000	No	2,251
11	I-880 NB	Hegenberger SB On-Ramp	301	5,702	0.586		0.650	0.186	1,052	5,649	11,000	No	5,901	11,000	No	2,298
14	I-880 NB	Coliseum Way/66th Street On-Ramp	2,981	2,931	0.636	0.735	0.629	0.209	1,533	7,334	8,800	No	8,576	8,800	No	2,900
17	I-880 NB	High Street On-Ramp	2,105		0.582	0.657		0.102	773	7,601	8,800	No	8,531	8,800	No	3,414
21	I-880 SB	High Street/Oakport Street On-Ramp	1,794	8,350	0.589	0.705	0.680	0.095	765	8,024	8,800	No	9,003	8,800	**Yes**	3,629
24	I-880 SB	66th Street On-Ramp	2,329	10,253	0.593	0.660	0.695	0.090	697	7,725	8,800	No	8,745	8,800	No	3,514
27	I-880 SB	Hegenberger SB Loop On-Ramp	1,420	4,254	0.615	0.611		0.127	889	7,004	8,800	No	7,731	8,800	No	3,058
31	I-880 SB	98th Street WB Loop On-Ramp	848	9,630	0.585	0.607		0.174	1,425	8,209	8,800	No	8,563	8,800	No	3,392
32	I-880 SB	98th Street EB On-Ramp	1,676	6,629	0.586		0.615	0.054	460	8,570	8,800	No	9,883	8,800	**Yes**	4,055
40	I-580 EB	SR 13 Merge	2,953	7,356	0.589	0.636		-0.128	-710	5,540	8,800	No	8,307	8,800	No	3,125
41	I-580 EB	Seminary Avenue On-Ramp	2,212	4,633	0.586		0.730	0.084	642	7,650	8,800	No	8,721	8,800	No	3,504
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	2,207		0.600	0.587		0.126	869	6,920	8,800	No	7,657	8,800	No	3,025
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	1,601	2,816	0.587	0.606	0.569	0.093	442	4,760	8,800	No	5,760	8,800	No	2,159
56	I-580 WB	Keller Avenue On-Ramp	1,585	4,739	0.587	0.632		0.172	917	5,320	8,800	No	5,684	8,800	No	2,202
58	I-580 WB	Edwards Avenue On-Ramp	1,755	2,667	0.585		0.628	0.186	1,117	5,990	9,600	No	6,687	8,800	No	2,437
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	1,300	######	0.585	0.787		0.236	1,004	4,260	9,600	No	4,563	8,800	No	1,628

HCM 2010
Merge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	On-ramp	v_3, v_{av34} > 2,700?	v_3, v_{av34} >1.5*v_{12}/2?	v_{12a} (pcph)
3	I-880 NB	Davis Street On-Ramp	Yes	Yes	2,839
7	I-880 NB	98th Street WB On-Ramp	No	Yes	2,183
11	I-880 NB	Hegenberger SB On-Ramp	No	Yes	2,259
14	I-880 NB	Coliseum Way/66th Street On-Ramp	Yes	Yes	2,933
17	I-880 NB	High Street On-Ramp	Yes	Yes	3,041
21	I-880 SB	High Street/Oakport Street On-Ramp	Yes	Yes	3,209
24	I-880 SB	66th Street On-Ramp	Yes	Yes	3,090
27	I-880 SB	Hegenberger SB Loop On-Ramp	Yes	Yes	2,802
31	I-880 SB	98th Street WB Loop On-Ramp	Yes	Yes	3,284
32	I-880 SB	98th Street EB On-Ramp	Yes	Yes	3,428
40	I-580 EB	SR 13 Merge	Yes	Yes	2,216
41	I-580 EB	Seminary Avenue On-Ramp	Yes	Yes	3,060
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	Yes	Yes	2,768
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	No	Yes	1,904
56	I-580 WB	Keller Avenue On-Ramp	No	Yes	2,128
58	I-580 WB	Edwards Avenue On-Ramp	No	Yes	2,396
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	No	Yes	1,704

HCM 2010
Merge Ramp Junctions
Capacity Analysis

			General Information						*Results*		*Speed Estimation*				
	Freeway/ Direction	On-ramp	v_{R12a} (pcph)	Max v_{R12a} (pcph)	Exceeds Max v_{R12a}?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. M_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
3	I-880 NB	Davis Street On-Ramp	3,374	4,600	No	535	2,000	No	**28.7**	**D**	0.399	55.8	2,129	59.1	57.6
7	I-880 NB	98th Street WB On-Ramp	2,526	4,600	No	343	2,100	No	**23.1**	**C**	0.340	57.2	1,637	60.9	59.2
11	I-880 NB	Hegenberger SB On-Ramp	2,512	4,600	No	253	1,900	No	**23.1**	**C**	0.354	56.9	1,695	60.7	59.0
14	I-880 NB	Coliseum Way/66th Street On-Ramp	4,176	4,600	No	1,242	4,200	No	**24.3**	**C**	0.365	56.6	2,200	58.9	57.8
17	I-880 NB	High Street On-Ramp	3,970	4,600	No	929	2,100	No	**35.1**	**E**	0.513	53.2	2,280	58.6	56.0
21	I-880 SB	High Street/Oakport Street On-Ramp	4,189	4,600	No	980	2,000	No	**-**	**F**	-	-	-	-	-
24	I-880 SB	66th Street On-Ramp	4,110	4,600	No	1,020	2,100	No	**33.6**	**D**	0.504	53.4	2,318	58.4	55.9
27	I-880 SB	Hegenberger SB Loop On-Ramp	3,529	4,600	No	727	1,900	No	**24.2**	**C**	0.373	56.4	2,101	59.2	57.9
31	I-880 SB	98th Street WB Loop On-Ramp	3,637	4,600	No	354	1,900	No	**32.1**	**D**	0.457	54.5	2,463	57.5	56.2
32	I-880 SB	98th Street EB On-Ramp	4,741	4,600	**Yes**	1,313	2,000	No	**-**	**F**	-	-	-	-	-
40	I-580 EB	SR 13 Merge	4,983	4,600	**Yes**	2,767	2,350	**Yes**	**-**	**F**	-	-	-	-	-
41	I-580 EB	Seminary Avenue On-Ramp	4,131	4,600	No	1,071	2,100	No	**35.3**	**E**	0.534	52.7	2,295	58.5	55.6
49	I-580 EB	98th Avenue/Golf Links Road On-Ramp	3,505	4,600	No	737	2,100	No	**27.5**	**C**	0.371	56.5	2,076	59.3	58.0
53	I-580 WB	98th Avenue/Golf Links Road On-Ramp	2,904	4,600	No	1,000	2,100	No	**25.5**	**C**	0.357	56.8	1,428	61.7	59.1
56	I-580 WB	Keller Avenue On-Ramp	2,492	4,600	No	364	2,100	No	**22.5**	**C**	0.333	57.3	1,596	61.1	59.4
58	I-580 WB	Edwards Avenue On-Ramp	3,093	4,600	No	697	2,100	No	**27.7**	**C**	0.382	56.2	1,797	60.3	58.4
63	I-580 WB	Mountain Boulevard/Rusting Avenue On-Ramp	2,007	4,600	No	303	2,100	No	**19.4**	**B**	0.325	57.5	1,278	62.2	60.1

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

Jurisdiction Caltrans District 4
Analysis Year 2035 PM
Scenario 2035 Plus Buildout

Agency or Company Caltrans
Date 1/21/2014
Project Description Coliseum City SP/EIR

General Information				*Mainline Data*						*Mainline Volume Adjustment*							
	Freeway/ Direction	Off-ramp	Analysis Time Period	Lanes	FFS (mph)	V_F (vph)	Highway or C-D?	HOV Lane?	HOV Lane Volume	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P
2	I-880 NB	Davis Street Off-Ramp	PM	5	65	8,000	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
5	I-880 NB	98th Street Off-Ramp	PM	4	65	8,100	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
20	I-880 SB	42nd Avenue/High Street Off-Ramp	PM	4	65	9,080	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
23	I-880 SB	66th Street Off-Ramp	PM	4	65	8,760	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
26	I-880 SB	Hegenberger Road Off-Ramp	PM	4	65	8,510	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
34	I-880 SB	Davis Street Off-Ramp	PM	4	65	9,620	Yes	No	0	1.00	Level	6%	0%	1.5	1.2	0.971	1.00
38	I-580 EB	Seminary Avenue Off-Ramp	PM	4	65	5,879	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
43	I-580 EB	Edwards Avenue Off-Ramp	PM	4	65	8,710	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
45	I-580 EB	Keller Avenue Off-Ramp	PM	4	65	8,060	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	PM	4	65	7,900	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	PM	4	65	6,470	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
55	I-580 WB	Keller Avenue Off-Ramp	PM	4	65	6,600	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
60	I-580 WB	Seminary Avenue Off-Ramp	PM	4	65	7,240	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00
61	I-580 WB	SR 13 Off-Ramp	PM	4	65	6,880	Yes	No	0	1.00	Level	0%	0%	1.5	1.2	1.000	1.00

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Flow Rate v_F (pcph)
2	I-880 NB	Davis Street Off-Ramp	8,240
5	I-880 NB	98th Street Off-Ramp	8,343
20	I-880 SB	42nd Avenue/High Street Off-Ramp	9,352
23	I-880 SB	66th Street Off-Ramp	9,023
26	I-880 SB	Hegenberger Road Off-Ramp	8,765
34	I-880 SB	Davis Street Off-Ramp	9,909
38	I-580 EB	Seminary Avenue Off-Ramp	5,879
43	I-580 EB	Edwards Avenue Off-Ramp	8,710
45	I-580 EB	Keller Avenue Off-Ramp	8,060
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	7,900
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	6,470
55	I-580 WB	Keller Avenue Off-Ramp	6,600
60	I-580 WB	Seminary Avenue Off-Ramp	7,240
61	I-580 WB	SR 13 Off-Ramp	6,880

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information			Effective	*Off-Ramp Data*							*Off-Ramp Volume Adjustment*								
	Freeway/		Flow Rate			S_{FR}	V_R	Decel Lane (ft)					Truck/						Flow Rate
	Direction	Off-ramp	v_p (pcph)	Type	Lanes	(mph)	(vph)	L_{D1}	L_{D2}	L_{Deff}	PHF	Terrain	Bus %	RV %	E_T	E_R	f_{HV}	f_P	v_R (pcph)
2	I-880 NB	Davis Street Off-Ramp	6,592	Right	1	50.0	1,110	1,500		1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,121
5	I-880 NB	98th Street Off-Ramp	8,343	Right	1	50.0	1,490	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,505
20	I-880 SB	42nd Avenue/High Street Off-Ramp	9,352	Right	1	50.0	1,290	300		300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,303
23	I-880 SB	66th Street Off-Ramp	9,023	Right	2	50.0	1,260	150	1,200	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,273
26	I-880 SB	Hegenberger Road Off-Ramp	8,765	Right	2	50.0	1,710	100	1,250	1,450	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,727
34	I-880 SB	Davis Street Off-Ramp	9,909	Right	1	50.0	930	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	939
38	I-580 EB	Seminary Avenue Off-Ramp	5,879	Right	1	50.0	1,110	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,121
43	I-580 EB	Edwards Avenue Off-Ramp	8,710	Right	1	50.0	650	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	657
45	I-580 EB	Keller Avenue Off-Ramp	8,060	Right	1	50.0	510	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	515
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	7,900	Right	1	50.0	980	100		100	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	990
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	6,470	Right	1	50.0	860	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	869
55	I-580 WB	Keller Avenue Off-Ramp	6,600	Right	1	50.0	410	150		150	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	414
60	I-580 WB	Seminary Avenue Off-Ramp	7,240	Right	1	50.0	360	200		200	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	364
61	I-580 WB	SR 13 Off-Ramp	6,880	Major	2	65.0	2,760	350	800	1,500	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,788

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Upstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{UP}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_u (pcph)
2	I-880 NB	Davis Street Off-Ramp	No											
5	I-880 NB	98th Street Off-Ramp	On	4,000	530	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	535
20	I-880 SB	42nd Avenue/High Street Off-Ramp	No											
23	I-880 SB	66th Street Off-Ramp	On	2,550	970	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	980
26	I-880 SB	Hegenberger Road Off-Ramp	On	3,100	1,010	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,020
34	I-880 SB	Davis Street Off-Ramp	On	3,700	1,300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,313
38	I-580 EB	Seminary Avenue Off-Ramp	No											
43	I-580 EB	Edwards Avenue Off-Ramp	On	950	1,060	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,071
45	I-580 EB	Keller Avenue Off-Ramp	Off	2,500	650	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	657
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	5,300	350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No											
55	I-580 WB	Keller Avenue Off-Ramp	On	5,400	990	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,000
60	I-580 WB	Seminary Avenue Off-Ramp	On	1,200	690	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	697
61	I-580 WB	SR 13 Off-Ramp	Off	1,250	360	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	364

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information *Adjacent Downstream Ramp Data*

	Freeway/ Direction	Off-ramp	Exists?	Distance L_{DOWN}	Volume (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{HV}	f_P	Flow Rate v_D (pcph)
2	I-880 NB	Davis Street Off-Ramp	On	1,900	680	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	687
5	I-880 NB	98th Street Off-Ramp	On	1,250	800	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	808
20	I-880 SB	42nd Avenue/High Street Off-Ramp	On	3,650	970	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	980
23	I-880 SB	66th Street Off-Ramp	On	3,400	1,010	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,020
26	I-880 SB	Hegenberger Road Off-Ramp	On	1,350	720	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	727
34	I-880 SB	Davis Street Off-Ramp	On	1,950	440	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	444
38	I-580 EB	Seminary Avenue Off-Ramp	On	3,700	2,740	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,767
43	I-580 EB	Edwards Avenue Off-Ramp	Off	2,500	510	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	515
45	I-580 EB	Keller Avenue Off-Ramp	On	2,300	350	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	354
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	On	2,000	730	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	737
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	On	1,900	990	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	1,000
55	I-580 WB	Keller Avenue Off-Ramp	On	2,300	360	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	364
60	I-580 WB	Seminary Avenue Off-Ramp	Off	1,250	2,760	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	2,788
61	I-580 WB	SR 13 Off-Ramp	On	1,900	300	1.00	Level	2%	0%	1.5	1.2	0.990	1.00	303

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

			General Information		*v_{12} Estimation*					*Capacity Checks*							
	Freeway/		L_{EQ}		P_{FD} Equations				v_{12}	v_{Fi}	Max v_{Fi}		v_3, v_{av34}	v_3, v_{av34}	v_3, v_{av34}	v_{12a}	Max v_{12a}
	Direction	Off-ramp	13-12	13-13	13-9	13-10	13-11	P_{FD}	(pcph)	(pcph)	(pcph)	LOS F?	(pcphpl)	> 2,700?	>1.5*v_{12}/2?	(pcph)	(pcph)
2	I-880 NB	Davis Street Off-Ramp		1,307	0.544			0.436	3,506	6,592	11,000	No	1,543	No	No	3,506	4,400
5	I-880 NB	98th Street Off-Ramp	3,604	2,466	0.482	0.472		0.436	4,486	8,343	8,800	No	1,928	No	No	4,486	4,400
20	I-880 SB	42nd Avenue/High Street Off-Ramp		2,648	0.466			0.436	4,812	9,352	8,800	**Yes**	2,270	No	No	4,812	4,400
23	I-880 SB	66th Street Off-Ramp	5,389	2,604	0.476	0.476		0.260	3,288	9,023	8,800	**Yes**	2,868	Yes	Yes	3,609	4,400
26	I-880 SB	Hegenberger Road Off-Ramp	7,217	3,132	0.461	0.461		0.260	3,557	8,765	8,800	No	2,604	No	No	3,557	4,400
34	I-880 SB	Davis Street Off-Ramp	5,771	914	0.469	0.469		0.436	4,850	9,909	8,800	**Yes**	2,529	No	No	4,850	4,400
38	I-580 EB	Seminary Avenue Off-Ramp		5,048	0.561			0.436	3,196	5,879	8,800	No	1,342	No	No	3,196	4,400
43	I-580 EB	Edwards Avenue Off-Ramp	4,835	819	0.512	0.512	0.459	0.436	4,168	8,710	8,800	No	2,271	No	No	4,168	4,400
45	I-580 EB	Keller Avenue Off-Ramp	3,022	504	0.535			0.436	3,805	8,060	8,800	No	2,128	No	No	3,805	4,400
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	1,992	1,386	0.517	0.449		0.436	4,003	7,900	8,800	No	1,949	No	No	4,003	4,400
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp		1,606	0.558			0.436	3,311	6,470	8,800	No	1,580	No	No	3,311	4,400
55	I-580 WB	Keller Avenue Off-Ramp	5,226	463	0.576	0.571		0.436	3,111	6,600	9,600	No	1,744	No	No	3,111	4,400
60	I-580 WB	Seminary Avenue Off-Ramp	3,320	3,555	0.562	0.562	0.742	0.436	3,362	7,240	9,600	No	1,939	No	No	3,362	4,400
61	I-580 WB	SR 13 Off-Ramp	20,918	-3,067	0.460			0.260	3,852	6,880	9,600	No	1,514	No	No	3,852	4,400

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information

	Freeway/ Direction	Off-ramp	Exceeds Max v_{12a}?
2	I-880 NB	Davis Street Off-Ramp	No
5	I-880 NB	98th Street Off-Ramp	**Yes**
20	I-880 SB	42nd Avenue/High Street Off-Ramp	**Yes**
23	I-880 SB	66th Street Off-Ramp	No
26	I-880 SB	Hegenberger Road Off-Ramp	No
34	I-880 SB	Davis Street Off-Ramp	**Yes**
38	I-580 EB	Seminary Avenue Off-Ramp	No
43	I-580 EB	Edwards Avenue Off-Ramp	No
45	I-580 EB	Keller Avenue Off-Ramp	No
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	No
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	No
55	I-580 WB	Keller Avenue Off-Ramp	No
60	I-580 WB	Seminary Avenue Off-Ramp	No
61	I-580 WB	SR 13 Off-Ramp	No

HCM 2010
Diverge Ramp Junctions
Capacity Analysis

General Information | *Results* | *Speed Estimation*

	Freeway/ Direction	Off-ramp	v_{Fo} (pcph)	Max v_{Fo} (pcph)	LOS F?	v_R (pcph)	Max v_R (pcph)	LOS F?	Density, D (pcplpm)	Level of Service	Int. Var. D_S	Inf. Area S_R (mph)	v_{OA} (pcphpl)	Out Lns. S_O (mph)	All vehs. S (mph)
2	I-880 NB	Davis Street Off-Ramp	5,471	11,000	No	1,121	2,100	No	**20.9**	**C**	0.334	57.3	1,543	69.2	62.3
5	I-880 NB	98th Street Off-Ramp	6,838	8,800	No	1,505	2,100	No	**41.5**	**E**	0.368	56.5	1,928	67.7	61.2
20	I-880 SB	42nd Avenue/High Street Off-Ramp	8,050	8,800	No	1,303	2,100	No	**-**	**F**	-	-	-	-	-
23	I-880 SB	66th Street Off-Ramp	7,750	8,800	No	1,273	4,200	No	**-**	**F**	-	-	-	-	-
26	I-880 SB	Hegenberger Road Off-Ramp	7,038	8,800	No	1,727	4,200	No	**21.8**	**C**	0.388	56.1	2,604	65.0	61.1
34	I-880 SB	Davis Street Off-Ramp	8,969	8,800	**Yes**	939	2,100	No	**-**	**F**	-	-	-	-	-
38	I-580 EB	Seminary Avenue Off-Ramp	4,758	8,800	No	1,121	2,100	No	**30.8**	**D**	0.334	57.3	1,342	70.0	62.5
43	I-580 EB	Edwards Avenue Off-Ramp	8,054	8,800	No	657	2,100	No	**39.2**	**E**	0.292	58.3	2,271	66.3	62.2
45	I-580 EB	Keller Avenue Off-Ramp	7,545	8,800	No	515	2,100	No	**35.2**	**E**	0.279	58.6	2,128	66.9	62.7
48	I-580 EB	98th Avenue/Golf Links Road Off-Ramp	6,910	8,800	No	990	2,100	No	**37.8**	**E**	0.322	57.6	1,949	67.6	62.1
52	I-580 WB	98th Avenue/Golf Links Road Off-Ramp	5,601	8,800	No	869	2,100	No	**31.4**	**D**	0.311	57.8	1,580	69.0	62.8
55	I-580 WB	Keller Avenue Off-Ramp	6,186	8,800	No	414	2,100	No	**29.7**	**D**	0.270	58.8	1,744	68.4	63.5
60	I-580 WB	Seminary Avenue Off-Ramp	6,876	8,800	No	364	2,100	No	**31.4**	**D**	0.266	58.9	1,939	67.6	63.3
61	I-580 WB	SR 13 Off-Ramp	4,092	8,800	No	2,788	4,400	No	**18.7**	**B**	0.289	58.4	1,514	69.3	62.7

Leisch Method for Weaving Analysis

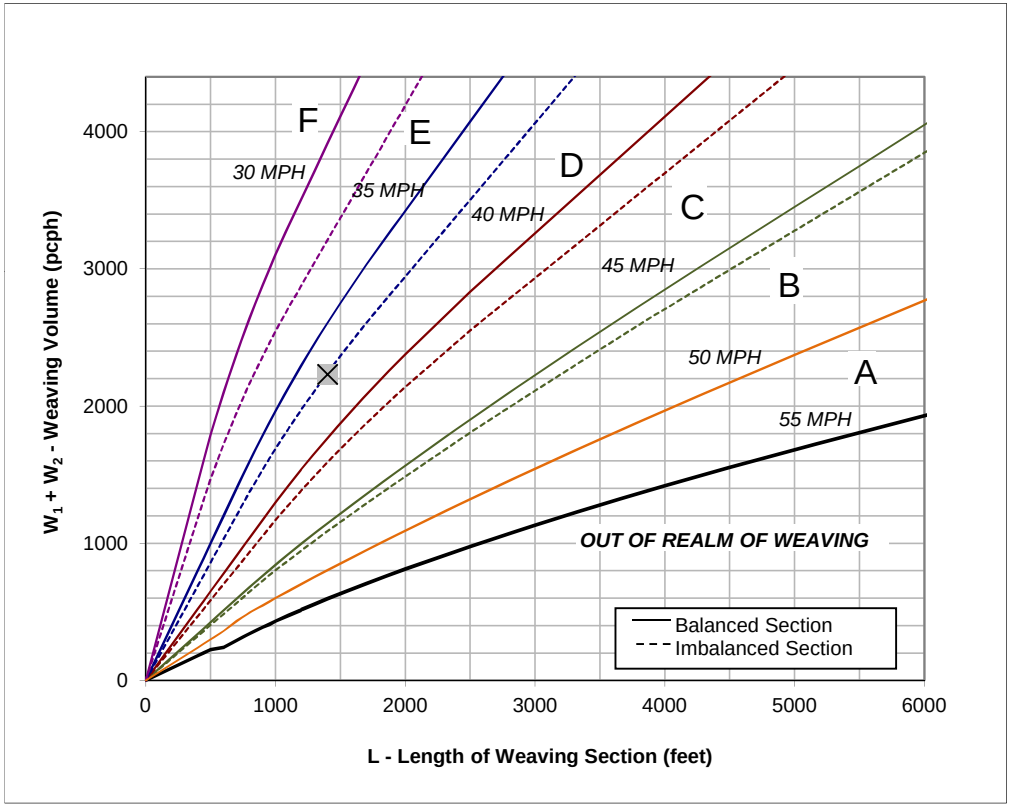
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,400

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,750	Volume (vph)*	1,140	Volume (vph)*	1,070
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,866	Volume (pcph)	1,151	Volume (pcph)	1,081

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 BO - PM Peak
Freeway	I-880 NB
On-ramp	98th Street
Off-ramp	Hegenberger Road



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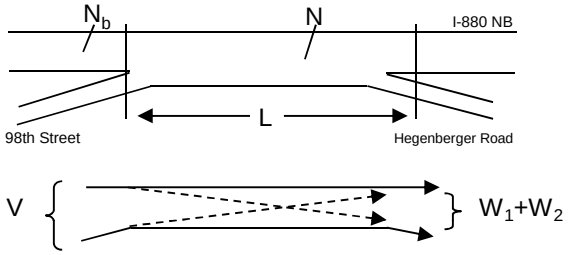


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   40 MPH and **45 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **33.6**
4. Weaving Intensity Factor (k) **2.96**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,996**
6. Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

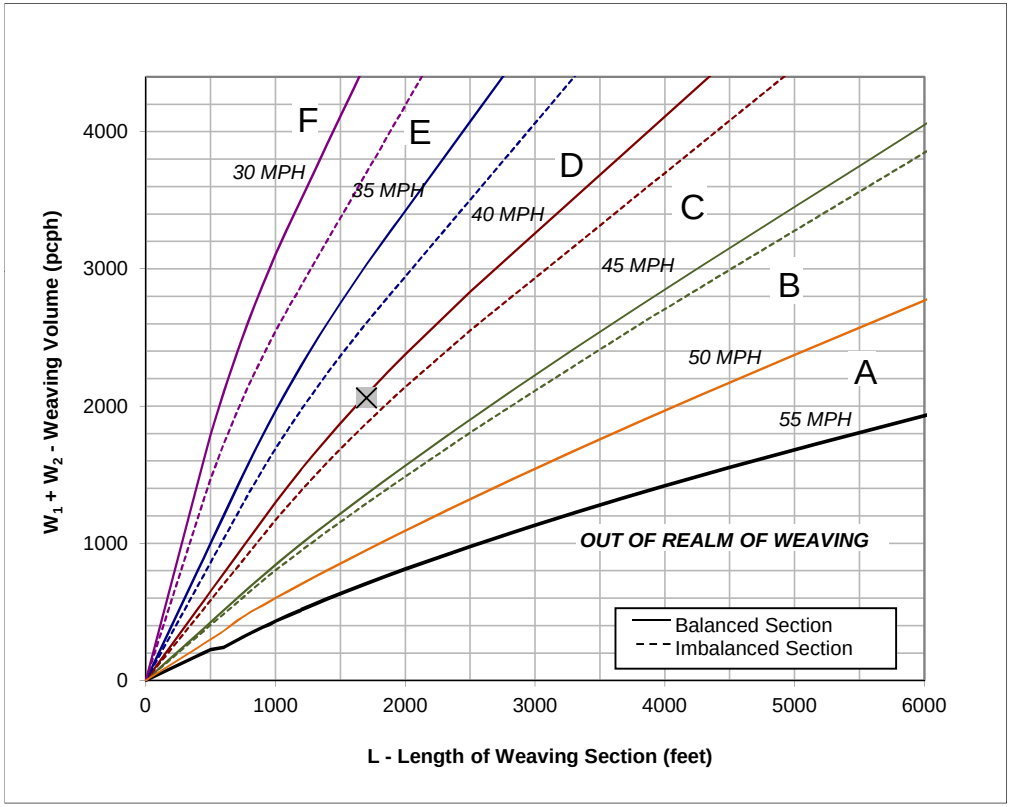
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,700

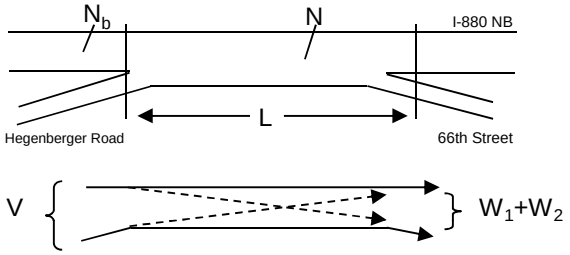
Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,920	Volume (vph)*	1,240	Volume (vph)*	800
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	8,039	Volume (pcph)	1,252	Volume (pcph)	808

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 BO - PM Peak
Freeway	I-880 NB
On-ramp	Hegenberger Road
Off-ramp	66th Street



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   45 MPH and **50 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **33.7**
4. Weaving Intensity Factor (k) **2.95**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,923**
6. Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

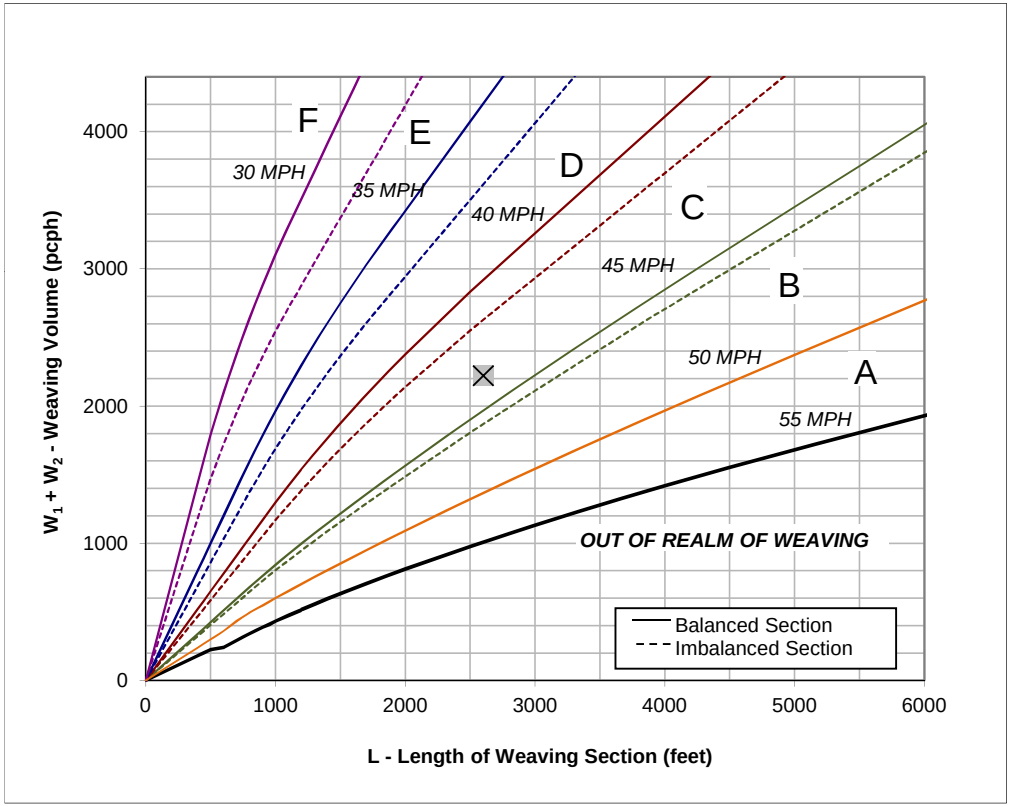
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,600

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	8,350	Volume (vph)*	1,230	Volume (vph)*	970
Truck Percentage	3%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	8,475	Volume (pcph)	1,242	Volume (pcph)	980

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 BO - PM Peak
Freeway	I-880 NB
On-ramp	66th Street
Off-ramp	High Street



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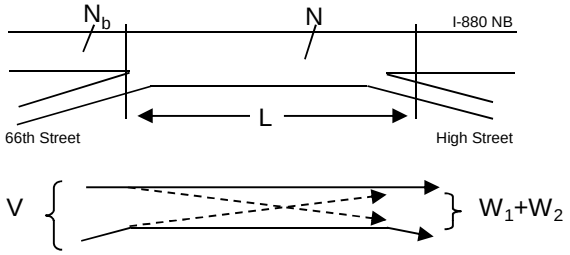


Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   45 MPH and **50 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **41.5**
4. Weaving Intensity Factor (k) **2.39**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,967**
6. Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

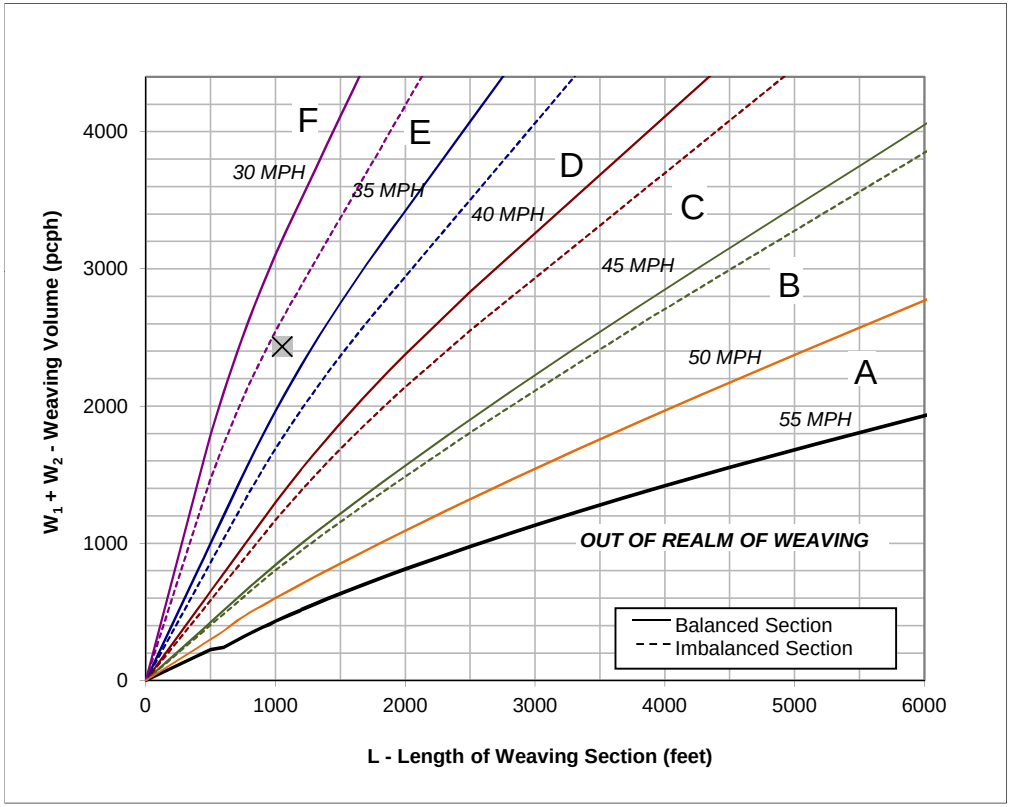
Data Input

Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	1,050

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	8,590	Volume (vph)*	1,790	Volume (vph)*	620
Truck Percentage	1%	Truck Percentage	2%	Truck Percentage	2%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	8,633	Volume (pcph)	1,808	Volume (pcph)	626

Project Information

Project	Coliseum City SP/EIR
Scenario	2035 BO - PM Peak
Freeway	I-880 SB
On-ramp	Hegenberger Road
Off-ramp	98th Street



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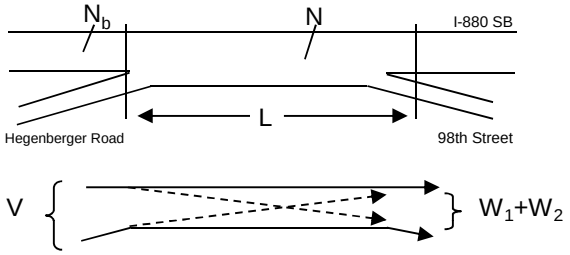

Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
   [If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
   35 MPH and **40 MPH**
   If below the 55 MPH curve, out of the realm of weaving.
   If left of the 30 MPH curve, LOS is F.
3. Interpolated Weaving Speed (S_w, mph) **28.8**
4. Weaving Intensity Factor (k) **3.00**
5. Service Volume (SV, pcph)
   $SV = (1/N)*[V + (k - 1)*\min(W_1, W_2)]$ **1,977**
6. Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF).** The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections* , Jack E. Leisch & Associates, September 1983 and *Highway Design Manual* , California Department of Transportation, July 24, 2009

Appendix I
MXD Methodology Memorandum

FEHR PEERS

FEHR PEERS

MEMORANDUM

Date: July 15, 2013

To: Scott Gregory, Lamphier Gregory
sgregory@lamphier-gregory.com

From: Rob Rees and Sam Tabibnia, Fehr & Peers

**Subject: Coliseum City Specific Plan and EIR –
Weekday Transportation Impact Analysis Assumptions**

WC12-2923

Fehr & Peers is conducting a transportation impact analysis for the proposed Coliseum City Specific Plan in Oakland. The entire proposed Specific Plan land uses will be briefly discussed below. A portion of the overall Specific Plan will be analyzed in a project level EIR (hereafter the 'Project'). This memorandum concerns the weekday transportation impact analysis assumptions. A separate memo will address weekend analysis.

This memorandum provides a brief description of the proposed Project land uses, describes assumptions used in trip generation methodologies, presents the estimated weekday trip generation for the Project, proposes transportation facilities to be analyzed for the EIR, and describes the transportation impact analysis approach.

PROJECT DESCRIPTION

The Coliseum City Specific Plan would consist of a mix of land uses including residential, retail, entertainment, research and development, office, and hotel within the 815 acre Specific Plan Area in Oakland. The Specific Plan would replace some existing uses in the plan area. **Table 1** presents the net buildout development program for Coliseum City.

The buildout development plan would also include a 72,000 seat football stadium, a 39,000 seat baseball ballpark, and a 20,000 seat arena.

The project team subsequently has identified a portion of the overall Specific Plan to be analyzed in a project level EIR. The project level EIR will analyze Sub-Area A as shown in Table 1.

TABLE 1
COLISEUM CITY NET BUILDOUT DEVELOPMENT ASSUMPTIONS

Land Use	Units	Sub-Area A (east of I-880)	Sub-Area B through E (west of I-880)	Total
Residential	DU	4,000	1,750	5,750
Retail	KSF	408	120	528
Office	KSF	-83	167	84
R&D	KSF	1,500	2,818	4,318
Industrial	KSF	-248	2,636	2,389
Hotel	Rooms	875	0	875
Total Non-Residential Development		1,578	5,741	7,319

Source: Oakland Coliseum Area Specific Plan, April 2013.

TRIP GENERATION

The existing uses would be removed from Sub-Area A and replaced with the proposed Project including about 4,000 residential units, 400,000 square feet of retail and entertainment uses, over 1.50 million square feet of office and research and development, and 875 hotel rooms. This development site provides a variety of automobile and transit travel mode opportunities. Due to the unique nature of the Project site design, pedestrian and bicycle travel modes may be more attractive than a typical development in the surrounding area. If vehicle trip reduction in mixed-use dense urban developments such as this is understated, the result can be excessive traffic impacts and related mitigation that can discourage development of otherwise desirable projects or transportation that is not sized to the urban setting of the development. The trip generation presented in subsequent sections accounts for the mix of uses, urban setting, and travel mode alternatives provided in the Project area.

Trip Generation Methodology

Current accepted methodologies, such as the Institute of Transportation Engineers (ITE) Tr*ip Generation* methodology, are primarily based on data collected at suburban, single-use, freestanding sites. These defining characteristics limit their applicability to mixed-use or multi-use development projects, such as the proposed Sub-Area A of Coliseum City, which is in an urban setting with frequent and nearby local and regional transit service. The land use mix, design features, and setting of the proposed Coliseum City Specific Plan would include characteristics that influence travel behavior differently from typical single-use suburban

developments. Thus, traditional data and methodologies, such as ITE, would not accurately estimate the project vehicle trip generation.

In response to the limitations in the ITE methodology, and to provide a straightforward and empirically validated method of estimating vehicle trip generation at mixed-use developments, the US Environmental Protection Agency (EPA) sponsored a national study of the trip generation characteristics of multi-use sites. Travel survey data was gathered from 239 mixed-use developments (MXDs) in six major metropolitan regions, and correlated with the characteristics of the sites and their surroundings. The findings indicate that the amount of external traffic generated is affected by a wide variety of factors including the mix of employment and residents, the overall size and density of the development, the internal connectivity for walking or driving among land uses, the availability of transit service, and the surrounding trip destinations within the immediate area outside the Project site.

These characteristics were related statistically to trip behavior observed at the study development sites using statistical techniques. These statistical relationships produced equations, known as the EPA MXD model, that allows predicting external vehicle trip reduction as a function of the MXD characteristics. Applying the external vehicle trip reduction percentage to "raw trips", as predicted by ITE, produces an estimate for the number of vehicle trips traveling in or out of the site.

The MXD model has been approved for use by the EPA[1]. It has also been peer-reviewed in the ASCE Journal of Urban Planning and Development[2], peer-reviewed in a 2012 TRB paper evaluating various smart growth trip generation methodologies[3], recommended by SANDAG for use on mixed-use smart growth developments[4], promoted in an American Planning Association (APA) Planning Advisory Service (PAS)[5] which recommended it for evaluating traffic generation of mixed-use and other forms of smart growth, including in-fill and transit oriented development, It has also been used successfully in multiple certified EIRs in California. **Attachment A** presents

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[1] Trip Generation Tool for Mixed-Use Developments (2012). www.epa.gov/dced/mxd_tripgeneration.html

[2] "Traffic Generated by Mixed-Use Developments—Six-Region Study Using Consistent Built Environmental Measures." Journal of Urban Planning and Development, 137(3), 248–261.

[3] Shafizadeh, Kevan et al. "Evaluation of the Operation and Accuracy of Available Smart Growth Trip Generation Methodologies for Use in California". Presented at 91st Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.

[4] SANDAG Smart Growth Trip Generation and Parking Study.
http://www.sandag.org/index.asp?projectid=378&fuseaction=projects.detail

[5] Walters, Jerry et al. "Getting Trip Generation Right – Eliminating the Bias Against Mixed Use Development". American Planning Association. May 2013.

certified EIRs that have used the MXD model or its predecessors and a comparison of the accuracy of MXD versus other methods for sample mixed-use developments across the country.

To supplement the results of the MXD model, Fehr & Peers utilized the Alameda County Transportation Commission (Alameda CTC) Countywide Travel Demand Model to estimate BART trips by the Coliseum City project.

Coliseum City Non-Event Trip Generation

Fehr & Peers collected input values for the MXD model for use in application on the Coliseum City trip generation. The MXD model uses internal project information such as land use mix, project area, intersection density, and transit stop placement as well as local and regional demographic data such as average household size and vehicle ownership, employment within one mile of the site, and employment within a 30 minute transit trip.

Table 2 summarizes the estimated trip generation for Coliseum City Sub-Area A using the MXD and Alameda CTC Model methodologies for weekday non-event. **Attachment B** summarizes the estimated trip generation for Coliseum City at full buildout.

As shown in Table 2, Coliseum City Sub-Area A is estimated to generate about 34,000 net daily trips, 2,100 net AM peak hour trips, and 2,800 net PM peak hour trips for a weekday non-event.

Overall, the Project is estimated to generate 40 to 48 percent fewer trips than estimated by the unadjusted ITE methodology.

Comparisons with Mode Share Data

American Community Survey (ACS) data and 2000 Bay Area Transportation Survey (BATS) data were used to check the reasonability of the MXD model results presented above.

Considering the specific setting, available transportation infrastructure, and mix of uses of the Project, a number of locations around the Bay Area were compared to the proposed Project. These locations represent a cross section of dense mixed-use urban areas with varying available travel modes. They include the Project area, downtown Oakland, downtown Berkeley, downtown San Francisco, Mission Bay (San Francisco), and downtown Walnut Creek.

TABLE 2
TRIP GENERATION - WEEKDAY NON-EVENT
COLISEUM CITY NET NEW EXTERNAL VEHICLE TRIPS

Description	Land Use	ITE Code	Units[a]	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out	Total
Residential	Apartment[b]	220	4,000 DU	24,360	393	1,571	1,964	1,441	777	2,218
Retail	Shopping Center [c]	820	408 KSF	16,940	228	140	368	738	799	1,537
Office	Office [d]	710	-83 KSF	-1,130	-144	-20	-164	-29	-142	-171
R&D	R&D [e]	760	1,500 KSF	9,510	1,137	233	1,370	187	1,062	1,249
Hotel	Hotel [f]	310	875 Rooms	7,800	340	246	586	300	313	613
Industrial	Industrial [g]	110	-248 KSF	-1,730	-201	-27	-228	-29	-211	-240
Raw External Project Trips				**55,750**	**1,753**	**2,143**	**3,896**	**2,608**	**2,597**	**5,205**
Reductions [h]										
Internal Capture (non-auto)				(7,750)	(202)	(248)	(450)	(352)	(350)	(702)
External (Walk, Bike, and Bus)				(6,040)	(204)	(250)	(454)	(274)	(273)	(547)
BART Trips				(7,810)	(403)	(493)	(896)	(600)	(597)	(1,197)
Total External Trip Reduction				**(21,600)**	**(809)**	**(991)**	**(1,800)**	**(1,226)**	**(1,220)**	**(2,446)**
Net New External Project Trips				***34,150***	***944***	***1,152***	***2,096***	***1,382***	***1,377***	***2,759***

Footnotes Next Page

a DU = dwelling unit. KSF = 1,000 square feet.

b ITE *Trip* Generation *(9th Edition)* land use category 220 (Apartments):
Daily: T = 6.06(X) + 123.56
AM Peak Hour: T = 0.49(X) + 3.73 (20% in, 80% out)
PM Peak Hour: T = 0.55(X) + 17.65 (65% in, 35% out)

c ITE *Trip Generation (9th Edition)* land use category 820 (Shopping Center):
Daily: Ln(T) = 0.65*ln(X) + 5.83
AM Peak Hour: Ln(T) = 0.61*ln(X)+2.24 (62% in, 38% out)
PM Peak Hour: Ln(T) = 0.67*ln(X)+3.37 (48% in, 52% out)

d ITE *Trip Generation (9th Edition)* land use category 710 (General Office):
Daily: Ln(T) = 0.76*ln(X) + 3.68
AM Peak Hour: Ln(T) = 0.80*ln(X) + 1.57 (88% in, 12% out)
PM Peak Hour: T = 1.12(X) + 78.45 (17% in, 83% out)

e ITE *Trip Generation (9th Edition)* land use category 760 (Research & Development):
Daily: Ln(T) = 0.83*ln(X) + 3.09
AM Peak Hour: Ln(T) = 0.87*ln(X) + 0.86 (83% in, 17% out)
PM Peak Hour: Ln(T) = 0.83*ln(X) + 1.06 (15% in, 85% out)

f ITE *Trip Generation (9th Edition)* land use category 310 (Hotel):
Daily: T = 8.92(X)
AM Peak Hour: T = 0.67(X) (58% in, 42% out)
PM Peak Hour: T = 0.70(X) (49% in, 51% out)

g ITE *Trip Generation (9th Edition)* land use category 110 (Light Industrial):
Daily: T = 6.97(X)
AM Peak Hour: T = 0.92(X) (88% in, 12% out)
PM Peak Hour: T = 0.97(X) (12% in, 88% out)

h Reductions based on application of MXD and Alameda CTC models: Daily = 40%, AM Peak Hour = 46%, PM Peak Hour = 48%
Internal Capture: Daily = 16%, AM Peak Hour = 13%, PM Peak Hour = 16%
External Walk/Bike/Bus/BART: Daily = 23%, AM Peak Hour = 33%, PM Peak Hour = 32%

Source: Fehr & Peers, 2013

Table 3 shows journey to work mode share data for the locations based on 2010 ACS data. The data shows that the Project mode share estimates are conservative relative to similar locations.

TABLE 3
AMERICAN COMMUNITY SURVEY (2010 5-YEAR ESTIMATES)
JOURNEY TO WORK MODE SHARE

Mode	Project Area	DT Oakland	DT Berkeley	DT San Francisco	Mission Bay	DT Walnut Creek	Project Mode Share
Auto	67%	36%	27%	16%	37%	59%	60%
Transit	20%	32%	27%	20%	32%	21%	17%
Non-Motorized	5%	23%	39%	61%	23%	14%	23%
Other	8%	9%	7%	3%	7%	6%	0%

DT = Downtown
Source: American Community Survey (2010 5-year estimates).

The 2000 Bay Area Travel Survey (BATS) provides mode share tables by proximity to rail stations. **Table 4** presents the mode share data for Alameda County and Bay Area residents. The Project is within ½ mile of two rail stations. Based on the BATS data, about 48 percent of trips by Alameda County residents and 55 percent of trips by Bay Area residents within ½ mile of a rail station is by non-auto modes. The data shows that the Project estimate of mode share is conservative relative to locations in a similar environment.

TABLE 4
BAY AREA TRAVEL SURVEY (BATS)
2000 MODE SHARE DATA (ALL TRIPS)

	Alameda County		Bay Area		Project Mode Share
Mode	Within 1/2 mile of Rail Station	Countywide	Within 1/2 mile of Rail Station	Regionwide	
Auto	48%	76%	55%	80%	60%
Transit	26%	8%	19%	6%	17%
Non-Motorized	23%	14%	23%	12%	23%
Other	3%	2%	3%	2%	0%

Source: Bay Area Travel Survey (BATS) 2000.

Attachment A

COLISEUM CITY SPECIFIC PLAN
CERTIFIED EIRS USING MXD (4Ds) MODEL

Name	Date Published	Jurisdiction	Description	% Reduction
Treasure Island DEIR[1]	July 2010	City of San Francisco	8,000 DUs 140,000 SF retail 100,000 SF office 311,000 SF commercial flex 274,000 SF other	56-61% reduction
Candlestick Point / Hunters Point DEIR[2]	November 2009	City of San Francisco	10,500 DUs 885,000 SF retail 2,650,000 SF office/R&D	44-50% reduction
Parkmerced DEIR[3]	May 2010	City of San Francisco	8,900 DUs 230,000 SF retail 105,000 SF office 164,000 SF other	34-38% reduction
Fairfield Train Station DEIR[4]	December 2010	City of Fairfield	6,790 DUs 150,000 SF retail	25% reduction
Redwood City Downtown Precise Plan DEIR[5]	August 2010	Redwood City	2,500 DUs 221,000 SF retail 275,000 SF office	21-29% reduction
Pittsburg/Bay Point BART Station Master Plan DEIR[6]	June 2011	City of Pittsburg	1,168 DU 95,000 SF retail 50,000 SF office	26-32% reduction
Newhall Ranch Draft EIS/EIR[7]	April 2009	Los Angeles County U.S. Army Corps of Engineers	21,000 DUs 5,500,000 SF commercial	29-33% reduction
Broadway-Valdez District Specific Plan	On-going	City of Oakland	1,796 DUs 1,118,345 SF retail 694,730 SF office 180 Hotel rooms	27-34% reduction
Coliseum City Specific Plan	On-going	City of Oakland	4,000 DUs 408,000 SF retail 1,500,000 SF office/R&D 875 Hotel rooms	40-48% reduction

1. http://sfplanning.org/index.aspx?page=1828#2007_0903E
2. http://sfplanning.org/index.aspx?page=1828#2007_0946E
3. http://sfplanning.org/index.aspx?page=1828#2008_0021E

Source: Fehr and Peers, 2013.

4. http://www.fairfield.ca.gov/gov/depts/cd/planning/train_station_deir.asp
5. http://www.redwoodcity.org/phed/planning/precise/FINAL-DTPP/EIR.htm
6. http://www.ci.pittsburg.ca.us/index.aspx?page=225
7. http://www.dfg.ca.gov/regions/5/newhall/final/

Validation of MXD+ model

Since the conclusion of the EPA sponsored study, Fehr & Peers has been actively enhancing the MXD model to improve sensitivity to various site characteristics, improve peak hour performance, and continue to validate the model against MXDs where data is available.

A set of 27 independent MXD sites across the country that were not included in the initial model development have been tested to validate the model. These sites represent locations where it is expected that traditional data and methodologies, such as ITE, would not accurately estimate the Project vehicle trip generation. **Table A1** presents the performance of the MXD model against ITE and ITE internalization procedures.

TABLE A1
MXD+ MODEL
VALIDATION STATISTICS COMPARISON

Validation Statistic	ITE raw	ITE with internalization	MXD+ model
Daily			
Average Model Error[1]	28%	16%	**2%**
% RMSE[2]	40%	27%	**17%**
R-Squared[3]	0.77	0.89	**0.96**
AM Peak Hour			
Average Model Error	54%	49%	**12%**
% RMSE	54%	53%	**21%**
R-Squared	0.81	0.81	**0.97**
PM Peak Hour			
Average Model Error	49%	35%	**4%**
% RMSE	64%	49%	**15%**
R-Squared	0.40	0.65	**0.97**

1. Average model error measures the difference between the estimated trip generation and the counted trip generation of the 28 survey sites.
2. RMSE stands for percent root mean squared error is a demand assessment of performance of transportation models in that it does not apply average that would allow over-estimates and under-estimates to cancel one another out and it penalizes proportionally more for large errors. A % RMSE of less than 40% is generally considered acceptable in transportation modeling.
3. R-squared is a statistical measure that indicates, in this case, the degree to which each method explains the variation in trip generation among the 27 survey sites. A R-Squared value closer to 1.0 indicates that the method fully explains the variation in trip generation amongst the survey sites and would be suitable to be used for that set of site types.

Source: Fehr & Peers, 2013.

TABLE B-1
TRIP GENERATION - WEEKDAY NON-EVENT – SPECIFIC PLAN BUILDOUT
COLISEUM CITY NET NEW EXTERNAL VEHICLE TRIPS

Description	Land Use	ITE Code	Units[a]	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out	Total
Residential	Apartment[b]	220	5,750 DU	34,970	564	2,257	2,821	2,067	1,113	3,180
Retail	Shopping Center [c]	820	528 KSF	20,030	267	163	430	877	950	1,827
Office	Office [d]	710	84 KSF	1,160	147	20	167	29	144	173
R&D	R&D [e]	760	4,318 KSF	22,870	2,853	584	3,437	451	2,552	3,003
Hotel	Hotel [f]	310	875 Rooms	7,810	340	246	586	300	313	613
Industrial	Industrial [g]	110	2,389 KSF	16,650	1,934	263	2,197	278	2,039	2,317
Raw External Project Trips				***103,490***	***6,105***	***3,534***	***9,639***	***4,002***	***7,111***	***11,113***
Reductions [h]										
Internal Capture (non-auto)				-17,960	-711	-411	-1,122	-657	-1,167	-1,824
External (Walk, Bike, and Bus)				-7,690	-493	-285	-778	-289	-514	-803
BART Trips				-14,490	-1,404	-813	-2,217	-920	-1,636	-2,556
Total External Trip Reduction				***-40,140***	***-2,608***	***-1,509***	***-4,117***	***-1,866***	***-3,317***	***-5,183***
Net New Total External Project Trips				**63,350**	**3,497**	**2,025**	**5,522**	**2,136**	**3,794**	**5,930**

Source: Fehr & Peers, 2013

APPENDIX 4.13

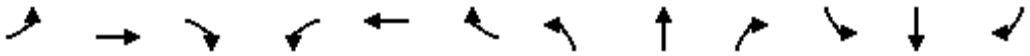
Traffic Appendices

C: Intersection Volumes for the Existing Plus Project Scenario

Appendix J

LOS Calculation Worksheets
Existing Plus Coliseum Site Conditions

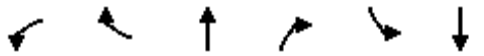
FEHR PEERS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	225	27	42	35	19	18	17	429	45	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	225	27	42	35	19	18	17	429	45	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	294	72	491
Volume Left (vph)	225	35	17
Volume Right (vph)	42	18	45
Hadj (s)	0.10	-0.02	-0.01
Departure Headway (s)	5.4	5.7	4.9
Degree Utilization, x	0.44	0.11	0.67
Capacity (veh/h)	623	567	706
Control Delay (s)	12.7	9.4	17.4
Approach Delay (s)	12.7	9.4	17.4
Approach LOS	B	A	C

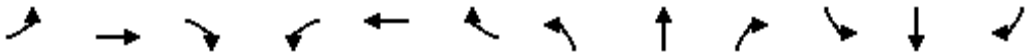
Intersection Summary				
Delay	15.1			
Level of Service	C			
Intersection Capacity Utilization	56.1%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	20	722	6	3	74
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	9	20	722	6	3	74
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	806	728			729	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	806	728			729	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	95			100	
cM capacity (veh/h)	350	422			874	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	29	728	77
Volume Left	9	0	3
Volume Right	20	6	0
cSH	397	1700	874
Volume to Capacity	0.07	0.43	0.00
Queue Length 95th (ft)	6	0	0
Control Delay (s)	14.8	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	14.8	0.0	0.4
Approach LOS	B		

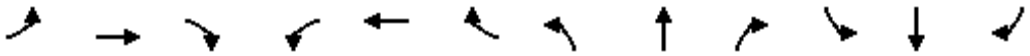
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	98	176	37	2	664	4	0	0	5	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	0	98	176	37	2	664	4	0	0	5	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1358	1340	8	1438	1342	2	10			4		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1358	1340	8	1438	1342	2	10			4		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	98	100	91	0	56	100	59			100		
cM capacity (veh/h)	50	90	1076	58	84	1088	1608			1631		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1
Volume Total	99	176	39	664	2	2	10
Volume Left	1	176	0	664	0	0	0
Volume Right	98	0	2	0	0	0	5
cSH	892	58	88	1608	1700	1700	1700
Volume to Capacity	0.11	3.05	0.44	0.41	0.00	0.00	0.01
Queue Length 95th (ft)	9	Err	46	52	0	0	0
Control Delay (s)	9.5	Err	74.6	8.8	0.0	0.0	0.0
Lane LOS	A	F	F	A			
Approach Delay (s)	9.5	8198.8		8.8			0.0
Approach LOS	A	F					

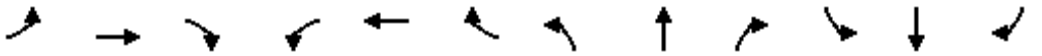
Intersection Summary				
Average Delay	1783.8			
Intersection Capacity Utilization	66.5%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	524	312	17	0	0	0	24	140	27	74	20	173
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	524	312	17	0	0	0	24	140	27	74	20	173

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	680	173	191	74	193
Volume Left (vph)	524	0	24	74	0
Volume Right (vph)	0	17	27	0	173
Hadj (s)	0.42	-0.05	-0.04	0.52	-0.60
Departure Headway (s)	6.4	5.9	6.8	7.5	6.4
Degree Utilization, x	1.0	0.28	0.36	0.15	0.34
Capacity (veh/h)	559	600	519	470	555
Control Delay (s)	127.7	10.0	13.6	10.6	11.4
Approach Delay (s)	103.9		13.6	11.2	
Approach LOS	F		B	B	

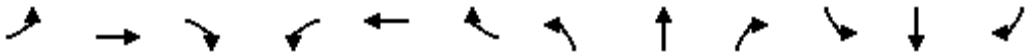
Intersection Summary				
Delay	71.8			
Level of Service	F			
Intersection Capacity Utilization	61.4%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	810	3	8	198	0	3	0	20	30	39	403
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	810	3	8	198	0	3	0	20	30	39	403
Pedestrians								2				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	198			815			1450	1028	408	639	1029	198
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	198			815			1450	1028	408	639	1029	198
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			99			92	100	97	91	83	49
cM capacity (veh/h)	1387			820			40	233	597	344	228	798

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	540	273	8	198	23	69	403
Volume Left	0	0	8	0	3	30	0
Volume Right	0	3	0	0	20	0	403
cSH	1700	1700	820	1700	211	267	798
Volume to Capacity	0.32	0.16	0.01	0.12	0.11	0.26	0.51
Queue Length 95th (ft)	0	0	1	0	9	25	72
Control Delay (s)	0.0	0.0	9.4	0.0	24.1	23.1	14.0
Lane LOS			A		C	C	B
Approach Delay (s)	0.0		0.4		24.1	15.4	
Approach LOS					C	C	

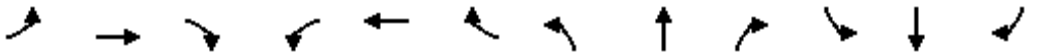
Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	48.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	586	26	130	22	11	67	264	372	7	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	3.5			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.88			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1752	1500			1773	1568	1752	1863	1385			
Flt Permitted	0.95	1.00			0.72	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1752	1500			1320	1568	1752	1863	1385			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	586	26	130	22	11	67	264	372	7	0	0	0
RTOR Reduction (vph)	0	53	0	0	0	59	0	0	5	0	0	0
Lane Group Flow (vph)	586	103	0	0	33	8	264	372	2	0	0	0
Confl. Peds. (#/hr)			4	4								
Confl. Bikes (#/hr)			1						2			
Heavy Vehicles (%)	3%	0%	10%	5%	0%	3%	3%	2%	14%	2%	2%	2%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	25.9	36.3			6.9	6.9	17.3	17.3	17.3			
Effective Green, g (s)	24.9	36.3			7.4	7.4	16.8	16.8	17.3			
Actuated g/C Ratio	0.41	0.59			0.12	0.12	0.27	0.27	0.28			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	713	891			159	189	481	512	392			
v/s Ratio Prot	c0.33	0.07						c0.20				
v/s Ratio Perm					c0.03	0.01	0.15		0.00			
v/c Ratio	0.82	0.12			0.21	0.04	0.55	0.73	0.01			
Uniform Delay, d1	16.1	5.4			24.2	23.7	18.9	20.1	15.7			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	7.6	0.1			0.2	0.0	0.7	4.3	0.0			
Delay (s)	23.7	5.5			24.4	23.8	19.6	24.4	15.7			
Level of Service	C	A			C	C	B	C	B			
Approach Delay (s)		19.9			24.0			22.3			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	61.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

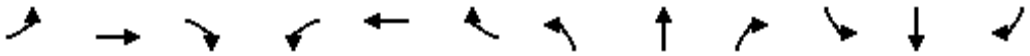
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	709	1	0	277	0	1	0	0	34	0	563
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			1.00			1.00	0.85
Flt Protected		1.00			1.00			0.95			0.95	1.00
Satd. Flow (prot)		1827			1863			1805			1656	1565
Flt Permitted		1.00			1.00			0.95			0.95	1.00
Satd. Flow (perm)		1827			1863			1805			1656	1565
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	709	1	0	277	0	1	0	0	34	0	563
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	466
Lane Group Flow (vph)	0	710	0	0	277	0	0	1	0	0	34	97
Confl. Peds. (#/hr)			3	3								1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	4%	0%	0%	2%	0%	0%	0%	2%	9%	0%	1%
Turn Type		NA			NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		25.4			25.4			1.8			8.2	8.2
Effective Green, g (s)		25.4			25.4			1.8			8.2	8.2
Actuated g/C Ratio		0.54			0.54			0.04			0.17	0.17
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		979			998			68			286	270
v/s Ratio Prot		c0.39			0.15			c0.00			0.02	
v/s Ratio Perm												c0.06
v/c Ratio		0.73			0.28			0.01			0.12	0.36
Uniform Delay, d1		8.4			6.0			21.9			16.5	17.3
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.9			0.2			0.1			0.1	0.3
Delay (s)		11.2			6.2			22.0			16.6	17.6
Level of Service		B			A			C			B	B
Approach Delay (s)		11.2			6.2			22.0			17.5	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

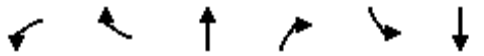


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	58	184	504	152	0	60	0	798	147	716	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.99	1.00	1.00		1.00		1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		1.00	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1900	1575	3433	1881		1736		2760		3497	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1900	1575	3433	1881		1736		2760		3497	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	58	184	504	152	0	60	0	798	147	716	14
RTOR Reduction (vph)	0	0	171	0	0	0	0	0	415	0	1	0
Lane Group Flow (vph)	0	58	13	504	152	0	60	0	383	0	876	0
Confl. Peds. (#/hr)	2		1			2						3
Heavy Vehicles (%)	0%	0%	1%	2%	1%	0%	4%	0%	2%	2%	2%	7%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		8.4	8.4	46.9	60.3		6.7		58.6		39.0	
Effective Green, g (s)		8.4	8.4	46.9	60.3		5.7		57.6		39.0	
Actuated g/C Ratio		0.07	0.07	0.39	0.50		0.05		0.48		0.32	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		133	110	1341	945		82		1324		1136	
v/s Ratio Prot		c0.03		c0.15	0.08		c0.03		0.14		c0.25	
v/s Ratio Perm			0.01									
v/c Ratio		0.44	0.12	0.38	0.16		0.73		0.29		0.77	
Uniform Delay, d1		53.5	52.3	26.1	16.2		56.4		18.8		36.5	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		0.8	0.2	0.8	0.4		24.8		0.0		3.0	
Delay (s)		54.4	52.5	26.9	16.5		81.2		18.9		39.5	
Level of Service		D	D	C	B		F		B		D	
Approach Delay (s)		52.9			24.5			23.2			39.5	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	490	530	0	0	321	123	369	2	332	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3433	1827			1845	1555		1792	1545			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3433	1827			1845	1555		1792	1545			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	490	530	0	0	321	123	369	2	332	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	95	0	0	164	0	0	0
Lane Group Flow (vph)	490	530	0	0	321	28	0	371	168	0	0	0
Confl. Peds. (#/hr)			8			5			2			
Heavy Vehicles (%)	2%	4%	0%	0%	3%	2%	1%	0%	2%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	20.9	48.2			22.8	22.8		42.8	42.8			
Effective Green, g (s)	20.9	48.2			22.8	22.8		42.8	42.8			
Actuated g/C Ratio	0.21	0.48			0.23	0.23		0.43	0.43			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	717	880			420	354		766	661			
v/s Ratio Prot	c0.14	0.29			c0.17							
v/s Ratio Perm						0.02		0.21	0.11			
v/c Ratio	0.68	0.60			0.76	0.08		0.48	0.25			
Uniform Delay, d1	36.5	18.9			36.1	30.3		20.6	18.4			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	3.5	1.7			9.4	0.2		2.2	0.9			
Delay (s)	40.0	20.6			45.5	30.5		22.8	19.3			
Level of Service	D	C			D	C		C	B			
Approach Delay (s)		29.9			41.4			21.2			0.0	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	852	371	277	1068
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	852	371	277	1068
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.83					
vC, conflicting volume	2126	612			852	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1941	612			852	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			65	
cM capacity (veh/h)	31	441			789	

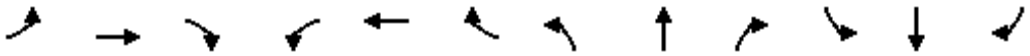
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	568	655	277	534	534
Volume Left	0	0	277	0	0
Volume Right	0	371	0	0	0
cSH	1700	1700	789	1700	1700
Volume to Capacity	0.33	0.39	0.35	0.31	0.31
Queue Length 95th (ft)	0	0	40	0	0
Control Delay (s)	0.0	0.0	12.0	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.5		
Approach LOS					

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	396	61	6	189	359	156	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.94	
Flt Protected	1.00	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3539	1583		1770	3539	1685	
Flt Permitted	1.00	1.00		0.41	1.00	0.97	
Satd. Flow (perm)	3539	1583		764	3539	1685	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	396	61	6	189	359	156	144
RTOR Reduction (vph)	0	17	0	0	0	37	0
Lane Group Flow (vph)	396	44	0	195	359	263	0
Confl. Peds. (#/hr)							6
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	11.4	29.5		23.2	23.2	12.6	
Effective Green, g (s)	11.4	29.5		23.2	23.2	12.6	
Actuated g/C Ratio	0.25	0.64		0.51	0.51	0.28	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	880	1019		580	1792	463	
v/s Ratio Prot	c0.11	0.03		c0.06	0.10	c0.16	
v/s Ratio Perm				0.11			
v/c Ratio	0.45	0.04		0.34	0.20	0.57	
Uniform Delay, d1	14.5	3.0		6.4	6.2	14.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.0		0.3	0.1	1.6	
Delay (s)	14.9	3.0		6.7	6.3	15.9	
Level of Service	B	A		A	A	B	
Approach Delay (s)	13.3				6.4	15.9	
Approach LOS	B				A	B	

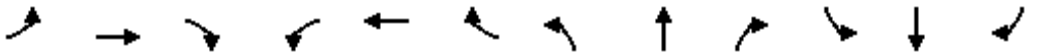
Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	45.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	247	4	74	207	235	1	218	56	158	285	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		1.00			1.00	0.85		0.97		1.00	0.97	
Flt Protected		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1834			3493	1583		3399		1770	1800	
Flt Permitted		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1834			3493	1583		3399		1770	1800	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	94	247	4	74	207	235	1	218	56	158	285	70
RTOR Reduction (vph)	0	0	0	0	0	142	0	22	0	0	7	0
Lane Group Flow (vph)	0	345	0	0	281	93	0	253	0	158	348	0
Confl. Peds. (#/hr)	13		14	14		13	8		27	27		8
Confl. Bikes (#/hr)			1			1						
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		21.7			12.5	22.6		12.0		22.6	22.6	
Effective Green, g (s)		21.7			12.5	22.6		12.0		22.6	22.6	
Actuated g/C Ratio		0.27			0.15	0.28		0.15		0.28	0.28	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		492			540	442		504		495	503	
v/s Ratio Prot		c0.19			c0.08	0.06		c0.07		0.09	c0.19	
v/s Ratio Perm												
v/c Ratio		0.70			0.52	0.21		0.50		0.32	0.69	
Uniform Delay, d1		26.6			31.4	22.3		31.6		23.0	26.0	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		4.5			0.9	0.2		0.8		0.4	4.1	
Delay (s)		31.1			32.3	22.5		32.4		23.4	30.1	
Level of Service		C			C	C		C		C	C	
Approach Delay (s)		31.1			27.8			32.4			28.0	
Approach LOS		C			C			C			C	

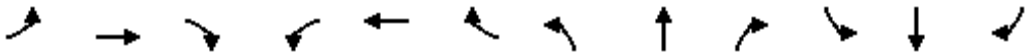
Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	136	442	66	22	560	30	136	244	27	44	138	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (prot)	1687	1845	1587	1719	1849			3418			3343	1436
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (perm)	1687	1845	1587	1719	1849			3418			3343	1436
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	136	442	66	22	560	30	136	244	27	44	138	109
RTOR Reduction (vph)	0	0	35	0	1	0	0	3	0	0	0	0
Lane Group Flow (vph)	136	442	31	22	589	0	0	404	0	0	182	109
Confl. Peds. (#/hr)			3						10			32
Confl. Bikes (#/hr)						2			1			1
Heavy Vehicles (%)	7%	3%	0%	5%	2%	0%	3%	2%	4%	12%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	15.3	51.9	51.9	9.3	45.9			19.4			15.0	115.1
Effective Green, g (s)	15.3	53.4	53.4	9.3	47.4			20.4			16.0	115.1
Actuated g/C Ratio	0.13	0.46	0.46	0.08	0.41			0.18			0.14	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	224	855	736	138	761			605			464	1436
v/s Ratio Prot	c0.08	0.24		0.01	c0.32			c0.12			c0.05	
v/s Ratio Perm			0.02									0.08
v/c Ratio	0.61	0.52	0.04	0.16	0.77			0.67			0.39	0.08
Uniform Delay, d1	47.1	21.8	16.9	49.3	29.2			44.2			45.1	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	4.6	0.5	0.0	0.5	4.9			2.8			0.5	0.1
Delay (s)	51.7	22.3	16.9	49.8	34.1			47.0			45.7	0.1
Level of Service	D	C	B	D	C			D			D	A
Approach Delay (s)		27.9			34.7			47.0			28.6	
Approach LOS		C			C			D			C	

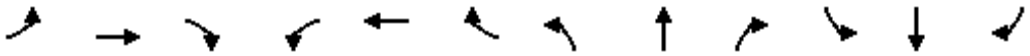
Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	115.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	406	18	36	483	336	5	35	13	132	28	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			0.98	
Frt		0.99			0.94			0.97			0.96	
Flt Protected		1.00			1.00			1.00			0.97	
Satd. Flow (prot)		3503			3319			1764			3166	
Flt Permitted		0.95			0.93			0.96			0.77	
Satd. Flow (perm)		3335			3081			1702			2513	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	406	18	36	483	336	5	35	13	132	28	66
RTOR Reduction (vph)	0	4	0	0	91	0	0	11	0	0	56	0
Lane Group Flow (vph)	0	423	0	0	764	0	0	42	0	0	170	0
Confl. Peds. (#/hr)			81	81			21		40	40		21
Confl. Bikes (#/hr)			6						1			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)		47.3			47.3			9.7			9.7	
Effective Green, g (s)		47.3			47.3			9.7			9.7	
Actuated g/C Ratio		0.73			0.73			0.15			0.15	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		2426			2242			253			375	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.25			0.02			c0.07	
v/c Ratio		0.17			0.34			0.17			0.45	
Uniform Delay, d1		2.8			3.2			24.1			25.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			0.4			0.3			0.9	
Delay (s)		2.9			3.6			24.4			26.1	
Level of Service		A			A			C			C	
Approach Delay (s)		2.9			3.6			24.4			26.1	
Approach LOS		A			A			C			C	

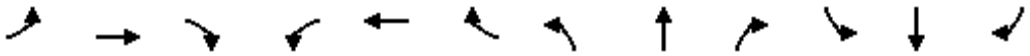
Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	382	141	68	801	161	47	241	1	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			1.00				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.98			1.00				
Flt Protected		1.00	1.00		1.00			0.99				
Satd. Flow (prot)		3539	1573		3438			3508				
Flt Permitted		1.00	1.00		0.90			0.99				
Satd. Flow (perm)		3539	1573		3112			3508				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	382	141	68	801	161	47	241	1	0	0	0
RTOR Reduction (vph)	0	0	0	0	28	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	382	141	0	1002	0	0	288	0	0	0	0
Confl. Peds. (#/hr)									22	22		
Confl. Bikes (#/hr)			2			3			12			1
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		30.1	57.5		30.1			27.4				
Effective Green, g (s)		30.1	57.5		30.1			27.4				
Actuated g/C Ratio		0.46	0.88		0.46			0.42				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		1638	1500		1441			1478				
v/s Ratio Prot		0.11	0.04									
v/s Ratio Perm			0.05		c0.32			0.08				
v/c Ratio		0.23	0.09		0.70			0.20				
Uniform Delay, d1		10.5	0.5		13.8			11.8				
Progression Factor		0.74	1.22		1.00			1.00				
Incremental Delay, d2		0.1	0.0		1.5			0.3				
Delay (s)		7.8	0.6		15.3			12.1				
Level of Service		A	A		B			B				
Approach Delay (s)		5.9			15.3			12.1			0.0	
Approach LOS		A			B			B			A	

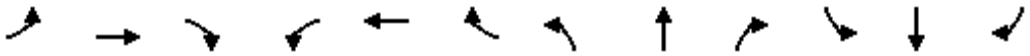
Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



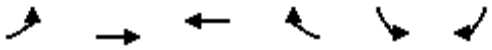
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	214	47	33	456	18	49	167	18	22	242	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			0.99			0.97	
Flpb, ped/bikes		1.00			1.00			0.98			0.99	
Frt		0.98			1.00			0.99			0.97	
Flt Protected		1.00			1.00			0.99			1.00	
Satd. Flow (prot)		1794			1839			3364			3283	
Flt Permitted		0.95			0.96			0.83			0.93	
Satd. Flow (perm)		1714			1780			2834			3055	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	214	47	33	456	18	49	167	18	22	242	71
RTOR Reduction (vph)	0	11	0	0	2	0	0	8	0	0	32	0
Lane Group Flow (vph)	0	274	0	0	505	0	0	226	0	0	303	0
Confl. Peds. (#/hr)	63		40	40		63	54		55	55		54
Confl. Bikes (#/hr)			3			17			4			7
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		38.5			24.4			25.0			25.0	
Effective Green, g (s)		34.5			24.4			25.0			25.0	
Actuated g/C Ratio		0.48			0.34			0.34			0.34	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		815			599			977			1053	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			c0.28			0.08			c0.10	
v/c Ratio		0.34			0.84			0.23			0.29	
Uniform Delay, d1		11.9			22.3			16.9			17.3	
Progression Factor		0.09			1.00			1.00			1.00	
Incremental Delay, d2		0.1			10.1			0.6			0.7	
Delay (s)		1.2			32.3			17.5			18.0	
Level of Service		A			C			B			B	
Approach Delay (s)		1.2			32.3			17.5			18.0	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	72.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



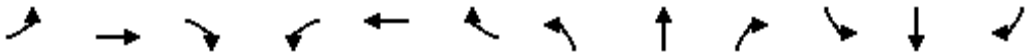
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	357	62	59	500	77	110	366	36	48	302	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.96			0.94		1.00	0.97		1.00	0.97	
Flpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3314			1701		1770	1789		1770	1764	
Flt Permitted		0.92			0.92		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3060			1568		1770	1789		1770	1764	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	17	357	62	59	500	77	110	366	36	48	302	54
RTOR Reduction (vph)	0	11	0	0	4	0	0	5	0	0	9	0
Lane Group Flow (vph)	0	425	0	0	632	0	110	397	0	48	347	0
Confl. Peds. (#/hr)	143		88	88		143			156			60
Confl. Bikes (#/hr)			1									
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		43.9			43.9		15.5	34.0		6.6	25.1	
Effective Green, g (s)		43.9			43.9		15.5	34.0		6.6	25.1	
Actuated g/C Ratio		0.44			0.44		0.16	0.34		0.07	0.25	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1343			688		274	608		116	442	
v/s Ratio Prot							c0.06	c0.22		0.03	c0.20	
v/s Ratio Perm		0.14			c0.40							
v/c Ratio		0.32			0.92		0.40	0.65		0.41	0.79	
Uniform Delay, d1		18.3			26.4		38.1	28.0		44.8	34.9	
Progression Factor		1.00			1.00		1.18	0.97		1.00	1.00	
Incremental Delay, d2		0.6			19.3		0.3	1.7		0.9	8.2	
Delay (s)		18.9			45.7		45.4	29.0		45.7	43.2	
Level of Service		B			D		D	C		D	D	
Approach Delay (s)		18.9			45.7			32.5			43.5	
Approach LOS		B			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



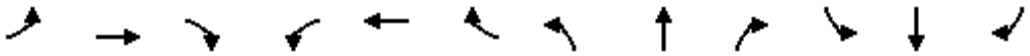
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	64	362	393	97	193	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1770	1863	1783		1698	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1770	1863	1783		1698	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	64	362	393	97	193	102
RTOR Reduction (vph)	0	0	5	0	21	0
Lane Group Flow (vph)	64	362	485	0	274	0
Confl. Peds. (#/hr)	67			67		
Confl. Bikes (#/hr)				14		9
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	7.5	70.3	58.3		21.2	
Effective Green, g (s)	7.5	70.3	58.3		21.2	
Actuated g/C Ratio	0.08	0.70	0.58		0.21	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	132	1309	1039		359	
v/s Ratio Prot	c0.04	0.19	c0.27		c0.16	
v/s Ratio Perm						
v/c Ratio	0.48	0.28	0.47		0.76	
Uniform Delay, d1	44.4	5.5	11.9		37.0	
Progression Factor	0.64	2.12	0.32		1.00	
Incremental Delay, d2	2.5	0.5	1.2		9.2	
Delay (s)	31.1	12.1	5.1		46.3	
Level of Service	C	B	A		D	
Approach Delay (s)		14.9	5.1		46.3	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



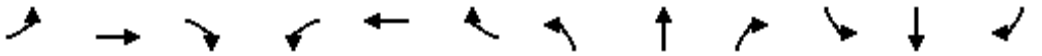
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	455	92	79	392	92	79	507	104	53	304	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.98			0.98			0.98		1.00	0.99	
Flt Protected		1.00			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1817			1809			3440		1770	3503	
Flt Permitted		0.93			0.86			0.84		0.23	1.00	
Satd. Flow (perm)		1705			1563			2900		420	3503	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	455	92	79	392	92	79	507	104	53	304	22
RTOR Reduction (vph)	0	5	0	0	6	0	0	17	0	0	6	0
Lane Group Flow (vph)	0	584	0	0	557	0	0	673	0	53	320	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		59.9			59.9			30.1		30.1	30.1	
Effective Green, g (s)		59.9			59.9			30.1		30.1	30.1	
Actuated g/C Ratio		0.60			0.60			0.30		0.30	0.30	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		1021			936			872		126	1054	
v/s Ratio Prot											0.09	
v/s Ratio Perm		0.34			c0.36			c0.23		0.13		
v/c Ratio		0.57			0.60			0.77		0.42	0.30	
Uniform Delay, d1		12.2			12.5			31.8		28.0	26.9	
Progression Factor		1.00			1.00			1.00		0.60	0.59	
Incremental Delay, d2		2.3			2.8			4.3		2.1	0.2	
Delay (s)		14.6			15.3			36.1		19.1	15.9	
Level of Service		B			B			D		B	B	
Approach Delay (s)		14.6			15.3			36.1			16.3	
Approach LOS		B			B			D			B	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



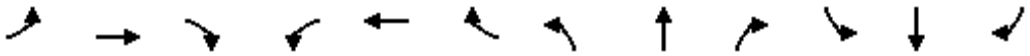
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	111	25	44	286	90	23	466	52	39	405	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00		0.91	1.00		0.97	1.00		0.98	1.00	
Frt		0.98		1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1758		1607	1751		1723	1821		1730	1815	
Flt Permitted		0.79		0.63	1.00		0.44	1.00		0.40	1.00	
Satd. Flow (perm)		1400		1061	1751		804	1821		729	1815	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	111	25	44	286	90	23	466	52	39	405	52
RTOR Reduction (vph)	0	10	0	0	18	0	0	6	0	0	7	0
Lane Group Flow (vph)	0	150	0	44	358	0	23	512	0	39	450	0
Confl. Peds. (#/hr)	38		68	68		38	65		61	61		65
Confl. Bikes (#/hr)			4			10			9			6
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		366		277	457		494	1120		448	1116	
v/s Ratio Prot					c0.20			c0.28			0.25	
v/s Ratio Perm		0.11		0.04			0.03			0.05		
v/c Ratio		0.41		0.16	0.78		0.05	0.46		0.09	0.40	
Uniform Delay, d1		19.8		18.5	22.3		4.9	6.7		5.1	6.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.4		0.3	8.6		0.2	1.3		0.4	1.1	
Delay (s)		23.2		18.8	30.9		5.1	8.0		5.5	7.5	
Level of Service		C		B	C		A	A		A	A	
Approach Delay (s)		23.2			29.6			7.9			7.3	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	132	19	3	285	76	77	346	17	61	336	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99			0.97		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1813			3314		1770	1848		1770	1863	1547
Flt Permitted	0.95	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1813			3162		1770	1848		1770	1863	1547
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	132	19	3	285	76	77	346	17	61	336	168
RTOR Reduction (vph)	0	6	0	0	27	0	0	2	0	0	0	111
Lane Group Flow (vph)	170	145	0	0	337	0	77	361	0	61	336	57
Confl. Peds. (#/hr)	67		42	42		67	9		8	8		9
Confl. Bikes (#/hr)			10			8			1			4
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	11.5	38.0			21.5		5.3	26.2		4.6	27.5	27.5
Effective Green, g (s)	11.5	38.0			21.5		5.3	26.2		4.6	27.5	27.5
Actuated g/C Ratio	0.14	0.47			0.27		0.07	0.32		0.06	0.34	0.34
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	251	852			841		116	599		100	634	526
v/s Ratio Prot	c0.10	0.08					c0.04	c0.20		0.03	0.18	
v/s Ratio Perm					c0.11							0.04
v/c Ratio	0.68	0.17			0.40		0.66	0.60		0.61	0.53	0.11
Uniform Delay, d1	32.9	12.3			24.4		36.9	22.9		37.2	21.4	18.3
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	0.4			1.4		10.5	4.4		7.0	3.2	0.4
Delay (s)	38.5	12.8			25.8		47.4	27.4		44.3	24.6	18.7
Level of Service	D	B			C		D	C		D	C	B
Approach Delay (s)		26.4			25.8			30.9			25.0	
Approach LOS		C			C			C			C	

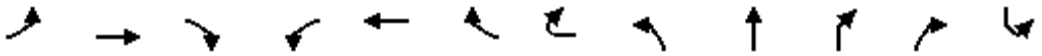
Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	17.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	328	29	60	440	28	50	305	55	19	299	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3457			3473			3414			3412	
Flt Permitted		0.77			0.85			0.86			0.93	
Satd. Flow (perm)		2690			2971			2958			3180	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	68	328	29	60	440	28	50	305	55	19	299	57
RTOR Reduction (vph)	0	7	0	0	5	0	0	15	0	0	19	0
Lane Group Flow (vph)	0	418	0	0	523	0	0	395	0	0	356	0
Confl. Peds. (#/hr)	51		16	16		51	11		46	46		44
Confl. Bikes (#/hr)			6			4			3			7
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1215			1002			998			1402	
v/s Ratio Prot		c0.02									c0.01	
v/s Ratio Perm		0.13			c0.18			c0.13			0.10	
v/c Ratio		0.34			0.52			0.40			0.25	
Uniform Delay, d1		14.9			21.3			20.3			14.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.8			1.9			1.2			0.4	
Delay (s)		15.7			23.2			21.4			14.7	
Level of Service		B			C			C			B	
Approach Delay (s)		15.7			23.2			21.4			14.7	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

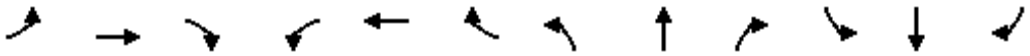


Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	21	311	30	23	302	35	4	14	198	7	25	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	4.0	4.0		
Lane Util. Factor		1.00			1.00			1.00	1.00	1.00		
Frpb, ped/bikes		1.00			1.00			1.00	1.00	0.94		
Flpb, ped/bikes		1.00			1.00			0.98	1.00	1.00		
Frt		0.99			0.99			1.00	1.00	0.85		
Flt Protected		1.00			1.00			0.95	1.00	1.00		
Satd. Flow (prot)		1830			1822			1740	1863	1483		
Flt Permitted		0.97			0.97			0.47	1.00	1.00		
Satd. Flow (perm)		1787			1774			866	1863	1483		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	311	30	23	302	35	4	14	198	7	25	1
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	26	0	0
Lane Group Flow (vph)	0	360	0	0	364	0	0	14	198	6	0	0
Confl. Peds. (#/hr)			23	23		10		13		23		
Confl. Bikes (#/hr)						4						
Turn Type		NA		Perm	NA			Perm	NA	Perm		Perm
Protected Phases		2			6				8			
Permitted Phases				6				8		8		4
Actuated Green, G (s)		39.4			39.4			12.4	12.4	12.4		
Effective Green, g (s)		39.4			39.4			12.4	12.4	12.4		
Actuated g/C Ratio		0.61			0.61			0.19	0.19	0.19		
Clearance Time (s)		4.0			4.0			4.0	4.0	4.0		
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0		
Lane Grp Cap (vph)		1083			1075			165	355	282		
v/s Ratio Prot									0.11			
v/s Ratio Perm		0.20			c0.20			0.02		0.00		
v/c Ratio		0.33			0.34			0.08	0.56	0.02		
Uniform Delay, d1		6.3			6.3			21.6	23.8	21.4		
Progression Factor		1.00			1.00			1.00	1.00	1.00		
Incremental Delay, d2		0.8			0.9			0.2	1.9	0.0		
Delay (s)		7.1			7.2			21.9	25.7	21.4		
Level of Service		A			A			C	C	C		
Approach Delay (s)		7.1			7.2				24.9			
Approach LOS		A			A				C			

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations							
Volume (vph)	31	191	21	1	4	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		
Lane Util. Factor	1.00	1.00			1.00		
Frpb, ped/bikes	1.00	1.00			1.00		
Flpb, ped/bikes	0.97	1.00			1.00		
Frt	1.00	0.99			0.93		
Flt Protected	0.95	1.00			0.98		
Satd. Flow (prot)	1715	1826			1687		
Flt Permitted	0.51	1.00			1.00		
Satd. Flow (perm)	913	1826			1726		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	191	21	1	4	1	5
RTOR Reduction (vph)	0	6	0	0	0	0	0
Lane Group Flow (vph)	32	206	0	0	11	0	0
Confl. Peds. (#/hr)	23		13				
Confl. Bikes (#/hr)			2				
Turn Type	Perm	NA		Perm	Prot		
Protected Phases		4			9		
Permitted Phases	4			9			
Actuated Green, G (s)	12.4	12.4			1.2		
Effective Green, g (s)	12.4	12.4			1.2		
Actuated g/C Ratio	0.19	0.19			0.02		
Clearance Time (s)	4.0	4.0			4.0		
Vehicle Extension (s)	3.0	3.0			3.0		
Lane Grp Cap (vph)	174	348			31		
v/s Ratio Prot		c0.11					
v/s Ratio Perm	0.04				c0.01		
v/c Ratio	0.18	0.59			0.35		
Uniform Delay, d1	22.1	24.0			31.5		
Progression Factor	1.00	1.00			1.00		
Incremental Delay, d2	0.5	2.7			6.9		
Delay (s)	22.6	26.7			38.4		
Level of Service	C	C			D		
Approach Delay (s)		26.1			38.4		
Approach LOS		C			D		

Intersection Summary

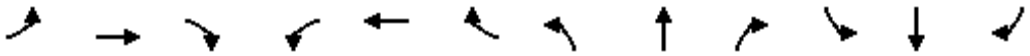


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	283	10	96	266	17	31	215	114	7	196	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00			1.00		0.99	1.00			1.00	
Frt	1.00	0.99			0.99		1.00	0.95			0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1850			3449		1750	1729			1807	
Flt Permitted	0.53	1.00			0.81		0.50	1.00			0.99	
Satd. Flow (perm)	982	1850			2816		916	1729			1785	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	283	10	96	266	17	31	215	114	7	196	43
RTOR Reduction (vph)	0	1	0	0	3	0	0	42	0	0	16	0
Lane Group Flow (vph)	26	292	0	0	376	0	31	287	0	0	230	0
Confl. Peds. (#/hr)			18	18		26	28		37			28
Confl. Bikes (#/hr)			1			1			2			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	38.7	38.7			38.7		16.3	16.3			16.3	
Effective Green, g (s)	38.7	38.7			38.7		16.3	16.3			16.3	
Actuated g/C Ratio	0.60	0.60			0.60		0.25	0.25			0.25	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	584	1101			1676		229	433			447	
v/s Ratio Prot		c0.16						c0.17				
v/s Ratio Perm	0.03				0.13		0.03				0.13	
v/c Ratio	0.04	0.27			0.22		0.14	0.66			0.51	
Uniform Delay, d1	5.5	6.3			6.1		18.9	21.9			20.9	
Progression Factor	1.00	1.03			1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.1	0.5			0.3		0.3	3.8			1.0	
Delay (s)	5.6	7.0			6.5		19.2	25.7			21.9	
Level of Service	A	A			A		B	C			C	
Approach Delay (s)		6.9			6.5			25.1			21.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	187	0	0	538	152	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.93	
Flt Protected	1.00			1.00	0.97	
Satd. Flow (prot)	3539			3539	3237	
Flt Permitted	1.00			1.00	0.97	
Satd. Flow (perm)	3539			3539	3237	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	187	0	0	538	152	134
RTOR Reduction (vph)	0	0	0	0	115	0
Lane Group Flow (vph)	187	0	0	538	171	0
Confl. Peds. (#/hr)						1
Confl. Bikes (#/hr)						1
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	42.1			42.1	8.4	
Effective Green, g (s)	42.1			42.1	8.4	
Actuated g/C Ratio	0.70			0.70	0.14	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2483			2483	453	
v/s Ratio Prot	0.05			c0.15	c0.05	
v/s Ratio Perm						
v/c Ratio	0.08			0.22	0.38	
Uniform Delay, d1	2.8			3.1	23.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.2	0.5	
Delay (s)	2.9			3.3	24.0	
Level of Service	A			A	C	
Approach Delay (s)	2.9			3.3	24.0	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



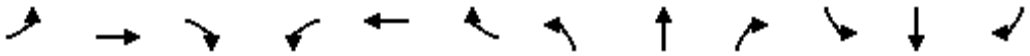
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	377	0	0	554	8	92	258	63	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			0.99				
Frt		1.00			1.00			0.98				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3527			3531			3364				
Flt Permitted		0.91			1.00			0.99				
Satd. Flow (perm)		3221			3531			3364				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	377	0	0	554	8	92	258	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	1	0	0	27	0	0	0	0
Lane Group Flow (vph)	0	402	0	0	561	0	0	386	0	0	0	0
Confl. Peds. (#/hr)	15		7	7		15	36		44	44		36
Confl. Bikes (#/hr)						2			2			7
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		43.1			43.1			11.9				
Effective Green, g (s)		43.1			43.1			11.9				
Actuated g/C Ratio		0.66			0.66			0.18				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		2135			2341			615				
v/s Ratio Prot					c0.16							
v/s Ratio Perm		0.12						0.11				
v/c Ratio		0.19			0.24			0.63				
Uniform Delay, d1		4.2			4.4			24.5				
Progression Factor		0.70			1.00			1.00				
Incremental Delay, d2		0.2			0.2			1.4				
Delay (s)		3.1			4.6			26.0				
Level of Service		A			A			C				
Approach Delay (s)		3.1			4.6			26.0			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	186	60	48	634	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.96		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3410		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3410		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	186	60	48	634	0	0
RTOR Reduction (vph)	33	0	0	0	0	0
Lane Group Flow (vph)	213	0	48	634	0	0
Confl. Peds. (#/hr)						1
Confl. Bikes (#/hr)						1
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1534		663	3539		
v/s Ratio Prot	0.06		0.03	c0.18		
v/s Ratio Perm						
v/c Ratio	0.14		0.07	0.18		
Uniform Delay, d1	6.5		8.0	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.2		0.2	0.1		
Delay (s)	6.6		8.2	0.1		
Level of Service	A		A	A		
Approach Delay (s)	6.6			0.7	0.0	
Approach LOS	A			A	A	

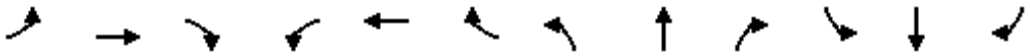
Intersection Summary			
HCM 2000 Control Delay	2.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



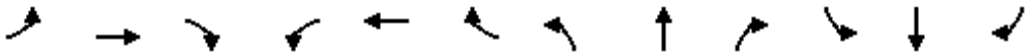
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	424	51	71	590	0	0	0	0	13	78	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		1.00			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.98			1.00						0.98	
Flt Protected		1.00			0.99						0.99	
Satd. Flow (prot)		3476			3519						3390	
Flt Permitted		1.00			0.86						0.99	
Satd. Flow (perm)		3476			3033						3390	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	424	51	71	590	0	0	0	0	13	78	14
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	465	0	0	661	0	0	0	0	0	92	0
Confl. Peds. (#/hr)	6		13	13		6	33		39	39		33
Confl. Bikes (#/hr)			1			3			3			5
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		48.9			48.9						6.1	
Effective Green, g (s)		48.9			48.9						6.1	
Actuated g/C Ratio		0.75			0.75						0.09	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2615			2281						318	
v/s Ratio Prot		0.13										
v/s Ratio Perm					c0.22						0.03	
v/c Ratio		0.18			0.29						0.29	
Uniform Delay, d1		2.3			2.5						27.4	
Progression Factor		1.00			0.71						1.00	
Incremental Delay, d2		0.1			0.3						0.5	
Delay (s)		2.5			2.1						27.9	
Level of Service		A			A						C	
Approach Delay (s)		2.5			2.1			0.0			27.9	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	4.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



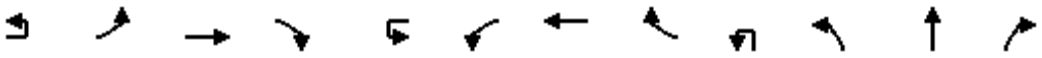
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	278	39	12	278	33	31	299	4	36	207	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.98			0.99		1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1822			1826		1750	1858		1766	1851	
Flt Permitted		0.99			0.99		0.52	1.00		0.37	1.00	
Satd. Flow (perm)		1811			1804		966	1858		682	1851	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	278	39	12	278	33	31	299	4	36	207	7
RTOR Reduction (vph)	0	5	0	0	4	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	319	0	0	319	0	31	302	0	36	212	0
Confl. Peds. (#/hr)	11		14	14		11	14		3	3		14
Confl. Bikes (#/hr)			2			2			2			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		39.3			39.3		16.2	16.2		16.2	16.2	
Effective Green, g (s)		39.3			39.3		16.2	16.2		16.2	16.2	
Actuated g/C Ratio		0.60			0.60		0.25	0.25		0.25	0.25	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1094			1090		240	463		169	461	
v/s Ratio Prot								c0.16			0.11	
v/s Ratio Perm		0.18			c0.18		0.03			0.05		
v/c Ratio		0.29			0.29		0.13	0.65		0.21	0.46	
Uniform Delay, d1		6.2			6.2		18.9	21.9		19.3	20.7	
Progression Factor		1.00			1.70		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			0.7		0.2	3.3		0.6	0.7	
Delay (s)		6.8			11.2		19.2	25.2		20.0	21.4	
Level of Service		A			B		B	C		B	C	
Approach Delay (s)		6.8			11.2			24.6			21.2	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



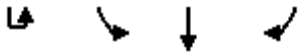
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	233	76	154	176	12	56	307	83	9	266	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00	1.00	0.95	0.95			1.00			0.95	
Frpb, ped/bikes		1.00	0.97	1.00	0.99			0.99			0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	
Frt		1.00	0.85	1.00	0.99			0.97			0.98	
Flt Protected		1.00	1.00	0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1854	1542	1681	1738			1789			3435	
Flt Permitted		1.00	1.00	0.95	1.00			0.92			0.94	
Satd. Flow (perm)		1854	1542	1681	1738			1655			3242	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	23	233	76	154	176	12	56	307	83	9	266	45
RTOR Reduction (vph)	0	0	60	0	4	0	0	11	0	0	18	0
Lane Group Flow (vph)	0	256	16	139	199	0	0	435	0	0	302	0
Confl. Peds. (#/hr)	30		8	8		30	14		25	25		14
Confl. Bikes (#/hr)			4			5			1			
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases			2				4			8		
Actuated Green, G (s)		13.4	13.4	12.5	12.5			28.1			28.1	
Effective Green, g (s)		13.4	13.4	12.5	12.5			28.1			28.1	
Actuated g/C Ratio		0.21	0.21	0.19	0.19			0.43			0.43	
Clearance Time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		382	317	323	334			715			1401	
v/s Ratio Prot		c0.14		0.08	c0.11							
v/s Ratio Perm			0.01					c0.26			0.09	
v/c Ratio		0.67	0.05	0.43	0.60			0.61			0.22	
Uniform Delay, d1		23.8	20.7	23.1	23.9			14.2			11.6	
Progression Factor		1.00	1.00	0.84	0.83			1.00			1.00	
Incremental Delay, d2		4.6	0.1	0.9	2.8			3.8			0.4	
Delay (s)		28.3	20.8	20.3	22.8			18.0			11.9	
Level of Service		C	C	C	C			B			B	
Approach Delay (s)		26.6			21.8			18.0			11.9	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



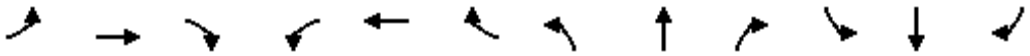
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	9	167	566	130	1	70	656	53	1	197	451	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00		1.00	0.95	
Frpb, ped/bikes		1.00	1.00	0.98		1.00	1.00	0.91		1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	0.97	
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	3539	1545		1770	3539	1445		1770	3403	
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		1770	3539	1545		1770	3539	1445		1770	3403	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	9	167	566	130	1	70	656	53	1	197	451	135
RTOR Reduction (vph)	0	0	0	73	0	0	0	34	0	0	23	0
Lane Group Flow (vph)	0	176	566	57	0	71	656	19	0	198	563	0
Confl. Peds. (#/hr)		66		10		10		66		17		4
Confl. Bikes (#/hr)				2				3				1
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	
Protected Phases	5	5	2		1	1	6		7	7	4	
Permitted Phases				2				6				
Actuated Green, G (s)		16.6	48.5	48.5		7.5	39.4	39.4		17.6	31.0	
Effective Green, g (s)		16.6	48.5	48.5		7.5	39.4	39.4		17.6	31.0	
Actuated g/C Ratio		0.15	0.44	0.44		0.07	0.36	0.36		0.16	0.28	
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		267	1560	681		120	1267	517		283	959	
v/s Ratio Prot		c0.10	0.16			0.04	c0.19			c0.11	0.17	
v/s Ratio Perm				0.04				0.01				
v/c Ratio		0.66	0.36	0.08		0.59	0.52	0.04		0.70	0.59	
Uniform Delay, d1		44.0	20.5	17.9		49.8	27.8	23.0		43.7	34.0	
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		4.4	0.1	0.0		5.1	1.5	0.1		6.0	0.6	
Delay (s)		48.5	20.5	17.9		54.9	29.3	23.1		49.7	34.6	
Level of Service		D	C	B		D	C	C		D	C	
Approach Delay (s)			25.8				31.2				38.4	
Approach LOS			C				C				D	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



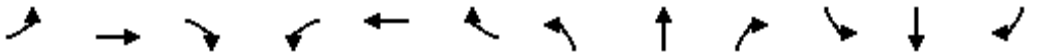
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	2	39	286	204
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	
Lane Util. Factor		1.00	0.95	
Frpb, ped/bikes		1.00	0.99	
Flpb, ped/bikes		1.00	1.00	
Frt		1.00	0.94	
Flt Protected		0.95	1.00	
Satd. Flow (prot)		1770	3273	
Flt Permitted		0.95	1.00	
Satd. Flow (perm)		1770	3273	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	39	286	204
RTOR Reduction (vph)	0	0	102	0
Lane Group Flow (vph)	0	41	388	0
Confl. Peds. (#/hr)		4		17
Confl. Bikes (#/hr)				
Turn Type	Prot	Prot	NA	
Protected Phases	3	3	8	
Permitted Phases				
Actuated Green, G (s)		5.0	18.4	
Effective Green, g (s)		5.0	18.4	
Actuated g/C Ratio		0.05	0.17	
Clearance Time (s)		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	
Lane Grp Cap (vph)		80	547	
v/s Ratio Prot		0.02	c0.12	
v/s Ratio Perm				
v/c Ratio		0.51	0.71	
Uniform Delay, d1		51.3	43.3	
Progression Factor		1.00	1.00	
Incremental Delay, d2		2.3	3.6	
Delay (s)		53.6	46.9	
Level of Service		D	D	
Approach Delay (s)			47.4	
Approach LOS			D	

Intersection Summary



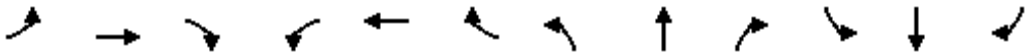
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	89	8	45	163	57	15	667	42	22	339	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.99			0.97			0.99			1.00	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1652			1614			3154			3161	
Flt Permitted		0.97			0.94			0.95			0.91	
Satd. Flow (perm)		1616			1523			2989			2881	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	89	8	45	163	57	15	667	42	22	339	12
RTOR Reduction (vph)	0	5	0	0	16	0	0	6	0	0	3	0
Lane Group Flow (vph)	0	102	0	0	249	0	0	718	0	0	370	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		15.0			15.0			43.0			43.0	
Effective Green, g (s)		15.0			15.0			43.0			43.0	
Actuated g/C Ratio		0.23			0.23			0.66			0.66	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		372			351			1977			1905	
v/s Ratio Prot												
v/s Ratio Perm		0.06			c0.16			c0.24			0.13	
v/c Ratio		0.28			0.71			0.36			0.19	
Uniform Delay, d1		20.5			23.0			4.9			4.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.4			6.4			0.5			0.2	
Delay (s)		20.9			29.4			5.4			4.5	
Level of Service		C			C			A			A	
Approach Delay (s)		20.9			29.4			5.4			4.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



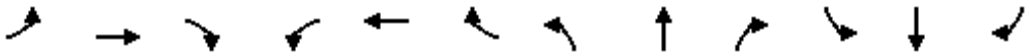
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	334	71	57	425	61	119	770	96	49	374	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.98			0.99		1.00	0.97		1.00	0.99	
Flpb, ped/bikes		1.00			0.99		0.94	1.00		0.94	1.00	
Frt		0.98			0.98		1.00	0.98		1.00	0.98	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3366			1798		1659	3378		1670	3434	
Flt Permitted		0.88			0.91		0.50	1.00		0.26	1.00	
Satd. Flow (perm)		2968			1646		865	3378		454	3434	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	34	334	71	57	425	61	119	770	96	49	374	45
RTOR Reduction (vph)	0	20	0	0	6	0	0	9	0	0	9	0
Lane Group Flow (vph)	0	419	0	0	537	0	119	857	0	49	410	0
Confl. Peds. (#/hr)	55		93	93		55	77		171	171		77
Confl. Bikes (#/hr)			11			10			6			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		34.1			34.1		46.4	46.4		46.4	46.4	
Effective Green, g (s)		34.1			34.1		46.4	46.4		46.4	46.4	
Actuated g/C Ratio		0.38			0.38		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1124			623		445	1741		234	1770	
v/s Ratio Prot								c0.25			0.12	
v/s Ratio Perm		0.14			c0.33		0.14			0.11		
v/c Ratio		0.37			0.86		0.27	0.49		0.21	0.23	
Uniform Delay, d1		20.2			25.8		12.2	14.2		11.8	12.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			11.4		1.5	1.0		2.0	0.3	
Delay (s)		20.3			37.2		13.7	15.1		13.9	12.3	
Level of Service		C			D		B	B		B	B	
Approach Delay (s)		20.3			37.2			15.0			12.5	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



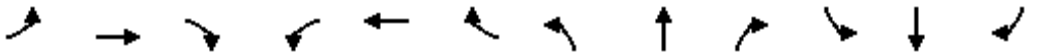
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	165	62	30	373	328	175	892	32	101	465	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.93		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3394		1770	3291		1770	3521		1770	3456	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3394		1770	3291		1770	3521		1770	3456	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	124	165	62	30	373	328	175	892	32	101	465	86
RTOR Reduction (vph)	0	38	0	0	160	0	0	2	0	0	15	0
Lane Group Flow (vph)	124	189	0	30	541	0	175	922	0	101	536	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	7.0	24.8		4.0	21.8		11.8	46.3		8.4	42.9	
Effective Green, g (s)	7.0	24.8		4.0	21.8		11.8	46.3		8.4	42.9	
Actuated g/C Ratio	0.07	0.25		0.04	0.22		0.12	0.46		0.08	0.43	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.5		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	123	841		70	717		208	1630		148	1482	
v/s Ratio Prot	c0.07	c0.06		0.02	c0.16		c0.10	c0.26		0.06	0.16	
v/s Ratio Perm												
v/c Ratio	1.01	0.23		0.43	0.75		0.84	0.57		0.68	0.36	
Uniform Delay, d1	46.5	29.9		46.9	36.6		43.2	19.5		44.5	19.3	
Progression Factor	1.00	1.00		1.00	1.00		0.98	0.91		1.00	1.00	
Incremental Delay, d2	83.3	0.0		1.5	4.7		22.5	1.3		9.9	0.7	
Delay (s)	129.8	30.0		48.4	41.2		64.7	19.0		54.4	20.0	
Level of Service	F	C		D	D		E	B		D	B	
Approach Delay (s)		65.3			41.5			26.3			25.3	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



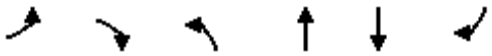
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	395	32	49	449	103	103	918	88	51	478	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.97		1.00	0.99		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3485			3434		1770	3493		1770	3506	
Flt Permitted		0.70			0.80		0.46	1.00		0.25	1.00	
Satd. Flow (perm)		2458			2742		849	3493		459	3506	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	395	32	49	449	103	103	918	88	51	478	32
RTOR Reduction (vph)	0	5	0	0	19	0	0	6	0	0	4	0
Lane Group Flow (vph)	0	472	0	0	582	0	103	1000	0	51	506	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.1			24.1		67.4	67.4		67.4	67.4	
Effective Green, g (s)		24.1			24.1		67.4	67.4		67.4	67.4	
Actuated g/C Ratio		0.24			0.24		0.67	0.67		0.67	0.67	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		2.0			2.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			660		572	2354		309	2363	
v/s Ratio Prot								c0.29			0.14	
v/s Ratio Perm		0.19			c0.21		0.12			0.11		
v/c Ratio		0.80			0.88		0.18	0.42		0.17	0.21	
Uniform Delay, d1		35.6			36.6		6.0	7.4		6.0	6.2	
Progression Factor		1.00			1.00		1.00	1.00		0.70	0.73	
Incremental Delay, d2		6.9			12.9		0.7	0.6		1.1	0.2	
Delay (s)		42.5			49.4		6.7	8.0		5.3	4.8	
Level of Service		D			D		A	A		A	A	
Approach Delay (s)		42.5			49.4			7.9			4.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	142	6	72	207	70	24	649	107	43	446	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		1.00			0.97		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829			1794		1770	3464		1770	3475	
Flt Permitted		0.75			0.89		0.47	1.00		0.34	1.00	
Satd. Flow (perm)		1398			1611		867	3464		630	3475	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	62	142	6	72	207	70	24	649	107	43	446	61
RTOR Reduction (vph)	0	1	0	0	15	0	0	16	0	0	13	0
Lane Group Flow (vph)	0	209	0	0	334	0	24	740	0	43	494	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.7			16.7		35.3	35.3		35.3	35.3	
Effective Green, g (s)		16.7			16.7		35.3	35.3		35.3	35.3	
Actuated g/C Ratio		0.27			0.27		0.57	0.57		0.57	0.57	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		376			433		493	1972		358	1978	
v/s Ratio Prot								c0.21			0.14	
v/s Ratio Perm		0.15			c0.21		0.03			0.07		
v/c Ratio		0.55			0.77		0.05	0.38		0.12	0.25	
Uniform Delay, d1		19.5			20.9		5.9	7.3		6.2	6.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0			7.6		0.0	0.0		0.1	0.0	
Delay (s)		20.5			28.5		5.9	7.4		6.2	6.7	
Level of Service		C			C		A	A		A	A	
Approach Delay (s)		20.5			28.5			7.3			6.7	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

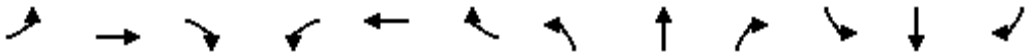


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	143	187	236	701	412	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3353	
Flt Permitted	0.95	1.00	0.41	1.00	1.00	
Satd. Flow (perm)	1770	1583	761	3539	3353	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	143	187	236	701	412	98
RTOR Reduction (vph)	0	57	0	0	18	0
Lane Group Flow (vph)	143	130	236	701	492	0
Confl. Peds. (#/hr)	33					101
Confl. Bikes (#/hr)						8
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	7.2	16.0	36.1	27.3	25.6	
Effective Green, g (s)	7.2	16.0	36.1	27.3	25.6	
Actuated g/C Ratio	0.14	0.31	0.70	0.53	0.50	
Clearance Time (s)	4.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	3.0	3.0	2.0	2.0	
Lane Grp Cap (vph)	246	490	704	1872	1663	
v/s Ratio Prot	c0.08	0.05	c0.06	c0.20	0.15	
v/s Ratio Perm		0.04	0.18			
v/c Ratio	0.58	0.26	0.34	0.37	0.30	
Uniform Delay, d1	20.8	13.4	2.8	7.1	7.7	
Progression Factor	1.00	1.00	0.87	0.56	1.00	
Incremental Delay, d2	2.2	0.3	0.3	0.0	0.0	
Delay (s)	23.0	13.7	2.7	4.1	7.7	
Level of Service	C	B	A	A	A	
Approach Delay (s)	17.7			3.7	7.7	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

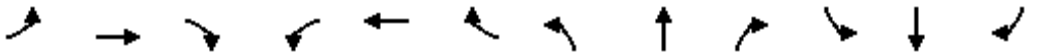
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	118	237	680	55	133	466
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0		3.0	3.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3469		1770	3539
Flt Permitted	0.95	1.00	1.00		0.34	1.00
Satd. Flow (perm)	1770	1583	3469		641	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	118	237	680	55	133	466
RTOR Reduction (vph)	0	64	6	0	0	0
Lane Group Flow (vph)	118	173	729	0	133	466
Confl. Peds. (#/hr)	75			93		
Confl. Bikes (#/hr)				2		
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	7.2	14.3	27.3		32.7	25.6
Effective Green, g (s)	7.2	14.3	27.3		32.7	25.6
Actuated g/C Ratio	0.14	0.28	0.53		0.63	0.50
Clearance Time (s)	4.0	3.0	3.0		3.0	3.0
Vehicle Extension (s)	2.0	3.0	2.0		3.0	2.0
Lane Grp Cap (vph)	246	438	1835		561	1755
v/s Ratio Prot	c0.07	c0.05	c0.21		0.03	0.13
v/s Ratio Perm		0.05			0.12	
v/c Ratio	0.48	0.39	0.40		0.24	0.27
Uniform Delay, d1	20.5	15.1	7.2		3.8	7.5
Progression Factor	1.00	1.00	1.00		0.82	0.64
Incremental Delay, d2	0.5	0.6	0.1		0.2	0.0
Delay (s)	21.0	15.7	7.3		3.3	4.9
Level of Service	C	B	A		A	A
Approach Delay (s)	17.5		7.3			4.5
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	533	56	161	713	114	183	476	183	65	285	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.92	1.00	0.99		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1462	1770	4932		1770	3368		1770	3327	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1462	1770	4932		1770	3368		1770	3327	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	533	56	161	713	114	183	476	183	65	285	119
RTOR Reduction (vph)	0	0	43	0	16	0	0	30	0	0	41	0
Lane Group Flow (vph)	98	533	13	161	811	0	183	629	0	65	363	0
Confl. Peds. (#/hr)			61			55			17			51
Confl. Bikes (#/hr)			4			5			2			9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8									
Actuated Green, G (s)	8.5	18.7	18.7	13.4	24.1		14.2	24.7		7.1	17.6	
Effective Green, g (s)	8.5	18.7	18.7	13.4	24.1		14.2	24.7		7.1	17.6	
Actuated g/C Ratio	0.11	0.24	0.24	0.17	0.31		0.18	0.31		0.09	0.22	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	190	1205	346	300	1506		318	1054		159	742	
v/s Ratio Prot	0.06	0.10		c0.09	c0.16		c0.10	c0.19		0.04	0.11	
v/s Ratio Perm			0.01									
v/c Ratio	0.52	0.44	0.04	0.54	0.54		0.58	0.60		0.41	0.49	
Uniform Delay, d1	33.3	25.7	23.2	29.9	22.8		29.6	22.9		33.9	26.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	0.3	0.0	1.8	0.4		2.5	0.9		1.7	0.5	
Delay (s)	35.6	25.9	23.2	31.8	23.2		32.1	23.8		35.6	27.2	
Level of Service	D	C	C	C	C		C	C		D	C	
Approach Delay (s)		27.1			24.6			25.6			28.4	
Approach LOS		C			C			C			C	

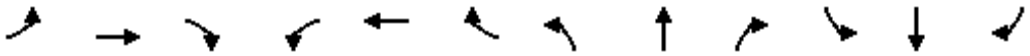
Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	78.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	272	642	60	62	553	149	106	440	44	302	375	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.94	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3489		1770	3539	1544	1770	3539	1491	1770	3356	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3489		1770	3539	1544	1770	3539	1491	1770	3356	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	272	642	60	62	553	149	106	440	44	302	375	165
RTOR Reduction (vph)	0	5	0	0	0	94	0	0	36	0	37	0
Lane Group Flow (vph)	272	697	0	62	553	55	106	440	8	302	503	0
Confl. Peds. (#/hr)	7					7			20	20		
Confl. Bikes (#/hr)			5						9			10
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	20.3	36.2		7.6	23.5	23.5	11.6	18.8	18.8	20.5	27.7	
Effective Green, g (s)	20.3	36.2		7.6	23.5	23.5	11.6	18.8	18.8	20.5	27.7	
Actuated g/C Ratio	0.20	0.37		0.08	0.24	0.24	0.12	0.19	0.19	0.21	0.28	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	362	1274		135	839	366	207	671	282	366	938	
v/s Ratio Prot	c0.15	0.20		0.04	c0.16		0.06	c0.12		c0.17	0.15	
v/s Ratio Perm						0.04			0.01			
v/c Ratio	0.75	0.55		0.46	0.66	0.15	0.51	0.66	0.03	0.83	0.54	
Uniform Delay, d1	37.0	24.9		43.8	34.2	29.9	41.1	37.2	32.7	37.6	30.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.5	0.5		2.5	1.9	0.2	2.1	2.3	0.0	14.0	0.6	
Delay (s)	45.5	25.4		46.2	36.1	30.1	43.2	39.5	32.8	51.6	30.9	
Level of Service	D	C		D	D	C	D	D	C	D	C	
Approach Delay (s)		31.0			35.7			39.6			38.3	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	99.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

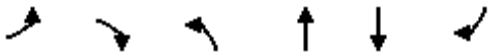


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	257	130	45	383	45	275	385	21	27	293	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1766	3539	1522	1753	3478		1770	3507		1770	3474	
Flt Permitted	0.45	1.00	1.00	0.59	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	837	3539	1522	1094	3478		1770	3507		1770	3474	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	257	130	45	383	45	275	385	21	27	293	34
RTOR Reduction (vph)	0	0	99	0	13	0	0	4	0	0	12	0
Lane Group Flow (vph)	48	257	31	45	415	0	275	402	0	27	315	0
Confl. Peds. (#/hr)	6		23	23		6			15			20
Confl. Bikes (#/hr)			15						16			4
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	11.3	11.3	11.3	11.3	11.3		14.6	22.9		1.3	9.6	
Effective Green, g (s)	11.3	11.3	11.3	11.3	11.3		14.6	22.9		1.3	9.6	
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.24		0.31	0.48		0.03	0.20	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	199	841	362	260	827		544	1690		48	702	
v/s Ratio Prot		0.07			c0.12		c0.16	0.11		0.02	c0.09	
v/s Ratio Perm	0.06		0.02	0.04								
v/c Ratio	0.24	0.31	0.09	0.17	0.50		0.51	0.24		0.56	0.45	
Uniform Delay, d1	14.6	14.9	14.1	14.4	15.7		13.5	7.2		22.8	16.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.2	0.1	0.3	0.5		0.7	0.1		14.2	0.5	
Delay (s)	15.3	15.1	14.2	14.7	16.1		14.2	7.3		37.0	17.1	
Level of Service	B	B	B	B	B		B	A		D	B	
Approach Delay (s)		14.8			16.0			10.1			18.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	47.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	74	22	109	55	145	22	500	77	109	337	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.89		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1753	1793		1768	1629		1760	3456		1765	3487	
Flt Permitted	0.63	1.00		0.69	1.00		0.53	1.00		0.43	1.00	
Satd. Flow (perm)	1167	1793		1293	1629		988	3456		808	3487	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	74	22	109	55	145	22	500	77	109	337	30
RTOR Reduction (vph)	0	12	0	0	105	0	0	20	0	0	10	0
Lane Group Flow (vph)	25	84	0	109	95	0	22	557	0	109	357	0
Confl. Peds. (#/hr)	35		3	3		35	16		9	9		16
Confl. Bikes (#/hr)						2			2			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	8.1	8.1		8.1	8.1		13.2	13.2		13.2	13.2	
Effective Green, g (s)	8.1	8.1		8.1	8.1		13.2	13.2		13.2	13.2	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.45	0.45		0.45	0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	322	495		357	450		445	1556		364	1570	
v/s Ratio Prot		0.05			0.06			c0.16			0.10	
v/s Ratio Perm	0.02			c0.08			0.02			0.13		
v/c Ratio	0.08	0.17		0.31	0.21		0.05	0.36		0.30	0.23	
Uniform Delay, d1	7.8	8.0		8.4	8.1		4.5	5.3		5.1	4.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.5	0.2		0.0	0.1		0.5	0.1	
Delay (s)	7.9	8.2		8.9	8.4		4.6	5.4		5.6	5.0	
Level of Service	A	A		A	A		A	A		A	A	
Approach Delay (s)		8.2			8.6			5.4			5.1	
Approach LOS		A			A			A			A	

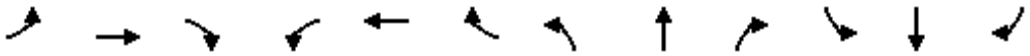
Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	29.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	96	315	515	381	337	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3385	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3385	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	96	315	515	381	337	118
RTOR Reduction (vph)	0	110	0	0	43	0
Lane Group Flow (vph)	96	205	515	381	412	0
Confl. Peds. (#/hr)	41					11
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	8.7	38.9	26.2	43.0	12.8	
Effective Green, g (s)	8.7	38.9	26.2	43.0	12.8	
Actuated g/C Ratio	0.15	0.65	0.44	0.72	0.21	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	257	1815	776	2549	725	
v/s Ratio Prot	c0.05	0.07	c0.29	0.11	c0.12	
v/s Ratio Perm						
v/c Ratio	0.37	0.11	0.66	0.15	0.57	
Uniform Delay, d1	23.0	3.9	13.3	2.6	21.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0	2.1	0.0	1.0	
Delay (s)	24.0	3.9	15.4	2.6	22.0	
Level of Service	C	A	B	A	C	
Approach Delay (s)	8.6			10.0	22.0	
Approach LOS	A			A	C	

Intersection Summary				
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	60.8%	ICU Level of Service	B	
Analysis Period (min)	15			

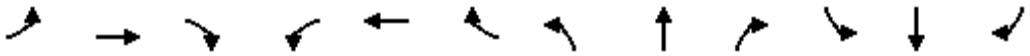
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	153	29	27	298	14	34	428	30	7	200	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.99			0.98	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1799			1841			3479			3434	
Flt Permitted		0.87			0.97			0.93			0.94	
Satd. Flow (perm)		1582			1788			3230			3248	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	63	153	29	27	298	14	34	428	30	7	200	33
RTOR Reduction (vph)	0	7	0	0	2	0	0	7	0	0	16	0
Lane Group Flow (vph)	0	238	0	0	337	0	0	485	0	0	224	0
Confl. Peds. (#/hr)	26		17	17		26	32		23	23		32
Confl. Bikes (#/hr)			6			6			7			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			33.0			33.0	
Effective Green, g (s)		25.0			25.0			33.0			33.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Lane Grp Cap (vph)		608			687			1639			1648	
v/s Ratio Prot												
v/s Ratio Perm		0.15			c0.19			c0.15			0.07	
v/c Ratio		0.39			0.49			0.30			0.14	
Uniform Delay, d1		14.5			15.2			9.3			8.5	
Progression Factor		0.73			1.00			1.00			1.00	
Incremental Delay, d2		1.9			2.5			0.5			0.2	
Delay (s)		12.4			17.7			9.7			8.6	
Level of Service		B			B			A			A	
Approach Delay (s)		12.4			17.7			9.7			8.6	
Approach LOS		B			B			A			A	

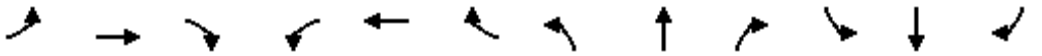
Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	147	0	0	615	55	299	485	104	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.91		0.91	0.91				
Frpb, ped/bikes		1.00			1.00		1.00	1.00				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.99		1.00	0.97				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5085			5023		1610	3288				
Flt Permitted		1.00			1.00		0.95	1.00				
Satd. Flow (perm)		5085			5023		1610	3288				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	147	0	0	615	55	299	485	104	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	16	0	0	0	0
Lane Group Flow (vph)	0	147	0	0	649	0	269	603	0	0	0	0
Confl. Peds. (#/hr)									5			
Confl. Bikes (#/hr)									2			
Turn Type		NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		15.2			15.2		42.3	42.3				
Effective Green, g (s)		15.2			15.2		42.3	42.3				
Actuated g/C Ratio		0.23			0.23		0.65	0.65				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		1189			1174		1047	2139				
v/s Ratio Prot		0.03			c0.13							
v/s Ratio Perm							0.17	0.18				
v/c Ratio		0.12			0.55		0.26	0.28				
Uniform Delay, d1		19.6			21.9		4.8	4.9				
Progression Factor		0.85			0.47		1.00	1.00				
Incremental Delay, d2		0.0			0.5		0.6	0.3				
Delay (s)		16.8			10.9		5.4	5.2				
Level of Service		B			B		A	A				
Approach Delay (s)		16.8			10.9			5.2			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



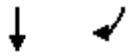
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	250	28	17	506	26	167	815	46	0	443	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.91	1.00
Frt	1.00	0.98			0.99		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1835			3509		1770	5045			5085	1583
Flt Permitted	0.28	1.00			0.94		0.95	1.00			1.00	1.00
Satd. Flow (perm)	520	1835			3300		1770	5045			5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	250	28	17	506	26	167	815	46	0	443	355
RTOR Reduction (vph)	0	3	0	0	3	0	0	5	0	0	0	250
Lane Group Flow (vph)	310	275	0	0	546	0	167	856	0	0	443	105
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Effective Green, g (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Actuated g/C Ratio	0.45	0.45			0.30		0.13	0.46			0.30	0.30
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	392	828			974		224	2298			1501	467
v/s Ratio Prot	c0.10	0.15					c0.09	c0.17			0.09	
v/s Ratio Perm	c0.26				0.17							0.07
v/c Ratio	0.79	0.33			0.56		0.75	0.37			0.30	0.22
Uniform Delay, d1	23.0	21.0			35.3		49.9	21.1			32.2	31.5
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	15.0	1.1			2.3		20.0	0.5			0.5	1.1
Delay (s)	38.0	22.0			37.6		69.9	21.6			32.7	32.6
Level of Service	D	C			D		E	C			C	C
Approach Delay (s)		30.5			37.6			29.5			32.7	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	18.5
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

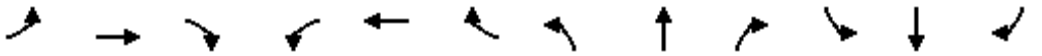
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	0	0	2	104	5	126	11	0	863	97	12	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		0.97			0.99				0.99			1.00
Flpb, ped/bikes		1.00			0.99				1.00			1.00
Frt		0.86			0.93				0.99			1.00
Flt Protected		1.00			0.98				1.00			0.95
Satd. Flow (prot)		1561			1655				4972			1766
Flt Permitted		1.00			0.86				0.93			0.24
Satd. Flow (perm)		1561			1449				4651			451
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	2	104	5	126	11	0	863	97	12	55
RTOR Reduction (vph)	0	2	0	0	51	0	0	0	10	0	0	0
Lane Group Flow (vph)	0	0	0	0	184	0	0	0	961	0	0	67
Confl. Peds. (#/hr)			13	13				4		15		15
Confl. Bikes (#/hr)						9				2		
Turn Type		NA		Perm	NA		Perm		NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		14.6			14.6				52.1			61.3
Effective Green, g (s)		14.6			14.6				52.1			61.3
Actuated g/C Ratio		0.17			0.17				0.61			0.72
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		268			249				2854			398
v/s Ratio Prot		0.00										c0.01
v/s Ratio Perm					c0.13				c0.21			0.11
v/c Ratio		0.00			0.74				0.34			0.17
Uniform Delay, d1		29.1			33.3				8.0			3.8
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			9.4				0.3			0.1
Delay (s)		29.1			42.7				8.3			3.9
Level of Service		C			D				A			A
Approach Delay (s)		29.1			42.7				8.3			
Approach LOS		C			D				A			

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	84.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



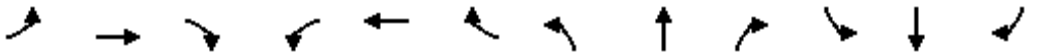
Movement	SBT	SBR
Lane Configurations		
Volume (vph)	391	2
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	5081	
Flt Permitted	1.00	
Satd. Flow (perm)	5081	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	391	2
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	392	0
Confl. Peds. (#/hr)		4
Confl. Bikes (#/hr)		3
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	61.3	
Effective Green, g (s)	61.3	
Actuated g/C Ratio	0.72	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	3668	
v/s Ratio Prot	0.08	
v/s Ratio Perm		
v/c Ratio	0.11	
Uniform Delay, d1	3.6	
Progression Factor	1.00	
Incremental Delay, d2	0.1	
Delay (s)	3.6	
Level of Service	A	
Approach Delay (s)	3.7	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	193	138	57	259	73	96	689	65	23	411	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.94			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1746			3415		1770	3493		1770	3539	1583
Flt Permitted	0.51	1.00			0.86		0.41	1.00		0.37	1.00	1.00
Satd. Flow (perm)	947	1746			2952		764	3493		681	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	154	193	138	57	259	73	96	689	65	23	411	80
RTOR Reduction (vph)	0	30	0	0	24	0	0	8	0	0	0	52
Lane Group Flow (vph)	154	301	0	0	365	0	96	746	0	23	411	28
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	27.1	27.1			27.1		27.9	27.9		27.3	25.3	25.3
Effective Green, g (s)	27.1	27.1			27.1		27.9	27.9		27.3	25.3	25.3
Actuated g/C Ratio	0.38	0.38			0.38		0.39	0.39		0.38	0.35	0.35
Clearance Time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	358	661			1118		383	1363		313	1252	560
v/s Ratio Prot		c0.17					0.02	c0.21		0.00	c0.12	
v/s Ratio Perm	0.16				0.12		0.08			0.02		0.02
v/c Ratio	0.43	0.45			0.33		0.25	0.55		0.07	0.33	0.05
Uniform Delay, d1	16.5	16.7			15.7		14.2	16.9		14.1	16.9	15.2
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.7	2.3			0.8		0.1	1.6		0.0	0.7	0.2
Delay (s)	20.2	18.9			16.5		14.3	18.5		14.2	17.6	15.4
Level of Service	C	B			B		B	B		B	B	B
Approach Delay (s)		19.3			16.5			18.0			17.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



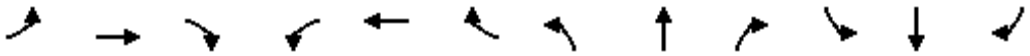
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	530	337	88	21	472	91	66	296	18	77	174	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	1.00			0.98		1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3254			3370		1770	3478		1770	1863	2787
Flt Permitted	0.95	0.57			0.92		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	1902			3112		1770	3478		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	530	337	88	21	472	91	66	296	18	77	174	242
RTOR Reduction (vph)	0	10	0	0	14	0	0	6	0	0	0	200
Lane Group Flow (vph)	318	627	0	0	570	0	66	308	0	77	174	42
Confl. Peds. (#/hr)			15			155			140			
Confl. Bikes (#/hr)			3			12			8			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	11.2	40.6			25.4		6.7	12.3		6.9	12.5	12.5
Effective Green, g (s)	11.2	40.6			25.4		6.7	12.3		6.9	12.5	12.5
Actuated g/C Ratio	0.16	0.57			0.35		0.09	0.17		0.10	0.17	0.17
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	251	1286			1100		165	595		170	324	485
v/s Ratio Prot	c0.20	0.08					0.04	0.09		c0.04	c0.09	
v/s Ratio Perm		c0.20			0.18							0.02
v/c Ratio	1.27	0.49			0.52		0.40	0.52		0.45	0.54	0.09
Uniform Delay, d1	30.3	9.4			18.4		30.7	27.1		30.7	27.0	24.9
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	147.8	0.3			0.4		1.6	0.8		1.9	1.7	0.1
Delay (s)	178.1	9.7			18.8		32.2	27.8		32.6	28.7	24.9
Level of Service	F	A			B		C	C		C	C	C
Approach Delay (s)		65.7			18.8			28.6			27.5	
Approach LOS		E			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	71.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	423	36	3	659	9	49	7	16	49	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.99			1.00		0.98		0.88		0.85
Flt Protected	1.00			1.00		0.99		0.99		1.00
Satd. Flow (prot)	3498			3538		4969		1629		1504
Flt Permitted	1.00			0.95		0.99		0.99		1.00
Satd. Flow (perm)	3498			3375		4969		1629		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	423	36	3	659	9	49	7	16	49	35
RTOR Reduction (vph)	7	0	0	0	0	0	0	47	0	25
Lane Group Flow (vph)	452	0	0	662	0	65	0	22	0	6
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1399			1350		1516		291		269
v/s Ratio Prot	0.13							c0.01		
v/s Ratio Perm				c0.20		0.01				0.00
v/c Ratio	0.32			0.49		0.04		0.08		0.02
Uniform Delay, d1	19.6			21.3		23.2		32.5		32.1
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	0.6			1.3		0.1		0.5		0.1
Delay (s)	20.3			22.5		23.3		33.0		32.3
Level of Service	C			C		C		C		C
Approach Delay (s)	20.3			22.5		23.3		32.8		
Approach LOS	C			C		C		C		

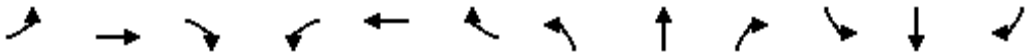
Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	39.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	95	67	10	250	10	47	122	13	6	251	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.98			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.99			0.99			0.97	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1729			1845			1814			1790	
Flt Permitted		0.89			0.99			0.87			1.00	
Satd. Flow (perm)		1563			1827			1595			1785	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	95	67	10	250	10	47	122	13	6	251	73
RTOR Reduction (vph)	0	27	0	0	2	0	0	4	0	0	16	0
Lane Group Flow (vph)	0	178	0	0	268	0	0	178	0	0	314	0
Confl. Peds. (#/hr)	21		14	14		21	12		4	4		12
Confl. Bikes (#/hr)			7			11			9			9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		553			646			809			906	
v/s Ratio Prot												
v/s Ratio Perm		0.11			c0.15			0.11			c0.18	
v/c Ratio		0.32			0.41			0.22			0.35	
Uniform Delay, d1		15.3			15.9			8.9			9.6	
Progression Factor		1.01			1.39			1.00			1.00	
Incremental Delay, d2		1.5			1.8			0.6			1.1	
Delay (s)		17.0			23.9			9.5			10.6	
Level of Service		B			C			A			B	
Approach Delay (s)		17.0			23.9			9.5			10.6	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



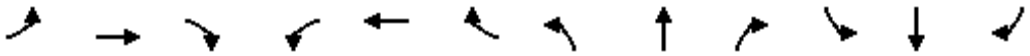
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	158	36	17	260	103	108	544	6	76	255	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.96		1.00	1.00		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1807			1791		1770	5077		1770	5030	
Flt Permitted		0.88			0.98		0.58	1.00		0.42	1.00	
Satd. Flow (perm)		1607			1767		1073	5077		784	5030	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	158	36	17	260	103	108	544	6	76	255	20
RTOR Reduction (vph)	0	9	0	0	20	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	235	0	0	360	0	108	548	0	76	263	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		766			842		429	2030		313	2012	
v/s Ratio Prot								c0.11			0.05	
v/s Ratio Perm		0.15			c0.20		0.10			0.10		
v/c Ratio		0.31			0.43		0.25	0.27		0.24	0.13	
Uniform Delay, d1		10.4			11.2		13.0	13.1		13.0	12.3	
Progression Factor		1.00			0.73		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0			1.5		1.4	0.3		1.8	0.1	
Delay (s)		11.4			9.6		14.4	13.4		14.8	12.5	
Level of Service		B			A		B	B		B	B	
Approach Delay (s)		11.4			9.6			13.6			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

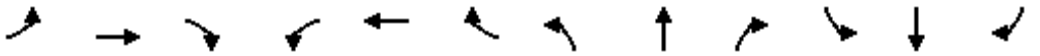
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	270	609	95	177	0	0	0	66	267	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Frt	1.00	0.85	1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3535	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3535	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	609	95	177	0	0	0	66	267	2
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	270	609	95	177	0	0	0	66	268	0
Confl. Peds. (#/hr)										12
Confl. Bikes (#/hr)										5
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	15.0	26.1	6.1	65.0				28.9	28.9	
Effective Green, g (s)	15.0	26.1	6.1	65.0				28.9	28.9	
Actuated g/C Ratio	0.23	0.40	0.09	1.00				0.44	0.44	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	408	1449	322	1583				786	1571	
v/s Ratio Prot	c0.15	c0.17						0.04	c0.08	
v/s Ratio Perm			0.03	0.11						
v/c Ratio	0.66	0.42	0.30	0.11				0.08	0.17	
Uniform Delay, d1	22.7	14.0	27.4	0.0				10.4	10.8	
Progression Factor	1.64	0.86	1.00	1.00				1.00	1.00	
Incremental Delay, d2	3.9	0.2	0.5	0.1				0.2	0.2	
Delay (s)	41.1	12.3	28.0	0.1				10.6	11.1	
Level of Service	D	B	C	A				B	B	
Approach Delay (s)	21.1		9.9			0.0			11.0	
Approach LOS	C		A			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	423	154	282	436	2	250	0	524	0	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Lane Util. Factor		0.95		0.91	0.91			1.00	1.00		1.00	
Frt		0.96		1.00	1.00			1.00	0.85		0.86	
Flt Protected		1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)		3395		1610	3371			1770	1583		1611	
Flt Permitted		0.88		0.95	0.87			0.75	1.00		1.00	
Satd. Flow (perm)		3009		1610	2948			1402	1583		1611	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	423	154	282	436	2	250	0	524	0	0	8
RTOR Reduction (vph)	0	32	0	0	0	0	0	0	396	0	6	0
Lane Group Flow (vph)	0	591	0	234	486	0	0	250	128	0	2	0
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		40.3		15.3	59.6			21.9	21.9		21.9	
Effective Green, g (s)		40.3		15.3	59.6			21.9	21.9		21.9	
Actuated g/C Ratio		0.45		0.17	0.66			0.24	0.24		0.24	
Clearance Time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1347		273	2024			341	385		392	
v/s Ratio Prot				c0.15	0.04						0.00	
v/s Ratio Perm		c0.20			0.12			c0.18	0.08			
v/c Ratio		0.44		0.86	0.24			0.73	0.33		0.00	
Uniform Delay, d1		17.1		36.3	6.1			31.4	28.0		25.8	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.0		22.3	0.1			7.9	0.5		0.0	
Delay (s)		18.1		58.6	6.2			39.3	28.5		25.8	
Level of Service		B		E	A			D	C		C	
Approach Delay (s)		18.1			23.2			32.0			25.8	
Approach LOS		B			C			C			C	

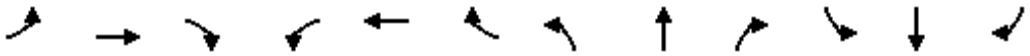
Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	355	58	53	505	56	122	811	40	18	342	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frt		0.98			0.99			0.99			1.00	0.85
Flt Protected		0.99			1.00			0.99			1.00	1.00
Satd. Flow (prot)		3446			3476			3495			3530	1583
Flt Permitted		0.71			0.87			0.83			0.89	1.00
Satd. Flow (perm)		2478			3030			2933			3162	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	355	58	53	505	56	122	811	40	18	342	126
RTOR Reduction (vph)	0	13	0	0	11	0	0	4	0	0	0	70
Lane Group Flow (vph)	0	500	0	0	604	0	0	969	0	0	360	56
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		30.0			30.0			32.0			32.0	32.0
Effective Green, g (s)		30.0			30.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42			0.42			0.44			0.44	0.44
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)		1032			1262			1303			1405	703
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.20			c0.33			0.11	0.04
v/c Ratio		0.48			0.48			0.74			0.26	0.08
Uniform Delay, d1		15.3			15.3			16.6			12.5	11.5
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		1.6			1.3			3.9			0.4	0.2
Delay (s)		17.0			16.6			20.5			13.0	11.7
Level of Service		B			B			C			B	B
Approach Delay (s)		17.0			16.6			20.5			12.7	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

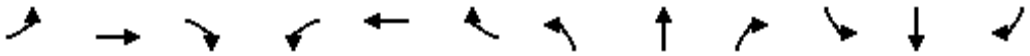
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	107	17	58	151	29	36	964	24	15	443	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.99			0.98		1.00	1.00			0.98	
Flt Protected		0.98			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1789			1788		1751	3490			3408	
Flt Permitted		0.70			0.88		0.45	1.00			0.93	
Satd. Flow (perm)		1274			1595		830	3490			3162	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	107	17	58	151	29	36	964	24	15	443	83
RTOR Reduction (vph)	0	6	0	0	8	0	0	2	0	0	14	0
Lane Group Flow (vph)	0	178	0	0	230	0	36	986	0	0	527	0
Confl. Peds. (#/hr)	3		1	1		3	2		7	7		2
Confl. Bikes (#/hr)			1			3			4			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		11.0			12.0		41.2	41.2			41.2	
Effective Green, g (s)		11.0			12.0		41.2	41.2			41.2	
Actuated g/C Ratio		0.18			0.20		0.67	0.67			0.67	
Clearance Time (s)		5.0			4.0		4.0	4.0			4.0	
Vehicle Extension (s)		1.0			1.0		1.0	1.0			1.0	
Lane Grp Cap (vph)		228			312		558	2349			2128	
v/s Ratio Prot								c0.28				
v/s Ratio Perm		0.14			c0.14		0.04				0.17	
v/c Ratio		0.78			0.74		0.06	0.42			0.25	
Uniform Delay, d1		24.0			23.1		3.4	4.6			3.9	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		14.8			7.6		0.2	0.6			0.3	
Delay (s)		38.7			30.7		3.6	5.1			4.2	
Level of Service		D			C		A	A			A	
Approach Delay (s)		38.7			30.7			5.1			4.2	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	61.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

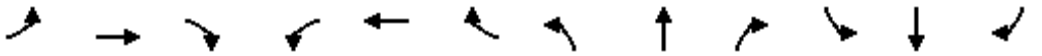
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	17	286	1	111	18	1002	141	75	503	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.86			0.96		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1166			1723		1751	3431		1752	3498	
Flt Permitted		1.00			0.78		0.45	1.00		0.18	1.00	
Satd. Flow (perm)		1166			1386		827	3431		329	3498	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	17	286	1	111	18	1002	141	75	503	6
RTOR Reduction (vph)	0	12	0	0	20	0	0	13	0	0	1	0
Lane Group Flow (vph)	0	5	0	0	378	0	18	1130	0	75	508	0
Confl. Peds. (#/hr)	2					2	2					2
Confl. Bikes (#/hr)						2			1			
Heavy Vehicles (%)	41%	41%	41%	2%	2%	2%	3%	3%	3%	3%	3%	3%
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		22.6			22.6		40.3	40.3		40.3	40.3	
Effective Green, g (s)		22.6			22.6		40.3	40.3		40.3	40.3	
Actuated g/C Ratio		0.32			0.32		0.57	0.57		0.57	0.57	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		371			441		470	1950		187	1988	
v/s Ratio Prot		0.00						c0.33			0.15	
v/s Ratio Perm					c0.27		0.02			0.23		
v/c Ratio		0.01			0.86		0.04	0.58		0.40	0.26	
Uniform Delay, d1		16.5			22.6		6.8	9.8		8.6	7.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			14.6		0.2	1.3		6.3	0.3	
Delay (s)		16.5			37.3		6.9	11.1		14.9	8.0	
Level of Service		B			D		A	B		B	A	
Approach Delay (s)		16.5			37.3			11.0			8.9	
Approach LOS		B			D			B			A	

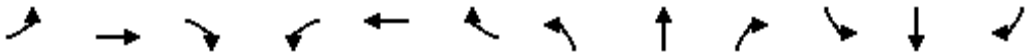
Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	70.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



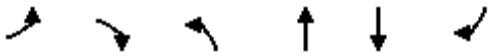
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	196	153	81	313	33	237	607	60	240	387	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frt		0.95			0.99		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3325			1826		1770	3491		1770	3483	
Flt Permitted		0.66			0.81		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2230			1492		1770	3491		1770	3483	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	196	153	81	313	33	237	607	60	240	387	46
RTOR Reduction (vph)	0	44	0	0	3	0	0	7	0	0	10	0
Lane Group Flow (vph)	0	435	0	0	424	0	237	660	0	240	423	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		33.2			33.2		16.0	22.9		16.5	23.4	
Effective Green, g (s)		33.2			33.2		16.0	22.9		16.5	23.4	
Actuated g/C Ratio		0.37			0.37		0.18	0.26		0.19	0.26	
Clearance Time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)		1.0			1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		830			555		317	897		327	914	
v/s Ratio Prot							0.13	c0.19		c0.14	0.12	
v/s Ratio Perm		0.20			c0.28							
v/c Ratio		0.52			0.76		0.75	0.74		0.73	0.46	
Uniform Delay, d1		21.8			24.5		34.6	30.3		34.2	27.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			5.6		8.2	2.7		7.2	0.1	
Delay (s)		22.1			30.1		42.8	33.0		41.4	27.7	
Level of Service		C			C		D	C		D	C	
Approach Delay (s)		22.1			30.1			35.6			32.6	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	89.1	Sum of lost time (s)	16.5
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



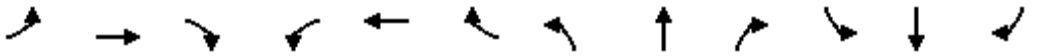
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	20	150	33	50	111	100	587	65	40	430	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.92		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1704		1770	3486		1770	3416	
Flt Permitted	0.64	1.00	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1201	1863	1583		1642		1770	3486		1770	3416	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	20	150	33	50	111	100	587	65	40	430	130
RTOR Reduction (vph)	0	0	108	0	57	0	0	8	0	0	29	0
Lane Group Flow (vph)	150	20	42	0	137	0	100	644	0	40	531	0
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	13.4	13.4	13.4		13.4		6.2	19.0		2.1	14.9	
Effective Green, g (s)	13.4	13.4	13.4		13.4		6.2	19.0		2.1	14.9	
Actuated g/C Ratio	0.28	0.28	0.28		0.28		0.13	0.40		0.04	0.31	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	338	525	446		463		231	1394		78	1071	
v/s Ratio Prot		0.01					c0.06	c0.18		0.02	0.16	
v/s Ratio Perm	c0.12		0.03		0.08							
v/c Ratio	0.44	0.04	0.09		0.30		0.43	0.46		0.51	0.50	
Uniform Delay, d1	14.0	12.4	12.6		13.4		19.0	10.5		22.2	13.2	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.0	0.0		0.1		0.5	0.1		2.4	0.1	
Delay (s)	14.3	12.4	12.6		13.5		19.5	10.6		24.6	13.4	
Level of Service	B	B	B		B		B	B		C	B	
Approach Delay (s)		13.4			13.5			11.8			14.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	47.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



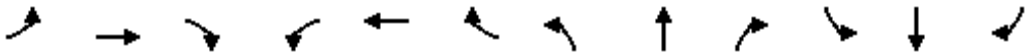
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	146	771	356	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.94	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3330	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3330	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	146	771	356	232
RTOR Reduction (vph)	0	0	0	0	102	0
Lane Group Flow (vph)	0	0	146	771	486	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			5.4	30.4	17.0	
Effective Green, g (s)			5.4	30.4	17.0	
Actuated g/C Ratio			0.18	1.00	0.56	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			609	3539	1862	
v/s Ratio Prot			0.04	c0.22	0.15	
v/s Ratio Perm						
v/c Ratio			0.24	0.22	0.26	
Uniform Delay, d1			10.7	0.0	3.5	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			0.2	0.0	0.1	
Delay (s)			10.9	0.0	3.5	
Level of Service			B	A	A	
Approach Delay (s)	0.0			1.8	3.5	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	2.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	30.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



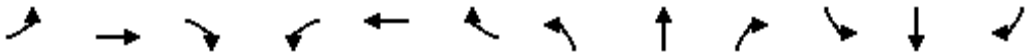
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	109	81	54	0	207	0	584	100	26	347	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.89			0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1762	1583		1646			3462		1770	3539	
Flt Permitted	0.95	1.00	1.00		0.99			1.00		0.32	1.00	
Satd. Flow (perm)	1681	1762	1583		1646			3462		602	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	109	81	54	0	207	0	584	100	26	347	0
RTOR Reduction (vph)	0	0	68	0	162	0	0	16	0	0	0	0
Lane Group Flow (vph)	87	119	13	0	99	0	0	668	0	26	347	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	7.3	7.3	7.3		8.4			16.7		16.7	16.7	
Effective Green, g (s)	7.3	7.3	7.3		8.4			16.7		16.7	16.7	
Actuated g/C Ratio	0.16	0.16	0.16		0.19			0.38		0.38	0.38	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	276	289	260		311			1302		226	1331	
v/s Ratio Prot	0.05	c0.07			c0.06			c0.19			0.10	
v/s Ratio Perm			0.01							0.04		
v/c Ratio	0.32	0.41	0.05		0.32			0.51		0.12	0.26	
Uniform Delay, d1	16.3	16.6	15.6		15.5			10.7		9.0	9.6	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.7	1.0	0.1		0.6			0.3		0.2	0.1	
Delay (s)	17.0	17.6	15.7		16.1			11.0		9.3	9.7	
Level of Service	B	B	B		B			B		A	A	
Approach Delay (s)		16.9			16.1			11.0			9.7	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	0	67	0	169	0	936	92	106	512	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		1.00			0.90			0.99		1.00	1.00	
Flt Protected		0.95			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1699			1579			3352		1703	3402	
Flt Permitted		0.55			0.92			1.00		0.95	1.00	
Satd. Flow (perm)		976			1473			3352		1703	3402	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	0	0	67	0	169	0	936	92	106	512	3
RTOR Reduction (vph)	0	0	0	0	117	0	0	10	0	0	1	0
Lane Group Flow (vph)	0	2	0	0	119	0	0	1018	0	106	514	0
Confl. Peds. (#/hr)	3					3			2	2		
Confl. Bikes (#/hr)									3			5
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		23.0			23.0			26.0		14.0	26.0	
Effective Green, g (s)		23.0			23.0			26.0		14.0	26.0	
Actuated g/C Ratio		0.31			0.31			0.35		0.19	0.35	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)		299			451			1162		317	1179	
v/s Ratio Prot								c0.30		c0.06	0.15	
v/s Ratio Perm		0.00			c0.08							
v/c Ratio		0.01			0.26			0.88		0.33	0.44	
Uniform Delay, d1		18.1			19.6			23.0		26.5	18.9	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		0.0			1.4			9.4		2.8	1.2	
Delay (s)		18.1			21.0			32.4		29.3	20.0	
Level of Service		B			C			C		C	C	
Approach Delay (s)		18.1			21.0			32.4			21.6	
Approach LOS		B			C			C			C	

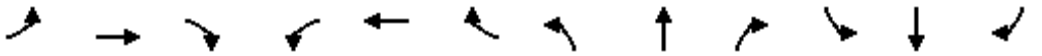
Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	109	28	29	206	146	84	806	51	110	366	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.95		1.00	0.99		1.00	0.97	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1727			1683		1697	3370		1702	3291	
Flt Permitted		0.67			0.96		0.49	1.00		0.29	1.00	
Satd. Flow (perm)		1180			1627		878	3370		520	3291	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	71	109	28	29	206	146	84	806	51	110	366	85
RTOR Reduction (vph)	0	11	0	0	42	0	0	6	0	0	28	0
Lane Group Flow (vph)	0	197	0	0	339	0	84	851	0	110	423	0
Confl. Peds. (#/hr)	2		3	3		2	3		1	1		3
Confl. Bikes (#/hr)						3			4			3
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.9			16.9		33.1	33.1		33.1	33.1	
Effective Green, g (s)		16.9			16.9		33.1	33.1		33.1	33.1	
Actuated g/C Ratio		0.28			0.28		0.55	0.55		0.55	0.55	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		332			458		484	1859		286	1815	
v/s Ratio Prot								c0.25			0.13	
v/s Ratio Perm		0.17			c0.21		0.10			0.21		
v/c Ratio		0.59			0.74		0.17	0.46		0.38	0.23	
Uniform Delay, d1		18.6			19.6		6.7	8.1		7.7	6.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.8			6.2		0.8	0.8		3.9	0.3	
Delay (s)		21.4			25.7		7.4	8.9		11.5	7.2	
Level of Service		C			C		A	A		B	A	
Approach Delay (s)		21.4			25.7			8.8			8.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	152	462	104	32	678	135	154	439	57	73	226	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1561	1770	3438		1770	3478		1770	3539	1555
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1561	1770	3438		1770	3478		1770	3539	1555
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	152	462	104	32	678	135	154	439	57	73	226	149
RTOR Reduction (vph)	0	0	69	0	16	0	0	8	0	0	0	97
Lane Group Flow (vph)	152	462	35	32	797	0	154	488	0	73	226	52
Confl. Peds. (#/hr)			2			8						1
Confl. Bikes (#/hr)						2						8
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	7.0	36.5	36.5	5.1	34.6		11.7	44.0		6.4	38.7	38.7
Effective Green, g (s)	7.0	36.5	36.5	5.1	34.6		11.7	44.0		6.4	38.7	38.7
Actuated g/C Ratio	0.06	0.33	0.33	0.05	0.31		0.11	0.40		0.06	0.35	0.35
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	112	1174	517	82	1081		188	1391		102	1245	547
v/s Ratio Prot	c0.09	0.13		0.02	c0.23		c0.09	c0.14		0.04	0.06	
v/s Ratio Perm			0.02									0.03
v/c Ratio	1.36	0.39	0.07	0.39	0.74		0.82	0.35		0.72	0.18	0.10
Uniform Delay, d1	51.5	28.2	25.1	50.9	33.6		48.1	23.0		50.9	24.7	23.9
Progression Factor	1.28	0.49	0.19	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	203.4	0.2	0.0	3.1	2.7		23.4	0.7		21.1	0.3	0.3
Delay (s)	269.6	14.1	4.8	54.0	36.3		71.5	23.7		72.0	25.0	24.3
Level of Service	F	B	A	D	D		E	C		E	C	C
Approach Delay (s)		66.8			37.0			35.1			32.4	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	43.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	65	108	614	22	29	242
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	65	108	614	22	29	242
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	804	318			636	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	804	318			636	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	79	84			97	
cM capacity (veh/h)	311	678			943	

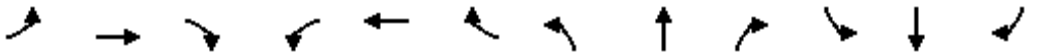
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	173	409	227	110	161
Volume Left	65	0	0	29	0
Volume Right	108	0	22	0	0
cSH	469	1700	1700	943	1700
Volume to Capacity	0.37	0.24	0.13	0.03	0.09
Queue Length 95th (ft)	42	0	0	2	0
Control Delay (s)	17.1	0.0	0.0	2.6	0.0
Lane LOS	C			A	
Approach Delay (s)	17.1	0.0		1.0	
Approach LOS	C				

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	219	61	577	111	106	193
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	219	61	577	111	106	193
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	941	344			688	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	941	344			688	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	5	91			88	
cM capacity (veh/h)	231	652			902	

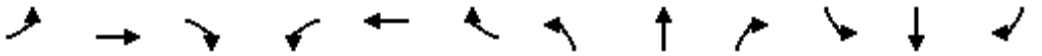
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	280	385	303	170	129
Volume Left	219	0	0	106	0
Volume Right	61	0	111	0	0
cSH	269	1700	1700	902	1700
Volume to Capacity	1.04	0.23	0.18	0.12	0.08
Queue Length 95th (ft)	274	0	0	10	0
Control Delay (s)	107.6	0.0	0.0	6.4	0.0
Lane LOS	F			A	
Approach Delay (s)	107.6	0.0		3.6	
Approach LOS	F				

Intersection Summary			
Average Delay	24.6		
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		



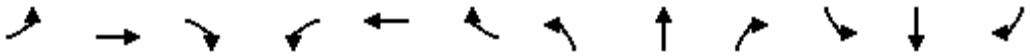
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	254	400	108	130	654	132	306	443	111	48	309	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1547	3433	3539	1556	3433	3414		3433	3274	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1547	3433	3539	1556	3433	3414		3433	3274	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	254	400	108	130	654	132	306	443	111	48	309	225
RTOR Reduction (vph)	0	0	75	0	0	95	0	19	0	0	130	0
Lane Group Flow (vph)	254	400	33	130	654	37	306	535	0	48	404	0
Confl. Peds. (#/hr)			14			7			16			11
Confl. Bikes (#/hr)			1						6			10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.5	23.5	23.5	8.5	21.5	21.5	11.2	24.6		4.0	17.4	
Effective Green, g (s)	10.5	23.5	23.5	8.5	21.5	21.5	11.2	24.6		4.0	17.4	
Actuated g/C Ratio	0.14	0.31	0.31	0.11	0.28	0.28	0.15	0.32		0.05	0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	470	1085	474	380	993	436	501	1096		179	743	
v/s Ratio Prot	c0.07	0.11		0.04	c0.18		c0.09	c0.16		0.01	0.12	
v/s Ratio Perm			0.02			0.02						
v/c Ratio	0.54	0.37	0.07	0.34	0.66	0.08	0.61	0.49		0.27	0.54	
Uniform Delay, d1	30.8	20.8	18.8	31.5	24.3	20.3	30.7	20.9		34.9	26.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	0.2	0.1	0.5	1.6	0.1	2.2	0.3		0.8	0.8	
Delay (s)	32.1	21.0	18.9	32.0	25.9	20.4	32.9	21.3		35.7	26.9	
Level of Service	C	C	B	C	C	C	C	C		D	C	
Approach Delay (s)		24.4			26.0			25.4			27.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	76.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	90	70	11	106	9	97	765	13	15	292	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93			0.99		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1757	1726			1832		1770	3527		1770	3539	1534
Flt Permitted	0.77	1.00			0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1431	1726			1786		1770	3527		1770	3539	1534
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	134	90	70	11	106	9	97	765	13	15	292	205
RTOR Reduction (vph)	0	23	0	0	2	0	0	1	0	0	0	134
Lane Group Flow (vph)	134	137	0	0	124	0	97	777	0	15	292	71
Confl. Peds. (#/hr)	20		9	9		20	3		23	23		3
Confl. Bikes (#/hr)			3			10			5			7
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	11.5	11.5			11.5		6.7	21.6		1.0	15.9	15.9
Effective Green, g (s)	11.5	11.5			11.5		6.7	21.6		1.0	15.9	15.9
Actuated g/C Ratio	0.25	0.25			0.25		0.15	0.47		0.02	0.34	0.34
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	356	430			445		257	1652		38	1220	529
v/s Ratio Prot		0.08					c0.05	c0.22		0.01	0.08	
v/s Ratio Perm	c0.09				0.07							0.05
v/c Ratio	0.38	0.32			0.28		0.38	0.47		0.39	0.24	0.13
Uniform Delay, d1	14.3	14.1			14.0		17.8	8.4		22.3	10.8	10.4
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.4			0.3		0.9	0.2		6.6	0.1	0.1
Delay (s)	15.0	14.5			14.3		18.7	8.6		28.9	10.9	10.5
Level of Service	B	B			B		B	A		C	B	B
Approach Delay (s)		14.7			14.3			9.7			11.3	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	281	361	2	313	15	348	701	7	37	508	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1862	1583	1770	3534		1770	3397	
Flt Permitted	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1859	1583	1770	3534		1770	3397	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	290	281	361	2	313	15	348	701	7	37	508	185
RTOR Reduction (vph)	0	0	213	0	0	12	0	1	0	0	39	0
Lane Group Flow (vph)	290	281	148	0	315	3	348	707	0	37	654	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	12.2	36.5	36.5		19.3	19.3	12.2	32.6		4.7	25.1	
Effective Green, g (s)	12.2	36.5	36.5		19.3	19.3	12.2	32.6		4.7	25.1	
Actuated g/C Ratio	0.14	0.41	0.41		0.22	0.22	0.14	0.37		0.05	0.28	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	243	765	650		404	344	243	1297		93	960	
v/s Ratio Prot	c0.16	0.15					c0.20	0.20		0.02	c0.19	
v/s Ratio Perm			0.09		c0.17	0.00						
v/c Ratio	1.19	0.37	0.23		0.78	0.01	1.43	0.55		0.40	0.68	
Uniform Delay, d1	38.3	18.1	17.0		32.7	27.3	38.3	22.2		40.7	28.3	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	120.1	0.3	0.2		9.2	0.0	216.5	0.5		2.8	2.0	
Delay (s)	158.4	18.4	17.2		42.0	27.3	254.8	22.7		43.5	30.3	
Level of Service	F	B	B		D	C	F	C		D	C	
Approach Delay (s)		61.5			41.3			99.2			31.0	
Approach LOS		E			D			F			C	

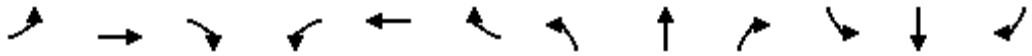
Intersection Summary			
HCM 2000 Control Delay	65.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	88.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	431	265	115	55	177	17	7	72	382	58	6	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.95		1.00	0.99			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3363		1770	3489			1770	3460			1764
Flt Permitted	0.95	1.00		0.95	1.00			0.36	1.00			1.00
Satd. Flow (perm)	3433	3363		1770	3489			671	3460			1857
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	431	265	115	55	177	17	7	72	382	58	6	17
RTOR Reduction (vph)	0	52	0	0	8	0	0	0	11	0	0	0
Lane Group Flow (vph)	431	328	0	55	186	0	0	79	429	0	0	23
Confl. Peds. (#/hr)			2	2						10		10
Confl. Bikes (#/hr)			2			1				4		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	11.1	17.5		4.8	11.2			11.1	24.1			1.8
Effective Green, g (s)	11.1	17.5		4.8	11.2			11.1	24.1			1.8
Actuated g/C Ratio	0.17	0.27		0.07	0.17			0.17	0.38			0.03
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	593	916		132	608			116	1298			52
v/s Ratio Prot	c0.13	c0.10		0.03	0.05				c0.12			
v/s Ratio Perm								c0.12				0.01
v/c Ratio	0.73	0.36		0.42	0.31			0.68	0.33			0.44
Uniform Delay, d1	25.1	18.8		28.4	23.1			24.9	14.3			30.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	4.4	0.2		2.1	0.3			15.2	0.2			5.9
Delay (s)	29.5	19.1		30.5	23.4			40.1	14.4			36.6
Level of Service	C	B		C	C			D	B			D
Approach Delay (s)		24.6			25.0				18.4			
Approach LOS		C			C				B			

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	64.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	289	248
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1563
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1563
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	289	248
RTOR Reduction (vph)	0	191
Lane Group Flow (vph)	289	57
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		1
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	14.8	14.8
Effective Green, g (s)	14.8	14.8
Actuated g/C Ratio	0.23	0.23
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	815	360
v/s Ratio Prot	0.08	
v/s Ratio Perm		0.04
v/c Ratio	0.35	0.16
Uniform Delay, d1	20.7	19.7
Progression Factor	1.00	1.00
Incremental Delay, d2	0.3	0.2
Delay (s)	21.0	19.9
Level of Service	C	B
Approach Delay (s)	21.2	
Approach LOS	C	

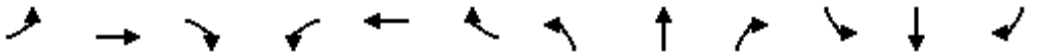
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	3	2	198	5	88	5	159	135	53	149	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	3	2	198	5	88	5	159	135	53	149	4
Pedestrians					2							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					4.0							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	516	563	151	432	430	161	153			296		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	516	563	151	432	430	161	153			296		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	100	61	99	90	100			96		
cM capacity (veh/h)	401	412	890	507	490	877	1415			1252		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	9	291	164	135	206
Volume Left	4	198	5	0	53
Volume Right	2	88	0	135	4
cSH	462	581	1415	1700	1252
Volume to Capacity	0.02	0.50	0.00	0.08	0.04
Queue Length 95th (ft)	1	70	0	0	3
Control Delay (s)	13.0	17.3	0.3	0.0	2.3
Lane LOS	B	C	A		A
Approach Delay (s)	13.0	17.3	0.1		2.3
Approach LOS	B	C			

Intersection Summary				
Average Delay	7.0			
Intersection Capacity Utilization	52.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	283	426	230	29	587	88	225	80	24	72	52	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.97		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.99	0.85	1.00	0.98		1.00	1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (prot)	1687	3029	2564	1703	4785		1643	3360	1571		2736	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (perm)	1687	3029	2564	1703	4785		1643	3360	1571		2736	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	283	426	230	29	587	88	225	80	24	72	52	134
RTOR Reduction (vph)	0	2	104	0	17	0	0	0	20	0	116	0
Lane Group Flow (vph)	283	447	104	29	658	0	112	193	4	0	142	0
Confl. Peds. (#/hr)	8					8			8	8		
Confl. Bikes (#/hr)			1			3			7			
Heavy Vehicles (%)	7%	7%	7%	6%	6%	6%	0%	0%	0%	20%	20%	20%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	18.2	35.1	35.1	2.7	19.6		11.1	11.1	11.1		9.3	
Effective Green, g (s)	18.2	35.1	35.1	2.7	19.6		11.1	11.1	11.1		9.3	
Actuated g/C Ratio	0.26	0.50	0.50	0.04	0.28		0.16	0.16	0.16		0.13	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	437	1514	1282	65	1335		259	531	248		362	
v/s Ratio Prot	c0.17	0.15		0.02	c0.14		c0.07	0.06			c0.05	
v/s Ratio Perm			0.04						0.00			
v/c Ratio	0.65	0.30	0.08	0.45	0.49		0.43	0.36	0.02		0.39	
Uniform Delay, d1	23.1	10.3	9.1	33.0	21.1		26.7	26.4	24.9		27.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	3.3	0.1	0.0	4.8	0.3		1.2	0.4	0.0		0.7	
Delay (s)	26.4	10.4	9.2	37.8	21.4		27.9	26.8	25.0		28.6	
Level of Service	C	B	A	D	C		C	C	C		C	
Approach Delay (s)		15.0			22.1			27.0			28.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	70.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

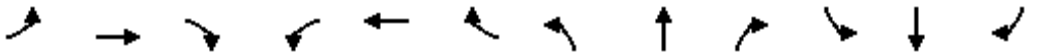
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	31	0	1101	97	103	1368	0	108	0	94	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Lane Util. Factor		1.00	0.86		1.00	0.86			1.00	1.00		
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00		
Flpb, ped/bikes		1.00	1.00		1.00	1.00			0.99	1.00		
Frt		1.00	0.99		1.00	1.00			1.00	0.85		
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1680	6024		1687	6108			1667	1509		
Flt Permitted		0.63	1.00		0.95	1.00			0.76	1.00		
Satd. Flow (perm)		1123	6024		1687	6108			1328	1509		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	0	1101	97	103	1368	0	108	0	94	0	0
RTOR Reduction (vph)	0	0	9	0	0	0	0	0	0	82	0	0
Lane Group Flow (vph)	0	31	1189	0	103	1368	0	0	108	12	0	0
Confl. Peds. (#/hr)		10					10	11				
Confl. Bikes (#/hr)				2			3					
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type	custom	Prot	NA		Prot	NA		Perm	NA	Perm		
Protected Phases		5	2		1	6			3			3
Permitted Phases	5							3	3	3	3	3
Actuated Green, G (s)		6.3	71.4		9.6	74.7			13.0	13.0		
Effective Green, g (s)		6.3	71.4		9.6	74.7			13.0	13.0		
Actuated g/C Ratio		0.06	0.67		0.09	0.70			0.12	0.12		
Clearance Time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Vehicle Extension (s)		2.0	2.0		2.0	2.0			2.0	2.0		
Lane Grp Cap (vph)		66	4057		152	4304			162	185		
v/s Ratio Prot			0.20		c0.06	c0.22						
v/s Ratio Perm		0.03							c0.08	0.01		
v/c Ratio		0.47	0.29		0.68	0.32			0.67	0.06		
Uniform Delay, d1		48.2	7.0		46.7	6.0			44.4	41.1		
Progression Factor		0.96	1.16		1.00	1.00			1.00	1.00		
Incremental Delay, d2		1.9	0.2		9.0	0.2			7.8	0.1		
Delay (s)		48.3	8.3		55.7	6.1			52.2	41.2		
Level of Service		D	A		E	A			D	D		
Approach Delay (s)			9.3			9.6			47.1			0.0
Approach LOS			A			A			D			A

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

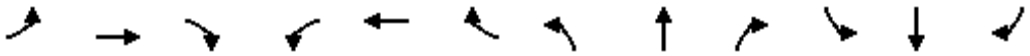
Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	11
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	7%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	488	135	66	826	99	458	155	311	31	11	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.97		1.00	0.98		1.00	0.92			0.90	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99			0.99	1.00
Satd. Flow (prot)	3433	4920		1770	6305		1610	3094			1572	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.99			0.99	1.00
Satd. Flow (perm)	3433	4920		1770	6305		1610	3094			1572	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	89	488	135	66	826	99	458	155	311	31	11	211
RTOR Reduction (vph)	0	31	0	0	13	0	0	190	0	0	80	114
Lane Group Flow (vph)	89	592	0	66	912	0	316	418	0	0	49	10
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	6.2	47.9		7.4	49.1		25.5	25.5			8.2	8.2
Effective Green, g (s)	6.2	47.9		7.4	49.1		25.5	25.5			8.2	8.2
Actuated g/C Ratio	0.06	0.45		0.07	0.46		0.24	0.24			0.08	0.08
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	200	2223		123	2920		387	744			121	116
v/s Ratio Prot	0.03	0.12		c0.04	c0.14		c0.20	0.14			c0.03	
v/s Ratio Perm												0.01
v/c Ratio	0.45	0.27		0.54	0.31		0.82	0.56			0.40	0.08
Uniform Delay, d1	48.2	18.1		47.6	17.9		38.0	35.3			46.6	45.4
Progression Factor	1.00	1.00		0.85	0.79		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.6	0.3		2.2	0.3		11.9	0.6			0.8	0.1
Delay (s)	48.8	18.4		42.7	14.3		49.9	35.9			47.4	45.5
Level of Service	D	B		D	B		D	D			D	D
Approach Delay (s)		22.2			16.2			40.7			46.5	
Approach LOS		C			B			D			D	

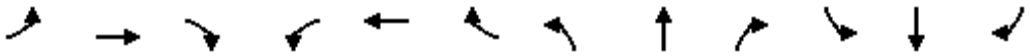
Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	609	119	49	942	182	194	182	83	71	90	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3312		1719	3338		1719	1710		1719	1664	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	3312		1719	3338		1719	1710		1719	1664	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	72	609	119	49	942	182	194	182	83	71	90	84
RTOR Reduction (vph)	0	13	0	0	11	0	0	18	0	0	37	0
Lane Group Flow (vph)	72	715	0	49	1113	0	194	247	0	71	137	0
Confl. Peds. (#/hr)	3		18	18		3	2		14	14		2
Confl. Bikes (#/hr)			4			1						2
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	6.0	47.4		14.0	55.4		14.3	22.6		6.0	14.3	
Effective Green, g (s)	6.0	47.4		14.0	55.4		14.3	22.6		6.0	14.3	
Actuated g/C Ratio	0.05	0.43		0.13	0.50		0.13	0.21		0.05	0.13	
Clearance Time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	93	1427		218	1681		223	351		93	216	
v/s Ratio Prot	c0.04	0.22		0.03	c0.33		c0.11	c0.14		0.04	c0.08	
v/s Ratio Perm												
v/c Ratio	0.77	0.50		0.22	0.66		0.87	0.70		0.76	0.63	
Uniform Delay, d1	51.3	22.7		43.1	20.3		46.9	40.6		51.3	45.4	
Progression Factor	1.00	1.00		1.13	1.51		1.00	1.00		1.00	1.00	
Incremental Delay, d2	29.8	0.1		0.2	1.8		27.5	5.1		27.7	4.4	
Delay (s)	81.1	22.8		48.7	32.6		74.4	45.7		79.0	49.7	
Level of Service	F	C		D	C		E	D		E	D	
Approach Delay (s)		28.1			33.3			57.9			58.2	
Approach LOS		C			C			E			E	

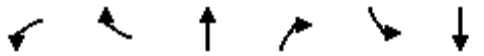
Intersection Summary			
HCM 2000 Control Delay	38.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	344	0	0	772	525	1	949	212	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	4.0			
Lane Util. Factor		0.95			0.95			0.95	1.00			
Frt		1.00			0.94			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3539			3324			3539	1583			
Flt Permitted		1.00			1.00			1.00	1.00			
Satd. Flow (perm)		3539			3324			3539	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	344	0	0	772	525	1	949	212	0	0	0
RTOR Reduction (vph)	0	0	0	0	105	0	0	0	115	0	0	0
Lane Group Flow (vph)	0	344	0	0	1192	0	0	950	97	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)		26.3			26.3			25.8	25.8			
Effective Green, g (s)		26.3			26.3			25.8	25.8			
Actuated g/C Ratio		0.44			0.44			0.43	0.43			
Clearance Time (s)		4.0			4.0			4.0	4.0			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		1548			1454			1519	679			
v/s Ratio Prot		0.10			c0.36							
v/s Ratio Perm								0.27	0.06			
v/c Ratio		0.22			0.82			0.63	0.14			
Uniform Delay, d1		10.5			14.8			13.4	10.4			
Progression Factor		1.00			1.00			1.00	1.00			
Incremental Delay, d2		0.1			3.7			0.8	0.1			
Delay (s)		10.6			18.6			14.2	10.5			
Level of Service		B			B			B	B			
Approach Delay (s)		10.6			18.6			13.5			0.0	
Approach LOS		B			B			B			A	

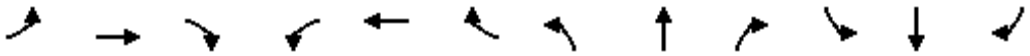
Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	60.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	845	0	0	0	415	1092
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0
Lane Util. Factor	0.97					0.91
Frt	1.00					1.00
Flt Protected	0.95					0.99
Satd. Flow (prot)	3433					5016
Flt Permitted	0.95					0.99
Satd. Flow (perm)	3433					5016
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	845	0	0	0	415	1092
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	845	0	0	0	0	1507
Turn Type	Prot				Split	NA
Protected Phases	8				6	6
Permitted Phases						
Actuated Green, G (s)	11.0					31.0
Effective Green, g (s)	11.0					31.0
Actuated g/C Ratio	0.22					0.62
Clearance Time (s)	4.0					4.0
Lane Grp Cap (vph)	755					3109
v/s Ratio Prot	c0.25					c0.30
v/s Ratio Perm						
v/c Ratio	1.12					0.48
Uniform Delay, d1	19.5					5.2
Progression Factor	1.00					1.00
Incremental Delay, d2	70.6					0.5
Delay (s)	90.1					5.7
Level of Service	F					A
Approach Delay (s)	90.1		0.0			5.7
Approach LOS	F		A			A

Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	139	388	442	36	631	102	216	339	438	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00				
Frt	1.00	0.92			0.98		1.00	0.92				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1770	3257			3461		1770	1705				
Flt Permitted	0.95	1.00			0.88		0.95	1.00				
Satd. Flow (perm)	1770	3257			3060		1770	1705				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	139	388	442	36	631	102	216	339	438	0	0	0
RTOR Reduction (vph)	0	191	0	0	14	0	0	58	0	0	0	0
Lane Group Flow (vph)	139	639	0	0	755	0	216	719	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	12.5	45.5			28.5		25.5	25.5				
Effective Green, g (s)	12.5	45.5			28.5		25.5	25.5				
Actuated g/C Ratio	0.16	0.57			0.36		0.32	0.32				
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0			2.0		2.0	2.0				
Lane Grp Cap (vph)	276	1852			1090		564	543				
v/s Ratio Prot	c0.08	0.20						c0.42				
v/s Ratio Perm					c0.25		0.12					
v/c Ratio	0.50	0.35			0.69		0.38	1.32				
Uniform Delay, d1	30.9	9.3			22.0		21.1	27.2				
Progression Factor	1.41	0.29			1.00		1.00	1.00				
Incremental Delay, d2	1.1	0.3			3.6		0.2	158.4				
Delay (s)	44.6	3.0			25.6		21.3	185.7				
Level of Service	D	A			C		C	F				
Approach Delay (s)		8.9			25.6			149.9			0.0	
Approach LOS		A			C			F			A	

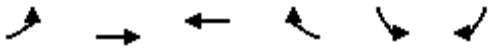
Intersection Summary			
HCM 2000 Control Delay	64.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	700	613	377	387	449	6	28	90	144	746	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Lane Util. Factor	0.95		1.00	0.95			1.00	1.00		0.91	
Frt	0.93		1.00	0.92			1.00	0.85		0.97	
Flt Protected	1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	3291		1770	3254			1770	1583		4894	
Flt Permitted	1.00		0.95	1.00			0.17	1.00		0.99	
Satd. Flow (perm)	3291		1770	3254			312	1583		4894	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	700	613	377	387	449	6	28	90	144	746	237
RTOR Reduction (vph)	25	0	0	0	0	0	0	63	0	0	0
Lane Group Flow (vph)	1288	0	377	836	0	0	34	27	0	1127	0
Turn Type	NA		Prot	NA		Perm	Perm	Perm	Perm	NA	
Protected Phases	2		1	6						4	
Permitted Phases						8	8	8	4		
Actuated Green, G (s)	32.1		11.5	47.1			23.9	23.9		23.9	
Effective Green, g (s)	32.1		11.5	47.1			23.9	23.9		23.9	
Actuated g/C Ratio	0.40		0.14	0.59			0.30	0.30		0.30	
Clearance Time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Vehicle Extension (s)	2.0		2.0	2.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	1320		254	1915			93	472		1462	
v/s Ratio Prot	c0.39		c0.21	0.26							
v/s Ratio Perm							0.11	0.02		0.23	
v/c Ratio	0.98		1.48	0.44			0.37	0.06		0.77	
Uniform Delay, d1	23.6		34.2	9.1			22.1	20.0		25.6	
Progression Factor	1.00		0.96	1.49			1.00	1.00		1.00	
Incremental Delay, d2	19.6		236.3	0.7			0.9	0.0		2.3	
Delay (s)	43.2		269.1	14.2			23.0	20.0		27.9	
Level of Service	D		F	B			C	C		C	
Approach Delay (s)	43.2			93.4						27.9	
Approach LOS	D			F						C	

Intersection Summary			
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

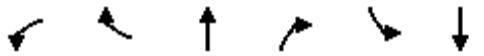
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	442	0	0	555	184	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	442	0	0	555	184	370
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	442	0	0	555	184	370
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	12.3			12.3	13.1	13.1
Effective Green, g (s)	12.3			12.3	13.1	13.1
Actuated g/C Ratio	0.37			0.37	0.39	0.39
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1872			1303	694	620
v/s Ratio Prot	0.09			c0.16	0.10	c0.23
v/s Ratio Perm						
v/c Ratio	0.24			0.43	0.27	0.60
Uniform Delay, d1	7.3			7.9	6.9	8.1
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.2	0.2	1.6
Delay (s)	7.4			8.1	7.1	9.6
Level of Service	A			A	A	A
Approach Delay (s)	7.4			8.1	8.8	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	33.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



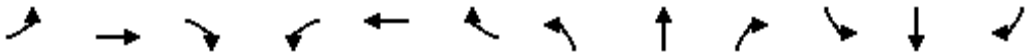
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	135	366	0	379	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.94	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3539	3539		3289	
Flt Permitted		1.00	1.00		0.97	
Satd. Flow (perm)		3539	3539		3289	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	135	366	0	379	280
RTOR Reduction (vph)	0	0	0	0	181	0
Lane Group Flow (vph)	0	135	366	0	478	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		8.3	8.3		8.9	
Effective Green, g (s)		8.3	8.3		8.9	
Actuated g/C Ratio		0.33	0.33		0.35	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1165	1165		1161	
v/s Ratio Prot		0.04	c0.10		c0.15	
v/s Ratio Perm						
v/c Ratio		0.12	0.31		0.41	
Uniform Delay, d1		5.9	6.3		6.2	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.0	0.2		0.2	
Delay (s)		5.9	6.5		6.4	
Level of Service		A	A		A	
Approach Delay (s)		5.9	6.5		6.4	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	25.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	532	138	69	189	96	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		4.0			4.0
Lane Util. Factor	0.97		1.00			1.00
Frpb, ped/bikes	1.00		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.97		0.90			1.00
Flt Protected	0.96		1.00			0.97
Satd. Flow (prot)	3304		1541			1668
Flt Permitted	0.96		1.00			0.74
Satd. Flow (perm)	3304		1541			1274
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	532	138	69	189	96	89
RTOR Reduction (vph)	26	0	91	0	0	0
Lane Group Flow (vph)	644	0	167	0	0	185
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	4%	4%	10%	10%	11%	11%
Turn Type	Prot		NA		Perm	NA
Protected Phases	6		8			4
Permitted Phases					4	
Actuated Green, G (s)	12.2		12.1			12.1
Effective Green, g (s)	12.2		12.1			12.1
Actuated g/C Ratio	0.38		0.38			0.38
Clearance Time (s)	3.5		4.0			4.0
Vehicle Extension (s)	2.2		2.0			2.0
Lane Grp Cap (vph)	1267		586			484
v/s Ratio Prot	c0.19		0.11			
v/s Ratio Perm						c0.15
v/c Ratio	0.51		0.28			0.38
Uniform Delay, d1	7.5		6.8			7.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.2		0.1			0.2
Delay (s)	7.7		6.9			7.3
Level of Service	A		A			A
Approach Delay (s)	7.7		6.9			7.3
Approach LOS	A		A			A

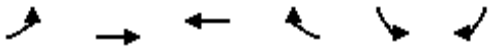
Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	31.8	Sum of lost time (s)	11.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	891	0	122	0	0	0	144	229	0	0	153	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.99	
Flt Protected	0.95		1.00					0.98			1.00	
Satd. Flow (prot)	3273		1509					3220			1790	
Flt Permitted	0.95		1.00					0.98			1.00	
Satd. Flow (perm)	3273		1509					3220			1790	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	891	0	122	0	0	0	144	229	0	0	153	11
RTOR Reduction (vph)	0	0	75	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	891	0	47	0	0	0	0	373	0	0	162	0
Confl. Peds. (#/hr)	1						2					2
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	10%	10%	10%	5%	5%	5%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4						2	2			6	
Permitted Phases			4									
Actuated Green, G (s)	27.2		27.2					15.0			13.0	
Effective Green, g (s)	27.2		27.2					15.0			13.0	
Actuated g/C Ratio	0.38		0.38					0.21			0.18	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1250		576					678			326	
v/s Ratio Prot	c0.27							c0.12			c0.09	
v/s Ratio Perm			0.03									
v/c Ratio	0.71		0.08					0.55			0.50	
Uniform Delay, d1	18.7		14.0					25.1			26.2	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	2.0		0.1					1.0			1.2	
Delay (s)	20.6		14.1					26.1			27.4	
Level of Service	C		B					C			C	
Approach Delay (s)		19.8			0.0			26.1			27.4	
Approach LOS		B			A			C			C	

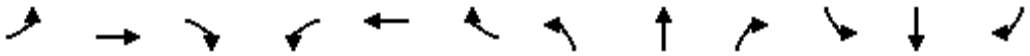
Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	71.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	952	1084	0	346	919
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5711	5711		3060	2484
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5711	5711		3060	2484
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	952	1084	0	346	919
RTOR Reduction (vph)	0	0	0	0	0	34
Lane Group Flow (vph)	0	952	1084	0	346	885
Confl. Bikes (#/hr)				2		2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		32.3	18.3		11.1	25.1
Effective Green, g (s)		32.3	18.3		11.1	25.1
Actuated g/C Ratio		0.63	0.36		0.22	0.49
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		3588	2033		660	1213
v/s Ratio Prot		0.17	c0.19		0.11	c0.36
v/s Ratio Perm						
v/c Ratio		0.27	0.53		0.52	0.73
Uniform Delay, d1		4.3	13.2		17.8	10.5
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.0	0.3		0.8	2.2
Delay (s)		4.3	13.4		18.6	12.7
Level of Service		A	B		B	B
Approach Delay (s)		4.3	13.4		14.3	
Approach LOS		A	B		B	

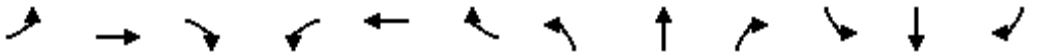
Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	51.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	534	377	0	920	293	894	0	243	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frpb, ped/bikes		1.00	0.99		1.00		1.00		1.00			
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00			
Frt		0.98	0.85		0.96		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3148	1357		4672		3273		1509			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3148	1357		4672		3273		1509			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	534	377	0	920	293	894	0	243	0	0	0
RTOR Reduction (vph)	0	14	0	0	55	0	0	0	148	0	0	0
Lane Group Flow (vph)	0	622	275	0	1158	0	894	0	95	0	0	0
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		56.0	105.0		56.0		41.0		41.0			
Effective Green, g (s)		56.0	105.0		56.0		41.0		41.0			
Actuated g/C Ratio		0.53	1.00		0.53		0.39		0.39			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1678	1357		2491		1278		589			
v/s Ratio Prot		0.20			c0.25		c0.27					
v/s Ratio Perm			0.20						0.06			
v/c Ratio		0.37	0.20		0.47		0.70		0.16			
Uniform Delay, d1		14.3	0.0		15.2		26.8		20.8			
Progression Factor		1.00	1.00		1.00		1.00		1.00			
Incremental Delay, d2		0.6	0.3		0.6		3.2		0.6			
Delay (s)		14.9	0.3		15.8		30.0		21.4			
Level of Service		B	A		B		C		C			
Approach Delay (s)		10.5			15.8			28.2			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	615	638	0	1374	0	0	0	0	307	0	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.95	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4369	1310		4893					3303		1500
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4369	1310		4893					3303		1500
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	615	638	0	1374	0	0	0	0	307	0	475
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	36
Lane Group Flow (vph)	0	934	319	0	1374	0	0	0	0	307	0	439
Confl. Peds. (#/hr)							5					5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		28.9	28.9		28.9					29.2		29.2
Effective Green, g (s)		28.9	28.9		28.9					29.2		29.2
Actuated g/C Ratio		0.44	0.44		0.44					0.44		0.44
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		1910	572		2139					1459		662
v/s Ratio Prot		0.21	0.24		c0.28							
v/s Ratio Perm										0.09		c0.29
v/c Ratio		0.49	0.56		0.64					0.21		0.66
Uniform Delay, d1		13.3	13.8		14.6					11.4		14.6
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.2	1.2		0.7					0.1		2.5
Delay (s)		13.5	15.0		15.2					11.4		17.1
Level of Service		B	B		B					B		B
Approach Delay (s)		13.9			15.2			0.0			14.9	
Approach LOS		B			B			A			B	

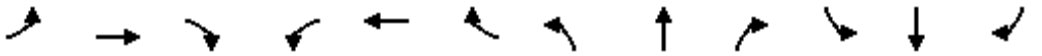
Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	66.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	566	120	0	904	469	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.99	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3471	1518		3471	3358	1413
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3471	1518		3471	3358	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	566	120	0	904	469	248
RTOR Reduction (vph)	0	0	0	0	3	155
Lane Group Flow (vph)	566	120	0	904	491	68
Confl. Peds. (#/hr)		4	4			
Confl. Bikes (#/hr)		2				
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	19.1	38.9		19.1	11.8	11.8
Effective Green, g (s)	19.1	38.9		19.1	11.8	11.8
Actuated g/C Ratio	0.49	1.00		0.49	0.30	0.30
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1704	1518		1704	1018	428
v/s Ratio Prot	0.16			c0.26	c0.15	
v/s Ratio Perm		0.08				0.05
v/c Ratio	0.33	0.08		0.53	0.48	0.16
Uniform Delay, d1	6.0	0.0		6.8	11.1	9.9
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.3	0.4	0.2
Delay (s)	6.1	0.1		7.1	11.4	10.1
Level of Service	A	A		A	B	B
Approach Delay (s)	5.1			7.1	11.0	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	38.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

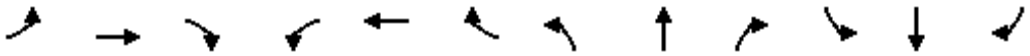


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	545	1010	0	1147	390	0	0	0	159	0	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00		0.95					0.95	0.91	0.95
Frt		1.00	0.85		0.96					1.00	0.86	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		3539	1583		3405					1681	1456	1504
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		3539	1583		3405					1681	1456	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	545	1010	0	1147	390	0	0	0	159	0	358
RTOR Reduction (vph)	0	0	363	0	31	0	0	0	0	0	76	76
Lane Group Flow (vph)	0	545	647	0	1506	0	0	0	0	143	112	110
Turn Type		NA	Perm		NA					Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4							6		6
Actuated Green, G (s)		36.0	36.0		36.0					12.2	12.2	12.2
Effective Green, g (s)		36.0	36.0		36.0					12.2	12.2	12.2
Actuated g/C Ratio		0.64	0.64		0.64					0.22	0.22	0.22
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2266	1014		2181					364	316	326
v/s Ratio Prot		0.15			c0.44							
v/s Ratio Perm			0.41							c0.09	0.08	0.07
v/c Ratio		0.24	0.64		0.69					0.39	0.35	0.34
Uniform Delay, d1		4.3	6.1		6.5					18.8	18.7	18.6
Progression Factor		1.00	1.00		1.00					1.00	1.00	1.00
Incremental Delay, d2		0.1	1.3		1.0					0.7	0.7	0.6
Delay (s)		4.3	7.5		7.5					19.5	19.3	19.2
Level of Service		A	A		A					B	B	B
Approach Delay (s)		6.4			7.5			0.0			19.3	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

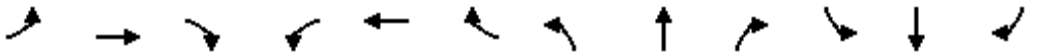
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	723	179	46	532	314	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3434		1770	3539	3393	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3434		1770	3539	3393	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	723	179	46	532	314	50
RTOR Reduction (vph)	22	0	0	0	14	0
Lane Group Flow (vph)	880	0	46	532	350	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	17.8		2.1	23.9	10.3	
Effective Green, g (s)	17.8		2.1	23.9	10.3	
Actuated g/C Ratio	0.44		0.05	0.59	0.26	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1520		92	2104	869	
v/s Ratio Prot	c0.26		c0.03	0.15	c0.10	
v/s Ratio Perm						
v/c Ratio	0.58		0.50	0.25	0.40	
Uniform Delay, d1	8.4		18.5	3.9	12.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.3		1.6	0.0	0.1	
Delay (s)	8.7		20.1	3.9	12.5	
Level of Service	A		C	A	B	
Approach Delay (s)	8.7			5.2	12.5	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	40.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



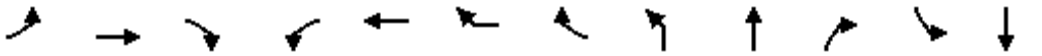
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	1243	26	6	637	221	15	100	375	225	26	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.96			0.90			1.00	
Flt Protected		1.00			1.00			1.00			0.96	
Satd. Flow (prot)		3524			3402			1668			1777	
Flt Permitted		0.92			0.95			0.99			0.26	
Satd. Flow (perm)		3236			3221			1650			487	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	33	1243	26	6	637	221	15	100	375	225	26	9
RTOR Reduction (vph)	0	2	0	0	43	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1300	0	0	821	0	0	490	0	0	259	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		36.1			36.1			21.5			21.5	
Effective Green, g (s)		36.1			36.1			21.5			21.5	
Actuated g/C Ratio		0.51			0.51			0.30			0.30	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1654			1646			502			148	
v/s Ratio Prot												
v/s Ratio Perm		c0.40			0.26			0.30			c0.53	
v/c Ratio		0.79			0.50			0.98			1.75	
Uniform Delay, d1		14.1			11.3			24.3			24.5	
Progression Factor		1.00			1.00			0.15			1.00	
Incremental Delay, d2		2.5			0.2			21.8			362.7	
Delay (s)		16.6			11.6			25.3			387.2	
Level of Service		B			B			C			F	
Approach Delay (s)		16.6			11.6			25.3			387.2	
Approach LOS		B			B			C			F	

Intersection Summary			
HCM 2000 Control Delay	49.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	455	95	134	492	186	57	322	370	54	71	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.97		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1770	3448		1770	3394			1849	1583		1823	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (perm)	1770	3448		1770	3394			1849	1583		1823	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	455	95	134	492	186	57	322	370	54	71	7
RTOR Reduction (vph)	0	19	0	0	37	0	0	0	142	0	0	6
Lane Group Flow (vph)	15	531	0	134	641	0	0	379	228	0	125	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	1.2	19.5		8.2	26.5			17.7	17.7		8.2	8.2
Effective Green, g (s)	1.2	19.5		8.2	26.5			17.7	17.7		8.2	8.2
Actuated g/C Ratio	0.02	0.28		0.12	0.38			0.25	0.25		0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	30	966		208	1292			470	402		214	186
v/s Ratio Prot	0.01	0.15		c0.08	c0.19			c0.20			c0.07	
v/s Ratio Perm									0.14			0.00
v/c Ratio	0.50	0.55		0.64	0.50			0.81	0.57		0.58	0.00
Uniform Delay, d1	33.9	21.3		29.3	16.5			24.3	22.6		29.1	27.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	12.5	0.6		6.7	0.3			9.8	1.8		4.0	0.0
Delay (s)	46.4	22.0		36.0	16.8			34.1	24.5		33.1	27.1
Level of Service	D	C		D	B			C	C		C	C
Approach Delay (s)		22.6			19.9			29.3			32.8	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	69.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

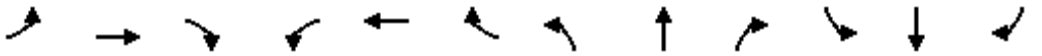


Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	110	673	6	210	407	0	64	1	451	207	120	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.95		1.00	0.98
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1848		1770	1863	1583			3372		1770	1820
Flt Permitted		0.88		0.95	1.00	1.00			0.95		0.29	1.00
Satd. Flow (perm)		1630		1770	1863	1583			3220		534	1820
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	673	6	210	407	0	64	1	451	207	120	168
RTOR Reduction (vph)	0	0	0	0	0	29	0	0	54	0	0	0
Lane Group Flow (vph)	0	789	0	210	407	35	0	0	605	0	120	198
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.0		12.8	39.8	39.8			26.0		26.0	26.0
Effective Green, g (s)		23.0		12.8	39.8	39.8			26.0		26.0	26.0
Actuated g/C Ratio		0.31		0.17	0.54	0.54			0.35		0.35	0.35
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		507		306	1004	853			1134		188	641
v/s Ratio Prot				c0.12	0.22							0.11
v/s Ratio Perm		c0.48				0.02			0.19		c0.22	
v/c Ratio		1.56		0.69	0.41	0.04			0.53		0.64	0.31
Uniform Delay, d1		25.4		28.6	10.0	8.0			19.1		20.0	17.4
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		259.9		6.3	0.3	0.0			0.5		6.9	0.3
Delay (s)		285.3		34.9	10.3	8.0			19.6		26.9	17.6
Level of Service		F		C	B	A			B		C	B
Approach Delay (s)		285.3			17.7				19.6			21.1
Approach LOS		F			B				B			C

Intersection Summary			
HCM 2000 Control Delay	104.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	73.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

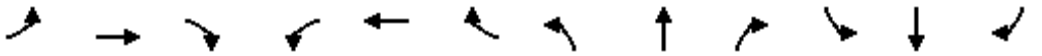
Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	30	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	30	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	337	2	199	415	8	9	436	235	15	74	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3526		1770	3529			1861	1583		1847	1583
Flt Permitted		1.00		0.95	1.00			1.00	1.00		0.92	1.00
Satd. Flow (perm)		3526		1770	3529			1855	1583		1712	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	337	2	199	415	8	9	436	235	15	74	21
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	104	0	0	13
Lane Group Flow (vph)	0	359	0	199	421	0	0	445	131	0	89	8
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		12.4		14.7	14.7			21.9	21.9		21.9	21.9
Effective Green, g (s)		12.4		14.7	14.7			21.9	21.9		21.9	21.9
Actuated g/C Ratio		0.20		0.24	0.24			0.36	0.36		0.36	0.36
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		716		426	850			665	568		614	568
v/s Ratio Prot		c0.10		0.11	c0.12							
v/s Ratio Perm								c0.24	0.08		0.05	0.00
v/c Ratio		0.50		0.47	0.50			0.67	0.23		0.14	0.01
Uniform Delay, d1		21.6		19.8	20.0			16.5	13.7		13.2	12.6
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.6		0.8	0.5			2.6	0.2		0.1	0.0
Delay (s)		22.1		20.6	20.4			19.1	13.9		13.3	12.6
Level of Service		C		C	C			B	B		B	B
Approach Delay (s)		22.1			20.5			17.3			13.2	
Approach LOS		C			C			B			B	

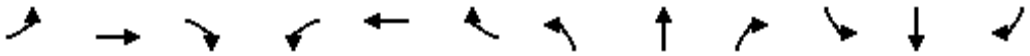
Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	659	54	20	439	61	88	259	43	161	202	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.99			0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3489			3462		1752	3448		1747	3539	1542
Flt Permitted		0.93			0.92		0.62	1.00		0.56	1.00	1.00
Satd. Flow (perm)		3246			3191		1153	3448		1034	3539	1542
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	659	54	20	439	61	88	259	43	161	202	23
RTOR Reduction (vph)	0	8	0	0	15	0	0	19	0	0	0	14
Lane Group Flow (vph)	0	731	0	0	505	0	88	283	0	161	202	9
Confl. Peds. (#/hr)	8		7	7		8	15		22	22		15
Confl. Bikes (#/hr)			3			5			3			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51			0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1669			1641		428	1280		384	1314	572
v/s Ratio Prot								0.08			0.06	
v/s Ratio Perm		c0.23			0.16		0.08			c0.16		0.01
v/c Ratio		0.44			0.31		0.21	0.22		0.42	0.15	0.01
Uniform Delay, d1		10.7			9.8		15.0	15.1		16.4	14.7	13.9
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8			0.5		1.1	0.4		3.3	0.2	0.0
Delay (s)		11.5			10.3		16.1	15.5		19.7	14.9	14.0
Level of Service		B			B		B	B		B	B	B
Approach Delay (s)		11.5			10.3			15.6			16.9	
Approach LOS		B			B			B			B	

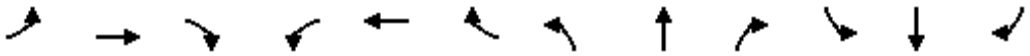
Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



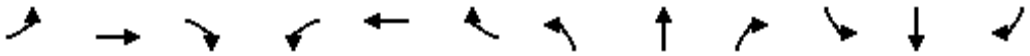
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	123	48	114	153	88	121	483	102	147	385	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3527	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3527	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	123	48	114	153	88	121	483	102	147	385	9
RTOR Reduction (vph)	0	0	0	0	0	63	0	0	75	0	2	0
Lane Group Flow (vph)	6	123	48	114	153	25	121	483	27	147	392	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.0	9.9	9.9	7.3	16.2	16.2	6.6	15.2	15.2	9.1	17.7	
Effective Green, g (s)	1.0	9.9	9.9	7.3	16.2	16.2	6.6	15.2	15.2	9.1	17.7	
Actuated g/C Ratio	0.02	0.17	0.17	0.13	0.28	0.28	0.11	0.26	0.26	0.16	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	30	320	272	224	524	445	203	935	418	280	1085	
v/s Ratio Prot	0.00	c0.07		c0.06	0.08		0.07	c0.14		c0.08	0.11	
v/s Ratio Perm			0.03			0.02			0.02			
v/c Ratio	0.20	0.38	0.18	0.51	0.29	0.06	0.60	0.52	0.06	0.53	0.36	
Uniform Delay, d1	27.9	21.1	20.3	23.4	16.2	15.1	24.2	18.0	15.8	22.2	15.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.3	0.8	0.3	1.8	0.3	0.1	4.6	0.5	0.1	1.8	0.2	
Delay (s)	31.1	21.9	20.6	25.2	16.5	15.1	28.8	18.5	15.9	24.0	15.7	
Level of Service	C	C	C	C	B	B	C	B	B	C	B	
Approach Delay (s)		21.8			19.0			19.9			18.0	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	116	127	241	73	60	91	611	499	64	547	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1733		1770	1737		1770	1863	1583	1770	3530	
Flt Permitted		0.99		0.53	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1717		988	1737		1770	1863	1583	1770	3530	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	11	116	127	241	73	60	91	611	499	64	547	10
RTOR Reduction (vph)	0	56	0	0	41	0	0	0	292	0	2	0
Lane Group Flow (vph)	0	198	0	241	92	0	91	611	207	64	555	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		18.6		18.6	18.6		3.5	24.2	24.2	3.5	24.2	
Effective Green, g (s)		18.6		18.6	18.6		3.5	24.2	24.2	3.5	24.2	
Actuated g/C Ratio		0.32		0.32	0.32		0.06	0.42	0.42	0.06	0.42	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		547		315	554		106	773	657	106	1465	
v/s Ratio Prot					0.05		c0.05	c0.33		0.04	0.16	
v/s Ratio Perm		0.12		c0.24					0.13			
v/c Ratio		0.36		0.77	0.17		0.86	0.79	0.32	0.60	0.38	
Uniform Delay, d1		15.3		17.9	14.3		27.2	14.8	11.5	26.7	11.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.4		10.6	0.1		45.6	5.5	0.3	9.3	0.2	
Delay (s)		15.7		28.4	14.4		72.8	20.4	11.8	36.1	12.0	
Level of Service		B		C	B		E	C	B	D	B	
Approach Delay (s)		15.7			23.5			20.8			14.5	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	58.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	35	124	236	37	84	86	1071	159	75	722	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.90			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1673			1746		1770	3471		1770	3531	
Flt Permitted		0.97			0.69		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1636			1238		1770	3471		1770	3531	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	35	124	236	37	84	86	1071	159	75	722	12
RTOR Reduction (vph)	0	86	0	0	15	0	0	17	0	0	2	0
Lane Group Flow (vph)	0	83	0	0	342	0	86	1213	0	75	732	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		20.4			20.4		5.9	28.0		5.8	27.9	
Effective Green, g (s)		20.4			20.4		5.9	28.0		5.8	27.9	
Actuated g/C Ratio		0.31			0.31		0.09	0.42		0.09	0.42	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		504			381		157	1468		155	1488	
v/s Ratio Prot							c0.05	c0.35		0.04	0.21	
v/s Ratio Perm		0.05			c0.28							
v/c Ratio		0.17			0.90		0.55	0.83		0.48	0.49	
Uniform Delay, d1		16.7			21.9		28.9	16.9		28.8	14.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			22.8		3.9	4.0		2.4	0.3	
Delay (s)		16.8			44.6		32.7	20.9		31.1	14.2	
Level of Service		B			D		C	C		C	B	
Approach Delay (s)		16.8			44.6			21.7			15.8	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	622	31	1280	681	45	1013
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.99		0.95		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	3425		3355		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	3425		3355		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	622	31	1280	681	45	1013
RTOR Reduction (vph)	5	0	62	0	0	0
Lane Group Flow (vph)	648	0	1899	0	45	1013
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	18.2		36.7		3.3	44.0
Effective Green, g (s)	18.2		36.7		3.3	44.0
Actuated g/C Ratio	0.26		0.52		0.05	0.63
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	887		1753		83	2218
v/s Ratio Prot	c0.19		c0.57		0.03	c0.29
v/s Ratio Perm						
v/c Ratio	0.73		1.08		0.54	0.46
Uniform Delay, d1	23.8		16.8		32.7	6.9
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	3.1		48.0		7.1	0.1
Delay (s)	26.9		64.8		39.8	7.0
Level of Service	C		E		D	A
Approach Delay (s)	26.9		64.8			8.4
Approach LOS	C		E			A

Intersection Summary			
HCM 2000 Control Delay	41.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	70.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	5	21	0	97	40	0	370	120	8	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95		1.00	0.95
Frpb, ped/bikes		0.99		1.00	0.98			1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt		0.86		1.00	0.85			1.00	0.96		1.00	1.00
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)		1591		1618	1426			1703	3256		1696	3406
Flt Permitted		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)		1591		1618	1426			1703	3256		1696	3406
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	5	21	0	97	40	0	370	120	8	140
RTOR Reduction (vph)	0	5	0	0	86	0	0	0	30	0	0	0
Lane Group Flow (vph)	0	0	0	19	13	0	0	40	460	0	8	140
Confl. Peds. (#/hr)			1			1				7	7	
Confl. Bikes (#/hr)						2				2		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type		NA		Split	NA		Prot	Prot	NA		Prot	NA
Protected Phases	4	4		8	8		5	5	2		1	6
Permitted Phases												
Actuated Green, G (s)		0.7		5.2	5.2			1.1	17.6		0.8	17.3
Effective Green, g (s)		0.7		5.2	5.2			1.1	17.6		0.8	17.3
Actuated g/C Ratio		0.02		0.13	0.13			0.03	0.44		0.02	0.43
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		27		208	184			46	1421		33	1462
v/s Ratio Prot		c0.00		c0.01	0.01			c0.02	c0.14		0.00	0.04
v/s Ratio Perm												
v/c Ratio		0.00		0.09	0.07			0.87	0.32		0.24	0.10
Uniform Delay, d1		19.5		15.5	15.4			19.5	7.4		19.5	6.8
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.0		0.2	0.2			83.5	0.1		3.8	0.0
Delay (s)		19.5		15.7	15.6			103.1	7.6		23.2	6.9
Level of Service		B		B	B			F	A		C	A
Approach Delay (s)		19.5			15.6				14.8			7.8
Approach LOS		B			B				B			A

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	40.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	3
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	22	250	841	22	16	154	1073	756	16	69	146	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	0.99	0.97		1.00	0.99	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.96	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1719	6197			1752	5697	1231		1696	1435	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1719	6197			1752	5697	1231		1696	1435	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	250	841	22	16	154	1073	756	16	69	146	3
RTOR Reduction (vph)	0	0	2	0	0	0	40	249	0	0	129	0
Lane Group Flow (vph)	0	272	861	0	0	170	1411	129	0	85	17	0
Confl. Peds. (#/hr)		12		1		1		12	64			
Confl. Bikes (#/hr)				1							1	
Heavy Vehicles (%)	5%	5%	5%	5%	3%	3%	3%	3%	11%	11%	11%	3%
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		20.3	42.1			15.2	37.0	37.0		12.7	12.7	
Effective Green, g (s)		20.3	42.1			15.2	37.0	37.0		12.7	12.7	
Actuated g/C Ratio		0.19	0.39			0.14	0.34	0.34		0.12	0.12	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		322	2411			246	1948	420		199	168	
v/s Ratio Prot		c0.16	0.14			0.10	c0.25			c0.05		
v/s Ratio Perm								0.11			0.01	
v/c Ratio		0.84	0.36			0.69	0.72	0.31		0.43	0.10	
Uniform Delay, d1		42.4	23.4			44.3	31.1	26.2		44.4	42.7	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		17.3	0.0			6.6	1.2	0.2		0.5	0.1	
Delay (s)		59.8	23.5			50.9	32.3	26.3		44.9	42.8	
Level of Service		E	C			D	C	C		D	D	
Approach Delay (s)			32.2				32.7			43.5		
Approach LOS			C				C			D		

Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	108.2	Sum of lost time (s)	21.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	298	149	69
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.96	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.95	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3400	1684	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3400	1684	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	298	149	69
RTOR Reduction (vph)	0	10	0
Lane Group Flow (vph)	301	208	0
Confl. Peds. (#/hr)	1		64
Confl. Bikes (#/hr)			1
Heavy Vehicles (%)	3%	3%	3%
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	17.2	17.2	
Effective Green, g (s)	17.2	17.2	
Actuated g/C Ratio	0.16	0.16	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	540	267	
v/s Ratio Prot	0.09	c0.12	
v/s Ratio Perm			
v/c Ratio	0.56	0.78	
Uniform Delay, d1	42.0	43.7	
Progression Factor	1.00	1.00	
Incremental Delay, d2	0.7	12.3	
Delay (s)	42.7	55.9	
Level of Service	D	E	
Approach Delay (s)		48.3	
Approach LOS		D	

Intersection Summary

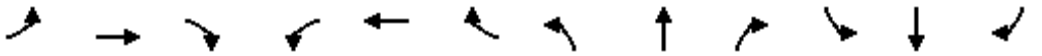
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	4	4	395	21	3	61	820	168	1	133	171	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00		1.00	0.91	1.00		1.00	1.00	0.88
Frpb, ped/bikes		1.00	1.00	0.98		1.00	1.00	0.98		1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1375	2756	1213		1719	4940	1509		1652	1743	2574
Flt Permitted		0.33	1.00	1.00		0.95	1.00	1.00		0.65	1.00	1.00
Satd. Flow (perm)		478	2756	1213		1719	4940	1509		1129	1743	2574
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	4	395	21	3	61	820	168	1	133	171	254
RTOR Reduction (vph)	0	0	0	16	0	0	0	106	0	0	0	201
Lane Group Flow (vph)	0	8	395	5	0	64	820	62	0	134	171	53
Confl. Peds. (#/hr)		6		4		4		6		4		
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	31%	31%	31%	31%	5%	5%	5%	5%	9%	9%	9%	9%
Turn Type	Perm	Perm	NA	Perm	Prot	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases			6		5	5	2				4	
Permitted Phases	6	6		6				2	4	4		4
Actuated Green, G (s)		20.6	20.6	20.6		7.4	32.0	32.0		17.8	17.8	17.8
Effective Green, g (s)		20.6	20.6	20.6		7.4	32.0	32.0		17.8	17.8	17.8
Actuated g/C Ratio		0.24	0.24	0.24		0.09	0.37	0.37		0.21	0.21	0.21
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		114	659	290		147	1836	560		233	360	532
v/s Ratio Prot			c0.14			0.04	c0.17				0.10	
v/s Ratio Perm		0.02		0.00				0.04		c0.12		0.02
v/c Ratio		0.07	0.60	0.02		0.44	0.45	0.11		0.58	0.47	0.10
Uniform Delay, d1		25.3	29.1	25.0		37.4	20.4	17.7		30.7	30.0	27.7
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.3	1.5	0.0		2.1	0.2	0.1		3.4	1.0	0.1
Delay (s)		25.6	30.6	25.0		39.4	20.6	17.8		34.2	31.0	27.7
Level of Service		C	C	C		D	C	B		C	C	C
Approach Delay (s)			30.2				21.3				30.3	
Approach LOS			C				C				C	

Intersection Summary			
HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	308	145	26
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.0	4.0	
Lane Util. Factor	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.98	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	1752	1799	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	1752	1799	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	308	145	26
RTOR Reduction (vph)	0	3	0
Lane Group Flow (vph)	308	168	0
Confl. Peds. (#/hr)			4
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	3%	3%	3%
Turn Type	Prot	NA	
Protected Phases	3	8	
Permitted Phases			
Actuated Green, G (s)	24.3	46.1	
Effective Green, g (s)	24.3	46.1	
Actuated g/C Ratio	0.28	0.54	
Clearance Time (s)	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	
Lane Grp Cap (vph)	494	963	
v/s Ratio Prot	c0.18	0.09	
v/s Ratio Perm			
v/c Ratio	0.62	0.17	
Uniform Delay, d1	26.9	10.2	
Progression Factor	1.00	1.00	
Incremental Delay, d2	2.5	0.1	
Delay (s)	29.4	10.3	
Level of Service	C	B	
Approach Delay (s)		22.6	
Approach LOS		C	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	810	11	85	986	354	32	181	122	158	52	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.97	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		5057		1752	5036	1549	1671	4387	1286	1480	2959	1324
Flt Permitted		0.77		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3926		1752	5036	1549	1671	4387	1286	1480	2959	1324
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	68	810	11	85	986	354	32	181	122	158	52	10
RTOR Reduction (vph)	0	0	0	0	0	133	0	47	63	0	0	8
Lane Group Flow (vph)	0	889	0	85	986	221	32	186	7	158	52	2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	8%	8%	8%	22%	22%	22%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		58.4		9.3	71.7	71.7	5.4	11.8	11.8	17.5	23.9	23.9
Effective Green, g (s)		58.4		9.3	71.7	71.7	5.4	11.8	11.8	17.5	23.9	23.9
Actuated g/C Ratio		0.51		0.08	0.62	0.62	0.05	0.10	0.10	0.15	0.21	0.21
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1993		141	3139	965	78	450	131	225	614	275
v/s Ratio Prot				c0.05	0.20		0.02	c0.04		c0.11	0.02	
v/s Ratio Perm		c0.23				0.14			0.01			0.00
v/c Ratio		0.45		0.60	0.31	0.23	0.41	0.41	0.05	0.70	0.08	0.01
Uniform Delay, d1		18.0		51.1	10.1	9.5	53.3	48.4	46.6	46.3	36.7	36.1
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.7		7.1	0.3	0.6	3.5	0.6	0.2	9.5	0.1	0.0
Delay (s)		18.7		58.1	10.4	10.1	56.7	49.0	46.7	55.8	36.8	36.2
Level of Service		B		E	B	B	E	D	D	E	D	D
Approach Delay (s)		18.7			13.2			49.3			50.4	
Approach LOS		B			B			D			D	

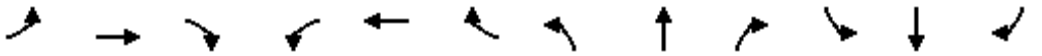
Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1046	679	194	699	1221	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3330		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3330		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1046	679	194	699	1221	211
RTOR Reduction (vph)	176	0	0	0	0	0
Lane Group Flow (vph)	1549	0	194	699	1221	211
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		10.0	37.0	14.0	59.0
Effective Green, g (s)	23.0		10.0	37.0	14.0	59.0
Actuated g/C Ratio	0.39		0.17	0.63	0.24	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1298		300	2219	814	1583
v/s Ratio Prot	c0.47		c0.11	0.20	c0.36	
v/s Ratio Perm						0.13
v/c Ratio	1.19		0.65	0.32	1.50	0.13
Uniform Delay, d1	18.0		22.9	5.1	22.5	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	95.0		4.7	0.1	231.4	0.2
Delay (s)	113.0		27.6	5.2	253.9	0.2
Level of Service	F		C	A	F	A
Approach Delay (s)	113.0			10.1	216.6	
Approach LOS	F			B	F	

Intersection Summary			
HCM 2000 Control Delay	126.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	596	354	163	635	247	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	596	354	163	635	247	88
RTOR Reduction (vph)	0	220	0	0	0	70
Lane Group Flow (vph)	596	134	163	635	247	18
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	16.6	16.6	6.1	26.7	9.0	9.0
Effective Green, g (s)	16.6	16.6	6.1	26.7	9.0	9.0
Actuated g/C Ratio	0.38	0.38	0.14	0.61	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1344	601	479	2162	707	326
v/s Ratio Prot	c0.17		0.05	c0.18	c0.07	
v/s Ratio Perm		0.08				0.01
v/c Ratio	0.44	0.22	0.34	0.29	0.35	0.06
Uniform Delay, d1	10.1	9.2	17.0	4.0	14.8	13.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.4	0.1	0.3	0.1
Delay (s)	10.3	9.4	17.4	4.1	15.1	14.0
Level of Service	B	A	B	A	B	B
Approach Delay (s)	10.0			6.8	14.8	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	43.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	5	116	17	18	82	90	826	26	42	770	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1649	1736	1553	1736	3044		3367	3454		1736	3464	
Flt Permitted	0.69	1.00	1.00	0.75	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1196	1736	1553	1378	3044		3367	3454		1736	3464	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	5	116	17	18	82	90	826	26	42	770	10
RTOR Reduction (vph)	0	0	91	0	64	0	0	2	0	0	1	0
Lane Group Flow (vph)	4	5	25	17	36	0	90	850	0	42	779	0
Confl. Peds. (#/hr)									3	3		
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.1	10.1	10.1	10.1	10.1		3.5	22.6		2.4	21.5	
Effective Green, g (s)	10.1	10.1	10.1	10.1	10.1		3.5	22.6		2.4	21.5	
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.08	0.48		0.05	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	259	376	336	298	659		252	1675		89	1598	
v/s Ratio Prot					0.01		c0.03	c0.25		0.02	0.23	
v/s Ratio Perm	0.00	0.00	c0.02	0.01								
v/c Ratio	0.02	0.01	0.07	0.06	0.05		0.36	0.51		0.47	0.49	
Uniform Delay, d1	14.3	14.3	14.5	14.5	14.5		20.5	8.2		21.5	8.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0	0.2	0.2	0.1		0.3	0.1		1.4	0.1	
Delay (s)	14.4	14.4	14.7	14.6	14.5		20.8	8.3		22.9	8.8	
Level of Service	B	B	B	B	B		C	A		C	A	
Approach Delay (s)		14.7			14.5			9.5			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	11.5
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

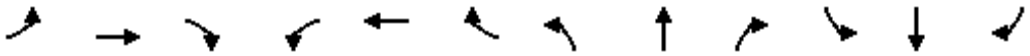
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	0	10	105	517	289	414	654	135	218	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91		0.97	0.95	1.00	0.97	0.95
Frpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt					1.00	0.95		1.00	1.00	0.85	1.00	1.00
Flt Protected					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)					1736	4697		3367	3471	1553	3367	3471
Flt Permitted					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)					1736	4697		3367	3471	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	10	105	517	289	414	654	135	218	535
RTOR Reduction (vph)	0	0	0	0	0	129	0	0	0	62	0	0
Lane Group Flow (vph)	0	0	0	0	115	677	0	414	654	73	218	535
Confl. Peds. (#/hr)	1						1					
Confl. Bikes (#/hr)			3									
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	Perm	NA		Prot	NA	Perm	Prot	NA
Protected Phases						8		5	2		1	6
Permitted Phases				8	8					2		
Actuated Green, G (s)					22.3	22.3		15.4	53.9	53.9	11.8	50.3
Effective Green, g (s)					22.3	22.3		15.4	53.9	53.9	11.8	50.3
Actuated g/C Ratio					0.22	0.22		0.15	0.54	0.54	0.12	0.50
Clearance Time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					387	1047		518	1870	837	397	1745
v/s Ratio Prot						c0.14		c0.12	c0.19		0.06	0.15
v/s Ratio Perm					0.07					0.05		
v/c Ratio					0.30	0.65		0.80	0.35	0.09	0.55	0.31
Uniform Delay, d1					32.3	35.3		40.8	13.1	11.1	41.6	14.6
Progression Factor					1.00	1.00		0.77	1.61	4.10	1.00	1.00
Incremental Delay, d2					0.4	1.4		7.7	0.5	0.2	1.6	0.5
Delay (s)					32.8	36.7		39.1	21.6	45.9	43.1	15.1
Level of Service					C	D		D	C	D	D	B
Approach Delay (s)		0.0				36.2			30.3			21.6
Approach LOS		A				D			C			C

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	141
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1532
Flt Permitted	1.00
Satd. Flow (perm)	1532
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	141
RTOR Reduction (vph)	70
Lane Group Flow (vph)	71
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	3
Heavy Vehicles (%)	4%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	50.3
Effective Green, g (s)	50.3
Actuated g/C Ratio	0.50
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	770
v/s Ratio Prot	
v/s Ratio Perm	0.05
v/c Ratio	0.09
Uniform Delay, d1	13.0
Progression Factor	1.00
Incremental Delay, d2	0.2
Delay (s)	13.2
Level of Service	B
Approach Delay (s)	
Approach LOS	

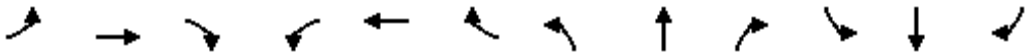
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	37	222	77	0	58	0	1061	280	21	470	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00		1.00		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5085	1556	3367		1553		3343	1466	1770	3539	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5085	1556	3367		1553		3343	1466	1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	119	37	222	77	0	58	0	1061	280	21	470	0
RTOR Reduction (vph)	0	0	194	0	0	54	0	0	107	0	0	0
Lane Group Flow (vph)	119	37	28	77	0	4	0	1061	173	21	470	0
Confl. Peds. (#/hr)									5	5		
Confl. Bikes (#/hr)			3						6			3
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	8%	8%	8%	2%	2%	2%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	12.4	12.4	12.4	6.5		6.5		61.9	61.9	3.2	69.1	
Effective Green, g (s)	12.4	12.4	12.4	6.5		6.5		61.9	61.9	3.2	69.1	
Actuated g/C Ratio	0.12	0.12	0.12	0.06		0.06		0.62	0.62	0.03	0.69	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	219	630	192	218		100		2069	907	56	2445	
v/s Ratio Prot	c0.07	0.01		c0.02				c0.32		c0.01	0.13	
v/s Ratio Perm			0.02			0.00			0.12			
v/c Ratio	0.54	0.06	0.14	0.35		0.04		0.51	0.19	0.38	0.19	
Uniform Delay, d1	41.1	38.7	39.1	44.7		43.8		10.6	8.2	47.4	5.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.76	1.88	
Incremental Delay, d2	2.7	0.0	0.3	1.0		0.2		0.9	0.5	4.1	0.2	
Delay (s)	43.9	38.7	39.4	45.7		44.0		11.5	8.7	40.0	10.5	
Level of Service	D	D	D	D		D		B	A	D	B	
Approach Delay (s)		40.7			45.0			11.0			11.8	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



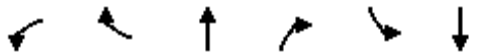
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	139	30	253	126	742	49	763	241	375	353	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1299	2522		3242	1759	1486	1671	4803	1480	3335	3392	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1299	2522		3242	1759	1486	1671	4803	1480	3335	3392	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	139	30	253	126	742	49	763	241	375	353	35
RTOR Reduction (vph)	0	19	0	0	0	134	0	0	140	0	6	0
Lane Group Flow (vph)	53	150	0	253	126	608	49	763	101	375	382	0
Confl. Peds. (#/hr)			2	2					3	3		
Confl. Bikes (#/hr)						1			4			
Heavy Vehicles (%)	39%	39%	39%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	5.7	11.9		11.4	17.6	33.8	11.8	20.4	31.8	16.2	24.8	
Effective Green, g (s)	5.7	11.9		11.4	17.6	33.8	11.8	20.4	31.8	16.2	24.8	
Actuated g/C Ratio	0.08	0.16		0.15	0.23	0.45	0.16	0.27	0.42	0.21	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	97	395		486	407	740	259	1290	698	711	1108	
v/s Ratio Prot	0.04	0.06		c0.08	0.07	c0.18	0.03	c0.16	0.02	0.11	0.11	
v/s Ratio Perm						0.23			0.05			
v/c Ratio	0.55	0.38		0.52	0.31	0.82	0.19	0.59	0.14	0.53	0.34	
Uniform Delay, d1	33.9	28.7		29.7	24.1	18.4	27.9	24.1	13.6	26.5	19.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.2	0.6		1.0	0.4	7.3	0.4	0.7	0.1	0.7	0.2	
Delay (s)	40.0	29.3		30.7	24.6	25.7	28.2	24.9	13.7	27.2	19.6	
Level of Service	D	C		C	C	C	C	C	B	C	B	
Approach Delay (s)		31.9			26.7			22.5			23.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	75.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

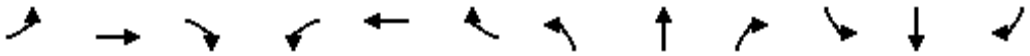
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	265	20	20	556	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1845			1860	1695	
Flt Permitted	1.00			0.98	0.98	
Satd. Flow (perm)	1845			1832	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	265	20	20	556	20	20
RTOR Reduction (vph)	3	0	0	0	17	0
Lane Group Flow (vph)	282	0	0	576	23	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	24.4			24.4	10.1	
Effective Green, g (s)	24.4			24.4	10.1	
Actuated g/C Ratio	0.34			0.34	0.14	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	620			616	236	
v/s Ratio Prot	0.15				c0.01	
v/s Ratio Perm				c0.31		
v/c Ratio	0.45			0.94	0.10	
Uniform Delay, d1	18.8			23.3	27.2	
Progression Factor	1.00			0.49	1.00	
Incremental Delay, d2	0.2			16.3	0.1	
Delay (s)	19.0			27.6	27.3	
Level of Service	B			C	C	
Approach Delay (s)	19.0			27.6	27.3	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	72.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	490	10	0	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1858			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1858			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	490	10	0	58
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	500	0	0	58
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.0		21.5			21.5
Effective Green, g (s)	1.0		21.5			21.5
Actuated g/C Ratio	0.01		0.30			0.30
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	25		565			567
v/s Ratio Prot	c0.01		c0.27			0.03
v/s Ratio Perm						
v/c Ratio	0.40		0.88			0.10
Uniform Delay, d1	34.5		23.4			17.6
Progression Factor	1.00		1.00			0.97
Incremental Delay, d2	10.2		15.3			0.0
Delay (s)	44.7		38.7			17.1
Level of Service	D		D			B
Approach Delay (s)	44.7		38.7			17.1
Approach LOS	D		D			B

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	105	36	553	48	29	14	20	165	29	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	105	36	553	48	29	14	20	165	29	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	694	91	214
Volume Left (vph)	105	48	20
Volume Right (vph)	553	14	29
Hadj (s)	-0.41	0.05	-0.03
Departure Headway (s)	4.3	5.4	5.6
Degree Utilization, x	0.82	0.14	0.34
Capacity (veh/h)	827	623	600
Control Delay (s)	23.8	9.3	11.5
Approach Delay (s)	23.8	9.3	11.5
Approach LOS	C	A	B

Intersection Summary				
Delay	19.8			
Level of Service	C			
Intersection Capacity Utilization	60.9%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	4	11	467	8	14	597
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	11	467	8	14	597
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1097	474			476	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1097	474			476	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	98			99	
cM capacity (veh/h)	233	589			1085	

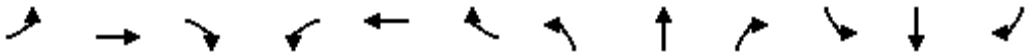
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	475	611
Volume Left	4	0	14
Volume Right	11	8	0
cSH	418	1700	1085
Volume to Capacity	0.04	0.28	0.01
Queue Length 95th (ft)	3	0	1
Control Delay (s)	13.9	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	13.9	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		53.3%	ICU Level of Service A
Analysis Period (min)		15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	0	632	248	36	2	399	2	0	0	6	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	2	0	632	248	36	2	399	2	0	0	6	11
Pedestrians		1										
Lane Width (ft)		12.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	832	812	12	1444	818	1	18			2		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	832	812	12	1444	818	1	18			2		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	41	0	85	100	75			100		
cM capacity (veh/h)	190	237	1067	31	235	1089	1603			1634		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1
Volume Total	634	248	38	399	1	1	17
Volume Left	2	248	0	399	0	0	0
Volume Right	632	0	2	0	0	0	11
cSH	1052	31	245	1603	1700	1700	1700
Volume to Capacity	0.60	8.04	0.16	0.25	0.00	0.00	0.01
Queue Length 95th (ft)	105	Err	13	25	0	0	0
Control Delay (s)	13.5	Err	22.4	8.0	0.0	0.0	0.0
Lane LOS	B	F	C	A			
Approach Delay (s)	13.5	8673.4		7.9			0.0
Approach LOS	B	F					

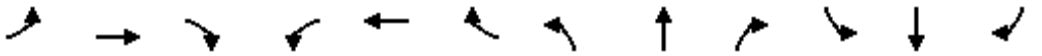
Intersection Summary				
Average Delay	1862.7			
Intersection Capacity Utilization	91.8%	ICU Level of Service	F	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	424	481	41	0	0	0	13	31	14	476	99	305
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	424	481	41	0	0	0	13	31	14	476	99	305

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	665	282	58	476	404
Volume Left (vph)	424	0	13	476	0
Volume Right (vph)	0	41	14	0	305
Hadj (s)	0.34	-0.08	0.02	0.50	-0.49
Departure Headway (s)	7.4	6.9	7.5	7.4	6.4
Degree Utilization, x	1.0	0.54	0.12	0.97	0.72
Capacity (veh/h)	498	515	470	478	553
Control Delay (s)	194.3	16.6	11.6	60.7	22.7
Approach Delay (s)	141.4		11.6	43.2	
Approach LOS	F		B	E	

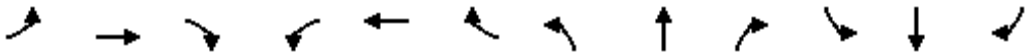
Intersection Summary				
Delay	91.6			
Level of Service	F			
Intersection Capacity Utilization	66.6%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	738	1	11	326	0	2	0	13	223	99	444
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	738	1	11	326	0	2	0	13	223	99	444
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	326			742			1583	1090	372	730	1090	326
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	326			742			1583	1090	372	730	1090	326
tC, single (s)	4.1			4.8			7.5	6.5	7.1	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.5			3.5	4.0	3.4	3.5	4.0	3.3
p0 queue free %	100			98			87	100	98	26	53	34
cM capacity (veh/h)	1245			683			16	213	606	303	211	673

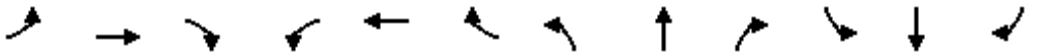
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	492	247	11	326	15	322	444
Volume Left	0	0	11	0	2	223	0
Volume Right	0	1	0	0	13	0	444
cSH	1700	1700	683	1700	101	267	673
Volume to Capacity	0.29	0.15	0.02	0.19	0.15	1.20	0.66
Queue Length 95th (ft)	0	0	1	0	12	373	124
Control Delay (s)	0.0	0.0	10.4	0.0	46.7	161.7	20.1
Lane LOS			B		E	F	C
Approach Delay (s)	0.0		0.3		46.7	79.6	
Approach LOS					E	F	

Intersection Summary			
Average Delay	33.3		
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	521	65	205	16	2	28	177	18	21	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.89			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1805	1663			1631	1517	1787	1900	1503			
Flt Permitted	0.95	1.00			0.65	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1805	1663			1105	1517	1787	1900	1503			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	521	65	205	16	2	28	177	18	21	0	0	0
RTOR Reduction (vph)	0	69	0	0	0	23	0	0	18	0	0	0
Lane Group Flow (vph)	521	201	0	0	18	5	177	18	3	0	0	0
Confl. Peds. (#/hr)						1			1			
Heavy Vehicles (%)	0%	2%	1%	13%	0%	4%	1%	0%	5%	0%	0%	0%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	19.7	30.5			7.3	7.3	7.9	7.9	7.9			
Effective Green, g (s)	18.7	30.5			7.8	7.8	7.4	7.4	7.4			
Actuated g/C Ratio	0.41	0.66			0.17	0.17	0.16	0.16	0.16			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	735	1105			187	257	288	306	242			
v/s Ratio Prot	c0.29	c0.12						0.01				
v/s Ratio Perm					0.02	0.00	c0.10		0.00			
v/c Ratio	0.71	0.18			0.10	0.02	0.61	0.06	0.01			
Uniform Delay, d1	11.3	2.9			16.1	15.9	17.9	16.3	16.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	3.1	0.1			0.1	0.0	2.7	0.0	0.0			
Delay (s)	14.5	3.0			16.2	15.9	20.7	16.3	16.2			
Level of Service	B	A			B	B	C	B	B			
Approach Delay (s)		10.6			16.0			19.9			0.0	
Approach LOS		B			B			B			A	

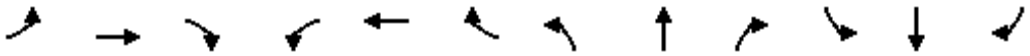
Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	45.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	709	2	2	180	0	3	0	2	79	1	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.95
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			0.95			1.00	0.85
Flt Protected		1.00			1.00			0.97			0.95	1.00
Satd. Flow (prot)		1899			1880			1454			1721	1523
Flt Permitted		1.00			1.00			0.97			0.95	1.00
Satd. Flow (perm)		1899			1872			1454			1721	1523
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	709	2	2	180	0	3	0	2	79	1	420
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	345
Lane Group Flow (vph)	0	711	0	0	182	0	0	0	0	0	80	75
Confl. Peds. (#/hr)	2					2						20
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	50%	4%	100%	1%
Turn Type		NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		24.3			24.3			0.7			8.0	8.0
Effective Green, g (s)		24.3			24.3			0.7			8.0	8.0
Actuated g/C Ratio		0.54			0.54			0.02			0.18	0.18
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		1025			1010			22			305	270
v/s Ratio Prot		c0.37						c0.00			0.05	
v/s Ratio Perm					0.10							c0.05
v/c Ratio		0.69			0.18			0.00			0.26	0.28
Uniform Delay, d1		7.6			5.3			21.8			16.0	16.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.2			0.1			0.1			0.2	0.2
Delay (s)		9.8			5.4			21.9			16.1	16.2
Level of Service		A			A			C			B	B
Approach Delay (s)		9.8			5.4			21.9			16.2	
Approach LOS		A			A			C			B	

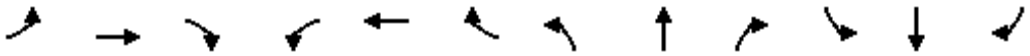
Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



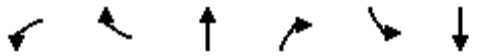
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	99	157	524	181	0	46	0	669	139	583	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.98	1.00	1.00		1.00		1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		0.99	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1881	1557	3433	1881		1770		2814		3506	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1881	1557	3433	1881		1770		2814		3506	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	99	157	524	181	0	46	0	669	139	583	31
RTOR Reduction (vph)	0	0	142	0	0	0	0	0	341	0	4	0
Lane Group Flow (vph)	0	99	15	524	181	0	46	0	328	0	749	0
Confl. Peds. (#/hr)			2			20			20			20
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	2%	0%	1%	1%	1%	0%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		9.6	9.6	38.7	53.3		6.4		50.1		26.3	
Effective Green, g (s)		9.6	9.6	38.7	53.3		5.4		49.1		26.3	
Actuated g/C Ratio		0.10	0.10	0.39	0.53		0.05		0.49		0.26	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		180	149	1328	1002		95		1381		922	
v/s Ratio Prot		c0.05		c0.15	0.10		c0.03		0.12		c0.21	
v/s Ratio Perm			0.01									
v/c Ratio		0.55	0.10	0.39	0.18		0.48		0.24		0.81	
Uniform Delay, d1		43.1	41.3	22.2	12.1		45.9		14.7		34.5	
Progression Factor		1.00	1.00	1.03	0.77		1.00		1.00		1.00	
Incremental Delay, d2		2.1	0.1	0.7	0.3		1.4		0.0		5.2	
Delay (s)		45.2	41.4	23.5	9.6		47.4		14.7		39.8	
Level of Service		D	D	C	A		D		B		D	
Approach Delay (s)		42.8			19.9			16.8			39.8	
Approach LOS		D			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	613	301	0	0	249	136	449	1	212	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3467	1881			1810	1577		1810	1599			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3467	1881			1810	1577		1810	1599			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	613	301	0	0	249	136	449	1	212	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	108	0	0	116	0	0	0
Lane Group Flow (vph)	613	301	0	0	249	28	0	450	96	0	0	0
Confl. Peds. (#/hr)			3	3		1						
Heavy Vehicles (%)	1%	1%	0%	0%	5%	1%	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	20.4	45.6			20.7	20.7		45.4	45.4			
Effective Green, g (s)	20.4	45.6			20.7	20.7		45.4	45.4			
Actuated g/C Ratio	0.20	0.46			0.21	0.21		0.45	0.45			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	707	857			374	326		821	725			
v/s Ratio Prot	c0.18	0.16			c0.14							
v/s Ratio Perm						0.02		0.25	0.06			
v/c Ratio	0.87	0.35			0.67	0.09		0.55	0.13			
Uniform Delay, d1	38.5	17.6			36.5	32.0		19.8	15.9			
Progression Factor	0.99	1.26			1.00	1.00		1.00	1.00			
Incremental Delay, d2	11.0	0.5			5.8	0.2		2.6	0.4			
Delay (s)	49.1	22.7			42.3	32.3		22.5	16.2			
Level of Service	D	C			D	C		C	B			
Approach Delay (s)		40.4			38.8			20.5			0.0	
Approach LOS		D			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	719	395	270	996
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	719	395	270	996
Pedestrians	2					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.87					
vC, conflicting volume	1956	559			721	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1796	559			721	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			69	
cM capacity (veh/h)	44	478			883	

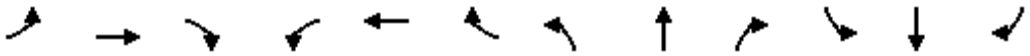
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	479	635	270	498	498
Volume Left	0	0	270	0	0
Volume Right	0	395	0	0	0
cSH	1700	1700	883	1700	1700
Volume to Capacity	0.28	0.37	0.31	0.29	0.29
Queue Length 95th (ft)	0	0	32	0	0
Control Delay (s)	0.0	0.0	10.9	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.3		
Approach LOS					

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	54.2%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	366	97	6	244	457	163	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.93	
Flt Protected	1.00	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3539	1583		1766	3539	1678	
Flt Permitted	1.00	1.00		0.42	1.00	0.98	
Satd. Flow (perm)	3539	1583		787	3539	1678	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	366	97	6	244	457	163	166
RTOR Reduction (vph)	0	30	0	0	0	40	0
Lane Group Flow (vph)	366	67	0	250	457	289	0
Confl. Peds. (#/hr)		5		5			10
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	11.5	30.8		24.5	24.5	13.8	
Effective Green, g (s)	11.5	30.8		24.5	24.5	13.8	
Actuated g/C Ratio	0.24	0.64		0.51	0.51	0.29	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	842	1009		601	1795	479	
v/s Ratio Prot	0.10	0.04		c0.09	0.13	c0.17	
v/s Ratio Perm				c0.12			
v/c Ratio	0.43	0.07		0.42	0.25	0.60	
Uniform Delay, d1	15.6	3.3		7.0	6.7	14.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.0		0.5	0.1	2.1	
Delay (s)	16.0	3.3		7.4	6.8	17.0	
Level of Service	B	A		A	A	B	
Approach Delay (s)	13.3				7.0	17.0	
Approach LOS	B				A	B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	48.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

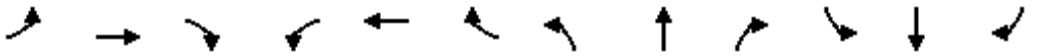
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	229	10	125	265	222	8	221	78	164	382	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		1.00			1.00	0.85		0.96		1.00	0.97	
Flt Protected		0.99			0.98	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1826			3483	1583		3388		1770	1793	
Flt Permitted		0.99			0.98	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1826			3483	1583		3388		1770	1793	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	229	10	125	265	222	8	221	78	164	382	101
RTOR Reduction (vph)	0	1	0	0	0	90	0	33	0	0	7	0
Lane Group Flow (vph)	0	336	0	0	390	132	0	274	0	164	476	0
Confl. Peds. (#/hr)	3		11	11		3	12		1	1		12
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		22.0			15.6	30.3		13.0		30.3	30.3	
Effective Green, g (s)		22.0			15.6	30.3		13.0		30.3	30.3	
Actuated g/C Ratio		0.24			0.17	0.33		0.14		0.33	0.33	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		432			584	516		474		577	584	
v/s Ratio Prot		c0.18			c0.11	0.08		c0.08		0.09	c0.27	
v/s Ratio Perm												
v/c Ratio		0.78			0.67	0.26		0.58		0.28	0.81	
Uniform Delay, d1		33.2			36.2	23.0		37.4		23.2	28.7	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		8.6			2.9	0.3		1.7		0.3	8.5	
Delay (s)		41.8			39.1	23.3		39.1		23.5	37.3	
Level of Service		D			D	C		D		C	D	
Approach Delay (s)		41.8			33.4			39.1			33.8	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	92.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	601	177	38	436	29	97	179	29	97	256	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			0.99			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (prot)	1736	1881	1575	1805	1846			3384			3409	1449
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (perm)	1736	1881	1575	1805	1846			3384			3409	1449
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	162	601	177	38	436	29	97	179	29	97	256	125
RTOR Reduction (vph)	0	0	67	0	2	0	0	5	0	0	0	0
Lane Group Flow (vph)	162	601	110	38	463	0	0	300	0	0	353	125
Confl. Peds. (#/hr)			2						17			4
Confl. Bikes (#/hr)						1						1
Heavy Vehicles (%)	4%	1%	1%	0%	2%	0%	7%	1%	0%	3%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	15.9	45.9	45.9	5.4	35.4			15.8			17.7	104.3
Effective Green, g (s)	15.9	47.4	47.4	5.4	36.9			16.8			18.7	104.3
Actuated g/C Ratio	0.15	0.45	0.45	0.05	0.35			0.16			0.18	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	264	854	715	93	653			545			611	1449
v/s Ratio Prot	0.09	c0.32		0.02	c0.25			c0.09			c0.10	
v/s Ratio Perm			0.07									0.09
v/c Ratio	0.61	0.70	0.15	0.41	0.71			0.55			0.58	0.09
Uniform Delay, d1	41.3	22.8	16.7	47.9	29.1			40.3			39.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	4.2	2.7	0.1	2.9	3.5			1.2			1.3	0.1
Delay (s)	45.5	25.5	16.8	50.8	32.6			41.5			40.5	0.1
Level of Service	D	C	B	D	C			D			D	A
Approach Delay (s)		27.3			34.0			41.5			30.0	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	104.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	3	611	17	18	25	434	183	10	12	18	242	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0				4.0			4.0			4.0
Lane Util. Factor		0.95				0.95			1.00			0.95
Frpb, ped/bikes		1.00				0.99			1.00			0.99
Flpb, ped/bikes		1.00				1.00			0.99			1.00
Frt		1.00				0.96			0.94			0.98
Flt Protected		1.00				1.00			0.99			0.96
Satd. Flow (prot)		3517				3353			1715			3297
Flt Permitted		0.95				0.89			0.89			0.75
Satd. Flow (perm)		3354				2996			1550			2574
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	611	17	18	25	434	183	10	12	18	242	12
RTOR Reduction (vph)	0	2	0	0	0	50	0	0	15	0	0	24
Lane Group Flow (vph)	0	629	0	0	0	610	0	0	25	0	0	273
Confl. Peds. (#/hr)	28		57		57		28	42				
Confl. Bikes (#/hr)			9				1					
Turn Type	Perm	NA			Perm	NA		Perm	NA		Perm	NA
Protected Phases		1				1			2			2
Permitted Phases	1				1			2			2	
Actuated Green, G (s)		44.8				44.8			12.2			12.2
Effective Green, g (s)		44.8				44.8			12.2			12.2
Actuated g/C Ratio		0.69				0.69			0.19			0.19
Clearance Time (s)		4.0				4.0			4.0			4.0
Vehicle Extension (s)		3.0				3.0			3.0			3.0
Lane Grp Cap (vph)		2311				2064			290			483
v/s Ratio Prot												
v/s Ratio Perm		0.19				c0.20			0.02			c0.11
v/c Ratio		0.27				0.30			0.09			0.87dl
Uniform Delay, d1		3.9				3.9			21.8			24.0
Progression Factor		1.00				1.00			1.00			1.00
Incremental Delay, d2		0.3				0.4			0.1			1.5
Delay (s)		4.2				4.3			21.9			25.5
Level of Service		A				A			C			C
Approach Delay (s)		4.2				4.3			21.9			25.5
Approach LOS		A				A			C			C

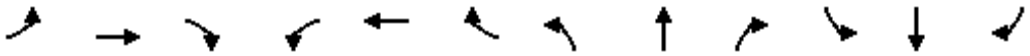
Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

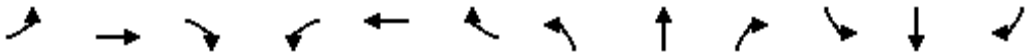
Movement	SBR
Lane Configurations	
Volume (vph)	43
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	43
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	42
Confl. Bikes (#/hr)	3
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



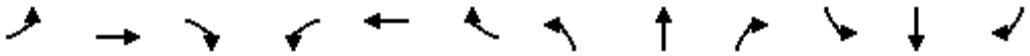
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	823	215	106	497	76	26	130	7	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			1.00				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.98			0.99				
Flt Protected		1.00	1.00		0.99			0.99				
Satd. Flow (prot)		3539	1573		3448			3482				
Flt Permitted		1.00	1.00		0.66			0.99				
Satd. Flow (perm)		3539	1573		2278			3482				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	823	215	106	497	76	26	130	7	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	823	215	0	658	0	0	160	0	0	0	0
Confl. Peds. (#/hr)	22								17			
Confl. Bikes (#/hr)			13			3			17			
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		24.2	57.5		24.2			33.3				
Effective Green, g (s)		24.2	57.5		24.2			33.3				
Actuated g/C Ratio		0.37	0.88		0.37			0.51				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		1317	1500		848			1783				
v/s Ratio Prot		0.23	c0.07									
v/s Ratio Perm			0.06		c0.29			0.05				
v/c Ratio		0.62	0.14		0.78			0.09				
Uniform Delay, d1		16.7	0.5		18.0			8.1				
Progression Factor		0.67	2.72		1.00			1.00				
Incremental Delay, d2		0.9	0.0		4.5			0.1				
Delay (s)		12.2	1.4		22.5			8.2				
Level of Service		B	A		C			A				
Approach Delay (s)		10.0			22.5			8.2			0.0	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



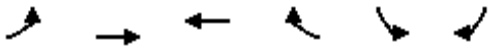
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	265	33	19	182	33	27	264	24	39	337	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.99			0.98	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		1815			1806			3448			3400	
Flt Permitted		0.96			0.96			0.90			0.90	
Satd. Flow (perm)		1759			1740			3122			3079	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	265	33	19	182	33	27	264	24	39	337	51
RTOR Reduction (vph)	0	7	0	0	9	0	0	7	0	0	13	0
Lane Group Flow (vph)	0	322	0	0	225	0	0	308	0	0	414	0
Confl. Peds. (#/hr)	29		42	42		29	39		26	26		39
Confl. Bikes (#/hr)			11			3			9			16
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		31.0			16.2			25.3			25.3	
Effective Green, g (s)		27.0			16.2			25.3			25.3	
Actuated g/C Ratio		0.41			0.25			0.39			0.39	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		727			431			1209			1192	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			c0.13			0.10			c0.13	
v/c Ratio		0.44			0.52			0.25			0.35	
Uniform Delay, d1		13.7			21.2			13.6			14.2	
Progression Factor		0.11			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.5			0.5			0.8	
Delay (s)		1.7			21.7			14.1			15.0	
Level of Service		A			C			B			B	
Approach Delay (s)		1.7			21.7			14.1			15.0	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



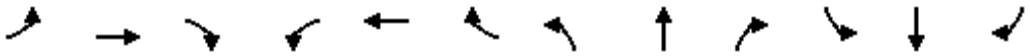
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	649	99	17	281	45	114	296	25	54	270	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.96			0.94		1.00	0.97		1.00	0.95	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3334			1701		1770	1793		1770	1728	
Flt Permitted		0.95			0.95		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3176			1621		1770	1793		1770	1728	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	649	99	17	281	45	114	296	25	54	270	38
RTOR Reduction (vph)	0	9	0	0	4	0	0	4	0	0	8	0
Lane Group Flow (vph)	0	745	0	0	339	0	114	317	0	54	300	0
Confl. Peds. (#/hr)	153		85	85		153			216			136
Confl. Bikes (#/hr)			3			13			19			9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		46.8			46.8		15.1	26.7		11.0	22.6	
Effective Green, g (s)		46.8			46.8		15.1	26.7		11.0	22.6	
Actuated g/C Ratio		0.47			0.47		0.15	0.27		0.11	0.23	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1486			758		267	478		194	390	
v/s Ratio Prot							c0.06	0.18		0.03	c0.17	
v/s Ratio Perm		c0.23			0.21							
v/c Ratio		0.50			0.45		0.43	0.66		0.28	0.77	
Uniform Delay, d1		18.5			17.9		38.5	32.6		40.9	36.3	
Progression Factor		1.00			1.00		0.96	0.68		1.00	1.00	
Incremental Delay, d2		1.2			1.9		0.3	2.3		0.3	8.0	
Delay (s)		19.7			19.8		37.3	24.5		41.1	44.3	
Level of Service		B			B		D	C		D	D	
Approach Delay (s)		19.7			19.8			27.9			43.8	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



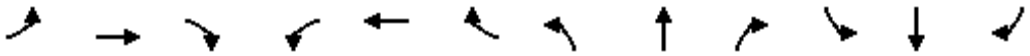
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	98	456	386	121	233	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.97	
Flt Protected	0.95	1.00	1.00		0.96	
Satd. Flow (prot)	1770	1863	1756		1727	
Flt Permitted	0.95	1.00	1.00		0.96	
Satd. Flow (perm)	1770	1863	1756		1727	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	456	386	121	233	70
RTOR Reduction (vph)	0	0	6	0	12	0
Lane Group Flow (vph)	98	456	501	0	291	0
Confl. Peds. (#/hr)	99			99	29	
Confl. Bikes (#/hr)				6		4
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	8.1	69.5	56.9		22.0	
Effective Green, g (s)	8.1	69.5	56.9		22.0	
Actuated g/C Ratio	0.08	0.70	0.57		0.22	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	143	1294	999		379	
v/s Ratio Prot	c0.06	0.24	c0.29		c0.17	
v/s Ratio Perm						
v/c Ratio	0.69	0.35	0.50		0.77	
Uniform Delay, d1	44.7	6.2	13.0		36.6	
Progression Factor	0.91	1.89	0.45		1.00	
Incremental Delay, d2	12.5	0.7	1.6		9.0	
Delay (s)	53.2	12.3	7.4		45.6	
Level of Service	D	B	A		D	
Approach Delay (s)		19.6	7.4		45.6	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	456	113	111	533	73	116	331	85	69	441	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.97			0.99			0.98		1.00	0.99	
Flt Protected		1.00			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1811			1823			3417		1770	3489	
Flt Permitted		0.96			0.83			0.65		0.32	1.00	
Satd. Flow (perm)		1740			1526			2255		596	3489	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	456	113	111	533	73	116	331	85	69	441	46
RTOR Reduction (vph)	0	6	0	0	3	0	0	19	0	0	9	0
Lane Group Flow (vph)	0	588	0	0	714	0	0	513	0	69	478	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		62.0			62.0			28.0		28.0	28.0	
Effective Green, g (s)		62.0			62.0			28.0		28.0	28.0	
Actuated g/C Ratio		0.62			0.62			0.28		0.28	0.28	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		1078			946			631		166	976	
v/s Ratio Prot											0.14	
v/s Ratio Perm		0.34			c0.47			c0.23		0.12		
v/c Ratio		0.55			0.75			0.81		0.42	0.49	
Uniform Delay, d1		10.9			13.6			33.6		29.3	30.0	
Progression Factor		1.00			1.00			1.00		0.71	0.73	
Incremental Delay, d2		2.0			5.6			7.9		1.6	0.4	
Delay (s)		12.9			19.1			41.5		22.5	22.3	
Level of Service		B			B			D		C	C	
Approach Delay (s)		12.9			19.1			41.5			22.4	
Approach LOS		B			B			D			C	

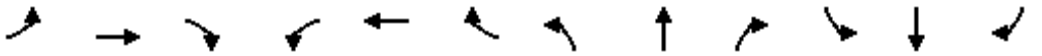
Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	116.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	187	41	57	145	42	31	498	71	48	625	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99		0.95	1.00		0.99	1.00		0.99	1.00	
Frt		0.98		1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1763		1677	1768		1743	1816		1748	1825	
Flt Permitted		0.93		0.46	1.00		0.29	1.00		0.37	1.00	
Satd. Flow (perm)		1650		818	1768		528	1816		672	1825	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	187	41	57	145	42	31	498	71	48	625	63
RTOR Reduction (vph)	0	10	0	0	16	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	260	0	57	171	0	31	561	0	48	682	0
Confl. Peds. (#/hr)	29		52	52		29	56		36	36		56
Confl. Bikes (#/hr)			11			4			7			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		431		213	462		324	1117		413	1123	
v/s Ratio Prot					0.10			0.31			c0.37	
v/s Ratio Perm		c0.16		0.07			0.06			0.07		
v/c Ratio		0.60		0.27	0.37		0.10	0.50		0.12	0.61	
Uniform Delay, d1		21.0		19.1	19.6		5.1	7.0		5.2	7.7	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		6.2		0.7	0.5		0.6	1.6		0.6	2.4	
Delay (s)		27.2		19.7	20.1		5.7	8.6		5.8	10.1	
Level of Service		C		B	C		A	A		A	B	
Approach Delay (s)		27.2			20.0			8.4			9.8	
Approach LOS		C			C			A			A	

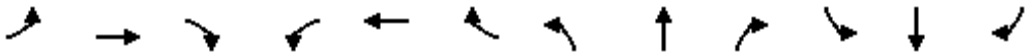
Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	223	208	34	3	154	55	64	392	14	69	439	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00		1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1818			3374		1770	1851		1770	1863	1492
Flt Permitted	0.95	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1818			3214		1770	1851		1770	1863	1492
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	223	208	34	3	154	55	64	392	14	69	439	215
RTOR Reduction (vph)	0	6	0	0	35	0	0	1	0	0	0	140
Lane Group Flow (vph)	223	236	0	0	177	0	64	405	0	69	439	75
Confl. Peds. (#/hr)	4		6	6		4	39		19	19		39
Confl. Bikes (#/hr)			4						4			8
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	15.3	44.6			24.3		5.4	31.1		4.7	32.4	32.4
Effective Green, g (s)	15.3	44.6			24.3		5.4	31.1		4.7	32.4	32.4
Actuated g/C Ratio	0.17	0.48			0.26		0.06	0.34		0.05	0.35	0.35
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	293	877			845		103	623		90	653	523
v/s Ratio Prot	c0.13	c0.13					0.04	0.22		c0.04	c0.24	
v/s Ratio Perm					0.06							0.05
v/c Ratio	0.76	0.27			0.21		0.62	0.65		0.77	0.67	0.14
Uniform Delay, d1	36.8	14.2			26.6		42.5	26.0		43.3	25.5	20.5
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.0	0.8			0.6		8.1	5.2		28.9	5.5	0.6
Delay (s)	46.8	15.0			27.1		50.6	31.2		72.2	30.9	21.1
Level of Service	D	B			C		D	C		E	C	C
Approach Delay (s)		30.2			27.1			33.8			31.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	92.4	Sum of lost time (s)	17.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	534	59	66	333	12	51	310	76	17	373	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			1.00			0.97			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3434			3477			3406			3434	
Flt Permitted		0.72			0.75			0.85			0.94	
Satd. Flow (perm)		2491			2644			2911			3221	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	124	534	59	66	333	12	51	310	76	17	373	69
RTOR Reduction (vph)	0	8	0	0	3	0	0	23	0	0	18	0
Lane Group Flow (vph)	0	709	0	0	408	0	0	414	0	0	441	0
Confl. Peds. (#/hr)	51		45	45		51	18		9	9		18
Confl. Bikes (#/hr)			3			3			8			7
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1136			892			982			1419	
v/s Ratio Prot		c0.03									c0.02	
v/s Ratio Perm		c0.24			0.15			c0.14			0.12	
v/c Ratio		0.62			0.46			0.42			0.31	
Uniform Delay, d1		17.4			20.8			20.5			14.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.6			1.7			1.3			0.6	
Delay (s)		20.0			22.5			21.8			15.2	
Level of Service		B			C			C			B	
Approach Delay (s)		20.0			22.5			21.8			15.2	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

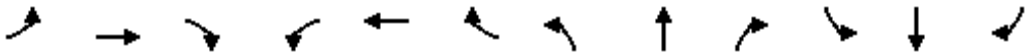
c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Volume (vph)	59	9	311	37	18	345	38	5	13	184	2	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0			4.0			4.0	4.0	4.0	
Lane Util. Factor			1.00			1.00			1.00	1.00	1.00	
Frpb, ped/bikes			0.99			0.99			1.00	1.00	0.93	
Flpb, ped/bikes			1.00			1.00			0.99	1.00	1.00	
Frt			0.99			0.99			1.00	1.00	0.85	
Flt Protected			0.99			1.00			0.95	1.00	1.00	
Satd. Flow (prot)			1806			1815			1746	1863	1478	
Flt Permitted			0.89			0.98			0.38	1.00	1.00	
Satd. Flow (perm)			1620			1781			707	1863	1478	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	59	9	311	37	18	345	38	5	13	184	2	33
RTOR Reduction (vph)	0	0	4	0	0	0	0	0	0	0	28	0
Lane Group Flow (vph)	0	0	412	0	0	406	0	0	13	184	7	0
Confl. Peds. (#/hr)	16	36		37	37		16	36	12			23
Confl. Bikes (#/hr)				1			1					2
Turn Type	Perm	Perm	NA		Perm	NA			Perm	NA	Perm	
Protected Phases			2			6				8		
Permitted Phases	2	2			6				8		8	
Actuated Green, G (s)			38.1			38.1			13.7	13.7	13.7	
Effective Green, g (s)			38.1			38.1			13.7	13.7	13.7	
Actuated g/C Ratio			0.59			0.59			0.21	0.21	0.21	
Clearance Time (s)			4.0			4.0			4.0	4.0	4.0	
Vehicle Extension (s)			3.0			3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)			949			1043			149	392	311	
v/s Ratio Prot										0.10		
v/s Ratio Perm			c0.25			0.23			0.02		0.00	
v/c Ratio			0.43			0.39			0.09	0.47	0.02	
Uniform Delay, d1			7.5			7.2			20.6	22.5	20.3	
Progression Factor			1.11			1.00			1.00	1.00	1.00	
Incremental Delay, d2			1.4			1.1			0.3	0.9	0.0	
Delay (s)			9.7			8.3			20.9	23.4	20.4	
Level of Service			A			A			C	C	C	
Approach Delay (s)			9.7			8.3				22.8		
Approach LOS			A			A				C		

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Volume (vph)	6	40	223	42	3	3	4	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0		
Lane Util. Factor		1.00	1.00			1.00		
Frpb, ped/bikes		1.00	0.99			1.00		
Flpb, ped/bikes		0.97	1.00			1.00		
Frt		1.00	0.98			0.91		
Flt Protected		0.95	1.00			0.98		
Satd. Flow (prot)		1713	1805			1667		
Flt Permitted		0.56	1.00			1.00		
Satd. Flow (perm)		1001	1805			1695		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	40	223	42	3	3	4	8
RTOR Reduction (vph)	0	0	11	0	0	0	0	0
Lane Group Flow (vph)	0	46	254	0	0	18	0	0
Confl. Peds. (#/hr)		23		12				
Confl. Bikes (#/hr)				2				
Turn Type	Perm	Perm	NA		Perm	Prot		
Protected Phases			4			9		
Permitted Phases	4	4			9			
Actuated Green, G (s)		13.7	13.7			1.2		
Effective Green, g (s)		13.7	13.7			1.2		
Actuated g/C Ratio		0.21	0.21			0.02		
Clearance Time (s)		4.0	4.0			4.0		
Vehicle Extension (s)		3.0	3.0			3.0		
Lane Grp Cap (vph)		210	380			31		
v/s Ratio Prot			c0.14					
v/s Ratio Perm		0.05				c0.01		
v/c Ratio		0.22	0.67			0.58		
Uniform Delay, d1		21.2	23.6			31.7		
Progression Factor		1.00	1.00			1.00		
Incremental Delay, d2		0.5	4.4			24.7		
Delay (s)		21.8	28.0			56.4		
Level of Service		C	C			E		
Approach Delay (s)			27.1			56.4		
Approach LOS			C			E		

Intersection Summary



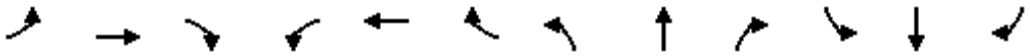
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	197	25	121	333	10	35	206	119	15	245	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	0.99			0.99	
Flpb, ped/bikes	0.98	1.00			1.00		0.99	1.00			1.00	
Frt	1.00	0.98			1.00		1.00	0.95			0.97	
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1742	1824			3469		1760	1743			1796	
Flt Permitted	0.49	1.00			0.80		0.34	1.00			0.95	
Satd. Flow (perm)	890	1824			2825		629	1743			1715	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	33	197	25	121	333	10	35	206	119	15	245	69
RTOR Reduction (vph)	0	3	0	0	1	0	0	40	0	0	18	0
Lane Group Flow (vph)	33	219	0	0	463	0	35	285	0	0	311	0
Confl. Peds. (#/hr)	20		10	10		20	18		7	7		18
Confl. Bikes (#/hr)			2			2						3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	53.8	53.8			53.8		21.2	21.2			21.2	
Effective Green, g (s)	53.8	53.8			53.8		21.2	21.2			21.2	
Actuated g/C Ratio	0.63	0.63			0.63		0.25	0.25			0.25	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	563	1154			1788		156	434			427	
v/s Ratio Prot		0.12						0.16				
v/s Ratio Perm	0.04				c0.16		0.06				c0.18	
v/c Ratio	0.06	0.19			0.26		0.22	0.66			0.73	
Uniform Delay, d1	5.9	6.5			6.8		25.4	28.6			29.3	
Progression Factor	0.64	0.73			1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.3			0.4		0.7	3.6			6.1	
Delay (s)	3.9	5.0			7.2		26.1	32.2			35.4	
Level of Service	A	A			A		C	C			D	
Approach Delay (s)		4.9			7.2			31.6			35.4	
Approach LOS		A			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	357	0	0	437	95	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	3539			3539	3208	
Flt Permitted	1.00			1.00	0.98	
Satd. Flow (perm)	3539			3539	3208	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	357	0	0	437	95	110
RTOR Reduction (vph)	0	0	0	0	96	0
Lane Group Flow (vph)	357	0	0	437	109	0
Confl. Bikes (#/hr)		2				1
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	43.1			43.1	7.4	
Effective Green, g (s)	43.1			43.1	7.4	
Actuated g/C Ratio	0.72			0.72	0.12	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2542			2542	395	
v/s Ratio Prot	0.10			c0.12	c0.03	
v/s Ratio Perm						
v/c Ratio	0.14			0.17	0.27	
Uniform Delay, d1	2.6			2.7	23.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.1	0.4	
Delay (s)	2.8			2.9	24.2	
Level of Service	A			A	C	
Approach Delay (s)	2.8			2.9	24.2	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



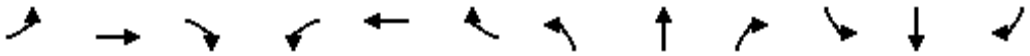
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	650	0	0	488	13	83	154	86	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			1.00				
Frt		1.00			1.00			0.96				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3528			3523			3310				
Flt Permitted		0.91			1.00			0.99				
Satd. Flow (perm)		3220			3523			3310				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	650	0	0	488	13	83	154	86	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	70	0	0	0	0
Lane Group Flow (vph)	0	688	0	0	499	0	0	253	0	0	0	0
Confl. Peds. (#/hr)	31		61	61		31	15		22	22		15
Confl. Bikes (#/hr)			4			7			2			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		45.8			45.8			9.2				
Effective Green, g (s)		45.8			45.8			9.2				
Actuated g/C Ratio		0.70			0.70			0.14				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		2268			2482			468				
v/s Ratio Prot					0.14							
v/s Ratio Perm		c0.21						0.08				
v/c Ratio		0.30			0.20			0.54				
Uniform Delay, d1		3.6			3.3			25.9				
Progression Factor		0.73			1.00			1.00				
Incremental Delay, d2		0.3			0.2			0.6				
Delay (s)		3.0			3.5			26.5				
Level of Service		A			A			C				
Approach Delay (s)		3.0			3.5			26.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	360	159	105	431	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.95		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3362		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3362		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	360	159	105	431	0	0
RTOR Reduction (vph)	87	0	0	0	0	0
Lane Group Flow (vph)	432	0	105	431	0	0
Confl. Peds. (#/hr)		2	2			1
Confl. Bikes (#/hr)		2				
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1512		663	3539		
v/s Ratio Prot	c0.13		c0.06	0.12		
v/s Ratio Perm						
v/c Ratio	0.29		0.16	0.12		
Uniform Delay, d1	6.9		8.3	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.5		0.5	0.1		
Delay (s)	7.4		8.8	0.1		
Level of Service	A		A	A		
Approach Delay (s)	7.4			1.8	0.0	
Approach LOS	A			A	A	

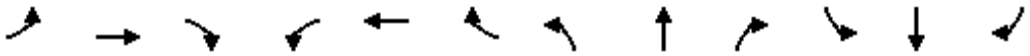
Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



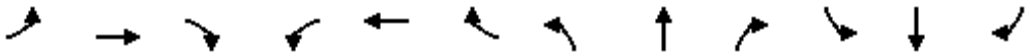
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	682	92	68	503	0	0	0	0	40	188	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		0.99			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.98			1.00						0.98	
Flt Protected		1.00			0.99						0.99	
Satd. Flow (prot)		3458			3514						3391	
Flt Permitted		1.00			0.80						0.99	
Satd. Flow (perm)		3458			2835						3391	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	682	92	68	503	0	0	0	0	40	188	41
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	24	0
Lane Group Flow (vph)	0	760	0	0	571	0	0	0	0	0	245	0
Confl. Peds. (#/hr)	36		71	71		36	18		25	25		18
Confl. Bikes (#/hr)			9			2			1			4
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		45.1			45.1						9.9	
Effective Green, g (s)		45.1			45.1						9.9	
Actuated g/C Ratio		0.69			0.69						0.15	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2399			1967						516	
v/s Ratio Prot		c0.22										
v/s Ratio Perm					0.20						0.07	
v/c Ratio		0.32			0.29						0.48	
Uniform Delay, d1		3.9			3.8						25.2	
Progression Factor		1.00			0.68						1.00	
Incremental Delay, d2		0.3			0.4						0.7	
Delay (s)		4.3			3.0						25.9	
Level of Service		A			A						C	
Approach Delay (s)		4.3			3.0			0.0			25.9	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



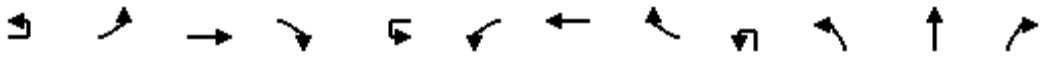
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	312	47	29	321	26	33	305	6	48	307	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	
Frt		0.98			0.99		1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1815			1832		1758	1856		1758	1852	
Flt Permitted		0.98			0.96		0.35	1.00		0.36	1.00	
Satd. Flow (perm)		1785			1761		653	1856		672	1852	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	312	47	29	321	26	33	305	6	48	307	10
RTOR Reduction (vph)	0	5	0	0	3	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	369	0	0	373	0	33	310	0	48	315	0
Confl. Peds. (#/hr)	8		28	28		8	10		10	10		10
Confl. Bikes (#/hr)						1			2			3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		38.8			38.8		16.7	16.7		16.7	16.7	
Effective Green, g (s)		38.8			38.8		16.7	16.7		16.7	16.7	
Actuated g/C Ratio		0.60			0.60		0.26	0.26		0.26	0.26	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1065			1051		167	476		172	475	
v/s Ratio Prot								0.17			c0.17	
v/s Ratio Perm		0.21			c0.21		0.05			0.07		
v/c Ratio		0.35			0.36		0.20	0.65		0.28	0.66	
Uniform Delay, d1		6.7			6.7		18.9	21.5		19.3	21.6	
Progression Factor		1.00			1.27		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			0.9		0.6	3.2		0.9	3.5	
Delay (s)		7.5			9.4		19.5	24.7		20.2	25.1	
Level of Service		A			A		B	C		C	C	
Approach Delay (s)		7.5			9.4			24.2			24.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



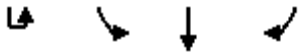
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	168	115	192	194	34	52	363	83	7	397	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00	1.00	0.95	0.95			1.00			0.95	
Frpb, ped/bikes		1.00	0.96	1.00	0.98			0.99			0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	
Frt		1.00	0.85	1.00	0.98			0.98			0.98	
Flt Protected		0.99	1.00	0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1846	1516	1681	1697			1795			3461	
Flt Permitted		0.99	1.00	0.95	1.00			0.92			0.95	
Satd. Flow (perm)		1846	1516	1681	1697			1652			3285	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	37	168	115	192	194	34	52	363	83	7	397	48
RTOR Reduction (vph)	0	0	96	0	7	0	0	8	0	0	10	0
Lane Group Flow (vph)	0	205	19	173	240	0	0	490	0	0	442	0
Confl. Peds. (#/hr)	40		18	18		40	29		52	52		29
Confl. Bikes (#/hr)			2						2			2
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases			2				4			8		
Actuated Green, G (s)		13.7	13.7	14.9	14.9			45.4			45.4	
Effective Green, g (s)		13.7	13.7	14.9	14.9			45.4			45.4	
Actuated g/C Ratio		0.16	0.16	0.18	0.18			0.53			0.53	
Clearance Time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		297	244	294	297			882			1754	
v/s Ratio Prot		c0.11		0.10	c0.14							
v/s Ratio Perm			0.01					c0.30			0.13	
v/c Ratio		0.69	0.08	0.59	0.81			0.56			0.25	
Uniform Delay, d1		33.6	30.3	32.2	33.7			13.1			10.7	
Progression Factor		1.00	1.00	0.76	0.76			1.00			1.00	
Incremental Delay, d2		6.7	0.1	2.9	14.6			2.5			0.3	
Delay (s)		40.4	30.4	27.3	40.3			15.6			11.0	
Level of Service		D	C	C	D			B			B	
Approach Delay (s)		36.8			35.0			15.6			11.0	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	105.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



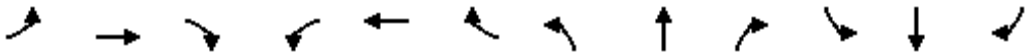
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	15	240	722	166	4	157	596	65	5	146	349	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00		1.00	0.95	
Frpb, ped/bikes		1.00	1.00	0.95		1.00	1.00	0.93		1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	3539	1504		1770	3539	1479		1770	3527	
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		1770	3539	1504		1770	3539	1479		1770	3527	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	240	722	166	4	157	596	65	5	146	349	6
RTOR Reduction (vph)	0	0	0	107	0	0	0	46	0	0	1	0
Lane Group Flow (vph)	0	255	722	59	0	161	596	19	0	151	354	0
Confl. Peds. (#/hr)		42		29		29		42		19		27
Confl. Bikes (#/hr)				7				6				3
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	
Protected Phases	5	5	2		1	1	6		7	7	4	
Permitted Phases				2				6				
Actuated Green, G (s)		21.8	41.5	41.5		13.5	33.2	33.2		13.4	36.1	
Effective Green, g (s)		21.8	41.5	41.5		13.5	33.2	33.2		13.4	36.1	
Actuated g/C Ratio		0.19	0.36	0.36		0.12	0.29	0.29		0.12	0.31	
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		332	1266	538		205	1012	423		204	1097	
v/s Ratio Prot		c0.14	0.20			c0.09	c0.17			c0.09	0.10	
v/s Ratio Perm				0.04				0.01				
v/c Ratio		0.77	0.57	0.11		0.79	0.59	0.04		0.74	0.32	
Uniform Delay, d1		44.7	30.1	24.9		49.8	35.5	29.9		49.6	30.6	
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		9.2	0.4	0.0		16.5	2.5	0.2		11.9	0.1	
Delay (s)		53.9	30.4	24.9		66.3	38.1	30.1		61.5	30.7	
Level of Service		D	C	C		E	D	C		E	C	
Approach Delay (s)			34.9				43.0				39.9	
Approach LOS			C				D				D	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



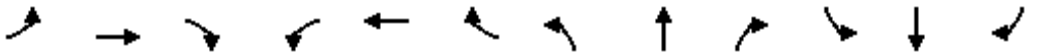
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	3	49	482	262
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	
Lane Util. Factor		1.00	0.95	
Frpb, ped/bikes		1.00	0.98	
Flpb, ped/bikes		1.00	1.00	
Frt		1.00	0.95	
Flt Protected		0.95	1.00	
Satd. Flow (prot)		1770	3298	
Flt Permitted		0.95	1.00	
Satd. Flow (perm)		1770	3298	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	49	482	262
RTOR Reduction (vph)	0	0	59	0
Lane Group Flow (vph)	0	52	685	0
Confl. Peds. (#/hr)		27		19
Confl. Bikes (#/hr)				12
Turn Type	Prot	Prot	NA	
Protected Phases	3	3	8	
Permitted Phases				
Actuated Green, G (s)		6.9	29.6	
Effective Green, g (s)		6.9	29.6	
Actuated g/C Ratio		0.06	0.26	
Clearance Time (s)		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	
Lane Grp Cap (vph)		105	841	
v/s Ratio Prot		0.03	c0.21	
v/s Ratio Perm				
v/c Ratio		0.50	0.81	
Uniform Delay, d1		52.9	40.6	
Progression Factor		1.00	1.00	
Incremental Delay, d2		1.3	5.8	
Delay (s)		54.2	46.4	
Level of Service		D	D	
Approach Delay (s)			46.9	
Approach LOS			D	

Intersection Summary



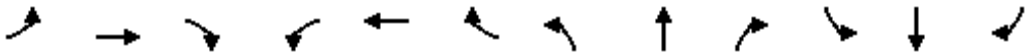
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	176	15	56	110	54	20	469	54	34	635	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.99			1.00	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1650			1586			3116			3159	
Flt Permitted		0.98			0.85			0.93			0.92	
Satd. Flow (perm)		1624			1360			2893			2902	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	13	176	15	56	110	54	20	469	54	34	635	19
RTOR Reduction (vph)	0	5	0	0	20	0	0	10	0	0	3	0
Lane Group Flow (vph)	0	199	0	0	200	0	0	533	0	0	685	0
Confl. Peds. (#/hr)	7		25	25		7	24		28	28		24
Confl. Bikes (#/hr)						2			11			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		13.8			13.8			44.2			44.2	
Effective Green, g (s)		13.8			13.8			44.2			44.2	
Actuated g/C Ratio		0.21			0.21			0.68			0.68	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		344			288			1967			1973	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.15			0.18			c0.24	
v/c Ratio		0.58			0.70			0.27			0.35	
Uniform Delay, d1		23.0			23.7			4.1			4.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.4			7.1			0.3			0.5	
Delay (s)		25.4			30.8			4.4			4.8	
Level of Service		C			C			A			A	
Approach Delay (s)		25.4			30.8			4.4			4.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



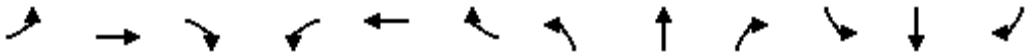
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	568	76	6	359	65	113	538	104	86	668	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.98			0.98		1.00	0.96		1.00	0.98	
Flpb, ped/bikes		1.00			1.00		0.93	1.00		0.92	1.00	
Frt		0.98			0.98		1.00	0.98		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3399			1788		1637	3321		1619	3436	
Flt Permitted		0.92			0.99		0.35	1.00		0.38	1.00	
Satd. Flow (perm)		3134			1772		595	3321		653	3436	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	23	568	76	6	359	65	113	538	104	86	668	54
RTOR Reduction (vph)	0	13	0	0	8	0	0	14	0	0	5	0
Lane Group Flow (vph)	0	654	0	0	422	0	113	628	0	86	717	0
Confl. Peds. (#/hr)	93		135	135		93	156		152	152		156
Confl. Bikes (#/hr)			13			8			4			9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.3			26.3		54.2	54.2		54.2	54.2	
Effective Green, g (s)		26.3			26.3		54.2	54.2		54.2	54.2	
Actuated g/C Ratio		0.29			0.29		0.60	0.60		0.60	0.60	
Clearance Time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		915			517		358	1999		393	2069	
v/s Ratio Prot								0.19			c0.21	
v/s Ratio Perm		0.21			c0.24		0.19			0.13		
v/c Ratio		0.72			0.82		0.32	0.31		0.22	0.35	
Uniform Delay, d1		28.5			29.6		8.8	8.8		8.2	9.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.2			9.1		2.3	0.4		1.3	0.5	
Delay (s)		30.7			38.7		11.1	9.2		9.5	9.5	
Level of Service		C			D		B	A		A	A	
Approach Delay (s)		30.7			38.7			9.5			9.5	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



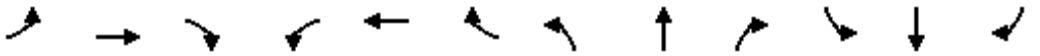
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	208	384	95	34	350	103	134	803	38	173	843	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3434		1770	3419		1770	3515		1770	3483	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3434		1770	3419		1770	3515		1770	3483	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	208	384	95	34	350	103	134	803	38	173	843	99
RTOR Reduction (vph)	0	22	0	0	28	0	0	4	0	0	9	0
Lane Group Flow (vph)	208	457	0	34	425	0	134	837	0	173	933	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.9	28.2		4.1	19.4		10.1	38.9		12.3	41.1	
Effective Green, g (s)	12.9	28.2		4.1	19.4		10.1	38.9		12.3	41.1	
Actuated g/C Ratio	0.13	0.28		0.04	0.19		0.10	0.39		0.12	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.5		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	228	968		72	663		178	1367		217	1431	
v/s Ratio Prot	c0.12	0.13		0.02	c0.12		0.08	0.24		c0.10	c0.27	
v/s Ratio Perm												
v/c Ratio	0.91	0.47		0.47	0.64		0.75	0.61		0.80	0.65	
Uniform Delay, d1	43.0	29.7		46.9	37.1		43.7	24.5		42.6	23.7	
Progression Factor	1.00	1.00		1.00	1.00		0.94	0.95		1.00	1.00	
Incremental Delay, d2	36.0	0.1		1.8	2.2		13.2	1.8		17.0	2.3	
Delay (s)	79.0	29.9		48.7	39.3		54.5	25.0		59.7	26.0	
Level of Service	E	C		D	D		D	C		E	C	
Approach Delay (s)		44.7			40.0			29.1			31.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



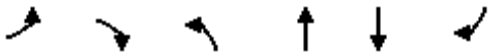
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	497	65	74	376	103	95	856	134	82	862	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.98			0.97		1.00	0.98		1.00	0.99	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3469			3417		1770	3467		1770	3513	
Flt Permitted		0.77			0.65		0.28	1.00		0.25	1.00	
Satd. Flow (perm)		2691			2227		514	3467		461	3513	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	49	497	65	74	376	103	95	856	134	82	862	45
RTOR Reduction (vph)	0	10	0	0	21	0	0	11	0	0	3	0
Lane Group Flow (vph)	0	601	0	0	532	0	95	979	0	82	904	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0		65.5	65.5		65.5	65.5	
Effective Green, g (s)		26.0			26.0		65.5	65.5		65.5	65.5	
Actuated g/C Ratio		0.26			0.26		0.66	0.66		0.66	0.66	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		2.0			2.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		699			579		336	2270		301	2301	
v/s Ratio Prot								c0.28			0.26	
v/s Ratio Perm		0.22			c0.24		0.18			0.18		
v/c Ratio		0.86			0.92		0.28	0.43		0.27	0.39	
Uniform Delay, d1		35.3			36.0		7.3	8.3		7.2	8.0	
Progression Factor		1.00			1.00		1.00	1.00		1.02	1.11	
Incremental Delay, d2		10.2			19.2		2.1	0.6		1.8	0.4	
Delay (s)		45.5			55.2		9.4	8.9		9.2	9.3	
Level of Service		D			E		A	A		A	A	
Approach Delay (s)		45.5			55.2			8.9			9.3	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	221	25	84	211	77	28	742	102	76	891	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.99			0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1819			1774		1765	3448		1750	3481	
Flt Permitted		0.88			0.82		0.24	1.00		0.29	1.00	
Satd. Flow (perm)		1613			1463		448	3448		542	3481	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	45	221	25	84	211	77	28	742	102	76	891	86
RTOR Reduction (vph)	0	6	0	0	15	0	0	14	0	0	9	0
Lane Group Flow (vph)	0	285	0	0	357	0	28	830	0	76	968	0
Confl. Peds. (#/hr)	15		41	41		15	11		43	43		11
Confl. Bikes (#/hr)			2			3			11			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.2			18.2		35.2	35.2		35.2	35.2	
Effective Green, g (s)		18.2			18.2		35.2	35.2		35.2	35.2	
Actuated g/C Ratio		0.29			0.29		0.56	0.56		0.56	0.56	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		463			419		248	1914		300	1932	
v/s Ratio Prot								0.24			c0.28	
v/s Ratio Perm		0.18			c0.24		0.06			0.14		
v/c Ratio		0.62			0.85		0.11	0.43		0.25	0.50	
Uniform Delay, d1		19.6			21.3		6.7	8.3		7.3	8.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.7			14.8		0.1	0.1		0.2	0.1	
Delay (s)		21.3			36.1		6.8	8.3		7.5	8.8	
Level of Service		C			D		A	A		A	A	
Approach Delay (s)		21.3			36.1			8.3			8.7	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	63.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



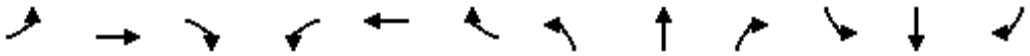
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	176	250	186	684	790	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3418	
Flt Permitted	0.95	1.00	0.23	1.00	1.00	
Satd. Flow (perm)	1770	1583	424	3539	3418	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	176	250	186	684	790	122
RTOR Reduction (vph)	0	13	0	0	9	0
Lane Group Flow (vph)	176	237	186	684	903	0
Confl. Peds. (#/hr)	19					76
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	10.9	20.2	37.6	28.3	28.6	
Effective Green, g (s)	10.9	20.2	37.6	28.3	28.6	
Actuated g/C Ratio	0.19	0.34	0.64	0.48	0.49	
Clearance Time (s)	4.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	3.0	3.0	2.0	2.0	
Lane Grp Cap (vph)	328	543	484	1703	1662	
v/s Ratio Prot	c0.10	c0.07	0.06	0.19	c0.26	
v/s Ratio Perm		0.08	0.18			
v/c Ratio	0.54	0.44	0.38	0.40	0.54	
Uniform Delay, d1	21.7	14.9	5.0	9.8	10.5	
Progression Factor	1.00	1.00	2.00	0.46	1.00	
Incremental Delay, d2	0.8	0.6	0.5	0.1	0.2	
Delay (s)	22.5	15.5	10.5	4.6	10.7	
Level of Service	C	B	B	A	B	
Approach Delay (s)	18.4			5.8	10.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	58.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

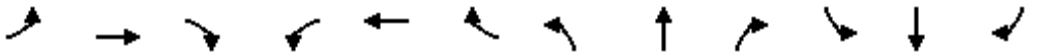
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	108	175	695	94	265	775
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0		3.0	3.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3450		1770	3539
Flt Permitted	0.95	1.00	1.00		0.27	1.00
Satd. Flow (perm)	1770	1583	3450		510	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	108	175	695	94	265	775
RTOR Reduction (vph)	0	28	8	0	0	0
Lane Group Flow (vph)	108	147	781	0	265	775
Confl. Peds. (#/hr)	27			36		
Confl. Bikes (#/hr)				3		
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	10.9	20.5	28.3		38.2	28.6
Effective Green, g (s)	10.9	20.5	28.3		38.2	28.6
Actuated g/C Ratio	0.19	0.35	0.48		0.65	0.49
Clearance Time (s)	4.0	3.0	3.0		3.0	3.0
Vehicle Extension (s)	2.0	3.0	2.0		3.0	2.0
Lane Grp Cap (vph)	328	551	1660		537	1721
v/s Ratio Prot	c0.06	0.04	0.23		c0.08	0.22
v/s Ratio Perm		0.05			c0.24	
v/c Ratio	0.33	0.27	0.47		0.49	0.45
Uniform Delay, d1	20.8	13.8	10.2		4.8	9.9
Progression Factor	1.00	1.00	1.00		2.01	0.56
Incremental Delay, d2	0.2	0.3	0.1		0.7	0.1
Delay (s)	21.0	14.0	10.3		10.4	5.6
Level of Service	C	B	B		B	A
Approach Delay (s)	16.7		10.3			6.8
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	58.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



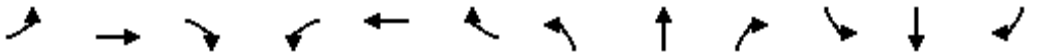
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	187	820	179	207	677	132	130	489	139	136	540	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.91	1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1436	1770	4852		1770	3390		1770	3381	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1436	1770	4852		1770	3390		1770	3381	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	187	820	179	207	677	132	130	489	139	136	540	140
RTOR Reduction (vph)	0	0	132	0	22	0	0	20	0	0	20	0
Lane Group Flow (vph)	187	820	47	207	787	0	130	608	0	136	660	0
Confl. Peds. (#/hr)			62			96			34			56
Confl. Bikes (#/hr)			7			9			2			12
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8									
Actuated Green, G (s)	15.9	24.9	24.9	16.5	26.0		13.0	25.7		13.4	26.1	
Effective Green, g (s)	15.9	24.9	24.9	16.5	26.0		13.0	25.7		13.4	26.1	
Actuated g/C Ratio	0.17	0.26	0.26	0.17	0.27		0.14	0.27		0.14	0.27	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	294	1325	374	305	1320		240	912		248	924	
v/s Ratio Prot	0.11	0.16		c0.12	c0.16		0.07	0.18		c0.08	c0.20	
v/s Ratio Perm			0.03									
v/c Ratio	0.64	0.62	0.12	0.68	0.60		0.54	0.67		0.55	0.71	
Uniform Delay, d1	37.1	31.1	27.0	37.0	30.2		38.5	31.1		38.2	31.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.5	0.9	0.2	5.9	0.7		2.5	1.9		2.5	2.6	
Delay (s)	41.6	32.0	27.1	42.9	30.9		41.0	32.9		40.7	34.0	
Level of Service	D	C	C	D	C		D	C		D	C	
Approach Delay (s)		32.8			33.4			34.3			35.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	95.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



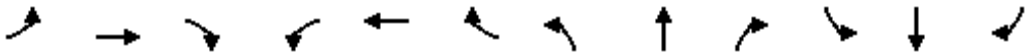
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	338	735	206	144	376	141	109	496	174	311	621	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.91	1.00	1.00	0.94	1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3355		1770	3539	1448	1770	3539	1494	1770	3350	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3355		1770	3539	1448	1770	3539	1494	1770	3350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	338	735	206	144	376	141	109	496	174	311	621	163
RTOR Reduction (vph)	0	20	0	0	0	112	0	0	99	0	17	0
Lane Group Flow (vph)	338	921	0	144	376	29	109	496	75	311	767	0
Confl. Peds. (#/hr)			39			38			19			48
Confl. Bikes (#/hr)			6						8			8
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	25.0	33.1		13.9	22.0	22.0	12.0	21.9	21.9	20.3	30.2	
Effective Green, g (s)	25.0	33.1		13.9	22.0	22.0	12.0	21.9	21.9	20.3	30.2	
Actuated g/C Ratio	0.24	0.31		0.13	0.21	0.21	0.11	0.21	0.21	0.19	0.29	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	420	1055		233	740	302	201	736	311	341	961	
v/s Ratio Prot	c0.19	c0.27		0.08	0.11		0.06	0.14		c0.18	c0.23	
v/s Ratio Perm						0.02			0.05			
v/c Ratio	0.80	0.87		0.62	0.51	0.10	0.54	0.67	0.24	0.91	0.80	
Uniform Delay, d1	37.8	34.1		43.1	36.8	33.6	44.0	38.4	34.7	41.6	34.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.7	8.1		4.8	0.6	0.1	3.0	2.4	0.4	27.6	4.7	
Delay (s)	48.5	42.2		48.0	37.4	33.7	47.0	40.8	35.1	69.2	39.4	
Level of Service	D	D		D	D	C	D	D	D	E	D	
Approach Delay (s)		43.9			38.9			40.4			47.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	105.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	585	241	25	260	42	255	472	82	64	494	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1763	3539	1521	1752	3457		1770	3443		1770	3486	
Flt Permitted	0.57	1.00	1.00	0.33	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1054	3539	1521	609	3457		1770	3443		1770	3486	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	108	585	241	25	260	42	255	472	82	64	494	43
RTOR Reduction (vph)	0	0	166	0	17	0	0	14	0	0	8	0
Lane Group Flow (vph)	108	585	75	25	285	0	255	540	0	64	529	0
Confl. Peds. (#/hr)	8		35	35		8			29			22
Confl. Bikes (#/hr)			5						5			12
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	18.2	18.2	18.2	18.2	18.2		13.4	23.3		4.8	14.7	
Effective Green, g (s)	18.2	18.2	18.2	18.2	18.2		13.4	23.3		4.8	14.7	
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31		0.23	0.40		0.08	0.25	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	329	1104	474	190	1079		406	1376		145	878	
v/s Ratio Prot		c0.17			0.08		c0.14	0.16		0.04	c0.15	
v/s Ratio Perm	0.10		0.05	0.04								
v/c Ratio	0.33	0.53	0.16	0.13	0.26		0.63	0.39		0.44	0.60	
Uniform Delay, d1	15.4	16.5	14.5	14.4	15.0		20.2	12.5		25.5	19.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.5	0.2	0.3	0.1		3.0	0.2		2.1	1.2	
Delay (s)	16.0	17.0	14.7	14.7	15.2		23.2	12.6		27.6	20.4	
Level of Service	B	B	B	B	B		C	B		C	C	
Approach Delay (s)		16.3			15.1			16.0			21.2	
Approach LOS		B			B			B			C	

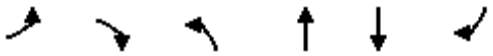
Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	58.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	141	30	192	95	171	42	541	81	179	504	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.90		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1729	1808		1762	1632		1754	3453		1759	3459	
Flt Permitted	0.57	1.00		0.65	1.00		0.43	1.00		0.40	1.00	
Satd. Flow (perm)	1032	1808		1204	1632		792	3453		737	3459	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	141	30	192	95	171	42	541	81	179	504	67
RTOR Reduction (vph)	0	8	0	0	67	0	0	19	0	0	16	0
Lane Group Flow (vph)	97	163	0	192	199	0	42	603	0	179	555	0
Confl. Peds. (#/hr)	70		11	11		70	25		18	18		25
Confl. Bikes (#/hr)			2			3			4			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.7	13.7		13.7	13.7		18.8	18.8		18.8	18.8	
Effective Green, g (s)	13.7	13.7		13.7	13.7		18.8	18.8		18.8	18.8	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	349	611		407	552		367	1602		342	1605	
v/s Ratio Prot		0.09			0.12			0.17			0.16	
v/s Ratio Perm	0.09			c0.16			0.05			c0.24		
v/c Ratio	0.28	0.27		0.47	0.36		0.11	0.38		0.52	0.35	
Uniform Delay, d1	9.8	9.7		10.6	10.1		6.1	7.0		7.7	6.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.2		0.9	0.4		0.1	0.1		1.4	0.1	
Delay (s)	10.2	10.0		11.4	10.5		6.3	7.2		9.1	7.1	
Level of Service	B	A		B	B		A	A		A	A	
Approach Delay (s)		10.1			10.9			7.1			7.5	
Approach LOS		B			B			A			A	

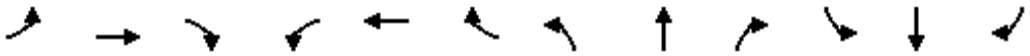
Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	40.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	52	539	278	501	508	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3489	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3489	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	52	539	278	501	508	47
RTOR Reduction (vph)	0	216	0	0	6	0
Lane Group Flow (vph)	52	323	278	501	549	0
Confl. Peds. (#/hr)	14					5
Confl. Bikes (#/hr)						4
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	7.7	26.5	14.8	34.4	15.6	
Effective Green, g (s)	7.7	26.5	14.8	34.4	15.6	
Actuated g/C Ratio	0.15	0.53	0.30	0.69	0.31	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	272	1474	522	2429	1086	
v/s Ratio Prot	0.03	c0.12	c0.16	0.14	c0.16	
v/s Ratio Perm						
v/c Ratio	0.19	0.22	0.53	0.21	0.51	
Uniform Delay, d1	18.5	6.3	14.8	2.9	14.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.1	1.0	0.0	0.4	
Delay (s)	18.8	6.4	15.8	2.9	14.5	
Level of Service	B	A	B	A	B	
Approach Delay (s)	7.5			7.5	14.5	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	50.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



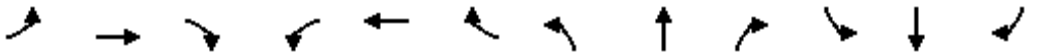
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	311	77	39	173	9	31	305	58	18	478	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.97	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1794			1832			3425			3395	
Flt Permitted		0.92			0.90			0.89			0.94	
Satd. Flow (perm)		1663			1667			3073			3199	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	72	311	77	39	173	9	31	305	58	18	478	104
RTOR Reduction (vph)	0	11	0	0	2	0	0	22	0	0	27	0
Lane Group Flow (vph)	0	449	0	0	219	0	0	372	0	0	573	0
Confl. Peds. (#/hr)	17		24	24		17	52		12	12		52
Confl. Bikes (#/hr)			7						2			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			33.0			33.0	
Effective Green, g (s)		25.0			25.0			33.0			33.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Lane Grp Cap (vph)		639			641			1560			1624	
v/s Ratio Prot												
v/s Ratio Perm		c0.27			0.13			0.12			c0.18	
v/c Ratio		0.70			0.34			0.24			0.35	
Uniform Delay, d1		16.9			14.2			9.0			9.6	
Progression Factor		0.35			1.00			1.00			1.00	
Incremental Delay, d2		5.3			1.4			0.4			0.6	
Delay (s)		11.2			15.6			9.3			10.2	
Level of Service		B			B			A			B	
Approach Delay (s)		11.2			15.6			9.3			10.2	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	461	0	0	479	62	175	345	224	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.91		0.91	0.91				
Frpb, ped/bikes		1.00			1.00		1.00	0.99				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.98		1.00	0.94				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5083			4998		1610	3165				
Flt Permitted		0.93			1.00		0.95	1.00				
Satd. Flow (perm)		4753			4998		1610	3165				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	461	0	0	479	62	175	345	224	0	0	0
RTOR Reduction (vph)	0	0	0	0	35	0	0	69	0	0	0	0
Lane Group Flow (vph)	0	465	0	0	506	0	157	518	0	0	0	0
Confl. Peds. (#/hr)									11			
Confl. Bikes (#/hr)									7			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		12.6			12.6		44.9	44.9				
Effective Green, g (s)		12.6			12.6		44.9	44.9				
Actuated g/C Ratio		0.19			0.19		0.69	0.69				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		921			968		1112	2186				
v/s Ratio Prot					c0.10							
v/s Ratio Perm		0.10					0.10	0.16				
v/c Ratio		0.50			0.52		0.14	0.24				
Uniform Delay, d1		23.4			23.5		3.4	3.7				
Progression Factor		1.42			0.39		1.00	1.00				
Incremental Delay, d2		0.4			0.5		0.3	0.3				
Delay (s)		33.6			9.7		3.7	4.0				
Level of Service		C			A		A	A				
Approach Delay (s)		33.6			9.7			3.9			0.0	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	436	28	31	416	5	143	396	69	0	804	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.91	1.00
Frt	1.00	0.99			1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1846			3521		1770	4972			5085	1583
Flt Permitted	0.35	1.00			0.89		0.95	1.00			1.00	1.00
Satd. Flow (perm)	648	1846			3153		1770	4972			5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	436	28	31	416	5	143	396	69	0	804	494
RTOR Reduction (vph)	0	2	0	0	1	0	0	21	0	0	0	285
Lane Group Flow (vph)	300	462	0	0	451	0	143	444	0	0	804	209
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Effective Green, g (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Actuated g/C Ratio	0.45	0.45			0.30		0.13	0.46			0.30	0.30
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	434	833			931		224	2265			1501	467
v/s Ratio Prot	c0.09	0.25					c0.08	0.09			c0.16	
v/s Ratio Perm	c0.22				0.14							0.13
v/c Ratio	0.69	0.55			0.48		0.64	0.20			0.54	0.45
Uniform Delay, d1	22.3	23.8			34.3		49.2	19.3			34.9	33.9
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	8.7	2.7			1.8		13.1	0.2			1.4	3.1
Delay (s)	31.0	26.4			36.1		62.3	19.5			36.3	37.0
Level of Service	C	C			D		E	B			D	D
Approach Delay (s)		28.2			36.1			29.5			36.6	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	18.5
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

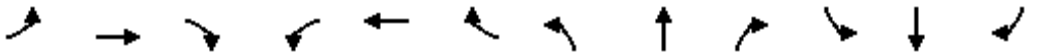
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	3	3	3	85	1	78	3	1	519	129	10	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		1.00			0.99				0.99			1.00
Flpb, ped/bikes		1.00			1.00				1.00			1.00
Frt		0.95			0.94				0.97			1.00
Flt Protected		0.98			0.97				1.00			0.95
Satd. Flow (prot)		1742			1687				4876			1768
Flt Permitted		0.93			0.83				0.94			0.36
Satd. Flow (perm)		1655			1441				4567			665
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	3	3	85	1	78	3	1	519	129	10	152
RTOR Reduction (vph)	0	3	0	0	41	0	0	0	31	0	0	0
Lane Group Flow (vph)	0	6	0	0	123	0	0	0	621	0	0	162
Confl. Peds. (#/hr)			1	1						13		3
Confl. Bikes (#/hr)						1						
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		10.8			10.8				48.1			59.3
Effective Green, g (s)		10.8			10.8				48.1			59.3
Actuated g/C Ratio		0.14			0.14				0.61			0.75
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		225			196				2777			591
v/s Ratio Prot												c0.02
v/s Ratio Perm		0.00			c0.09				0.14			c0.18
v/c Ratio		0.03			0.63				0.22			0.27
Uniform Delay, d1		29.6			32.2				7.0			2.9
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			4.4				0.2			0.1
Delay (s)		29.6			36.7				7.2			3.0
Level of Service		C			D				A			A
Approach Delay (s)		29.6			36.7				7.2			
Approach LOS		C			D				A			

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	79.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

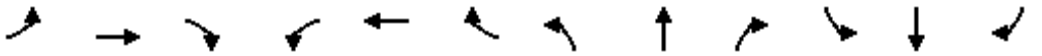
Movement	SBT	SBR
Lane Configurations		
Volume (vph)	819	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	5085	
Flt Permitted	1.00	
Satd. Flow (perm)	5085	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	819	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	819	0
Confl. Peds. (#/hr)		1
Confl. Bikes (#/hr)		8
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	59.3	
Effective Green, g (s)	59.3	
Actuated g/C Ratio	0.75	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	3812	
v/s Ratio Prot	0.16	
v/s Ratio Perm		
v/c Ratio	0.21	
Uniform Delay, d1	3.0	
Progression Factor	1.00	
Incremental Delay, d2	0.1	
Delay (s)	3.1	
Level of Service	A	
Approach Delay (s)	3.1	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	191	262	212	71	188	48	91	385	93	48	660	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.93			0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1738			3417		1770	3436		1770	3539	1583
Flt Permitted	0.56	1.00			0.70		0.22	1.00		0.48	1.00	1.00
Satd. Flow (perm)	1052	1738			2406		411	3436		892	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	191	262	212	71	188	48	91	385	93	48	660	169
RTOR Reduction (vph)	0	34	0	0	18	0	0	24	0	0	0	103
Lane Group Flow (vph)	191	440	0	0	289	0	91	454	0	48	660	66
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	27.1	27.1			27.1		25.9	25.9		26.7	24.7	24.7
Effective Green, g (s)	27.1	27.1			27.1		25.9	25.9		26.7	24.7	24.7
Actuated g/C Ratio	0.38	0.38			0.38		0.37	0.37		0.38	0.35	0.35
Clearance Time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	403	666			922		263	1258		395	1236	553
v/s Ratio Prot		c0.25					0.03	c0.13		0.01	c0.19	
v/s Ratio Perm	0.18				0.12		0.10			0.04		0.04
v/c Ratio	0.47	0.66			0.31		0.35	0.36		0.12	0.53	0.12
Uniform Delay, d1	16.4	18.0			15.3		15.6	16.4		14.5	18.4	15.6
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.0	5.1			0.9		0.3	0.8		0.1	1.7	0.4
Delay (s)	20.4	23.1			16.2		15.9	17.2		14.5	20.1	16.0
Level of Service	C	C			B		B	B		B	C	B
Approach Delay (s)		22.3			16.2			17.0			19.0	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	502	135	54	406	36	107	161	47	153	287	565
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	0.99			0.99		1.00	0.97		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97			0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3258			3440		1770	3332		1770	1863	2787
Flt Permitted	0.95	0.94			0.81		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	3067			2799		1770	3332		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	287	502	135	54	406	36	107	161	47	153	287	565
RTOR Reduction (vph)	0	19	0	0	5	0	0	27	0	0	0	412
Lane Group Flow (vph)	258	647	0	0	491	0	107	181	0	153	287	153
Confl. Peds. (#/hr)			19			134			77			
Confl. Bikes (#/hr)			1			14			8			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	19.8	47.1			23.3		7.8	21.5		11.2	24.9	24.9
Effective Green, g (s)	19.8	47.1			23.3		7.8	21.5		11.2	24.9	24.9
Actuated g/C Ratio	0.22	0.51			0.25		0.08	0.23		0.12	0.27	0.27
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	347	1614			710		150	780		215	505	755
v/s Ratio Prot	c0.16	0.09					0.06	0.05		c0.09	c0.15	
v/s Ratio Perm		0.12			c0.18							0.05
v/c Ratio	0.74	0.40			0.69		0.71	0.23		0.71	0.57	0.20
Uniform Delay, d1	33.6	13.7			31.0		40.9	28.5		38.7	28.8	25.8
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.4	0.2			2.9		14.8	0.2		10.6	1.5	0.1
Delay (s)	42.0	13.9			33.9		55.7	28.6		49.3	30.3	25.9
Level of Service	D	B			C		E	C		D	C	C
Approach Delay (s)		21.7			33.9			37.8			30.7	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	91.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	555	62	7	532	50	108	18	6	66	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.98			1.00		0.98		0.86		0.85
Flt Protected	1.00			1.00		0.99		1.00		1.00
Satd. Flow (prot)	3486			3537		4937		1600		1504
Flt Permitted	1.00			0.95		0.99		1.00		1.00
Satd. Flow (perm)	3486			3354		4937		1600		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	555	62	7	532	50	108	18	6	66	11
RTOR Reduction (vph)	9	0	0	0	0	0	0	47	0	8
Lane Group Flow (vph)	608	0	0	539	0	176	0	26	0	2
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1394			1341		1507		286		269
v/s Ratio Prot	c0.17							c0.02		
v/s Ratio Perm				0.16		0.04				0.00
v/c Ratio	0.44			0.40		0.12		0.09		0.01
Uniform Delay, d1	20.7			20.4		23.8		32.6		32.1
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	1.0			0.9		0.2		0.6		0.0
Delay (s)	21.7			21.3		23.9		33.2		32.1
Level of Service	C			C		C		C		C
Approach Delay (s)	21.7			21.3		23.9		33.1		
Approach LOS	C			C		C		C		

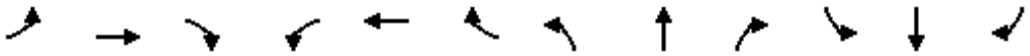
Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	351	21	10	164	35	21	97	17	87	192	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1838			1805			1809			1776	
Flt Permitted		0.96			0.98			0.93			0.89	
Satd. Flow (perm)		1774			1768			1701			1609	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	351	21	10	164	35	21	97	17	87	192	67
RTOR Reduction (vph)	0	3	0	0	11	0	0	8	0	0	13	0
Lane Group Flow (vph)	0	404	0	0	198	0	0	127	0	0	333	0
Confl. Peds. (#/hr)	7		3	3		7	10		4	4		10
Confl. Bikes (#/hr)			8			8			6			17
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		627			625			863			816	
v/s Ratio Prot												
v/s Ratio Perm		c0.23			0.11			0.07			c0.21	
v/c Ratio		0.64			0.32			0.15			0.41	
Uniform Delay, d1		17.6			15.3			8.5			9.9	
Progression Factor		1.01			1.13			1.00			1.00	
Incremental Delay, d2		4.6			1.3			0.4			1.5	
Delay (s)		22.4			18.6			8.9			11.4	
Level of Service		C			B			A			B	
Approach Delay (s)		22.4			18.6			8.9			11.4	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



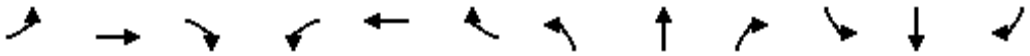
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	295	60	29	235	76	50	241	3	115	822	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1813			1799		1770	5076		1770	4956	
Flt Permitted		0.90			0.95		0.22	1.00		0.59	1.00	
Satd. Flow (perm)		1651			1717		401	5076		1107	4956	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	295	60	29	235	76	50	241	3	115	822	167
RTOR Reduction (vph)	0	9	0	0	16	0	0	2	0	0	47	0
Lane Group Flow (vph)	0	411	0	0	324	0	50	242	0	115	942	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		787			818		160	2030		442	1982	
v/s Ratio Prot								0.05			c0.19	
v/s Ratio Perm		c0.25			0.19		0.12			0.10		
v/c Ratio		0.52			0.40		0.31	0.12		0.26	0.48	
Uniform Delay, d1		11.8			11.0		13.4	12.3		13.1	14.4	
Progression Factor		1.00			0.85		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.5			1.4		5.0	0.1		1.4	0.8	
Delay (s)		14.3			10.8		18.4	12.4		14.5	15.3	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.3			10.8			13.4			15.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

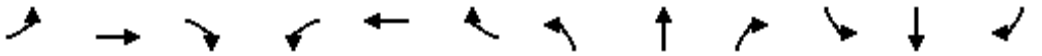
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	260	410	236	416	0	0	0	192	370	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frt	1.00	0.85	1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3525	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3525	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	260	410	236	416	0	0	0	192	370	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	260	410	236	416	0	0	0	192	378	0
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	14.2	29.0	9.8	65.0				26.0	26.0	
Effective Green, g (s)	14.2	29.0	9.8	65.0				26.0	26.0	
Actuated g/C Ratio	0.22	0.45	0.15	1.00				0.40	0.40	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	386	1610	517	1583				708	1410	
v/s Ratio Prot	c0.15	0.11						0.11	0.11	
v/s Ratio Perm			c0.07	c0.26						
v/c Ratio	0.67	0.25	0.46	0.26				0.27	0.27	
Uniform Delay, d1	23.3	11.2	25.2	0.0				13.1	13.1	
Progression Factor	1.69	0.56	1.00	1.00				1.00	1.00	
Incremental Delay, d2	4.5	0.1	0.6	0.4				0.9	0.5	
Delay (s)	43.8	6.4	25.8	0.4				14.1	13.6	
Level of Service	D	A	C	A				B	B	
Approach Delay (s)	20.9		9.6			0.0			13.7	
Approach LOS	C		A			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	537	154	453	472	3	229	0	377	4	17	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Lane Util. Factor		0.95		0.91	0.91			1.00	1.00		1.00	
Frt		0.97		1.00	1.00			1.00	0.85		0.93	
Flt Protected		1.00		0.95	0.99			0.95	1.00		1.00	
Satd. Flow (prot)		3421		1610	3348			1770	1583		1729	
Flt Permitted		0.95		0.95	0.61			0.73	1.00		0.97	
Satd. Flow (perm)		3261		1610	2078			1359	1583		1689	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	537	154	453	472	3	229	0	377	4	17	21
RTOR Reduction (vph)	0	25	0	0	0	0	0	0	301	0	17	0
Lane Group Flow (vph)	0	669	0	304	624	0	0	229	76	0	25	0
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		45.1		22.3	71.4			20.1	20.1		20.1	
Effective Green, g (s)		45.1		22.3	71.4			20.1	20.1		20.1	
Actuated g/C Ratio		0.45		0.22	0.71			0.20	0.20		0.20	
Clearance Time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1470		359	1766			273	318		339	
v/s Ratio Prot				c0.19	0.08							
v/s Ratio Perm		c0.21			0.17			c0.17	0.05		0.01	
v/c Ratio		0.46		0.85	0.35			0.84	0.24		0.07	
Uniform Delay, d1		19.0		37.2	5.5			38.4	33.5		32.4	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.0		16.6	0.1			19.7	0.4		0.1	
Delay (s)		20.0		53.8	5.6			58.0	33.9		32.5	
Level of Service		B		D	A			E	C		C	
Approach Delay (s)		20.0			21.4			43.0			32.5	
Approach LOS		B			C			D			C	

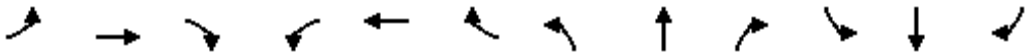
Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	497	84	57	408	70	106	549	82	44	589	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frt		0.98			0.98			0.98			1.00	0.85
Flt Protected		0.99			0.99			0.99			1.00	1.00
Satd. Flow (prot)		3449			3451			3455			3527	1583
Flt Permitted		0.79			0.82			0.74			0.86	1.00
Satd. Flow (perm)		2730			2856			2579			3053	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	96	497	84	57	408	70	106	549	82	44	589	127
RTOR Reduction (vph)	0	15	0	0	16	0	0	13	0	0	0	71
Lane Group Flow (vph)	0	662	0	0	519	0	0	724	0	0	633	56
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		30.0			30.0			32.0			32.0	32.0
Effective Green, g (s)		30.0			30.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42			0.42			0.44			0.44	0.44
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)		1137			1190			1146			1356	703
v/s Ratio Prot												
v/s Ratio Perm		c0.24			0.18			c0.28			0.21	0.04
v/c Ratio		0.58			0.44			0.63			0.47	0.08
Uniform Delay, d1		16.2			15.0			15.4			14.0	11.5
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.2			1.2			2.6			1.2	0.2
Delay (s)		18.4			16.1			18.1			15.2	11.7
Level of Service		B			B			B			B	B
Approach Delay (s)		18.4			16.1			18.1			14.6	
Approach LOS		B			B			B			B	

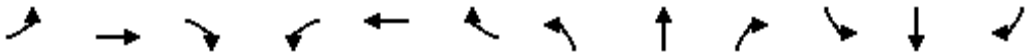
Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	242	29	81	118	28	15	532	33	43	890	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.99			0.98		1.00	0.99			0.99	
Flt Protected		0.99			0.98		0.95	1.00			1.00	
Satd. Flow (prot)		1816			1795		1767	3503			3502	
Flt Permitted		0.81			0.72		0.24	1.00			0.91	
Satd. Flow (perm)		1499			1315		448	3503			3198	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	99	242	29	81	118	28	15	532	33	43	890	46
RTOR Reduction (vph)	0	4	0	0	7	0	0	5	0	0	4	0
Lane Group Flow (vph)	0	366	0	0	220	0	15	560	0	0	975	0
Confl. Peds. (#/hr)	3		2	2		3	7		4	4		7
Confl. Bikes (#/hr)			2			3			5			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		19.1			20.1		41.3	41.3			41.3	
Effective Green, g (s)		19.1			20.1		41.3	41.3			41.3	
Actuated g/C Ratio		0.28			0.29		0.60	0.60			0.60	
Clearance Time (s)		5.0			4.0		4.0	4.0			4.0	
Vehicle Extension (s)		1.0			1.0		1.0	1.0			1.0	
Lane Grp Cap (vph)		412			380		266	2084			1903	
v/s Ratio Prot								0.16				
v/s Ratio Perm		c0.24			0.17		0.03				c0.30	
v/c Ratio		0.89			0.58		0.06	0.27			0.51	
Uniform Delay, d1		24.1			21.0		5.9	6.8			8.2	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		19.5			1.3		0.4	0.3			1.0	
Delay (s)		43.6			22.4		6.3	7.1			9.2	
Level of Service		D			C		A	A			A	
Approach Delay (s)		43.6			22.4			7.1			9.2	
Approach LOS		D			C			A			A	

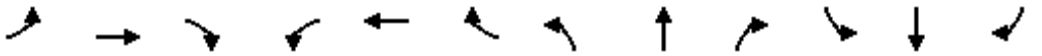
Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	4	7	246	1	67	5	554	245	116	909	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.97		1.00	0.95		1.00	1.00	
Flt Protected		0.99			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1689			1719		1751	3344		1752	3504	
Flt Permitted		0.94			0.76		0.27	1.00		0.31	1.00	
Satd. Flow (perm)		1611			1363		496	3344		579	3504	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	4	7	246	1	67	5	554	245	116	909	2
RTOR Reduction (vph)	0	5	0	0	14	0	0	54	0	0	0	0
Lane Group Flow (vph)	0	9	0	0	300	0	5	745	0	116	911	0
Confl. Peds. (#/hr)	2					2	2					2
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.8			18.8		40.8	40.8		40.8	40.8	
Effective Green, g (s)		18.8			18.8		40.8	40.8		40.8	40.8	
Actuated g/C Ratio		0.28			0.28		0.60	0.60		0.60	0.60	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		448			379		299	2018		349	2114	
v/s Ratio Prot								0.22			c0.26	
v/s Ratio Perm		0.01			c0.22		0.01			0.20		
v/c Ratio		0.02			0.79		0.02	0.37		0.33	0.43	
Uniform Delay, d1		17.7			22.6		5.4	6.8		6.6	7.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			10.0		0.1	0.5		2.5	0.6	
Delay (s)		17.7			32.6		5.5	7.4		9.2	7.8	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		17.7			32.6			7.3			8.0	
Approach LOS		B			C			A			A	

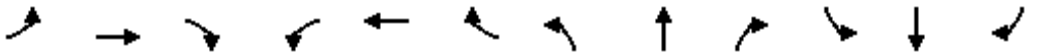
Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	67.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



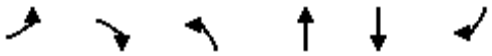
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	233	404	379	131	382	85	249	625	183	72	705	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frt		0.94			0.98		1.00	0.97		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3303			1807		1770	3419		1770	3423	
Flt Permitted		0.60			0.23		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2009			417		1770	3419		1770	3423	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	233	404	379	131	382	85	249	625	183	72	705	198
RTOR Reduction (vph)	0	72	0	0	5	0	0	21	0	0	26	0
Lane Group Flow (vph)	0	944	0	0	593	0	249	787	0	72	877	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		33.4			33.4		17.1	39.7		7.2	29.8	
Effective Green, g (s)		33.4			33.4		17.1	39.7		7.2	29.8	
Actuated g/C Ratio		0.35			0.35		0.18	0.41		0.07	0.31	
Clearance Time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)		1.0			1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		693			143		312	1402		131	1053	
v/s Ratio Prot							c0.14	0.23		0.04	c0.26	
v/s Ratio Perm		0.47			c1.42							
v/c Ratio		1.36			4.15		0.80	0.56		0.55	0.83	
Uniform Delay, d1		31.7			31.7		38.2	21.9		43.2	31.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		172.2			1431.7		12.4	0.3		2.5	5.5	
Delay (s)		203.9			1463.4		50.6	22.2		45.8	36.7	
Level of Service		F			F		D	C		D	D	
Approach Delay (s)		203.9			1463.4			28.9			37.4	
Approach LOS		F			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	315.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	2.19		
Actuated Cycle Length (s)	96.8	Sum of lost time (s)	16.5
Intersection Capacity Utilization	121.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



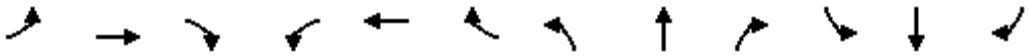
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	30	170	53	60	38	134	761	23	44	1035	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.97		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1768		1770	3524		1770	3464	
Flt Permitted	0.64	1.00	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1187	1863	1583		1607		1770	3524		1770	3464	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	30	170	53	60	38	134	761	23	44	1035	170
RTOR Reduction (vph)	0	0	131	0	14	0	0	2	0	0	12	0
Lane Group Flow (vph)	170	30	39	0	137	0	134	782	0	44	1193	0
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	15.9	15.9	15.9		15.9		7.9	36.7		3.0	31.8	
Effective Green, g (s)	15.9	15.9	15.9		15.9		7.9	36.7		3.0	31.8	
Actuated g/C Ratio	0.23	0.23	0.23		0.23		0.12	0.53		0.04	0.46	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	275	431	366		372		203	1885		77	1605	
v/s Ratio Prot		0.02					c0.08	0.22		0.02	c0.34	
v/s Ratio Perm	c0.14		0.02		0.09							
v/c Ratio	0.62	0.07	0.11		0.37		0.66	0.41		0.57	0.74	
Uniform Delay, d1	23.6	20.6	20.8		22.1		29.1	9.5		32.2	15.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.9	0.0	0.0		0.2		6.1	0.1		6.2	1.7	
Delay (s)	26.5	20.6	20.8		22.4		35.2	9.6		38.4	16.7	
Level of Service	C	C	C		C		D	A		D	B	
Approach Delay (s)		23.4			22.4			13.3			17.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	68.6	Sum of lost time (s)	13.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



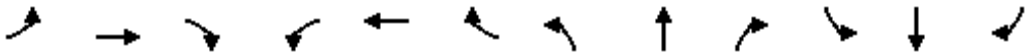
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	184	922	841	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.96	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3398	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3398	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	184	922	841	306
RTOR Reduction (vph)	0	0	0	0	69	0
Lane Group Flow (vph)	0	0	184	922	1078	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			6.0	39.4	25.4	
Effective Green, g (s)			6.0	39.4	25.4	
Actuated g/C Ratio			0.15	1.00	0.64	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			522	3539	2190	
v/s Ratio Prot			0.05	c0.26	c0.32	
v/s Ratio Perm						
v/c Ratio			0.35	0.26	0.49	
Uniform Delay, d1			15.0	0.0	3.6	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			0.4	0.0	0.2	
Delay (s)			15.4	0.0	3.8	
Level of Service			B	A	A	
Approach Delay (s)	0.0			2.6	3.8	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	3.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	39.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	121	123	136	0	255	0	687	142	208	603	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.91			0.97		1.00	1.00	
Flt Protected	0.95	0.98	1.00		0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1741	1583		1670			3448		1770	3539	
Flt Permitted	0.95	0.98	1.00		0.98			1.00		0.24	1.00	
Satd. Flow (perm)	1681	1741	1583		1670			3448		452	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	231	121	123	136	0	255	0	687	142	208	603	0
RTOR Reduction (vph)	0	0	101	0	76	0	0	18	0	0	0	0
Lane Group Flow (vph)	173	179	22	0	315	0	0	811	0	208	603	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	14.3	14.3	14.3		18.5			36.3		36.3	36.3	
Effective Green, g (s)	14.3	14.3	14.3		18.5			36.3		36.3	36.3	
Actuated g/C Ratio	0.18	0.18	0.18		0.23			0.45		0.45	0.45	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	296	306	279		380			1543		202	1584	
v/s Ratio Prot	c0.10	0.10			c0.19			0.24			0.17	
v/s Ratio Perm			0.01							c0.46		
v/c Ratio	0.58	0.58	0.08		0.83			0.53		1.03	0.38	
Uniform Delay, d1	30.7	30.7	27.9		29.8			16.2		22.4	14.9	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	2.9	2.8	0.1		13.9			0.3		71.3	0.2	
Delay (s)	33.6	33.5	28.0		43.7			16.5		93.7	15.1	
Level of Service	C	C	C		D			B		F	B	
Approach Delay (s)		32.1			43.7			16.5			35.2	
Approach LOS		C			D			B			D	

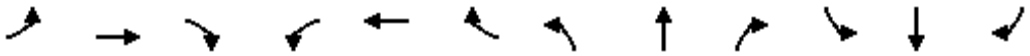
Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	67	0	100	0	618	53	134	989	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frpb, ped/bikes					1.00			1.00		1.00	1.00	
Flpb, ped/bikes					1.00			1.00		1.00	1.00	
Frt					0.92			0.99		1.00	1.00	
Flt Protected					0.98			1.00		0.95	1.00	
Satd. Flow (prot)					1678			3491		1770	3539	
Flt Permitted					0.89			1.00		0.95	1.00	
Satd. Flow (perm)					1525			3491		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	67	0	100	0	618	53	134	989	0
RTOR Reduction (vph)	0	0	0	0	69	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	98	0	0	663	0	134	989	0
Confl. Peds. (#/hr)			1	1						3		
Confl. Bikes (#/hr)									2			
Turn Type				Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)					23.0			26.0		14.0	26.0	
Effective Green, g (s)					23.0			26.0		14.0	26.0	
Actuated g/C Ratio					0.31			0.35		0.19	0.35	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)					467			1210		330	1226	
v/s Ratio Prot								0.19		c0.08	c0.28	
v/s Ratio Perm					c0.06							
v/c Ratio					0.21			0.55		0.41	0.81	
Uniform Delay, d1					19.3			19.8		26.8	22.2	
Progression Factor					1.00			0.70		1.00	1.00	
Incremental Delay, d2					1.0			1.6		3.7	5.7	
Delay (s)					20.3			15.4		30.5	28.0	
Level of Service					C			B		C	C	
Approach Delay (s)		0.0			20.3			15.4			28.3	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	264	131	46	166	122	40	458	71	157	786	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.95		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1753			1726		1747	3422		1748	3435	
Flt Permitted		0.78			0.83		0.28	1.00		0.45	1.00	
Satd. Flow (perm)		1381			1442		510	3422		822	3435	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	94	264	131	46	166	122	40	458	71	157	786	93
RTOR Reduction (vph)	0	18	0	0	28	0	0	17	0	0	12	0
Lane Group Flow (vph)	0	471	0	0	306	0	40	512	0	157	867	0
Confl. Peds. (#/hr)	11					11	5		2	2		5
Confl. Bikes (#/hr)			1			2			2			7
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		22.0			22.0		43.0	43.0		43.0	43.0	
Effective Green, g (s)		22.0			22.0		43.0	43.0		43.0	43.0	
Actuated g/C Ratio		0.29			0.29		0.57	0.57		0.57	0.57	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		405			422		292	1961		471	1969	
v/s Ratio Prot								0.15			c0.25	
v/s Ratio Perm		c0.34			0.21		0.08			0.19		
v/c Ratio		1.16			0.73		0.14	0.26		0.33	0.44	
Uniform Delay, d1		26.5			23.8		7.4	8.0		8.4	9.1	
Progression Factor		1.00			1.00		1.00	1.00		3.07	3.20	
Incremental Delay, d2		97.6			6.1		1.0	0.3		1.2	0.4	
Delay (s)		124.1			29.9		8.4	8.4		27.1	29.6	
Level of Service		F			C		A	A		C	C	
Approach Delay (s)		124.1			29.9			8.4			29.3	
Approach LOS		F			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	43.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

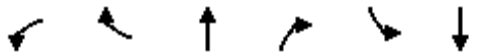
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	771	222	77	682	97	143	209	68	162	626	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1550	1770	3473		1770	3398		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1550	1770	3473		1770	3398		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	771	222	77	682	97	143	209	68	162	626	112
RTOR Reduction (vph)	0	0	99	0	11	0	0	25	0	0	0	71
Lane Group Flow (vph)	120	771	123	77	768	0	143	252	0	162	626	41
Confl. Peds. (#/hr)			6						1			
Confl. Bikes (#/hr)			3									
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	7.0	31.5	31.5	8.9	33.4		11.5	43.6		8.0	40.1	40.1
Effective Green, g (s)	7.0	31.5	31.5	8.9	33.4		11.5	43.6		8.0	40.1	40.1
Actuated g/C Ratio	0.06	0.29	0.29	0.08	0.30		0.10	0.40		0.07	0.36	0.36
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	112	1013	443	143	1054		185	1346		128	1290	577
v/s Ratio Prot	c0.07	0.22		0.04	c0.22		0.08	c0.07		c0.09	c0.18	
v/s Ratio Perm			0.08									0.03
v/c Ratio	1.07	0.76	0.28	0.54	0.73		0.77	0.19		1.27	0.49	0.07
Uniform Delay, d1	51.5	35.8	30.4	48.6	34.2		48.0	21.6		51.0	27.0	22.8
Progression Factor	1.19	0.91	1.10	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	96.3	2.7	0.3	3.9	2.5		18.0	0.3		167.4	1.3	0.2
Delay (s)	157.5	35.2	33.6	52.4	36.8		66.0	22.0		218.4	28.3	23.0
Level of Service	F	D	C	D	D		E	C		F	C	C
Approach Delay (s)		48.1			38.2			36.9			61.9	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	47.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	66	72	508	92	49	541
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	66	72	508	92	49	541
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	922	300			600	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	922	300			600	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	74	90			95	
cM capacity (veh/h)	255	696			973	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	138	339	261	229	361
Volume Left	66	0	0	49	0
Volume Right	72	0	92	0	0
cSH	381	1700	1700	973	1700
Volume to Capacity	0.36	0.20	0.15	0.05	0.21
Queue Length 95th (ft)	40	0	0	4	0
Control Delay (s)	19.7	0.0	0.0	2.3	0.0
Lane LOS	C			A	
Approach Delay (s)	19.7	0.0		0.9	
Approach LOS	C				

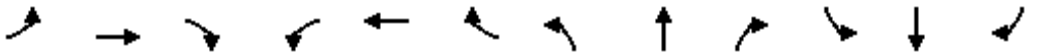
Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	128	168	388	296	175	390
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	128	168	388	296	175	390
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1081	342			684	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1081	342			684	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	25	74			81	
cM capacity (veh/h)	171	654			905	

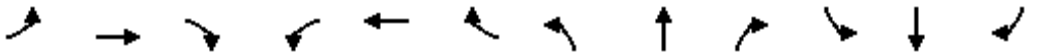
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	296	259	425	305	260
Volume Left	128	0	0	175	0
Volume Right	168	0	296	0	0
cSH	295	1700	1700	905	1700
Volume to Capacity	1.00	0.15	0.25	0.19	0.15
Queue Length 95th (ft)	265	0	0	18	0
Control Delay (s)	92.3	0.0	0.0	6.6	0.0
Lane LOS	F			A	
Approach Delay (s)	92.3	0.0		3.6	
Approach LOS	F				

Intersection Summary			
Average Delay	19.0		
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		



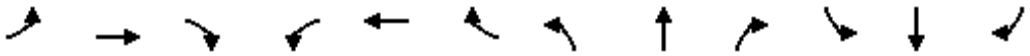
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	829	165	152	685	75	246	435	157	134	503	317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1524	3433	3539	1541	3433	3365		3433	3281	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1524	3433	3539	1541	3433	3365		3433	3281	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	341	829	165	152	685	75	246	435	157	134	503	317
RTOR Reduction (vph)	0	0	55	0	0	55	0	28	0	0	79	0
Lane Group Flow (vph)	341	829	110	152	685	20	246	564	0	134	741	0
Confl. Peds. (#/hr)			23			15			26			28
Confl. Bikes (#/hr)			6			1			2			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	15.3	31.5	31.5	9.9	26.1	26.1	10.8	29.2		9.1	27.5	
Effective Green, g (s)	15.3	31.5	31.5	9.9	26.1	26.1	10.8	29.2		9.1	27.5	
Actuated g/C Ratio	0.16	0.33	0.33	0.10	0.27	0.27	0.11	0.31		0.10	0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	548	1164	501	355	965	420	387	1026		326	942	
v/s Ratio Prot	c0.10	c0.23		0.04	0.19		c0.07	0.17		0.04	c0.23	
v/s Ratio Perm			0.07			0.01						
v/c Ratio	0.62	0.71	0.22	0.43	0.71	0.05	0.64	0.55		0.41	0.79	
Uniform Delay, d1	37.5	28.1	23.2	40.2	31.4	25.6	40.6	27.8		40.8	31.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	2.1	0.2	0.8	2.4	0.0	3.4	0.6		0.8	4.4	
Delay (s)	39.7	30.2	23.4	41.1	33.8	25.7	44.0	28.4		41.6	35.8	
Level of Service	D	C	C	D	C	C	D	C		D	D	
Approach Delay (s)		31.8			34.3			32.9			36.6	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	95.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	186	147	14	103	17	102	566	20	17	579	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1749	1721			1814		1770	3515		1770	3539	1529
Flt Permitted	0.71	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1309	1721			1738		1770	3515		1770	3539	1529
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	182	186	147	14	103	17	102	566	20	17	579	311
RTOR Reduction (vph)	0	27	0	0	5	0	0	2	0	0	0	198
Lane Group Flow (vph)	182	306	0	0	129	0	102	584	0	17	579	113
Confl. Peds. (#/hr)	26		9	9		26	7		18	18		7
Confl. Bikes (#/hr)			9			5			2			3
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	16.9	16.9			16.9		7.1	26.6		1.1	20.6	20.6
Effective Green, g (s)	16.9	16.9			16.9		7.1	26.6		1.1	20.6	20.6
Actuated g/C Ratio	0.30	0.30			0.30		0.13	0.47		0.02	0.36	0.36
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	390	513			518		222	1651		34	1288	556
v/s Ratio Prot		c0.18					c0.06	0.17		0.01	c0.16	
v/s Ratio Perm	0.14				0.07							0.07
v/c Ratio	0.47	0.60			0.25		0.46	0.35		0.50	0.45	0.20
Uniform Delay, d1	16.2	16.9			15.0		23.0	9.5		27.5	13.7	12.4
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	1.9			0.3		1.5	0.1		11.1	0.3	0.2
Delay (s)	17.1	18.8			15.3		24.5	9.7		38.6	13.9	12.5
Level of Service	B	B			B		C	A		D	B	B
Approach Delay (s)		18.2			15.3			11.9			13.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	443	427	4	192	13	227	391	15	69	669	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1861	1583	1770	3520		1770	3438	
Flt Permitted	0.95	1.00	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1840	1583	1770	3520		1770	3438	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	360	443	427	4	192	13	227	391	15	69	669	158
RTOR Reduction (vph)	0	0	210	0	0	11	0	2	0	0	20	0
Lane Group Flow (vph)	360	443	217	0	196	2	227	404	0	69	807	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	12.2	32.2	32.2		15.0	15.0	12.2	32.8		7.3	27.9	
Effective Green, g (s)	12.2	32.2	32.2		15.0	15.0	12.2	32.8		7.3	27.9	
Actuated g/C Ratio	0.14	0.37	0.37		0.17	0.17	0.14	0.38		0.08	0.32	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	247	687	583		316	271	247	1322		148	1098	
v/s Ratio Prot	c0.20	c0.24					c0.13	c0.11		0.04	c0.23	
v/s Ratio Perm			0.14		0.11	0.00						
v/c Ratio	1.46	0.64	0.37		0.62	0.01	0.92	0.31		0.47	0.73	
Uniform Delay, d1	37.5	22.8	20.2		33.5	30.0	37.1	19.2		38.1	26.4	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	226.9	2.1	0.4		3.8	0.0	35.7	0.1		2.3	2.6	
Delay (s)	264.5	24.9	20.6		37.3	30.0	72.8	19.3		40.5	29.0	
Level of Service	F	C	C		D	C	E	B		D	C	
Approach Delay (s)		93.5			36.8			38.5			29.9	
Approach LOS		F			D			D			C	

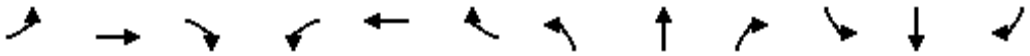
Intersection Summary			
HCM 2000 Control Delay	58.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	87.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	292	226	89	100	287	16	2	124	279	42	13	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.96		1.00	0.99			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3373		1770	3508			1768	3461			1763
Flt Permitted	0.95	1.00		0.95	1.00			0.36	1.00			0.69
Satd. Flow (perm)	3433	3373		1770	3508			665	3461			1280
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	292	226	89	100	287	16	2	124	279	42	13	23
RTOR Reduction (vph)	0	39	0	0	4	0	0	0	11	0	0	0
Lane Group Flow (vph)	292	276	0	100	299	0	0	126	310	0	0	36
Confl. Peds. (#/hr)	2		7	7		2		3		9		9
Confl. Bikes (#/hr)						2				3		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	11.2	15.7		7.8	12.3			11.2	23.0			5.8
Effective Green, g (s)	11.2	15.7		7.8	12.3			11.2	23.0			5.8
Actuated g/C Ratio	0.16	0.23		0.11	0.18			0.16	0.34			0.08
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	562	775		202	631			109	1165			108
v/s Ratio Prot	c0.09	c0.08		0.06	c0.09				0.09			
v/s Ratio Perm								c0.19				0.03
v/c Ratio	0.52	0.36		0.50	0.47			1.16	0.27			0.33
Uniform Delay, d1	26.1	22.1		28.4	25.1			28.5	16.5			29.4
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	0.8	0.3		1.9	0.6			134.2	0.1			1.8
Delay (s)	26.9	22.3		30.3	25.7			162.7	16.6			31.3
Level of Service	C	C		C	C			F	B			C
Approach Delay (s)		24.5			26.8				57.8			
Approach LOS		C			C				E			

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	68.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	425	433
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.98
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1559
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1559
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	425	433
RTOR Reduction (vph)	0	321
Lane Group Flow (vph)	425	112
Confl. Peds. (#/hr)		3
Confl. Bikes (#/hr)		2
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	17.6	17.6
Effective Green, g (s)	17.6	17.6
Actuated g/C Ratio	0.26	0.26
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	911	401
v/s Ratio Prot	c0.12	
v/s Ratio Perm		0.07
v/c Ratio	0.47	0.28
Uniform Delay, d1	21.4	20.3
Progression Factor	1.00	1.00
Incremental Delay, d2	0.4	0.4
Delay (s)	21.8	20.7
Level of Service	C	C
Approach Delay (s)	21.6	
Approach LOS	C	

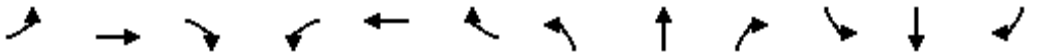
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	9	2	133	3	68	1	135	157	217	117	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	9	2	133	3	68	1	135	157	217	117	0
Pedestrians								2				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	758	845	119	696	688	135	117			292		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	758	845	119	696	688	135	117			292		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	96	100	55	99	92	100			83		
cM capacity (veh/h)	255	245	923	295	302	906	1453			1253		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	16	204	136	157	334
Volume Left	5	133	1	0	217
Volume Right	2	68	0	157	0
cSH	273	381	1453	1700	1253
Volume to Capacity	0.06	0.54	0.00	0.09	0.17
Queue Length 95th (ft)	5	76	0	0	16
Control Delay (s)	19.0	24.8	0.1	0.0	6.1
Lane LOS	C	C	A		A
Approach Delay (s)	19.0	24.8	0.0		6.1
Approach LOS	C	C			

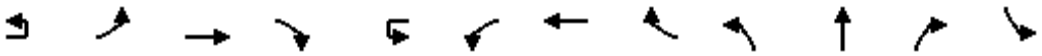
Intersection Summary				
Average Delay	8.7			
Intersection Capacity Utilization	53.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	631	375	45	577	68	375	104	59	126	92	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.99	0.85	1.00	0.98		1.00	1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (prot)	1736	3113	2633	1736	4900		1579	3221	1530		3126	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (perm)	1736	3113	2633	1736	4900		1579	3221	1530		3126	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	147	631	375	45	577	68	375	104	59	126	92	242
RTOR Reduction (vph)	0	3	206	0	12	0	0	0	46	0	159	0
Lane Group Flow (vph)	147	666	131	45	633	0	187	292	13	0	301	0
Confl. Peds. (#/hr)	4					4			4	4		
Confl. Bikes (#/hr)			4			2						4
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	12.6	29.1	29.1	4.6	21.1		16.0	16.0	16.0		13.0	
Effective Green, g (s)	12.6	29.1	29.1	4.6	21.1		16.0	16.0	16.0		13.0	
Actuated g/C Ratio	0.17	0.39	0.39	0.06	0.28		0.21	0.21	0.21		0.17	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	292	1212	1025	106	1384		338	689	327		544	
v/s Ratio Prot	c0.08	c0.21		0.03	0.13		c0.12	0.09			c0.10	
v/s Ratio Perm			0.05						0.01			
v/c Ratio	0.50	0.55	0.13	0.42	0.46		0.55	0.42	0.04		0.55	
Uniform Delay, d1	28.2	17.7	14.6	33.8	22.1		26.2	25.4	23.3		28.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	1.4	0.5	0.1	2.7	0.2		2.0	0.4	0.0		1.2	
Delay (s)	29.6	18.2	14.7	36.5	22.3		28.1	25.8	23.3		29.4	
Level of Service	C	B	B	D	C		C	C	C		C	
Approach Delay (s)		18.6			23.2			26.3			29.4	
Approach LOS		B			C			C			C	

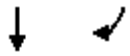
Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



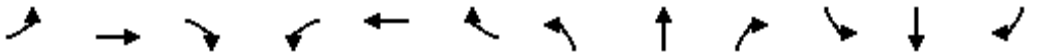
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	30	0	1407	84	10	126	1276	0	110	0	111	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0			3.0	4.0			5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.86			1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00			1.00	0.99	
Flpb, ped/bikes		0.99	1.00			1.00	1.00			0.99	1.00	
Frt		1.00	0.99			1.00	1.00			1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1758	6345			1768	6408			1754	1561	
Flt Permitted		0.50	1.00			0.27	1.00			0.76	1.00	
Satd. Flow (perm)		925	6345			496	6408			1398	1561	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	0	1407	84	10	126	1276	0	110	0	111	0
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	0	0	98	0
Lane Group Flow (vph)	0	30	1485	0	0	136	1276	0	0	110	13	0
Confl. Peds. (#/hr)		15		4		4		15	8			
Confl. Bikes (#/hr)				1				3			1	
Turn Type	custom	Prot	NA		custom	Prot	NA		Perm	NA	Perm	
Protected Phases		5	2			1	6			3		
Permitted Phases	5				1				3	3	3	3
Actuated Green, G (s)		8.0	66.2			15.0	73.2			12.8	12.8	
Effective Green, g (s)		8.0	66.2			15.0	73.2			12.8	12.8	
Actuated g/C Ratio		0.08	0.62			0.14	0.69			0.12	0.12	
Clearance Time (s)		3.0	4.0			3.0	4.0			5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0			2.0	2.0	
Lane Grp Cap (vph)		69	3962			70	4425			168	188	
v/s Ratio Prot			c0.23				0.20					
v/s Ratio Perm		0.03				c0.27				c0.08	0.01	
v/c Ratio		0.43	0.37			1.94	0.29			0.65	0.07	
Uniform Delay, d1		46.8	9.8			45.5	6.3			44.5	41.3	
Progression Factor		0.67	1.96			1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.3	0.2			471.9	0.2			6.8	0.1	
Delay (s)		32.6	19.4			517.4	6.5			51.3	41.4	
Level of Service		C	B			F	A			D	D	
Approach Delay (s)			19.7				55.7			46.3		
Approach LOS			B				E			D		

Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Volume (vph)	0	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		
Lane Util. Factor		
Frpb, ped/bikes		
Flpb, ped/bikes		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	0	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Confl. Peds. (#/hr)		8
Confl. Bikes (#/hr)		
Turn Type		Perm
Protected Phases	3	
Permitted Phases	3	3
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)	0.0	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	974	82	106	883	51	437	181	480	53	20	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.99		1.00	0.99		1.00	0.90			0.91	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	3433	5026		1770	6355		1610	3037			1584	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (perm)	3433	5026		1770	6355		1610	3037			1584	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	974	82	106	883	51	437	181	480	53	20	298
RTOR Reduction (vph)	0	7	0	0	5	0	0	352	0	0	65	161
Lane Group Flow (vph)	98	1049	0	106	929	0	385	361	0	0	124	21
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	6.4	37.8		10.5	41.9		28.2	28.2			12.5	12.5
Effective Green, g (s)	6.4	37.8		10.5	41.9		28.2	28.2			12.5	12.5
Actuated g/C Ratio	0.06	0.36		0.10	0.40		0.27	0.27			0.12	0.12
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	207	1792		175	2512		428	807			186	177
v/s Ratio Prot	0.03	c0.21		c0.06	0.15		c0.24	0.12			c0.08	
v/s Ratio Perm												0.01
v/c Ratio	0.47	0.59		0.61	0.37		0.90	0.45			0.67	0.12
Uniform Delay, d1	48.2	27.7		45.8	22.7		37.5	32.4			44.7	41.8
Progression Factor	1.00	1.00		0.87	0.81		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.6	1.4		3.9	0.4		20.7	0.1			6.8	0.1
Delay (s)	48.8	29.1		43.9	18.8		58.2	32.5			51.5	41.9
Level of Service	D	C		D	B		E	C			D	D
Approach Delay (s)		30.8			21.3			41.6			46.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

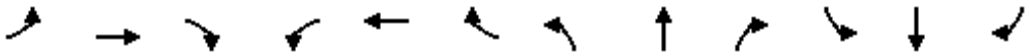
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	65	1029	147	53	724	73	7	144	89	60	2	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.99			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.98		1.00	0.99			1.00	0.94			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	1752	3423		1752	3433			1752	1713			1719
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (perm)	1752	3423		1752	3433			1752	1713			1719
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	1029	147	53	724	73	7	144	89	60	2	83
RTOR Reduction (vph)	0	7	0	0	5	0	0	0	28	0	0	0
Lane Group Flow (vph)	65	1169	0	53	792	0	0	151	121	0	0	85
Confl. Peds. (#/hr)	18		6	6		18		19		16		16
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA		Prot	Prot
Protected Phases	5	2		1	6		3	3	8		7	7
Permitted Phases												
Actuated Green, G (s)	7.1	56.5		6.1	55.5			12.5	14.9			12.5
Effective Green, g (s)	7.1	56.5		6.1	55.5			12.5	14.9			12.5
Actuated g/C Ratio	0.06	0.51		0.06	0.50			0.11	0.14			0.11
Clearance Time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)	113	1758		97	1732			199	232			195
v/s Ratio Prot	0.04	c0.34		c0.03	0.23			c0.09	0.07			0.05
v/s Ratio Perm												
v/c Ratio	0.58	0.66		0.55	0.46			0.76	0.52			0.44
Uniform Delay, d1	50.0	19.8		50.6	17.6			47.3	44.2			45.5
Progression Factor	1.12	1.05		0.95	1.41			1.00	1.00			1.00
Incremental Delay, d2	3.2	0.5		2.8	0.7			13.6	1.0			0.6
Delay (s)	59.1	21.2		50.8	25.5			60.9	45.2			46.0
Level of Service	E	C		D	C			E	D			D
Approach Delay (s)		23.2			27.1				53.1			
Approach LOS		C			C				D			

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

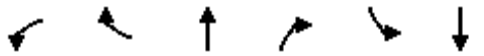
Movement	SBT	SBR
Lane Configurations		
Volume (vph)	83	114
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.98	
Flpb, ped/bikes	1.00	
Frt	0.91	
Flt Protected	1.00	
Satd. Flow (prot)	1618	
Flt Permitted	1.00	
Satd. Flow (perm)	1618	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	83	114
RTOR Reduction (vph)	54	0
Lane Group Flow (vph)	143	0
Confl. Peds. (#/hr)		19
Confl. Bikes (#/hr)		2
Heavy Vehicles (%)	5%	5%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	14.9	
Effective Green, g (s)	14.9	
Actuated g/C Ratio	0.14	
Clearance Time (s)	5.0	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	219	
v/s Ratio Prot	c0.09	
v/s Ratio Perm		
v/c Ratio	0.65	
Uniform Delay, d1	45.1	
Progression Factor	1.00	
Incremental Delay, d2	5.2	
Delay (s)	50.3	
Level of Service	D	
Approach Delay (s)	49.0	
Approach LOS	D	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	622	0	0	695	449	2	1011	562	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95			0.95	1.00			
Frt	1.00	1.00			0.94			1.00	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	1770	3539			3331			3539	1583			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	1770	3539			3331			3539	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	622	0	0	695	449	2	1011	562	0	0	0
RTOR Reduction (vph)	0	0	0	0	105	0	0	0	75	0	0	0
Lane Group Flow (vph)	2	622	0	0	1039	0	0	1013	487	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	0.9	31.7			26.8			34.2	34.2			
Effective Green, g (s)	0.9	31.7			26.8			34.2	34.2			
Actuated g/C Ratio	0.01	0.43			0.36			0.46	0.46			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	21	1518			1207			1637	732			
v/s Ratio Prot	0.00	c0.18			c0.31							
v/s Ratio Perm								0.29	c0.31			
v/c Ratio	0.10	0.41			0.86			0.62	0.67			
Uniform Delay, d1	36.1	14.6			21.8			14.9	15.4			
Progression Factor	1.00	1.00			1.00			1.00	1.00			
Incremental Delay, d2	2.0	0.2			6.5			0.7	2.3			
Delay (s)	38.1	14.8			28.3			15.6	17.7			
Level of Service	D	B			C			B	B			
Approach Delay (s)		14.9			28.3			16.4			0.0	
Approach LOS		B			C			B			A	

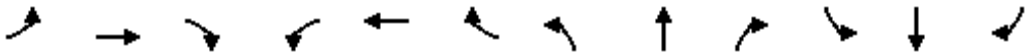
Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	73.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	713	0	0	0	624	999
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0
Lane Util. Factor	0.97					0.91
Frt	1.00					1.00
Flt Protected	0.95					0.98
Satd. Flow (prot)	3433					4989
Flt Permitted	0.95					0.98
Satd. Flow (perm)	3433					4989
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	713	0	0	0	624	999
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	713	0	0	0	0	1623
Turn Type	Prot				Split	NA
Protected Phases	8				6	6
Permitted Phases						
Actuated Green, G (s)	11.0					31.0
Effective Green, g (s)	11.0					31.0
Actuated g/C Ratio	0.22					0.62
Clearance Time (s)	4.0					4.0
Lane Grp Cap (vph)	755					3093
v/s Ratio Prot	c0.21					c0.33
v/s Ratio Perm						
v/c Ratio	0.94					0.52
Uniform Delay, d1	19.2					5.4
Progression Factor	1.00					1.00
Incremental Delay, d2	21.7					0.6
Delay (s)	40.9					6.0
Level of Service	D					A
Approach Delay (s)	40.9		0.0			6.0
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	500	426	93	32	571	128	241	521	547	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00				
Frt	1.00	0.97			0.97		1.00	0.92				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1770	3444			3439		1770	1720				
Flt Permitted	0.95	1.00			0.91		0.95	1.00				
Satd. Flow (perm)	1770	3444			3129		1770	1720				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	500	426	93	32	571	128	241	521	547	0	0	0
RTOR Reduction (vph)	0	20	0	0	19	0	0	40	0	0	0	0
Lane Group Flow (vph)	500	499	0	0	712	0	241	1028	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	24.5	50.5			21.5		35.5	35.5				
Effective Green, g (s)	24.5	50.5			21.5		35.5	35.5				
Actuated g/C Ratio	0.26	0.53			0.23		0.37	0.37				
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0			2.0		2.0	2.0				
Lane Grp Cap (vph)	456	1830			708		661	642				
v/s Ratio Prot	c0.28	0.14						c0.60				
v/s Ratio Perm					c0.23		0.14					
v/c Ratio	1.10	0.27			1.01		0.36	1.60				
Uniform Delay, d1	35.2	12.2			36.8		21.6	29.8				
Progression Factor	1.01	0.32			1.00		1.00	1.00				
Incremental Delay, d2	59.6	0.2			35.4		0.1	277.8				
Delay (s)	95.1	4.1			72.1		21.7	307.5				
Level of Service	F	A			E		C	F				
Approach Delay (s)		48.8			72.1			254.9			0.0	
Approach LOS		D			E			F			A	

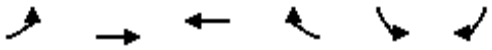
Intersection Summary			
HCM 2000 Control Delay	142.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	120.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	903	441	360	850	357	17	25	91	108	918	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Lane Util. Factor	0.95		1.00	0.95			1.00	1.00		0.91	
Frt	0.95		1.00	0.96			1.00	0.85		0.96	
Flt Protected	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	3365		1770	3382			1770	1583		4880	
Flt Permitted	1.00		0.95	1.00			0.15	1.00		1.00	
Satd. Flow (perm)	3365		1770	3382			271	1583		4880	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	903	441	360	850	357	17	25	91	108	918	330
RTOR Reduction (vph)	12	0	0	0	0	0	0	65	0	0	0
Lane Group Flow (vph)	1332	0	360	1207	0	0	42	26	0	1356	0
Turn Type	NA		Prot	NA		Perm	Perm	Perm	Perm	NA	
Protected Phases	2		1	6						4	
Permitted Phases						8	8	8	4		
Actuated Green, G (s)	41.5		13.5	58.5			27.5	27.5		27.5	
Effective Green, g (s)	41.5		13.5	58.5			27.5	27.5		27.5	
Actuated g/C Ratio	0.44		0.14	0.62			0.29	0.29		0.29	
Clearance Time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Vehicle Extension (s)	2.0		2.0	2.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	1469		251	2082			78	458		1412	
v/s Ratio Prot	c0.40		c0.20	0.36							
v/s Ratio Perm							0.16	0.02		0.28	
v/c Ratio	0.91		1.43	0.58			0.54	0.06		0.96	
Uniform Delay, d1	24.9		40.8	10.9			28.4	24.4		33.2	
Progression Factor	1.00		0.90	1.80			1.00	1.00		1.00	
Incremental Delay, d2	9.7		215.3	1.1			3.5	0.0		15.4	
Delay (s)	34.6		251.8	20.7			32.0	24.4		48.6	
Level of Service	C		F	C			C	C		D	
Approach Delay (s)	34.6			73.8						48.6	
Approach LOS	C			E						D	

Intersection Summary			
HCM 2000 Control Delay	52.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	119.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	630	0	0	784	71	588
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	630	0	0	784	71	588
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	630	0	0	784	71	588
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	17.4			17.4	21.2	21.2
Effective Green, g (s)	17.4			17.4	21.2	21.2
Actuated g/C Ratio	0.37			0.37	0.45	0.45
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1898			1321	805	720
v/s Ratio Prot	0.12			c0.22	0.04	c0.37
v/s Ratio Perm						
v/c Ratio	0.33			0.59	0.09	0.82
Uniform Delay, d1	10.4			11.8	7.2	11.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.7	0.0	7.1
Delay (s)	10.5			12.5	7.3	18.1
Level of Service	B			B	A	B
Approach Delay (s)	10.5			12.5	17.0	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



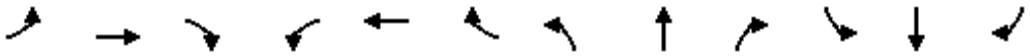
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	601	238	0	438	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.96	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3539	3539		3354	
Flt Permitted		1.00	1.00		0.96	
Satd. Flow (perm)		3539	3539		3354	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	601	238	0	438	143
RTOR Reduction (vph)	0	0	0	0	64	0
Lane Group Flow (vph)	0	601	238	0	517	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		11.6	11.6		10.2	
Effective Green, g (s)		11.6	11.6		10.2	
Actuated g/C Ratio		0.39	0.39		0.34	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1377	1377		1148	
v/s Ratio Prot		c0.17	0.07		c0.15	
v/s Ratio Perm						
v/c Ratio		0.44	0.17		0.45	
Uniform Delay, d1		6.7	6.0		7.6	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.2	0.1		0.3	
Delay (s)		6.9	6.0		7.9	
Level of Service		A	A		A	
Approach Delay (s)		6.9	6.0		7.9	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	29.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBU	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	16	367	100	115	571	133	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5		4.0			4.0
Lane Util. Factor		0.97		1.00			1.00
Frpb, ped/bikes		1.00		1.00			1.00
Flpb, ped/bikes		1.00		1.00			1.00
Frt		0.97		0.89			1.00
Flt Protected		0.96		1.00			0.97
Satd. Flow (prot)		3328		1637			1796
Flt Permitted		0.96		1.00			0.36
Satd. Flow (perm)		3328		1637			667
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	367	100	115	571	133	113
RTOR Reduction (vph)	0	26	0	138	0	0	0
Lane Group Flow (vph)	0	457	0	548	0	0	246
Confl. Peds. (#/hr)		2					
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom	Prot		NA		Perm	NA
Protected Phases		6		8			4
Permitted Phases						4	
Actuated Green, G (s)		20.8		26.3			26.3
Effective Green, g (s)		20.8		26.3			26.3
Actuated g/C Ratio		0.38		0.48			0.48
Clearance Time (s)		3.5		4.0			4.0
Vehicle Extension (s)		2.2		2.0			2.0
Lane Grp Cap (vph)		1267		788			321
v/s Ratio Prot				0.33			
v/s Ratio Perm		0.14					c0.37
v/c Ratio		2.38dr		0.69			0.77
Uniform Delay, d1		12.1		11.0			11.6
Progression Factor		1.00		1.00			1.00
Incremental Delay, d2		0.1		2.2			9.5
Delay (s)		12.2		13.2			21.1
Level of Service		B		B			C
Approach Delay (s)		12.2		13.2			21.1
Approach LOS		B		B			C

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	54.6	Sum of lost time (s)	11.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

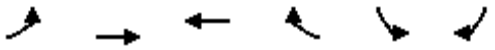
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	767	0	142	0	0	0	154	152	0	0	144	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.98	
Flt Protected	0.95		1.00					0.98			1.00	
Satd. Flow (prot)	3367		1553					3386			1798	
Flt Permitted	0.95		1.00					0.98			1.00	
Satd. Flow (perm)	3367		1553					3386			1798	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	767	0	142	0	0	0	154	152	0	0	144	19
RTOR Reduction (vph)	0	0	92	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	767	0	50	0	0	0	0	306	0	0	159	0
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	4%	2%	4%	2%	2%	2%	4%	4%	2%	2%	4%	4%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4				8		2	2			6	
Permitted Phases			4	8						6		
Actuated Green, G (s)	21.7		21.7					12.2			12.1	
Effective Green, g (s)	21.7		21.7					12.2			12.1	
Actuated g/C Ratio	0.35		0.35					0.20			0.20	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1178		543					666			350	
v/s Ratio Prot	c0.23							c0.09			c0.09	
v/s Ratio Perm			0.03									
v/c Ratio	0.65		0.09					0.46			0.45	
Uniform Delay, d1	17.0		13.5					22.0			22.0	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	1.3		0.1					0.5			0.9	
Delay (s)	18.3		13.6					22.5			23.0	
Level of Service	B		B					C			C	
Approach Delay (s)		17.5			0.0			22.5			23.0	
Approach LOS		B			A			C			C	

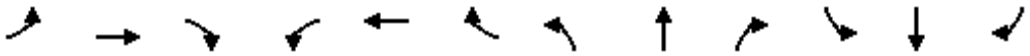
Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



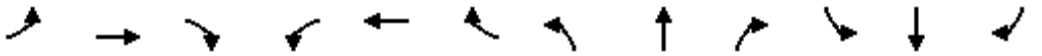
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1342	997	0	262	588
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5767	5767		3090	2508
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5767	5767		3090	2508
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1342	997	0	262	588
RTOR Reduction (vph)	0	0	0	0	0	122
Lane Group Flow (vph)	0	1342	997	0	262	466
Confl. Peds. (#/hr)	8			8		8
Confl. Bikes (#/hr)				3		
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		27.0	16.5		9.9	20.4
Effective Green, g (s)		27.0	16.5		9.9	20.4
Actuated g/C Ratio		0.60	0.37		0.22	0.45
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		3467	2119		681	1139
v/s Ratio Prot		0.23	c0.17		0.08	c0.19
v/s Ratio Perm						
v/c Ratio		0.39	0.47		0.38	0.41
Uniform Delay, d1		4.7	10.9		14.9	8.2
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1	0.2		0.4	0.2
Delay (s)		4.7	11.0		15.3	8.4
Level of Service		A	B		B	A
Approach Delay (s)		4.7	11.0		10.6	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	782	523	0	797	283	589	0	612	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frt		0.98	0.85		0.96		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3256	1413		4791		3367		1553			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3256	1413		4791		3367		1553			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	782	523	0	797	283	589	0	612	0	0	0
RTOR Reduction (vph)	0	11	0	0	58	0	0	0	133	0	0	0
Lane Group Flow (vph)	0	897	397	0	1022	0	589	0	479	0	0	0
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		66.0	110.0		66.0		36.0		36.0			
Effective Green, g (s)		66.0	110.0		66.0		36.0		36.0			
Actuated g/C Ratio		0.60	1.00		0.60		0.33		0.33			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1953	1413		2874		1101		508			
v/s Ratio Prot		c0.28			0.21		0.17					
v/s Ratio Perm			0.28						c0.31			
v/c Ratio		0.46	0.28		0.36		0.53		0.94			
Uniform Delay, d1		12.1	0.0		11.2		30.2		36.0			
Progression Factor		1.00	1.00		1.01		1.00		1.00			
Incremental Delay, d2		0.8	0.5		0.3		1.9		27.9			
Delay (s)		12.9	0.5		11.6		32.0		63.9			
Level of Service		B	A		B		C		E			
Approach Delay (s)		9.1			11.6			48.3			0.0	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

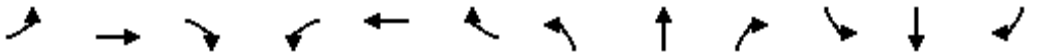


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1049	905	0	1034	0	0	0	0	276	0	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		0.99
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.95	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4500	1335		4988					3367		1532
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4500	1335		4988					3367		1532
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1049	905	0	1034	0	0	0	0	276	0	145
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	108
Lane Group Flow (vph)	0	1502	452	0	1034	0	0	0	0	276	0	37
Confl. Peds. (#/hr)							5					2
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	4%	4%	4%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		40.4	40.4		40.4					11.2		11.2
Effective Green, g (s)		40.4	40.4		40.4					11.2		11.2
Actuated g/C Ratio		0.68	0.68		0.68					0.19		0.19
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3050	904		3381					632		287
v/s Ratio Prot		0.33	c0.34		0.21							
v/s Ratio Perm										c0.08		0.02
v/c Ratio		0.49	0.50		0.31					0.44		0.13
Uniform Delay, d1		4.6	4.7		3.9					21.4		20.1
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.1	0.4		0.1					0.5		0.2
Delay (s)		4.8	5.1		4.0					21.9		20.3
Level of Service		A	A		A					C		C
Approach Delay (s)		4.8			4.0			0.0			21.4	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	59.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1049	520	0	975	499	538
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.96	0.85
Flt Protected	1.00	1.00		1.00	0.97	1.00
Satd. Flow (prot)	3471	1519		3471	3272	1413
Flt Permitted	1.00	1.00		1.00	0.97	1.00
Satd. Flow (perm)	3471	1519		3471	3272	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1049	520	0	975	499	538
RTOR Reduction (vph)	0	0	0	0	44	78
Lane Group Flow (vph)	1049	520	0	975	665	250
Confl. Peds. (#/hr)		4	4			
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	25.7	50.7		25.7	17.0	17.0
Effective Green, g (s)	25.7	50.7		25.7	17.0	17.0
Actuated g/C Ratio	0.51	1.00		0.51	0.34	0.34
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1759	1519		1759	1097	473
v/s Ratio Prot	c0.30			0.28	c0.20	
v/s Ratio Perm		0.34				0.18
v/c Ratio	0.60	0.34		0.55	0.61	0.53
Uniform Delay, d1	8.8	0.0		8.6	14.1	13.6
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.6		0.4	1.0	1.1
Delay (s)	9.4	0.6		9.0	15.0	14.7
Level of Service	A	A		A	B	B
Approach Delay (s)	6.5			9.0	14.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	50.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

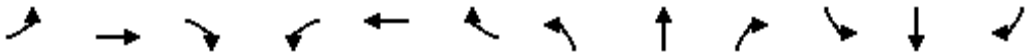


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1311	477	0	1065	400	0	0	0	363	0	359
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00		0.95					0.95	0.91	0.95
Frt		1.00	0.85		0.96					1.00	0.92	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		3539	1583		3394					1681	1524	1504
Flt Permitted		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (perm)		3539	1583		3394					1681	1524	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1311	477	0	1065	400	0	0	0	363	0	359
RTOR Reduction (vph)	0	0	185	0	39	0	0	0	0	0	41	85
Lane Group Flow (vph)	0	1311	292	0	1426	0	0	0	0	250	201	145
Turn Type		NA	Perm		NA					Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4							6		6
Actuated Green, G (s)		41.0	41.0		41.0					18.0	18.0	18.0
Effective Green, g (s)		41.0	41.0		41.0					18.0	18.0	18.0
Actuated g/C Ratio		0.61	0.61		0.61					0.27	0.27	0.27
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2165	968		2076					451	409	404
v/s Ratio Prot		0.37			c0.42							
v/s Ratio Perm			0.18							c0.15	0.13	0.10
v/c Ratio		0.61	0.30		0.69					0.55	0.49	0.36
Uniform Delay, d1		8.0	6.2		8.7					21.1	20.6	19.8
Progression Factor		1.00	1.00		1.00					1.00	1.00	1.00
Incremental Delay, d2		0.5	0.2		1.0					1.5	0.9	0.5
Delay (s)		8.5	6.4		9.7					22.5	21.6	20.4
Level of Service		A	A		A					C	C	C
Approach Delay (s)		7.9			9.7			0.0			21.5	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	489	200	64	872	303	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3385		1770	3539	3370	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3385		1770	3539	3370	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	489	200	64	872	303	76
RTOR Reduction (vph)	49	0	0	0	24	0
Lane Group Flow (vph)	640	0	64	872	355	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	14.3		3.6	21.9	9.7	
Effective Green, g (s)	14.3		3.6	21.9	9.7	
Actuated g/C Ratio	0.38		0.10	0.58	0.26	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1287		169	2061	869	
v/s Ratio Prot	0.19		0.04	c0.25	c0.11	
v/s Ratio Perm						
v/c Ratio	0.50		0.38	0.42	0.41	
Uniform Delay, d1	8.9		16.0	4.3	11.6	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		0.5	0.1	0.1	
Delay (s)	9.0		16.5	4.4	11.7	
Level of Service	A		B	A	B	
Approach Delay (s)	9.0			5.2	11.7	
Approach LOS	A			A	B	

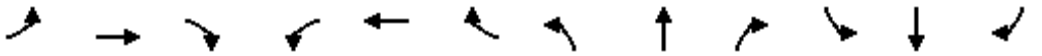
Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	37.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	1068	26	6	1165	298	18	62	140	167	43	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.97			0.91			0.99	
Flt Protected		1.00			1.00			1.00			0.97	
Satd. Flow (prot)		3526			3410			1651			1728	
Flt Permitted		0.94			0.95			0.97			0.57	
Satd. Flow (perm)		3332			3244			1604			1020	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	1068	26	6	1165	298	18	62	140	167	43	25
RTOR Reduction (vph)	0	2	0	0	27	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	1099	0	0	1442	0	0	220	0	0	230	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	5%	5%	5%	5%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.5			40.5			21.3			21.3	
Effective Green, g (s)		40.5			40.5			21.3			21.3	
Actuated g/C Ratio		0.54			0.54			0.28			0.28	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1804			1756			456			290	
v/s Ratio Prot												
v/s Ratio Perm		0.33			c0.44			0.14			c0.23	
v/c Ratio		0.61			0.82			0.48			0.79	
Uniform Delay, d1		11.7			14.2			22.2			24.7	
Progression Factor		1.00			1.00			0.08			1.00	
Incremental Delay, d2		0.6			3.2			0.7			13.8	
Delay (s)		12.3			17.4			2.5			38.5	
Level of Service		B			B			A			D	
Approach Delay (s)		12.3			17.4			2.5			38.5	
Approach LOS		B			B			A			D	

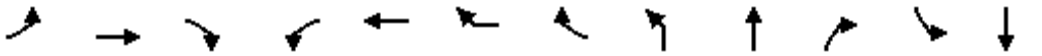
Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	429	141	300	651	215	57	163	118	120	150	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.96		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1770	3408		1770	3407			1839	1583		1822	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (perm)	1770	3408		1770	3407			1839	1583		1822	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	28	429	141	300	651	215	57	163	118	120	150	26
RTOR Reduction (vph)	0	36	0	0	29	0	0	0	91	0	0	21
Lane Group Flow (vph)	28	534	0	300	837	0	0	220	27	0	270	5
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	2.9	20.5		14.3	31.9			13.5	13.5		15.7	15.7
Effective Green, g (s)	2.9	20.5		14.3	31.9			13.5	13.5		15.7	15.7
Actuated g/C Ratio	0.04	0.26		0.18	0.40			0.17	0.17		0.20	0.20
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	64	873		316	1358			310	267		357	310
v/s Ratio Prot	0.02	0.16		c0.17	c0.25			c0.12			c0.15	
v/s Ratio Perm									0.02			0.00
v/c Ratio	0.44	0.61		0.95	0.62			0.71	0.10		0.76	0.02
Uniform Delay, d1	37.8	26.2		32.5	19.2			31.4	28.1		30.3	25.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	4.7	1.3		36.9	0.8			7.3	0.2		8.8	0.0
Delay (s)	42.5	27.5		69.4	20.0			38.7	28.3		39.2	25.9
Level of Service	D	C		E	C			D	C		D	C
Approach Delay (s)		28.2			32.7			35.0			38.0	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



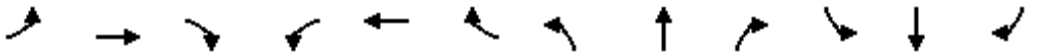
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	51	374	12	255	557	0	64	4	192	230	145	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.97			1.00		1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.92		1.00	0.98
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1843		1770	1863	1534			3251		1763	1810
Flt Permitted		0.89		0.95	1.00	1.00			0.95		0.43	1.00
Satd. Flow (perm)		1657		1770	1863	1534			3096		794	1810
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	51	374	12	255	557	0	64	4	192	230	145	313
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	164	0	0	0
Lane Group Flow (vph)	0	436	0	255	557	38	0	0	262	0	145	373
Confl. Peds. (#/hr)	6		2	2		6					4	
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.2		13.8	41.0	41.0			19.7		19.7	19.7
Effective Green, g (s)		23.2		13.8	41.0	41.0			19.7		19.7	19.7
Actuated g/C Ratio		0.34		0.20	0.60	0.60			0.29		0.29	0.29
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		559		355	1111	915			887		227	519
v/s Ratio Prot				c0.14	0.30							c0.21
v/s Ratio Perm		c0.26				0.02			0.08		0.18	
v/c Ratio		0.78		0.72	0.50	0.04			0.30		0.64	0.72
Uniform Delay, d1		20.4		25.6	8.0	5.7			19.1		21.4	22.0
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		6.8		6.8	0.4	0.0			0.2		5.8	4.7
Delay (s)		27.2		32.4	8.3	5.7			19.3		27.2	26.7
Level of Service		C		C	A	A			B		C	C
Approach Delay (s)		27.2			15.2				19.3			26.9
Approach LOS		C			B				B			C

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	68.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

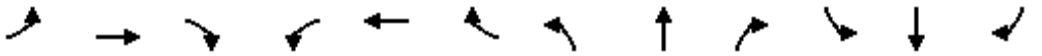
Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	60	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frpb, ped/bikes			
Flpb, ped/bikes			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	60	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Confl. Peds. (#/hr)	4		
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	316	5	336	469	12	7	174	203	37	219	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		0.99		0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3514		1770	3526			1859	1583		1849	1583
Flt Permitted		0.99		0.95	1.00			0.99	1.00		0.94	1.00
Satd. Flow (perm)		3514		1770	3526			1837	1583		1743	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	36	316	5	336	469	12	7	174	203	37	219	34
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	151	0	0	25
Lane Group Flow (vph)	0	356	0	336	479	0	0	181	52	0	256	9
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		12.3		19.1	19.1			15.0	15.0		15.0	15.0
Effective Green, g (s)		12.3		19.1	19.1			15.0	15.0		15.0	15.0
Actuated g/C Ratio		0.21		0.33	0.33			0.26	0.26		0.26	0.26
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		740		578	1153			471	406		447	406
v/s Ratio Prot		c0.10		c0.19	0.14							
v/s Ratio Perm								0.10	0.03		c0.15	0.01
v/c Ratio		0.48		0.58	0.42			0.38	0.13		0.57	0.02
Uniform Delay, d1		20.2		16.3	15.3			17.9	16.7		18.9	16.2
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5		1.5	0.2			0.5	0.1		1.8	0.0
Delay (s)		20.7		17.8	15.5			18.4	16.8		20.7	16.2
Level of Service		C		B	B			B	B		C	B
Approach Delay (s)		20.7			16.5			17.6			20.2	
Approach LOS		C			B			B			C	

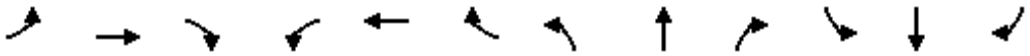
Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	537	76	47	677	68	140	316	76	135	259	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		0.99			1.00		1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.98			0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3443			3478		1753	3416		1751	3539	1544
Flt Permitted		0.86			0.89		0.59	1.00		0.49	1.00	1.00
Satd. Flow (perm)		2964			3088		1092	3416		896	3539	1544
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	537	76	47	677	68	140	316	76	135	259	82
RTOR Reduction (vph)	0	15	0	0	10	0	0	30	0	0	0	52
Lane Group Flow (vph)	0	646	0	0	782	0	140	362	0	135	259	30
Confl. Peds. (#/hr)	50		44	7		8	15		22	22		15
Confl. Bikes (#/hr)			14									
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51			0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1524			1588		405	1268		332	1314	573
v/s Ratio Prot								0.11			0.07	
v/s Ratio Perm		0.22			c0.25		0.13			c0.15		0.02
v/c Ratio		0.42			0.49		0.35	0.29		0.41	0.20	0.05
Uniform Delay, d1		10.6			11.1		15.9	15.5		16.3	14.9	14.1
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.9			1.1		2.3	0.6		3.7	0.3	0.2
Delay (s)		11.4			12.2		18.2	16.0		20.0	15.3	14.3
Level of Service		B			B		B	B		B	B	B
Approach Delay (s)		11.4			12.2			16.6			16.4	
Approach LOS		B			B			B			B	

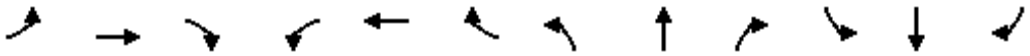
Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



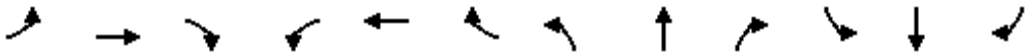
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	194	141	138	353	103	191	610	126	245	623	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3518	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3518	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	194	141	138	353	103	191	610	126	245	623	26
RTOR Reduction (vph)	0	0	0	0	0	70	0	0	60	0	2	0
Lane Group Flow (vph)	16	194	141	138	353	33	191	610	66	245	647	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	2.5	19.0	19.0	13.2	29.7	29.7	15.7	24.1	24.1	19.6	28.0	
Effective Green, g (s)	2.5	19.0	19.0	13.2	29.7	29.7	15.7	24.1	24.1	19.6	28.0	
Actuated g/C Ratio	0.03	0.21	0.21	0.14	0.32	0.32	0.17	0.26	0.26	0.21	0.30	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	48	385	327	254	602	511	302	928	415	377	1071	
v/s Ratio Prot	0.01	0.10		c0.08	c0.19		0.11	0.17		c0.14	c0.18	
v/s Ratio Perm			0.09			0.02			0.04			
v/c Ratio	0.33	0.50	0.43	0.54	0.59	0.07	0.63	0.66	0.16	0.65	0.60	
Uniform Delay, d1	43.9	32.3	31.7	36.6	26.0	21.5	35.4	30.2	26.1	33.0	27.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.1	1.0	0.9	2.4	1.5	0.1	4.3	1.7	0.2	3.8	1.0	
Delay (s)	48.0	33.3	32.7	38.9	27.4	21.6	39.7	31.9	26.3	36.9	28.2	
Level of Service	D	C	C	D	C	C	D	C	C	D	C	
Approach Delay (s)		33.7			29.1			32.7			30.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	91.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	69	96	268	137	120	97	687	258	121	778	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1721		1770	1732		1770	1863	1583	1770	3530	
Flt Permitted		0.97		0.62	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1683		1160	1732		1770	1863	1583	1770	3530	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	69	96	268	137	120	97	687	258	121	778	13
RTOR Reduction (vph)	0	67	0	0	50	0	0	0	150	0	2	0
Lane Group Flow (vph)	0	110	0	268	207	0	97	687	108	121	789	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		18.7		18.7	18.7		5.2	25.9	25.9	5.2	25.9	
Effective Green, g (s)		18.7		18.7	18.7		5.2	25.9	25.9	5.2	25.9	
Actuated g/C Ratio		0.30		0.30	0.30		0.08	0.42	0.42	0.08	0.42	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		509		351	524		148	780	663	148	1479	
v/s Ratio Prot					0.12		0.05	c0.37		c0.07	0.22	
v/s Ratio Perm		0.07		c0.23					0.07			
v/c Ratio		0.22		0.76	0.39		0.66	0.88	0.16	0.82	0.53	
Uniform Delay, d1		16.1		19.5	17.1		27.4	16.5	11.2	27.8	13.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2		9.5	0.5		10.0	11.4	0.1	28.2	0.4	
Delay (s)		16.3		29.0	17.6		37.4	27.9	11.3	56.1	13.8	
Level of Service		B		C	B		D	C	B	E	B	
Approach Delay (s)		16.3			23.4			24.7			19.4	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	61.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	27	131	198	50	116	97	990	72	94	978	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.89			0.96		1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1660			1735		1770	3503		1770	3532	
Flt Permitted		0.98			0.74		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1635			1313		1770	3503		1770	3532	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	27	131	198	50	116	97	990	72	94	978	14
RTOR Reduction (vph)	0	91	0	0	24	0	0	8	0	0	1	0
Lane Group Flow (vph)	0	74	0	0	340	0	97	1054	0	94	991	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		19.6			19.6		5.8	26.3		5.8	26.3	
Effective Green, g (s)		19.6			19.6		5.8	26.3		5.8	26.3	
Actuated g/C Ratio		0.31			0.31		0.09	0.41		0.09	0.41	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		503			404		161	1446		161	1458	
v/s Ratio Prot							c0.05	c0.30		0.05	0.28	
v/s Ratio Perm		0.05			c0.26							
v/c Ratio		0.15			0.84		0.60	0.73		0.58	0.68	
Uniform Delay, d1		16.0			20.6		27.8	15.7		27.8	15.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			14.7		6.2	1.9		5.3	1.3	
Delay (s)		16.1			35.3		34.1	17.6		33.1	16.5	
Level of Service		B			D		C	B		C	B	
Approach Delay (s)		16.1			35.3			19.0			18.0	
Approach LOS		B			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	63.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	883	18	1178	844	38	1215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frpb, ped/bikes	1.00		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		1.00	1.00
Frt	1.00		0.94		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	3433		3300		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	3433		3300		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	883	18	1178	844	38	1215
RTOR Reduction (vph)	2	0	125	0	0	0
Lane Group Flow (vph)	899	0	1897	0	38	1215
Confl. Peds. (#/hr)		1				
Confl. Bikes (#/hr)		3		2		
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	25.5		36.9		3.2	44.1
Effective Green, g (s)	25.5		36.9		3.2	44.1
Actuated g/C Ratio	0.33		0.48		0.04	0.57
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1128		1569		72	2011
v/s Ratio Prot	c0.26		c0.57		0.02	c0.34
v/s Ratio Perm						
v/c Ratio	0.80		1.21		0.53	0.60
Uniform Delay, d1	23.7		20.3		36.5	11.0
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	4.0		100.2		6.8	0.5
Delay (s)	27.7		120.5		43.3	11.5
Level of Service	C		F		D	B
Approach Delay (s)	27.7		120.5			12.5
Approach LOS	C		F			B

Intersection Summary			
HCM 2000 Control Delay	68.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	77.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

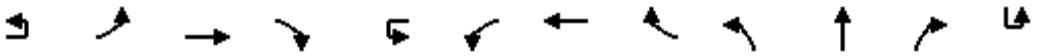
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	4	5	25	432	0	17	33	0	127	107	2	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95			1.00
Frpb, ped/bikes		0.99		1.00	1.00			1.00	0.98			1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00			0.99
Frt		0.90		1.00	0.99			1.00	0.93			1.00
Flt Protected		0.99		0.95	0.96			0.95	1.00			0.95
Satd. Flow (prot)		1652		1618	1608			1703	3115			1692
Flt Permitted		0.99		0.95	0.96			0.95	1.00			0.30
Satd. Flow (perm)		1652		1618	1608			1703	3115			540
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	5	25	432	0	17	33	0	127	107	2	19
RTOR Reduction (vph)	0	24	0	0	83	0	0	0	87	0	0	0
Lane Group Flow (vph)	0	10	0	225	141	0	0	33	147	0	0	21
Confl. Peds. (#/hr)			1	1						9		9
Confl. Bikes (#/hr)						1				2		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA			Prot
Protected Phases	4	4		8	8		5	5	2			1
Permitted Phases												
Actuated Green, G (s)		2.4		13.2	13.2			2.6	10.5			13.2
Effective Green, g (s)		2.4		13.2	13.2			2.6	10.5			13.2
Actuated g/C Ratio		0.04		0.24	0.24			0.05	0.19			0.24
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		71		386	383			80	591			128
v/s Ratio Prot		c0.01		c0.14	0.09			c0.02	0.05			
v/s Ratio Perm												0.04
v/c Ratio		0.14		0.58	0.37			0.41	0.25			0.16
Uniform Delay, d1		25.5		18.6	17.6			25.6	19.0			16.7
Progression Factor		1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2		0.9		2.2	0.6			3.4	0.2			0.6
Delay (s)		26.4		20.9	18.2			29.0	19.3			17.3
Level of Service		C		C	B			C	B			B
Approach Delay (s)		26.4			19.5				20.5			
Approach LOS		C			B				C			

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	55.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	371	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3406	
Flt Permitted	1.00	
Satd. Flow (perm)	3406	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	371	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	371	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		1
Heavy Vehicles (%)	6%	2%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	21.1	
Effective Green, g (s)	21.1	
Actuated g/C Ratio	0.38	
Clearance Time (s)	4.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1299	
v/s Ratio Prot	c0.11	
v/s Ratio Perm		
v/c Ratio	0.29	
Uniform Delay, d1	11.9	
Progression Factor	1.00	
Incremental Delay, d2	0.1	
Delay (s)	12.0	
Level of Service	B	
Approach Delay (s)	12.3	
Approach LOS	B	

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	3	99	988	13	41	117	1011	470	19	51	182	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	0.99	0.94		1.00	0.99	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.98	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1770	6395			1770	5830	1211		1838	1561	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1770	6395			1770	5830	1211		1838	1561	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	99	988	13	41	117	1011	470	19	51	182	1
RTOR Reduction (vph)	0	0	1	0	0	0	23	184	0	0	164	0
Lane Group Flow (vph)	0	102	1000	0	0	158	1190	84	0	70	18	0
Confl. Peds. (#/hr)		35						35	29			
Confl. Bikes (#/hr)								2			1	
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		9.9	23.0			12.7	25.8	25.8		8.2	8.2	
Effective Green, g (s)		9.9	23.0			12.7	25.8	25.8		8.2	8.2	
Actuated g/C Ratio		0.12	0.28			0.15	0.31	0.31		0.10	0.10	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		213	1789			273	1829	380		183	155	
v/s Ratio Prot		0.06	0.16			c0.09	c0.20			c0.04		
v/s Ratio Perm								0.07			0.01	
v/c Ratio		0.48	0.56			0.58	0.65	0.22		0.38	0.12	
Uniform Delay, d1		33.7	25.3			32.3	24.3	20.8		34.6	33.7	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	0.2			1.8	0.6	0.1		0.5	0.1	
Delay (s)		34.4	25.5			34.1	25.0	20.9		35.1	33.8	
Level of Service		C	C			C	C	C		D	C	
Approach Delay (s)			26.3				25.2			34.2		
Approach LOS			C				C			C		

Intersection Summary			
HCM 2000 Control Delay	46.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	82.2	Sum of lost time (s)	21.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	838	89	149
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.97	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.91	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3433	1631	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3433	1631	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	838	89	149
RTOR Reduction (vph)	0	34	0
Lane Group Flow (vph)	839	204	0
Confl. Peds. (#/hr)			29
Confl. Bikes (#/hr)			1
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	17.3	17.3	
Effective Green, g (s)	17.3	17.3	
Actuated g/C Ratio	0.21	0.21	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	722	343	
v/s Ratio Prot	c0.24	0.13	
v/s Ratio Perm			
v/c Ratio	1.16	0.59	
Uniform Delay, d1	32.5	29.3	
Progression Factor	1.00	1.00	
Incremental Delay, d2	87.8	1.8	
Delay (s)	120.2	31.1	
Level of Service	F	C	
Approach Delay (s)		100.5	
Approach LOS		F	

Intersection Summary

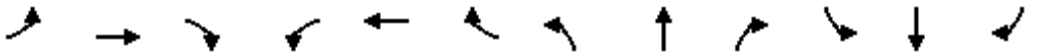
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	3	12	487	53	2	190	1030	189	2	144	117	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00		1.00	0.91	1.00		1.00	1.00	0.88
Frpb, ped/bikes		1.00	1.00	0.99		1.00	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1715	3438	1516		1719	4940	1504		1717	1810	2707
Flt Permitted		0.27	1.00	1.00		0.95	1.00	1.00		0.70	1.00	1.00
Satd. Flow (perm)		480	3438	1516		1719	4940	1504		1257	1810	2707
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	12	487	53	2	190	1030	189	2	144	117	270
RTOR Reduction (vph)	0	0	0	41	0	0	0	102	0	0	0	216
Lane Group Flow (vph)	0	15	487	12	0	192	1030	87	0	146	117	54
Confl. Peds. (#/hr)		8		2		2		8		2		
Confl. Bikes (#/hr)								1				
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm	Perm	NA	Perm	Prot	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases			6		5	5	2				4	
Permitted Phases	6	6		6				2	4	4		4
Actuated Green, G (s)		21.6	21.6	21.6		17.4	43.0	43.0		18.7	18.7	18.7
Effective Green, g (s)		21.6	21.6	21.6		17.4	43.0	43.0		18.7	18.7	18.7
Actuated g/C Ratio		0.23	0.23	0.23		0.19	0.46	0.46		0.20	0.20	0.20
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		110	791	349		318	2264	689		250	360	539
v/s Ratio Prot			c0.14			c0.11	0.21				0.06	
v/s Ratio Perm		0.03		0.01				0.06		c0.12		0.02
v/c Ratio		0.14	0.62	0.03		0.60	0.45	0.13		0.58	0.33	0.10
Uniform Delay, d1		28.7	32.4	28.0		35.0	17.4	14.6		34.0	32.1	30.7
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.6	1.4	0.0		3.2	0.1	0.1		3.5	0.5	0.1
Delay (s)		29.3	33.8	28.1		38.3	17.5	14.7		37.5	32.7	30.8
Level of Service		C	C	C		D	B	B		D	C	C
Approach Delay (s)			33.1				20.0				33.0	
Approach LOS			C				B				C	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	93.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	241	68	27
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.0	4.0	
Lane Util. Factor	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.96	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	1719	1726	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	1719	1726	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	241	68	27
RTOR Reduction (vph)	0	9	0
Lane Group Flow (vph)	241	86	0
Confl. Peds. (#/hr)			2
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	5%	5%	5%
Turn Type	Prot	NA	
Protected Phases	3	8	
Permitted Phases			
Actuated Green, G (s)	20.1	42.8	
Effective Green, g (s)	20.1	42.8	
Actuated g/C Ratio	0.21	0.46	
Clearance Time (s)	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	
Lane Grp Cap (vph)	368	787	
v/s Ratio Prot	c0.14	0.05	
v/s Ratio Perm			
v/c Ratio	0.65	0.11	
Uniform Delay, d1	33.7	14.6	
Progression Factor	1.00	1.00	
Incremental Delay, d2	4.2	0.1	
Delay (s)	37.8	14.7	
Level of Service	D	B	
Approach Delay (s)		31.3	
Approach LOS		C	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	1125	9	184	473	362	20	129	152	106	126	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.94	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		4961		1736	4988	1532	1736	4451	1335	1736	3471	1553
Flt Permitted		0.83		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		4119		1736	4988	1532	1736	4451	1335	1736	3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	102	1125	9	184	473	362	20	129	152	106	126	16
RTOR Reduction (vph)	0	0	0	0	0	111	0	69	69	0	0	13
Lane Group Flow (vph)	0	1236	0	184	473	251	20	136	7	106	126	3
Confl. Peds. (#/hr)	1					1						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		67.1		15.4	86.5	86.5	3.4	11.5	11.5	13.0	21.1	21.1
Effective Green, g (s)		67.1		15.4	86.5	86.5	3.4	11.5	11.5	13.0	21.1	21.1
Actuated g/C Ratio		0.54		0.12	0.69	0.69	0.03	0.09	0.09	0.10	0.17	0.17
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		2211		213	3451	1060	47	409	122	180	585	262
v/s Ratio Prot				c0.11	0.09		0.01	c0.03		c0.06	0.04	
v/s Ratio Perm		c0.30				0.16			0.01			0.00
v/c Ratio		0.56		0.86	0.14	0.24	0.43	0.33	0.06	0.59	0.22	0.01
Uniform Delay, d1		19.2		53.8	6.6	7.1	59.8	53.2	51.8	53.4	44.8	43.3
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.0		28.4	0.1	0.5	6.1	0.5	0.2	4.9	0.2	0.0
Delay (s)		20.2		82.2	6.6	7.6	65.9	53.6	52.0	58.3	45.0	43.3
Level of Service		C		F	A	A	E	D	D	E	D	D
Approach Delay (s)		20.2			20.6			54.0			50.6	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	620	1347	285	1145	691	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.90		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3176		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3176		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	620	1347	285	1145	691	160
RTOR Reduction (vph)	415	0	0	0	0	0
Lane Group Flow (vph)	1552	0	285	1145	691	160
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		11.0	38.0	13.9	59.9
Effective Green, g (s)	23.0		11.0	38.0	13.9	59.9
Actuated g/C Ratio	0.38		0.18	0.63	0.23	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1219		325	2245	796	1583
v/s Ratio Prot	c0.49		c0.16	0.32	c0.20	
v/s Ratio Perm						0.10
v/c Ratio	1.30dr		0.88	0.51	0.87	0.10
Uniform Delay, d1	18.4		23.8	5.9	22.1	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	129.6		22.3	0.2	9.9	0.1
Delay (s)	148.1		46.1	6.1	32.0	0.1
Level of Service	F		D	A	C	A
Approach Delay (s)	148.1			14.1	26.0	
Approach LOS	F			B	C	

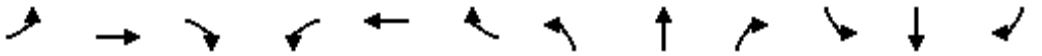
Intersection Summary			
HCM 2000 Control Delay	78.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	656	92	119	944	453	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	656	92	119	944	453	109
RTOR Reduction (vph)	0	60	0	0	0	80
Lane Group Flow (vph)	656	32	119	944	453	29
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	16.3	16.3	5.7	26.0	12.5	12.5
Effective Green, g (s)	16.3	16.3	5.7	26.0	12.5	12.5
Actuated g/C Ratio	0.35	0.35	0.12	0.56	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1240	554	420	1978	922	425
v/s Ratio Prot	0.19		0.03	c0.27	c0.13	
v/s Ratio Perm		0.02				0.02
v/c Ratio	0.53	0.06	0.28	0.48	0.49	0.07
Uniform Delay, d1	12.0	10.0	18.5	6.2	14.3	12.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.4	0.2	0.4	0.1
Delay (s)	12.4	10.1	18.9	6.3	14.7	12.7
Level of Service	B	B	B	A	B	B
Approach Delay (s)	12.2			7.8	14.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	46.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	19	127	25	13	123	73	964	14	48	1007	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.86		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1663	1748	1568	1752	2994		3400	3497		1752	3502	
Flt Permitted	0.67	0.99	1.00	0.74	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1165	1729	1568	1372	2994		3400	3497		1752	3502	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	19	127	25	13	123	73	964	14	48	1007	5
RTOR Reduction (vph)	0	0	99	0	96	0	0	1	0	0	0	0
Lane Group Flow (vph)	5	20	28	25	40	0	73	977	0	48	1012	0
Confl. Peds. (#/hr)	3											
Confl. Bikes (#/hr)						1			3			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.1	10.1	10.1	10.1	10.1		3.3	22.6		2.4	21.7	
Effective Green, g (s)	10.1	10.1	10.1	10.1	10.1		3.3	22.6		2.4	21.7	
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.07	0.48		0.05	0.47	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	252	374	339	297	648		240	1695		90	1630	
v/s Ratio Prot					0.01		0.02	0.28		c0.03	c0.29	
v/s Ratio Perm	0.00	0.01	0.02	c0.02								
v/c Ratio	0.02	0.05	0.08	0.08	0.06		0.30	0.58		0.53	0.62	
Uniform Delay, d1	14.4	14.5	14.6	14.6	14.5		20.6	8.6		21.6	9.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.1	0.2	0.2	0.1		0.3	0.3		3.0	0.5	
Delay (s)	14.4	14.6	14.7	14.8	14.6		20.8	8.9		24.6	9.9	
Level of Service	B	B	B	B	B		C	A		C	A	
Approach Delay (s)		14.7			14.6			9.7			10.6	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	11.5
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

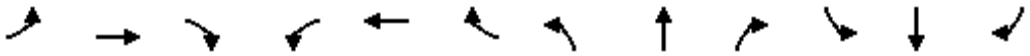
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	0	0	0	9	266	396	379	3	176	632	178	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91			0.97	0.95	1.00	0.97
Frpb, ped/bikes					1.00	0.99			1.00	1.00	0.99	1.00
Flpb, ped/bikes					1.00	1.00			1.00	1.00	1.00	1.00
Frt					1.00	0.93			1.00	1.00	0.85	1.00
Flt Protected					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (prot)					1752	4629			3400	3505	1548	3400
Flt Permitted					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (perm)					1752	4629			3400	3505	1548	3400
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	9	266	396	379	3	176	632	178	276
RTOR Reduction (vph)	0	0	0	0	0	213	0	0	0	0	89	0
Lane Group Flow (vph)	0	0	0	0	275	562	0	0	179	632	89	276
Confl. Peds. (#/hr)							2					
Confl. Bikes (#/hr)							2				2	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm	Perm	NA		Prot	Prot	NA	Perm	Prot
Protected Phases						8		5	5	2		1
Permitted Phases				8	8						2	
Actuated Green, G (s)					24.9	24.9			10.6	50.0	50.0	13.1
Effective Green, g (s)					24.9	24.9			10.6	50.0	50.0	13.1
Actuated g/C Ratio					0.25	0.25			0.11	0.50	0.50	0.13
Clearance Time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					436	1152			360	1752	774	445
v/s Ratio Prot						0.12			0.05	0.18		c0.08
v/s Ratio Perm					c0.16						0.06	
v/c Ratio					0.63	0.49			0.50	0.36	0.11	0.62
Uniform Delay, d1					33.5	32.1			42.2	15.3	13.3	41.1
Progression Factor					1.00	1.00			0.68	1.40	4.13	1.00
Incremental Delay, d2					3.0	0.3			1.0	0.5	0.3	2.7
Delay (s)					36.4	32.4			29.5	21.8	55.0	43.8
Level of Service					D	C			C	C	E	D
Approach Delay (s)		0.0				33.5				29.2		
Approach LOS		A				C				C		

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	785	92
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3505	1546
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3505	1546
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	785	92
RTOR Reduction (vph)	0	44
Lane Group Flow (vph)	785	48
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		4
Heavy Vehicles (%)	3%	3%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	52.5	52.5
Effective Green, g (s)	52.5	52.5
Actuated g/C Ratio	0.52	0.52
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1840	811
v/s Ratio Prot	c0.22	
v/s Ratio Perm		0.03
v/c Ratio	0.43	0.06
Uniform Delay, d1	14.5	11.6
Progression Factor	1.00	1.00
Incremental Delay, d2	0.7	0.1
Delay (s)	15.3	11.8
Level of Service	B	B
Approach Delay (s)	21.8	
Approach LOS	C	

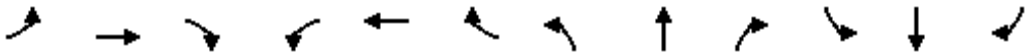
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	83	400	220	0	75	0	762	193	23	902	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	5036	1568	3400		1530		3505	1543	1752	3505	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	5036	1568	3400		1530		3505	1543	1752	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	153	83	400	220	0	75	0	762	193	23	902	0
RTOR Reduction (vph)	0	0	95	0	0	66	0	0	104	0	0	0
Lane Group Flow (vph)	153	83	305	220	0	9	0	762	89	23	902	0
Confl. Peds. (#/hr)						5			2	2		
Confl. Bikes (#/hr)									4			3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	22.9	22.9	22.9	11.8		11.8		46.0	46.0	3.3	53.3	
Effective Green, g (s)	22.9	22.9	22.9	11.8		11.8		46.0	46.0	3.3	53.3	
Actuated g/C Ratio	0.23	0.23	0.23	0.12		0.12		0.46	0.46	0.03	0.53	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	401	1153	359	401		180		1612	709	57	1868	
v/s Ratio Prot	0.09	0.02		c0.06				0.22		0.01	c0.26	
v/s Ratio Perm			c0.19			0.01			0.06			
v/c Ratio	0.38	0.07	0.85	0.55		0.05		0.47	0.13	0.40	0.48	
Uniform Delay, d1	32.6	30.2	36.9	41.6		39.1		18.6	15.5	47.4	14.7	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.85	1.29	
Incremental Delay, d2	0.6	0.0	17.2	1.5		0.1		1.0	0.4	4.3	0.8	
Delay (s)	33.2	30.2	54.1	43.1		39.2		19.6	15.8	44.4	19.8	
Level of Service	C	C	D	D		D		B	B	D	B	
Approach Delay (s)		46.0			42.1			18.9			20.4	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



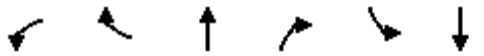
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	90	36	197	82	438	28	414	243	678	1065	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1504	2866		3242	1759	1495	1671	4803	1482	3335	3403	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1504	2866		3242	1759	1495	1671	4803	1482	3335	3403	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	84	90	36	197	82	438	28	414	243	678	1065	68
RTOR Reduction (vph)	0	31	0	0	0	176	0	0	136	0	3	0
Lane Group Flow (vph)	84	95	0	197	82	262	28	414	107	678	1130	0
Confl. Peds. (#/hr)			1	1			2		1	1		2
Confl. Bikes (#/hr)			2									1
Heavy Vehicles (%)	20%	20%	20%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	8.2	9.9		9.9	11.6	27.9	2.8	23.2	33.1	16.3	36.7	
Effective Green, g (s)	8.2	9.9		9.9	11.6	27.9	2.8	23.2	33.1	16.3	36.7	
Actuated g/C Ratio	0.11	0.13		0.13	0.15	0.37	0.04	0.31	0.44	0.22	0.49	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	163	376		426	270	633	62	1479	730	721	1658	
v/s Ratio Prot	0.06	0.03		c0.06	0.05	c0.09	0.02	c0.09	0.02	c0.20	c0.33	
v/s Ratio Perm						0.09			0.05			
v/c Ratio	0.52	0.25		0.46	0.30	0.41	0.45	0.28	0.15	0.94	0.68	
Uniform Delay, d1	31.7	29.4		30.2	28.3	17.6	35.5	19.7	12.6	29.0	14.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.7	0.4		0.8	0.6	0.4	5.2	0.1	0.1	20.3	1.2	
Delay (s)	34.4	29.7		31.0	28.9	18.1	40.7	19.8	12.7	49.3	16.0	
Level of Service	C	C		C	C	B	D	B	B	D	B	
Approach Delay (s)		31.6			22.9			18.2			28.5	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

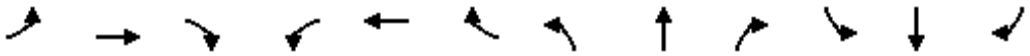
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	309	20	20	240	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1847			1856	1695	
Flt Permitted	1.00			0.92	0.98	
Satd. Flow (perm)	1847			1707	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	20	20	240	20	20
RTOR Reduction (vph)	4	0	0	0	17	0
Lane Group Flow (vph)	325	0	0	260	23	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	16.2			16.2	10.8	
Effective Green, g (s)	16.2			16.2	10.8	
Actuated g/C Ratio	0.25			0.25	0.17	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	458			423	280	
v/s Ratio Prot	c0.18				c0.01	
v/s Ratio Perm				0.15		
v/c Ratio	0.71			0.61	0.08	
Uniform Delay, d1	22.4			21.8	23.1	
Progression Factor	1.00			0.63	1.00	
Incremental Delay, d2	4.3			1.8	0.0	
Delay (s)	26.7			15.4	23.1	
Level of Service	C			B	C	
Approach Delay (s)	26.7			15.4	23.1	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	21.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	220	10	0	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1852			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1852			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	220	10	0	75
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	230	0	0	75
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.0		21.3			21.3
Effective Green, g (s)	1.0		21.3			21.3
Actuated g/C Ratio	0.01		0.28			0.28
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	23		527			530
v/s Ratio Prot	c0.01		c0.12			0.04
v/s Ratio Perm						
v/c Ratio	0.43		0.44			0.14
Uniform Delay, d1	36.6		21.8			19.9
Progression Factor	1.00		1.00			0.78
Incremental Delay, d2	12.6		0.6			0.1
Delay (s)	49.2		22.4			15.7
Level of Service	D		C			B
Approach Delay (s)	49.2		22.4			15.7
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	225	27	42	35	19	18	17	429	45	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	225	27	42	35	19	18	17	429	45	0	0	0

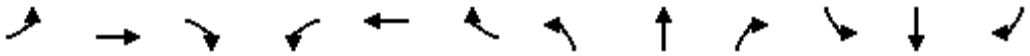
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	294	72	491
Volume Left (vph)	225	35	17
Volume Right (vph)	42	18	45
Hadj (s)	0.10	-0.02	-0.01
Departure Headway (s)	5.4	5.7	4.9
Degree Utilization, x	0.44	0.11	0.67
Capacity (veh/h)	623	567	706
Control Delay (s)	12.7	9.4	17.4
Approach Delay (s)	12.7	9.4	17.4
Approach LOS	B	A	C

Intersection Summary				
Delay	15.1			
Level of Service	C			
Intersection Capacity Utilization	56.1%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	20	722	6	3	74
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	9	20	722	6	3	74
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	806	728			729	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	806	728			729	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	95			100	
cM capacity (veh/h)	350	422			874	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	29	728	77
Volume Left	9	0	3
Volume Right	20	6	0
cSH	397	1700	874
Volume to Capacity	0.07	0.43	0.00
Queue Length 95th (ft)	6	0	0
Control Delay (s)	14.8	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	14.8	0.0	0.4
Approach LOS	B		

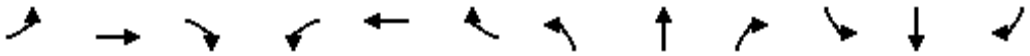
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	98	176	37	2	664	4	0	0	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95			1.00	
Frt		0.87		1.00	0.99		1.00	1.00			0.93	
Flt Protected		1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1629		1770	1752		1770	2888			1611	
Flt Permitted		1.00		0.95	1.00		0.75	1.00			1.00	
Satd. Flow (perm)		1629		1770	1752		1399	2888			1611	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1	0	98	176	37	2	664	4	0	0	5	5
RTOR Reduction (vph)	0	92	0	0	2	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	7	0	176	37	0	664	4	0	0	8	0
Heavy Vehicles (%)	0%	0%	1%	2%	8%	0%	2%	25%	0%	0%	20%	0%
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2					
Actuated Green, G (s)		5.7		15.7	15.7		56.6	56.6			56.6	
Effective Green, g (s)		5.7		15.7	15.7		56.6	56.6			56.6	
Actuated g/C Ratio		0.06		0.17	0.17		0.63	0.63			0.63	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		103		308	305		879	1816			1013	
v/s Ratio Prot		c0.00		c0.10	0.02			0.00			0.01	
v/s Ratio Perm							c0.47					
v/c Ratio		0.07		0.57	0.12		0.76	0.00			0.01	
Uniform Delay, d1		39.7		34.1	31.3		11.8	6.2			6.2	
Progression Factor		1.00		1.00	1.00		0.88	1.31			1.00	
Incremental Delay, d2		0.3		2.6	0.2		5.5	0.0			0.0	
Delay (s)		39.9		36.6	31.5		15.9	8.1			6.2	
Level of Service		D		D	C		B	A			A	
Approach Delay (s)		39.9			35.7			15.9			6.2	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

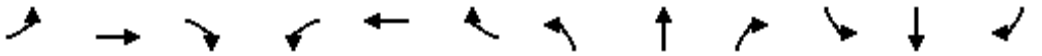
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	524	312	17	0	0	0	24	140	27	74	20	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95						1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00						1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00						1.00		1.00	1.00	
Frt	1.00	0.99						0.98		1.00	0.87	
Flt Protected	0.95	0.99						0.99		0.95	1.00	
Satd. Flow (prot)	1681	1752						1825		1787	1578	
Flt Permitted	0.95	0.99						0.99		0.95	1.00	
Satd. Flow (perm)	1681	1752						1825		1787	1578	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	524	312	17	0	0	0	24	140	27	74	20	173
RTOR Reduction (vph)	0	1	0	0	0	0	0	7	0	0	150	0
Lane Group Flow (vph)	419	433	0	0	0	0	0	184	0	74	43	0
Confl. Peds. (#/hr)												2
Confl. Bikes (#/hr)									2			1
Heavy Vehicles (%)	2%	1%	0%	2%	2%	2%	0%	1%	4%	1%	0%	2%
Turn Type	Split	NA					Split	NA		Split	NA	
Protected Phases	4	4					2	2		6	6	
Permitted Phases												
Actuated Green, G (s)	52.0	52.0						14.0		12.0	12.0	
Effective Green, g (s)	52.0	52.0						14.0		12.0	12.0	
Actuated g/C Ratio	0.58	0.58						0.16		0.13	0.13	
Clearance Time (s)	4.0	4.0						4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	971	1012						283		238	210	
v/s Ratio Prot	c0.25	0.25						c0.10		c0.04	0.03	
v/s Ratio Perm												
v/c Ratio	0.43	0.43						0.65		0.31	0.21	
Uniform Delay, d1	10.7	10.7						35.7		35.3	34.8	
Progression Factor	0.39	0.38						1.00		0.56	0.26	
Incremental Delay, d2	1.3	1.3						5.3		0.7	0.5	
Delay (s)	5.5	5.3						41.0		20.6	9.4	
Level of Service	A	A						D		C	A	
Approach Delay (s)		5.4			0.0			41.0			12.5	
Approach LOS		A			A			D			B	

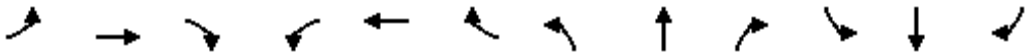
Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	810	3	8	198	0	3	0	20	30	39	403
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor		0.95		1.00	1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	1.00
Frt		1.00		1.00	1.00			0.88			1.00	0.85
Flt Protected		1.00		0.95	1.00			0.99			0.98	1.00
Satd. Flow (prot)		3572		1805	1863			1666			1805	1524
Flt Permitted		1.00		0.95	1.00			0.99			0.98	1.00
Satd. Flow (perm)		3572		1805	1863			1666			1805	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	810	3	8	198	0	3	0	20	30	39	403
RTOR Reduction (vph)	0	0	0	0	0	0	0	21	0	0	0	351
Lane Group Flow (vph)	0	813	0	8	198	0	0	2	0	0	69	52
Confl. Peds. (#/hr)			2									
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	0%	0%	0%	3%	3%	6%
Turn Type		NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)		54.5		0.8	59.3			7.0			11.7	11.7
Effective Green, g (s)		54.5		0.8	59.3			7.0			11.7	11.7
Actuated g/C Ratio		0.61		0.01	0.66			0.08			0.13	0.13
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		2163		16	1227			129			234	198
v/s Ratio Prot		c0.23		0.00	c0.11			c0.00			c0.04	
v/s Ratio Perm												0.03
v/c Ratio		0.38		0.50	0.16			0.01			0.29	0.26
Uniform Delay, d1		9.1		44.4	5.9			38.3			35.4	35.3
Progression Factor		1.00		1.04	0.80			1.00			1.00	1.00
Incremental Delay, d2		0.5		21.7	0.3			0.0			0.7	0.7
Delay (s)		9.6		68.0	5.0			38.4			36.1	36.0
Level of Service		A		E	A			D			D	D
Approach Delay (s)		9.6			7.4			38.4			36.0	
Approach LOS		A			A			D			D	

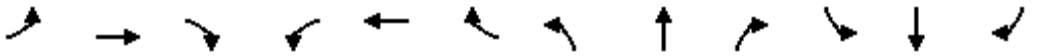
Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	586	26	130	22	11	67	264	372	7	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	3.5			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.88			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1752	1500			1773	1568	1752	1863	1385			
Flt Permitted	0.95	1.00			0.72	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1752	1500			1320	1568	1752	1863	1385			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	586	26	130	22	11	67	264	372	7	0	0	0
RTOR Reduction (vph)	0	53	0	0	0	59	0	0	5	0	0	0
Lane Group Flow (vph)	586	103	0	0	33	8	264	372	2	0	0	0
Confl. Peds. (#/hr)			4	4								
Confl. Bikes (#/hr)			1						2			
Heavy Vehicles (%)	3%	0%	10%	5%	0%	3%	3%	2%	14%	2%	2%	2%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	25.9	36.3			6.9	6.9	17.3	17.3	17.3			
Effective Green, g (s)	24.9	36.3			7.4	7.4	16.8	16.8	17.3			
Actuated g/C Ratio	0.41	0.59			0.12	0.12	0.27	0.27	0.28			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	713	891			159	189	481	512	392			
v/s Ratio Prot	c0.33	0.07						c0.20				
v/s Ratio Perm					c0.03	0.01	0.15		0.00			
v/c Ratio	0.82	0.12			0.21	0.04	0.55	0.73	0.01			
Uniform Delay, d1	16.1	5.4			24.2	23.7	18.9	20.1	15.7			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	7.6	0.1			0.2	0.0	0.7	4.3	0.0			
Delay (s)	23.7	5.5			24.4	23.8	19.6	24.4	15.7			
Level of Service	C	A			C	C	B	C	B			
Approach Delay (s)		19.9			24.0			22.3			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	61.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

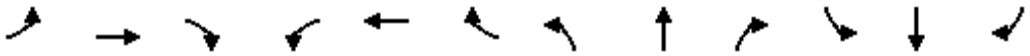
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	709	1	0	277	0	1	0	0	34	0	563
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			1.00			1.00	0.85
Flt Protected		1.00			1.00			0.95			0.95	1.00
Satd. Flow (prot)		1827			1863			1805			1656	1565
Flt Permitted		1.00			1.00			0.95			0.95	1.00
Satd. Flow (perm)		1827			1863			1805			1656	1565
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	709	1	0	277	0	1	0	0	34	0	563
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	466
Lane Group Flow (vph)	0	710	0	0	277	0	0	1	0	0	34	97
Confl. Peds. (#/hr)			3	3								1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	4%	0%	0%	2%	0%	0%	0%	2%	9%	0%	1%
Turn Type		NA			NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		25.4			25.4			1.8			8.2	8.2
Effective Green, g (s)		25.4			25.4			1.8			8.2	8.2
Actuated g/C Ratio		0.54			0.54			0.04			0.17	0.17
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		979			998			68			286	270
v/s Ratio Prot		c0.39			0.15			c0.00			0.02	
v/s Ratio Perm												c0.06
v/c Ratio		0.73			0.28			0.01			0.12	0.36
Uniform Delay, d1		8.4			6.0			21.9			16.5	17.3
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.9			0.2			0.1			0.1	0.3
Delay (s)		11.2			6.2			22.0			16.6	17.6
Level of Service		B			A			C			B	B
Approach Delay (s)		11.2			6.2			22.0			17.5	
Approach LOS		B			A			C			B	

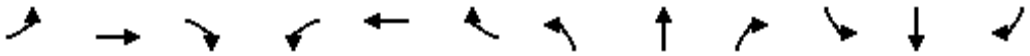
Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



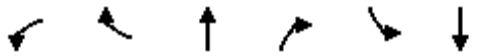
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	58	184	504	152	0	60	0	798	147	716	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.99	1.00	1.00		1.00		1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		1.00	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1900	1575	3433	1881		1736		2760		3497	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1900	1575	3433	1881		1736		2760		3497	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	58	184	504	152	0	60	0	798	147	716	14
RTOR Reduction (vph)	0	0	171	0	0	0	0	0	415	0	1	0
Lane Group Flow (vph)	0	58	13	504	152	0	60	0	383	0	876	0
Confl. Peds. (#/hr)	2		1			2						3
Heavy Vehicles (%)	0%	0%	1%	2%	1%	0%	4%	0%	2%	2%	2%	7%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		8.4	8.4	46.9	60.3		6.7		58.6		39.0	
Effective Green, g (s)		8.4	8.4	46.9	60.3		5.7		57.6		39.0	
Actuated g/C Ratio		0.07	0.07	0.39	0.50		0.05		0.48		0.32	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		133	110	1341	945		82		1324		1136	
v/s Ratio Prot		c0.03		c0.15	0.08		c0.03		0.14		c0.25	
v/s Ratio Perm			0.01									
v/c Ratio		0.44	0.12	0.38	0.16		0.73		0.29		0.77	
Uniform Delay, d1		53.5	52.3	26.1	16.2		56.4		18.8		36.5	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		0.8	0.2	0.8	0.4		24.8		0.0		3.0	
Delay (s)		54.4	52.5	26.9	16.5		81.2		18.9		39.5	
Level of Service		D	D	C	B		F		B		D	
Approach Delay (s)		52.9			24.5			23.2			39.5	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	490	530	0	0	321	123	369	2	332	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3433	1827			1845	1555		1792	1545			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3433	1827			1845	1555		1792	1545			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	490	530	0	0	321	123	369	2	332	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	95	0	0	164	0	0	0
Lane Group Flow (vph)	490	530	0	0	321	28	0	371	168	0	0	0
Confl. Peds. (#/hr)			8			5			2			
Heavy Vehicles (%)	2%	4%	0%	0%	3%	2%	1%	0%	2%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	20.9	48.2			22.8	22.8		42.8	42.8			
Effective Green, g (s)	20.9	48.2			22.8	22.8		42.8	42.8			
Actuated g/C Ratio	0.21	0.48			0.23	0.23		0.43	0.43			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	717	880			420	354		766	661			
v/s Ratio Prot	c0.14	0.29			c0.17							
v/s Ratio Perm						0.02		0.21	0.11			
v/c Ratio	0.68	0.60			0.76	0.08		0.48	0.25			
Uniform Delay, d1	36.5	18.9			36.1	30.3		20.6	18.4			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	3.5	1.7			9.4	0.2		2.2	0.9			
Delay (s)	40.0	20.6			45.5	30.5		22.8	19.3			
Level of Service	D	C			D	C		C	B			
Approach Delay (s)		29.9			41.4			21.2			0.0	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	852	371	277	1068
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	852	371	277	1068
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.83					
vC, conflicting volume	2126	612			852	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1941	612			852	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			65	
cM capacity (veh/h)	31	441			789	

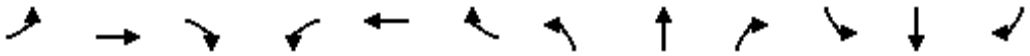
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	568	655	277	534	534
Volume Left	0	0	277	0	0
Volume Right	0	371	0	0	0
cSH	1700	1700	789	1700	1700
Volume to Capacity	0.33	0.39	0.35	0.31	0.31
Queue Length 95th (ft)	0	0	40	0	0
Control Delay (s)	0.0	0.0	12.0	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.5		
Approach LOS					

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	396	61	6	189	359	156	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.94	
Flt Protected	1.00	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3539	1583		1770	3539	1685	
Flt Permitted	1.00	1.00		0.41	1.00	0.97	
Satd. Flow (perm)	3539	1583		764	3539	1685	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	396	61	6	189	359	156	144
RTOR Reduction (vph)	0	17	0	0	0	37	0
Lane Group Flow (vph)	396	44	0	195	359	263	0
Confl. Peds. (#/hr)							6
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	11.4	29.5		23.2	23.2	12.6	
Effective Green, g (s)	11.4	29.5		23.2	23.2	12.6	
Actuated g/C Ratio	0.25	0.64		0.51	0.51	0.28	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	880	1019		580	1792	463	
v/s Ratio Prot	c0.11	0.03		c0.06	0.10	c0.16	
v/s Ratio Perm				0.11			
v/c Ratio	0.45	0.04		0.34	0.20	0.57	
Uniform Delay, d1	14.5	3.0		6.4	6.2	14.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.0		0.3	0.1	1.6	
Delay (s)	14.9	3.0		6.7	6.3	15.9	
Level of Service	B	A		A	A	B	
Approach Delay (s)	13.3				6.4	15.9	
Approach LOS	B				A	B	

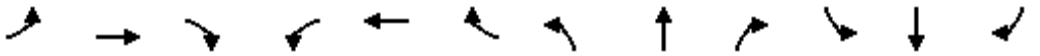
Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	45.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	247	4	74	207	235	1	218	56	158	285	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		1.00			1.00	0.85		0.97		1.00	0.97	
Flt Protected		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1834			3493	1583		3399		1770	1800	
Flt Permitted		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1834			3493	1583		3399		1770	1800	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	94	247	4	74	207	235	1	218	56	158	285	70
RTOR Reduction (vph)	0	0	0	0	0	142	0	22	0	0	7	0
Lane Group Flow (vph)	0	345	0	0	281	93	0	253	0	158	348	0
Confl. Peds. (#/hr)	13		14	14		13	8		27	27		8
Confl. Bikes (#/hr)			1			1						
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		21.7			12.5	22.6		12.0		22.6	22.6	
Effective Green, g (s)		21.7			12.5	22.6		12.0		22.6	22.6	
Actuated g/C Ratio		0.27			0.15	0.28		0.15		0.28	0.28	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		492			540	442		504		495	503	
v/s Ratio Prot		c0.19			c0.08	0.06		c0.07		0.09	c0.19	
v/s Ratio Perm												
v/c Ratio		0.70			0.52	0.21		0.50		0.32	0.69	
Uniform Delay, d1		26.6			31.4	22.3		31.6		23.0	26.0	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		4.5			0.9	0.2		0.8		0.4	4.1	
Delay (s)		31.1			32.3	22.5		32.4		23.4	30.1	
Level of Service		C			C	C		C		C	C	
Approach Delay (s)		31.1			27.8			32.4			28.0	
Approach LOS		C			C			C			C	

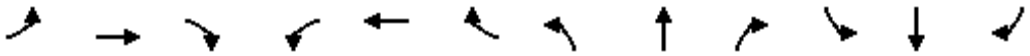
Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	136	442	66	22	560	30	136	244	27	44	138	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (prot)	1687	1845	1587	1719	1849			3418			3343	1436
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (perm)	1687	1845	1587	1719	1849			3418			3343	1436
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	136	442	66	22	560	30	136	244	27	44	138	109
RTOR Reduction (vph)	0	0	35	0	1	0	0	3	0	0	0	0
Lane Group Flow (vph)	136	442	31	22	589	0	0	404	0	0	182	109
Confl. Peds. (#/hr)			3						10			32
Confl. Bikes (#/hr)						2			1			1
Heavy Vehicles (%)	7%	3%	0%	5%	2%	0%	3%	2%	4%	12%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	15.3	51.9	51.9	9.3	45.9			19.4			15.0	115.1
Effective Green, g (s)	15.3	53.4	53.4	9.3	47.4			20.4			16.0	115.1
Actuated g/C Ratio	0.13	0.46	0.46	0.08	0.41			0.18			0.14	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	224	855	736	138	761			605			464	1436
v/s Ratio Prot	c0.08	0.24		0.01	c0.32			c0.12			c0.05	
v/s Ratio Perm			0.02									0.08
v/c Ratio	0.61	0.52	0.04	0.16	0.77			0.67			0.39	0.08
Uniform Delay, d1	47.1	21.8	16.9	49.3	29.2			44.2			45.1	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	4.6	0.5	0.0	0.5	4.9			2.8			0.5	0.1
Delay (s)	51.7	22.3	16.9	49.8	34.1			47.0			45.7	0.1
Level of Service	D	C	B	D	C			D			D	A
Approach Delay (s)		27.9			34.7			47.0			28.6	
Approach LOS		C			C			D			C	

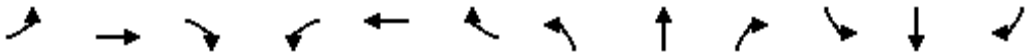
Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	115.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	406	18	36	483	336	5	35	13	132	28	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			0.98	
Frt		0.99			0.94			0.97			0.96	
Flt Protected		1.00			1.00			1.00			0.97	
Satd. Flow (prot)		3503			3319			1764			3166	
Flt Permitted		0.95			0.93			0.96			0.77	
Satd. Flow (perm)		3335			3081			1702			2513	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	406	18	36	483	336	5	35	13	132	28	66
RTOR Reduction (vph)	0	4	0	0	91	0	0	11	0	0	56	0
Lane Group Flow (vph)	0	423	0	0	764	0	0	42	0	0	170	0
Confl. Peds. (#/hr)			81	81			21		40	40		21
Confl. Bikes (#/hr)			6						1			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)		47.3			47.3			9.7			9.7	
Effective Green, g (s)		47.3			47.3			9.7			9.7	
Actuated g/C Ratio		0.73			0.73			0.15			0.15	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		2426			2242			253			375	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.25			0.02			c0.07	
v/c Ratio		0.17			0.34			0.17			0.45	
Uniform Delay, d1		2.8			3.2			24.1			25.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			0.4			0.3			0.9	
Delay (s)		2.9			3.6			24.4			26.1	
Level of Service		A			A			C			C	
Approach Delay (s)		2.9			3.6			24.4			26.1	
Approach LOS		A			A			C			C	

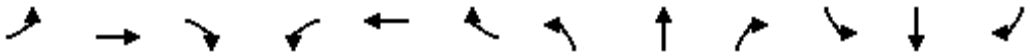
Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	382	141	68	801	161	47	241	1	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			1.00				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.98			1.00				
Flt Protected		1.00	1.00		1.00			0.99				
Satd. Flow (prot)		3539	1573		3438			3508				
Flt Permitted		1.00	1.00		0.90			0.99				
Satd. Flow (perm)		3539	1573		3112			3508				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	382	141	68	801	161	47	241	1	0	0	0
RTOR Reduction (vph)	0	0	0	0	28	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	382	141	0	1002	0	0	288	0	0	0	0
Confl. Peds. (#/hr)									22	22		
Confl. Bikes (#/hr)			2			3			12			1
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		30.1	57.5		30.1			27.4				
Effective Green, g (s)		30.1	57.5		30.1			27.4				
Actuated g/C Ratio		0.46	0.88		0.46			0.42				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		1638	1500		1441			1478				
v/s Ratio Prot		0.11	0.04									
v/s Ratio Perm			0.05		c0.32			0.08				
v/c Ratio		0.23	0.09		0.70			0.20				
Uniform Delay, d1		10.5	0.5		13.8			11.8				
Progression Factor		0.74	1.22		1.00			1.00				
Incremental Delay, d2		0.1	0.0		1.5			0.3				
Delay (s)		7.8	0.6		15.3			12.1				
Level of Service		A	A		B			B				
Approach Delay (s)		5.9			15.3			12.1			0.0	
Approach LOS		A			B			B			A	

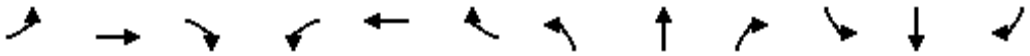
Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



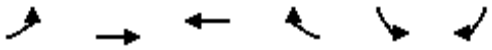
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	214	47	33	456	18	49	167	18	22	242	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			0.99			0.97	
Flpb, ped/bikes		1.00			1.00			0.98			0.99	
Frt		0.98			1.00			0.99			0.97	
Flt Protected		1.00			1.00			0.99			1.00	
Satd. Flow (prot)		1794			1839			3364			3283	
Flt Permitted		0.95			0.96			0.83			0.93	
Satd. Flow (perm)		1714			1780			2834			3055	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	214	47	33	456	18	49	167	18	22	242	71
RTOR Reduction (vph)	0	11	0	0	2	0	0	8	0	0	32	0
Lane Group Flow (vph)	0	274	0	0	505	0	0	226	0	0	303	0
Confl. Peds. (#/hr)	63		40	40		63	54		55	55		54
Confl. Bikes (#/hr)			3			17			4			7
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		38.5			24.4			25.0			25.0	
Effective Green, g (s)		34.5			24.4			25.0			25.0	
Actuated g/C Ratio		0.48			0.34			0.34			0.34	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		815			599			977			1053	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			c0.28			0.08			c0.10	
v/c Ratio		0.34			0.84			0.23			0.29	
Uniform Delay, d1		11.9			22.3			16.9			17.3	
Progression Factor		0.09			1.00			1.00			1.00	
Incremental Delay, d2		0.1			10.1			0.6			0.7	
Delay (s)		1.2			32.3			17.5			18.0	
Level of Service		A			C			B			B	
Approach Delay (s)		1.2			32.3			17.5			18.0	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	72.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



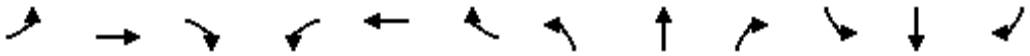
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	357	62	59	500	77	110	366	36	48	302	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.96			0.94		1.00	0.97		1.00	0.97	
Flpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3314			1701		1770	1789		1770	1764	
Flt Permitted		0.92			0.92		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3060			1568		1770	1789		1770	1764	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	17	357	62	59	500	77	110	366	36	48	302	54
RTOR Reduction (vph)	0	11	0	0	4	0	0	5	0	0	9	0
Lane Group Flow (vph)	0	425	0	0	632	0	110	397	0	48	347	0
Confl. Peds. (#/hr)	143		88	88		143			156			60
Confl. Bikes (#/hr)			1									
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		43.9			43.9		15.5	34.0		6.6	25.1	
Effective Green, g (s)		43.9			43.9		15.5	34.0		6.6	25.1	
Actuated g/C Ratio		0.44			0.44		0.16	0.34		0.07	0.25	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1343			688		274	608		116	442	
v/s Ratio Prot							c0.06	c0.22		0.03	c0.20	
v/s Ratio Perm		0.14			c0.40							
v/c Ratio		0.32			0.92		0.40	0.65		0.41	0.79	
Uniform Delay, d1		18.3			26.4		38.1	28.0		44.8	34.9	
Progression Factor		1.00			1.00		1.18	0.97		1.00	1.00	
Incremental Delay, d2		0.6			19.3		0.3	1.7		0.9	8.2	
Delay (s)		18.9			45.7		45.4	29.0		45.7	43.2	
Level of Service		B			D		D	C		D	D	
Approach Delay (s)		18.9			45.7			32.5			43.5	
Approach LOS		B			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



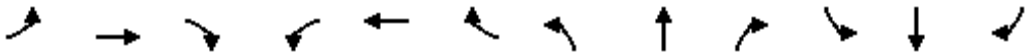
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	64	362	393	97	193	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1770	1863	1783		1698	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1770	1863	1783		1698	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	64	362	393	97	193	102
RTOR Reduction (vph)	0	0	5	0	21	0
Lane Group Flow (vph)	64	362	485	0	274	0
Confl. Peds. (#/hr)	67			67		
Confl. Bikes (#/hr)				14		9
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	7.5	70.3	58.3		21.2	
Effective Green, g (s)	7.5	70.3	58.3		21.2	
Actuated g/C Ratio	0.08	0.70	0.58		0.21	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	132	1309	1039		359	
v/s Ratio Prot	c0.04	0.19	c0.27		c0.16	
v/s Ratio Perm						
v/c Ratio	0.48	0.28	0.47		0.76	
Uniform Delay, d1	44.4	5.5	11.9		37.0	
Progression Factor	0.64	2.12	0.32		1.00	
Incremental Delay, d2	2.5	0.5	1.2		9.2	
Delay (s)	31.1	12.1	5.1		46.3	
Level of Service	C	B	A		D	
Approach Delay (s)		14.9	5.1		46.3	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



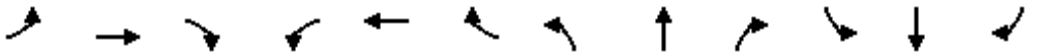
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	455	92	79	392	92	79	507	104	53	304	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.98			0.98			0.98		1.00	0.99	
Flt Protected		1.00			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1817			1809			3440		1770	3503	
Flt Permitted		0.93			0.86			0.84		0.23	1.00	
Satd. Flow (perm)		1705			1563			2900		420	3503	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	455	92	79	392	92	79	507	104	53	304	22
RTOR Reduction (vph)	0	5	0	0	6	0	0	17	0	0	6	0
Lane Group Flow (vph)	0	584	0	0	557	0	0	673	0	53	320	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		59.9			59.9			30.1		30.1	30.1	
Effective Green, g (s)		59.9			59.9			30.1		30.1	30.1	
Actuated g/C Ratio		0.60			0.60			0.30		0.30	0.30	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		1021			936			872		126	1054	
v/s Ratio Prot											0.09	
v/s Ratio Perm		0.34			c0.36			c0.23		0.13		
v/c Ratio		0.57			0.60			0.77		0.42	0.30	
Uniform Delay, d1		12.2			12.5			31.8		28.0	26.9	
Progression Factor		1.00			1.00			1.00		0.60	0.59	
Incremental Delay, d2		2.3			2.8			4.3		2.1	0.2	
Delay (s)		14.6			15.3			36.1		19.1	15.9	
Level of Service		B			B			D		B	B	
Approach Delay (s)		14.6			15.3			36.1			16.3	
Approach LOS		B			B			D			B	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



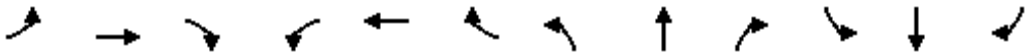
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	111	25	44	286	90	23	466	52	39	405	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00		0.91	1.00		0.97	1.00		0.98	1.00	
Frt		0.98		1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1758		1607	1751		1723	1821		1730	1815	
Flt Permitted		0.79		0.63	1.00		0.44	1.00		0.40	1.00	
Satd. Flow (perm)		1400		1061	1751		804	1821		729	1815	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	111	25	44	286	90	23	466	52	39	405	52
RTOR Reduction (vph)	0	10	0	0	18	0	0	6	0	0	7	0
Lane Group Flow (vph)	0	150	0	44	358	0	23	512	0	39	450	0
Confl. Peds. (#/hr)	38		68	68		38	65		61	61		65
Confl. Bikes (#/hr)			4			10			9			6
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		366		277	457		494	1120		448	1116	
v/s Ratio Prot					c0.20			c0.28			0.25	
v/s Ratio Perm		0.11		0.04			0.03			0.05		
v/c Ratio		0.41		0.16	0.78		0.05	0.46		0.09	0.40	
Uniform Delay, d1		19.8		18.5	22.3		4.9	6.7		5.1	6.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.4		0.3	8.6		0.2	1.3		0.4	1.1	
Delay (s)		23.2		18.8	30.9		5.1	8.0		5.5	7.5	
Level of Service		C		B	C		A	A		A	A	
Approach Delay (s)		23.2			29.6			7.9			7.3	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	132	19	3	285	76	77	346	17	61	336	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99			0.97		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1813			3314		1770	1848		1770	1863	1547
Flt Permitted	0.95	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1813			3162		1770	1848		1770	1863	1547
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	132	19	3	285	76	77	346	17	61	336	168
RTOR Reduction (vph)	0	6	0	0	27	0	0	2	0	0	0	111
Lane Group Flow (vph)	170	145	0	0	337	0	77	361	0	61	336	57
Confl. Peds. (#/hr)	67		42	42		67	9		8	8		9
Confl. Bikes (#/hr)			10			8			1			4
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	11.5	38.0			21.5		5.3	26.2		4.6	27.5	27.5
Effective Green, g (s)	11.5	38.0			21.5		5.3	26.2		4.6	27.5	27.5
Actuated g/C Ratio	0.14	0.47			0.27		0.07	0.32		0.06	0.34	0.34
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	251	852			841		116	599		100	634	526
v/s Ratio Prot	c0.10	0.08					c0.04	c0.20		0.03	0.18	
v/s Ratio Perm					c0.11							0.04
v/c Ratio	0.68	0.17			0.40		0.66	0.60		0.61	0.53	0.11
Uniform Delay, d1	32.9	12.3			24.4		36.9	22.9		37.2	21.4	18.3
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	0.4			1.4		10.5	4.4		7.0	3.2	0.4
Delay (s)	38.5	12.8			25.8		47.4	27.4		44.3	24.6	18.7
Level of Service	D	B			C		D	C		D	C	B
Approach Delay (s)		26.4			25.8			30.9			25.0	
Approach LOS		C			C			C			C	

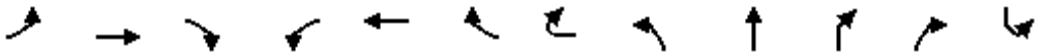
Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	17.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	328	29	60	440	28	50	305	55	19	299	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3457			3473			3414			3412	
Flt Permitted		0.77			0.85			0.86			0.93	
Satd. Flow (perm)		2690			2971			2958			3180	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	68	328	29	60	440	28	50	305	55	19	299	57
RTOR Reduction (vph)	0	7	0	0	5	0	0	15	0	0	19	0
Lane Group Flow (vph)	0	418	0	0	523	0	0	395	0	0	356	0
Confl. Peds. (#/hr)	51		16	16		51	11		46	46		44
Confl. Bikes (#/hr)			6			4			3			7
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1215			1002			998			1402	
v/s Ratio Prot		c0.02									c0.01	
v/s Ratio Perm		0.13			c0.18			c0.13			0.10	
v/c Ratio		0.34			0.52			0.40			0.25	
Uniform Delay, d1		14.9			21.3			20.3			14.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.8			1.9			1.2			0.4	
Delay (s)		15.7			23.2			21.4			14.7	
Level of Service		B			C			C			B	
Approach Delay (s)		15.7			23.2			21.4			14.7	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



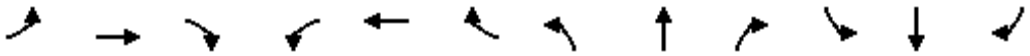
Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	21	311	30	23	302	35	4	14	198	7	25	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	4.0	4.0		
Lane Util. Factor		1.00			1.00			1.00	1.00	1.00		
Frpb, ped/bikes		1.00			1.00			1.00	1.00	0.94		
Flpb, ped/bikes		1.00			1.00			0.98	1.00	1.00		
Frt		0.99			0.99			1.00	1.00	0.85		
Flt Protected		1.00			1.00			0.95	1.00	1.00		
Satd. Flow (prot)		1830			1822			1740	1863	1483		
Flt Permitted		0.97			0.97			0.47	1.00	1.00		
Satd. Flow (perm)		1787			1774			866	1863	1483		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	311	30	23	302	35	4	14	198	7	25	1
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	26	0	0
Lane Group Flow (vph)	0	360	0	0	364	0	0	14	198	6	0	0
Confl. Peds. (#/hr)			23	23		10		13		23		
Confl. Bikes (#/hr)						4						
Turn Type		NA		Perm	NA			Perm	NA	Perm		Perm
Protected Phases		2			6				8			
Permitted Phases				6				8		8		4
Actuated Green, G (s)		39.4			39.4			12.4	12.4	12.4		
Effective Green, g (s)		39.4			39.4			12.4	12.4	12.4		
Actuated g/C Ratio		0.61			0.61			0.19	0.19	0.19		
Clearance Time (s)		4.0			4.0			4.0	4.0	4.0		
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0		
Lane Grp Cap (vph)		1083			1075			165	355	282		
v/s Ratio Prot									0.11			
v/s Ratio Perm		0.20			c0.20			0.02		0.00		
v/c Ratio		0.33			0.34			0.08	0.56	0.02		
Uniform Delay, d1		6.3			6.3			21.6	23.8	21.4		
Progression Factor		1.00			1.00			1.00	1.00	1.00		
Incremental Delay, d2		0.8			0.9			0.2	1.9	0.0		
Delay (s)		7.1			7.2			21.9	25.7	21.4		
Level of Service		A			A			C	C	C		
Approach Delay (s)		7.1			7.2				24.9			
Approach LOS		A			A				C			

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations							
Volume (vph)	31	191	21	1	4	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		
Lane Util. Factor	1.00	1.00			1.00		
Frpb, ped/bikes	1.00	1.00			1.00		
Flpb, ped/bikes	0.97	1.00			1.00		
Frt	1.00	0.99			0.93		
Flt Protected	0.95	1.00			0.98		
Satd. Flow (prot)	1715	1826			1687		
Flt Permitted	0.51	1.00			1.00		
Satd. Flow (perm)	913	1826			1726		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	191	21	1	4	1	5
RTOR Reduction (vph)	0	6	0	0	0	0	0
Lane Group Flow (vph)	32	206	0	0	11	0	0
Confl. Peds. (#/hr)	23		13				
Confl. Bikes (#/hr)			2				
Turn Type	Perm	NA		Perm	Prot		
Protected Phases		4			9		
Permitted Phases	4			9			
Actuated Green, G (s)	12.4	12.4			1.2		
Effective Green, g (s)	12.4	12.4			1.2		
Actuated g/C Ratio	0.19	0.19			0.02		
Clearance Time (s)	4.0	4.0			4.0		
Vehicle Extension (s)	3.0	3.0			3.0		
Lane Grp Cap (vph)	174	348			31		
v/s Ratio Prot		c0.11					
v/s Ratio Perm	0.04				c0.01		
v/c Ratio	0.18	0.59			0.35		
Uniform Delay, d1	22.1	24.0			31.5		
Progression Factor	1.00	1.00			1.00		
Incremental Delay, d2	0.5	2.7			6.9		
Delay (s)	22.6	26.7			38.4		
Level of Service	C	C			D		
Approach Delay (s)		26.1			38.4		
Approach LOS		C			D		

Intersection Summary

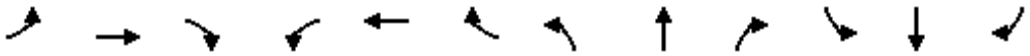


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	283	10	96	266	17	31	215	114	7	196	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00			1.00		0.99	1.00			1.00	
Frt	1.00	0.99			0.99		1.00	0.95			0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1850			3449		1750	1729			1807	
Flt Permitted	0.53	1.00			0.81		0.50	1.00			0.99	
Satd. Flow (perm)	982	1850			2816		916	1729			1785	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	283	10	96	266	17	31	215	114	7	196	43
RTOR Reduction (vph)	0	1	0	0	3	0	0	42	0	0	16	0
Lane Group Flow (vph)	26	292	0	0	376	0	31	287	0	0	230	0
Confl. Peds. (#/hr)			18	18		26	28		37			28
Confl. Bikes (#/hr)			1			1			2			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	38.7	38.7			38.7		16.3	16.3			16.3	
Effective Green, g (s)	38.7	38.7			38.7		16.3	16.3			16.3	
Actuated g/C Ratio	0.60	0.60			0.60		0.25	0.25			0.25	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	584	1101			1676		229	433			447	
v/s Ratio Prot		c0.16						c0.17				
v/s Ratio Perm	0.03				0.13		0.03				0.13	
v/c Ratio	0.04	0.27			0.22		0.14	0.66			0.51	
Uniform Delay, d1	5.5	6.3			6.1		18.9	21.9			20.9	
Progression Factor	1.00	1.03			1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.1	0.5			0.3		0.3	3.8			1.0	
Delay (s)	5.6	7.0			6.5		19.2	25.7			21.9	
Level of Service	A	A			A		B	C			C	
Approach Delay (s)		6.9			6.5			25.1			21.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	187	0	0	538	152	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.93	
Flt Protected	1.00			1.00	0.97	
Satd. Flow (prot)	3539			3539	3237	
Flt Permitted	1.00			1.00	0.97	
Satd. Flow (perm)	3539			3539	3237	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	187	0	0	538	152	134
RTOR Reduction (vph)	0	0	0	0	115	0
Lane Group Flow (vph)	187	0	0	538	171	0
Confl. Peds. (#/hr)						1
Confl. Bikes (#/hr)						1
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	42.1			42.1	8.4	
Effective Green, g (s)	42.1			42.1	8.4	
Actuated g/C Ratio	0.70			0.70	0.14	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2483			2483	453	
v/s Ratio Prot	0.05			c0.15	c0.05	
v/s Ratio Perm						
v/c Ratio	0.08			0.22	0.38	
Uniform Delay, d1	2.8			3.1	23.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.2	0.5	
Delay (s)	2.9			3.3	24.0	
Level of Service	A			A	C	
Approach Delay (s)	2.9			3.3	24.0	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



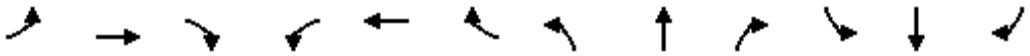
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	377	0	0	554	8	92	258	63	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			0.99				
Frt		1.00			1.00			0.98				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3527			3531			3364				
Flt Permitted		0.91			1.00			0.99				
Satd. Flow (perm)		3221			3531			3364				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	377	0	0	554	8	92	258	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	1	0	0	27	0	0	0	0
Lane Group Flow (vph)	0	402	0	0	561	0	0	386	0	0	0	0
Confl. Peds. (#/hr)	15		7	7		15	36		44	44		36
Confl. Bikes (#/hr)						2			2			7
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		43.1			43.1			11.9				
Effective Green, g (s)		43.1			43.1			11.9				
Actuated g/C Ratio		0.66			0.66			0.18				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		2135			2341			615				
v/s Ratio Prot					c0.16							
v/s Ratio Perm		0.12						0.11				
v/c Ratio		0.19			0.24			0.63				
Uniform Delay, d1		4.2			4.4			24.5				
Progression Factor		0.70			1.00			1.00				
Incremental Delay, d2		0.2			0.2			1.4				
Delay (s)		3.1			4.6			26.0				
Level of Service		A			A			C				
Approach Delay (s)		3.1			4.6			26.0			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	186	60	48	634	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.96		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3410		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3410		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	186	60	48	634	0	0
RTOR Reduction (vph)	33	0	0	0	0	0
Lane Group Flow (vph)	213	0	48	634	0	0
Confl. Peds. (#/hr)						1
Confl. Bikes (#/hr)						1
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1534		663	3539		
v/s Ratio Prot	0.06		0.03	c0.18		
v/s Ratio Perm						
v/c Ratio	0.14		0.07	0.18		
Uniform Delay, d1	6.5		8.0	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.2		0.2	0.1		
Delay (s)	6.6		8.2	0.1		
Level of Service	A		A	A		
Approach Delay (s)	6.6			0.7	0.0	
Approach LOS	A			A	A	

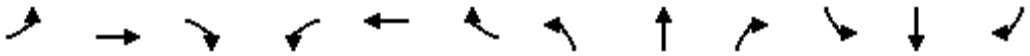
Intersection Summary			
HCM 2000 Control Delay	2.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



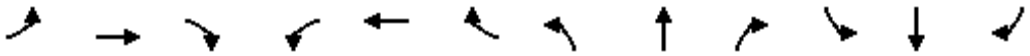
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	424	51	71	590	0	0	0	0	13	78	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		1.00			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.98			1.00						0.98	
Flt Protected		1.00			0.99						0.99	
Satd. Flow (prot)		3476			3519						3390	
Flt Permitted		1.00			0.86						0.99	
Satd. Flow (perm)		3476			3033						3390	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	424	51	71	590	0	0	0	0	13	78	14
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	465	0	0	661	0	0	0	0	0	92	0
Confl. Peds. (#/hr)	6		13	13		6	33		39	39		33
Confl. Bikes (#/hr)			1			3			3			5
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		48.9			48.9						6.1	
Effective Green, g (s)		48.9			48.9						6.1	
Actuated g/C Ratio		0.75			0.75						0.09	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2615			2281						318	
v/s Ratio Prot		0.13										
v/s Ratio Perm					c0.22						0.03	
v/c Ratio		0.18			0.29						0.29	
Uniform Delay, d1		2.3			2.5						27.4	
Progression Factor		1.00			0.71						1.00	
Incremental Delay, d2		0.1			0.3						0.5	
Delay (s)		2.5			2.1						27.9	
Level of Service		A			A						C	
Approach Delay (s)		2.5			2.1			0.0			27.9	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	4.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



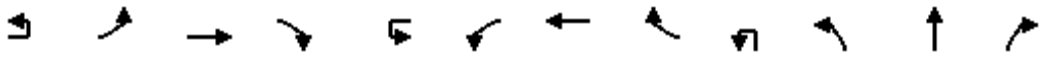
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	278	39	12	278	33	31	299	4	36	207	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.98			0.99		1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1822			1826		1750	1858		1766	1851	
Flt Permitted		0.99			0.99		0.52	1.00		0.37	1.00	
Satd. Flow (perm)		1811			1804		966	1858		682	1851	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	278	39	12	278	33	31	299	4	36	207	7
RTOR Reduction (vph)	0	5	0	0	4	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	319	0	0	319	0	31	302	0	36	212	0
Confl. Peds. (#/hr)	11		14	14		11	14		3	3		14
Confl. Bikes (#/hr)			2			2			2			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		39.3			39.3		16.2	16.2		16.2	16.2	
Effective Green, g (s)		39.3			39.3		16.2	16.2		16.2	16.2	
Actuated g/C Ratio		0.60			0.60		0.25	0.25		0.25	0.25	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1094			1090		240	463		169	461	
v/s Ratio Prot								c0.16			0.11	
v/s Ratio Perm		0.18			c0.18		0.03			0.05		
v/c Ratio		0.29			0.29		0.13	0.65		0.21	0.46	
Uniform Delay, d1		6.2			6.2		18.9	21.9		19.3	20.7	
Progression Factor		1.00			1.70		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			0.7		0.2	3.3		0.6	0.7	
Delay (s)		6.8			11.2		19.2	25.2		20.0	21.4	
Level of Service		A			B		B	C		B	C	
Approach Delay (s)		6.8			11.2			24.6			21.2	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



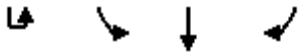
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	233	76	154	176	12	56	307	83	9	266	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00	1.00	0.95	0.95			1.00			0.95	
Frpb, ped/bikes		1.00	0.97	1.00	0.99			0.99			0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	
Frt		1.00	0.85	1.00	0.99			0.97			0.98	
Flt Protected		1.00	1.00	0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1854	1542	1681	1738			1789			3435	
Flt Permitted		1.00	1.00	0.95	1.00			0.92			0.94	
Satd. Flow (perm)		1854	1542	1681	1738			1655			3242	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	23	233	76	154	176	12	56	307	83	9	266	45
RTOR Reduction (vph)	0	0	60	0	4	0	0	11	0	0	18	0
Lane Group Flow (vph)	0	256	16	139	199	0	0	435	0	0	302	0
Confl. Peds. (#/hr)	30		8	8		30	14		25	25		14
Confl. Bikes (#/hr)			4			5			1			
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases			2				4			8		
Actuated Green, G (s)		13.4	13.4	12.5	12.5			28.1			28.1	
Effective Green, g (s)		13.4	13.4	12.5	12.5			28.1			28.1	
Actuated g/C Ratio		0.21	0.21	0.19	0.19			0.43			0.43	
Clearance Time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		382	317	323	334			715			1401	
v/s Ratio Prot		c0.14		0.08	c0.11							
v/s Ratio Perm			0.01					c0.26			0.09	
v/c Ratio		0.67	0.05	0.43	0.60			0.61			0.22	
Uniform Delay, d1		23.8	20.7	23.1	23.9			14.2			11.6	
Progression Factor		1.00	1.00	0.84	0.83			1.00			1.00	
Incremental Delay, d2		4.6	0.1	0.9	2.8			3.8			0.4	
Delay (s)		28.3	20.8	20.3	22.8			18.0			11.9	
Level of Service		C	C	C	C			B			B	
Approach Delay (s)		26.6			21.8			18.0			11.9	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



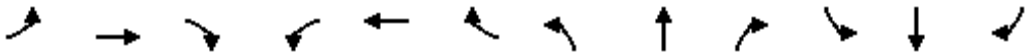
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	9	167	566	130	1	70	656	53	1	197	451	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00		1.00	0.95	
Frpb, ped/bikes		1.00	1.00	0.98		1.00	1.00	0.91		1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	0.97	
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	3539	1545		1770	3539	1445		1770	3403	
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		1770	3539	1545		1770	3539	1445		1770	3403	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	9	167	566	130	1	70	656	53	1	197	451	135
RTOR Reduction (vph)	0	0	0	73	0	0	0	34	0	0	23	0
Lane Group Flow (vph)	0	176	566	57	0	71	656	19	0	198	563	0
Confl. Peds. (#/hr)		66		10		10		66		17		4
Confl. Bikes (#/hr)				2				3				1
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	
Protected Phases	5	5	2		1	1	6		7	7	4	
Permitted Phases				2				6				
Actuated Green, G (s)		16.6	48.5	48.5		7.5	39.4	39.4		17.6	31.0	
Effective Green, g (s)		16.6	48.5	48.5		7.5	39.4	39.4		17.6	31.0	
Actuated g/C Ratio		0.15	0.44	0.44		0.07	0.36	0.36		0.16	0.28	
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		267	1560	681		120	1267	517		283	959	
v/s Ratio Prot		c0.10	0.16			0.04	c0.19			c0.11	0.17	
v/s Ratio Perm				0.04				0.01				
v/c Ratio		0.66	0.36	0.08		0.59	0.52	0.04		0.70	0.59	
Uniform Delay, d1		44.0	20.5	17.9		49.8	27.8	23.0		43.7	34.0	
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		4.4	0.1	0.0		5.1	1.5	0.1		6.0	0.6	
Delay (s)		48.5	20.5	17.9		54.9	29.3	23.1		49.7	34.6	
Level of Service		D	C	B		D	C	C		D	C	
Approach Delay (s)			25.8				31.2				38.4	
Approach LOS			C				C				D	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



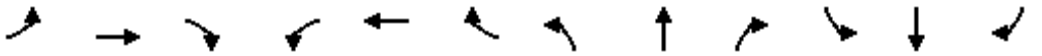
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	2	39	286	204
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	
Lane Util. Factor		1.00	0.95	
Frpb, ped/bikes		1.00	0.99	
Flpb, ped/bikes		1.00	1.00	
Frt		1.00	0.94	
Flt Protected		0.95	1.00	
Satd. Flow (prot)		1770	3273	
Flt Permitted		0.95	1.00	
Satd. Flow (perm)		1770	3273	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	39	286	204
RTOR Reduction (vph)	0	0	102	0
Lane Group Flow (vph)	0	41	388	0
Confl. Peds. (#/hr)		4		17
Confl. Bikes (#/hr)				
Turn Type	Prot	Prot	NA	
Protected Phases	3	3	8	
Permitted Phases				
Actuated Green, G (s)		5.0	18.4	
Effective Green, g (s)		5.0	18.4	
Actuated g/C Ratio		0.05	0.17	
Clearance Time (s)		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	
Lane Grp Cap (vph)		80	547	
v/s Ratio Prot		0.02	c0.12	
v/s Ratio Perm				
v/c Ratio		0.51	0.71	
Uniform Delay, d1		51.3	43.3	
Progression Factor		1.00	1.00	
Incremental Delay, d2		2.3	3.6	
Delay (s)		53.6	46.9	
Level of Service		D	D	
Approach Delay (s)			47.4	
Approach LOS			D	

Intersection Summary



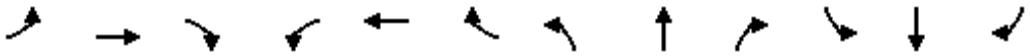
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	89	8	45	163	57	15	667	42	22	339	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.99			0.97			0.99			1.00	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1652			1614			3154			3161	
Flt Permitted		0.97			0.94			0.95			0.91	
Satd. Flow (perm)		1616			1523			2989			2881	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	89	8	45	163	57	15	667	42	22	339	12
RTOR Reduction (vph)	0	5	0	0	16	0	0	6	0	0	3	0
Lane Group Flow (vph)	0	102	0	0	249	0	0	718	0	0	370	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		15.0			15.0			43.0			43.0	
Effective Green, g (s)		15.0			15.0			43.0			43.0	
Actuated g/C Ratio		0.23			0.23			0.66			0.66	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		372			351			1977			1905	
v/s Ratio Prot												
v/s Ratio Perm		0.06			c0.16			c0.24			0.13	
v/c Ratio		0.28			0.71			0.36			0.19	
Uniform Delay, d1		20.5			23.0			4.9			4.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.4			6.4			0.5			0.2	
Delay (s)		20.9			29.4			5.4			4.5	
Level of Service		C			C			A			A	
Approach Delay (s)		20.9			29.4			5.4			4.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



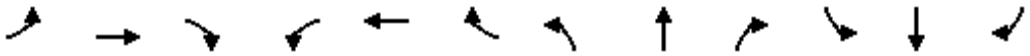
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	334	71	57	425	61	119	770	96	49	374	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.98			0.99		1.00	0.97		1.00	0.99	
Flpb, ped/bikes		1.00			0.99		0.94	1.00		0.94	1.00	
Frt		0.98			0.98		1.00	0.98		1.00	0.98	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3366			1798		1659	3378		1670	3434	
Flt Permitted		0.88			0.91		0.50	1.00		0.26	1.00	
Satd. Flow (perm)		2968			1646		865	3378		454	3434	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	34	334	71	57	425	61	119	770	96	49	374	45
RTOR Reduction (vph)	0	20	0	0	6	0	0	9	0	0	9	0
Lane Group Flow (vph)	0	419	0	0	537	0	119	857	0	49	410	0
Confl. Peds. (#/hr)	55		93	93		55	77		171	171		77
Confl. Bikes (#/hr)			11			10			6			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		34.1			34.1		46.4	46.4		46.4	46.4	
Effective Green, g (s)		34.1			34.1		46.4	46.4		46.4	46.4	
Actuated g/C Ratio		0.38			0.38		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1124			623		445	1741		234	1770	
v/s Ratio Prot								c0.25			0.12	
v/s Ratio Perm		0.14			c0.33		0.14			0.11		
v/c Ratio		0.37			0.86		0.27	0.49		0.21	0.23	
Uniform Delay, d1		20.2			25.8		12.2	14.2		11.8	12.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			11.4		1.5	1.0		2.0	0.3	
Delay (s)		20.3			37.2		13.7	15.1		13.9	12.3	
Level of Service		C			D		B	B		B	B	
Approach Delay (s)		20.3			37.2			15.0			12.5	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



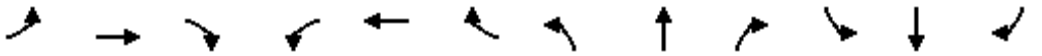
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	165	62	30	373	328	175	892	32	101	465	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.93		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3394		1770	3291		1770	3521		1770	3456	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3394		1770	3291		1770	3521		1770	3456	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	124	165	62	30	373	328	175	892	32	101	465	86
RTOR Reduction (vph)	0	38	0	0	160	0	0	2	0	0	15	0
Lane Group Flow (vph)	124	189	0	30	541	0	175	922	0	101	536	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	7.0	24.8		4.0	21.8		11.8	46.3		8.4	42.9	
Effective Green, g (s)	7.0	24.8		4.0	21.8		11.8	46.3		8.4	42.9	
Actuated g/C Ratio	0.07	0.25		0.04	0.22		0.12	0.46		0.08	0.43	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.5		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	123	841		70	717		208	1630		148	1482	
v/s Ratio Prot	c0.07	c0.06		0.02	c0.16		c0.10	c0.26		0.06	0.16	
v/s Ratio Perm												
v/c Ratio	1.01	0.23		0.43	0.75		0.84	0.57		0.68	0.36	
Uniform Delay, d1	46.5	29.9		46.9	36.6		43.2	19.5		44.5	19.3	
Progression Factor	1.00	1.00		1.00	1.00		0.98	0.91		1.00	1.00	
Incremental Delay, d2	83.3	0.0		1.5	4.7		22.5	1.3		9.9	0.7	
Delay (s)	129.8	30.0		48.4	41.2		64.7	19.0		54.4	20.0	
Level of Service	F	C		D	D		E	B		D	B	
Approach Delay (s)		65.3			41.5			26.3			25.3	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



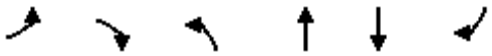
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	395	32	49	449	103	103	918	88	51	478	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.97		1.00	0.99		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3485			3434		1770	3493		1770	3506	
Flt Permitted		0.70			0.80		0.46	1.00		0.25	1.00	
Satd. Flow (perm)		2458			2742		849	3493		459	3506	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	395	32	49	449	103	103	918	88	51	478	32
RTOR Reduction (vph)	0	5	0	0	19	0	0	6	0	0	4	0
Lane Group Flow (vph)	0	472	0	0	582	0	103	1000	0	51	506	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.1			24.1		67.4	67.4		67.4	67.4	
Effective Green, g (s)		24.1			24.1		67.4	67.4		67.4	67.4	
Actuated g/C Ratio		0.24			0.24		0.67	0.67		0.67	0.67	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		2.0			2.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			660		572	2354		309	2363	
v/s Ratio Prot								c0.29			0.14	
v/s Ratio Perm		0.19			c0.21		0.12			0.11		
v/c Ratio		0.80			0.88		0.18	0.42		0.17	0.21	
Uniform Delay, d1		35.6			36.6		6.0	7.4		6.0	6.2	
Progression Factor		1.00			1.00		1.00	1.00		0.70	0.73	
Incremental Delay, d2		6.9			12.9		0.7	0.6		1.1	0.2	
Delay (s)		42.5			49.4		6.7	8.0		5.3	4.8	
Level of Service		D			D		A	A		A	A	
Approach Delay (s)		42.5			49.4			7.9			4.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	142	6	72	207	70	24	649	107	43	446	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		1.00			0.97		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829			1794		1770	3464		1770	3475	
Flt Permitted		0.75			0.89		0.47	1.00		0.34	1.00	
Satd. Flow (perm)		1398			1611		867	3464		630	3475	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	62	142	6	72	207	70	24	649	107	43	446	61
RTOR Reduction (vph)	0	1	0	0	15	0	0	16	0	0	13	0
Lane Group Flow (vph)	0	209	0	0	334	0	24	740	0	43	494	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.7			16.7		35.3	35.3		35.3	35.3	
Effective Green, g (s)		16.7			16.7		35.3	35.3		35.3	35.3	
Actuated g/C Ratio		0.27			0.27		0.57	0.57		0.57	0.57	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		376			433		493	1972		358	1978	
v/s Ratio Prot								c0.21			0.14	
v/s Ratio Perm		0.15			c0.21		0.03			0.07		
v/c Ratio		0.55			0.77		0.05	0.38		0.12	0.25	
Uniform Delay, d1		19.5			20.9		5.9	7.3		6.2	6.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0			7.6		0.0	0.0		0.1	0.0	
Delay (s)		20.5			28.5		5.9	7.4		6.2	6.7	
Level of Service		C			C		A	A		A	A	
Approach Delay (s)		20.5			28.5			7.3			6.7	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

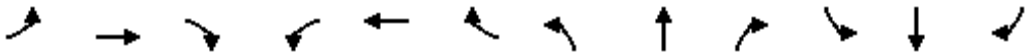


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	143	187	236	701	412	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3353	
Flt Permitted	0.95	1.00	0.41	1.00	1.00	
Satd. Flow (perm)	1770	1583	761	3539	3353	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	143	187	236	701	412	98
RTOR Reduction (vph)	0	57	0	0	18	0
Lane Group Flow (vph)	143	130	236	701	492	0
Confl. Peds. (#/hr)	33					101
Confl. Bikes (#/hr)						8
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	7.2	16.0	36.1	27.3	25.6	
Effective Green, g (s)	7.2	16.0	36.1	27.3	25.6	
Actuated g/C Ratio	0.14	0.31	0.70	0.53	0.50	
Clearance Time (s)	4.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	3.0	3.0	2.0	2.0	
Lane Grp Cap (vph)	246	490	704	1872	1663	
v/s Ratio Prot	c0.08	0.05	c0.06	c0.20	0.15	
v/s Ratio Perm		0.04	0.18			
v/c Ratio	0.58	0.26	0.34	0.37	0.30	
Uniform Delay, d1	20.8	13.4	2.8	7.1	7.7	
Progression Factor	1.00	1.00	0.87	0.56	1.00	
Incremental Delay, d2	2.2	0.3	0.3	0.0	0.0	
Delay (s)	23.0	13.7	2.7	4.1	7.7	
Level of Service	C	B	A	A	A	
Approach Delay (s)	17.7			3.7	7.7	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

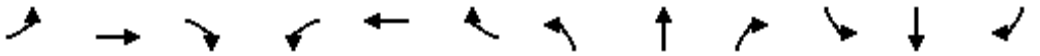
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	118	237	680	55	133	466
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0		3.0	3.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3469		1770	3539
Flt Permitted	0.95	1.00	1.00		0.34	1.00
Satd. Flow (perm)	1770	1583	3469		641	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	118	237	680	55	133	466
RTOR Reduction (vph)	0	64	6	0	0	0
Lane Group Flow (vph)	118	173	729	0	133	466
Confl. Peds. (#/hr)	75			93		
Confl. Bikes (#/hr)				2		
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	7.2	14.3	27.3		32.7	25.6
Effective Green, g (s)	7.2	14.3	27.3		32.7	25.6
Actuated g/C Ratio	0.14	0.28	0.53		0.63	0.50
Clearance Time (s)	4.0	3.0	3.0		3.0	3.0
Vehicle Extension (s)	2.0	3.0	2.0		3.0	2.0
Lane Grp Cap (vph)	246	438	1835		561	1755
v/s Ratio Prot	c0.07	c0.05	c0.21		0.03	0.13
v/s Ratio Perm		0.05			0.12	
v/c Ratio	0.48	0.39	0.40		0.24	0.27
Uniform Delay, d1	20.5	15.1	7.2		3.8	7.5
Progression Factor	1.00	1.00	1.00		0.82	0.64
Incremental Delay, d2	0.5	0.6	0.1		0.2	0.0
Delay (s)	21.0	15.7	7.3		3.3	4.9
Level of Service	C	B	A		A	A
Approach Delay (s)	17.5		7.3			4.5
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



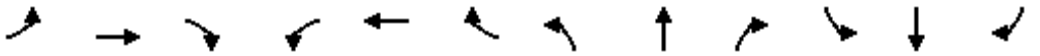
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	533	56	161	713	114	183	476	183	65	285	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.92	1.00	0.99		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1462	1770	4932		1770	3368		1770	3327	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1462	1770	4932		1770	3368		1770	3327	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	533	56	161	713	114	183	476	183	65	285	119
RTOR Reduction (vph)	0	0	43	0	16	0	0	30	0	0	41	0
Lane Group Flow (vph)	98	533	13	161	811	0	183	629	0	65	363	0
Confl. Peds. (#/hr)			61			55			17			51
Confl. Bikes (#/hr)			4			5			2			9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8									
Actuated Green, G (s)	8.5	18.7	18.7	13.4	24.1		14.2	24.7		7.1	17.6	
Effective Green, g (s)	8.5	18.7	18.7	13.4	24.1		14.2	24.7		7.1	17.6	
Actuated g/C Ratio	0.11	0.24	0.24	0.17	0.31		0.18	0.31		0.09	0.22	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	190	1205	346	300	1506		318	1054		159	742	
v/s Ratio Prot	0.06	0.10		c0.09	c0.16		c0.10	c0.19		0.04	0.11	
v/s Ratio Perm			0.01									
v/c Ratio	0.52	0.44	0.04	0.54	0.54		0.58	0.60		0.41	0.49	
Uniform Delay, d1	33.3	25.7	23.2	29.9	22.8		29.6	22.9		33.9	26.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	0.3	0.0	1.8	0.4		2.5	0.9		1.7	0.5	
Delay (s)	35.6	25.9	23.2	31.8	23.2		32.1	23.8		35.6	27.2	
Level of Service	D	C	C	C	C		C	C		D	C	
Approach Delay (s)		27.1			24.6			25.6			28.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	78.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



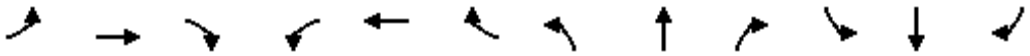
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	272	642	60	62	553	149	106	440	44	302	375	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.94	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3489		1770	3539	1544	1770	3539	1491	1770	3356	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3489		1770	3539	1544	1770	3539	1491	1770	3356	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	272	642	60	62	553	149	106	440	44	302	375	165
RTOR Reduction (vph)	0	5	0	0	0	94	0	0	36	0	37	0
Lane Group Flow (vph)	272	697	0	62	553	55	106	440	8	302	503	0
Confl. Peds. (#/hr)	7					7			20	20		
Confl. Bikes (#/hr)			5						9			10
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	20.3	36.2		7.6	23.5	23.5	11.6	18.8	18.8	20.5	27.7	
Effective Green, g (s)	20.3	36.2		7.6	23.5	23.5	11.6	18.8	18.8	20.5	27.7	
Actuated g/C Ratio	0.20	0.37		0.08	0.24	0.24	0.12	0.19	0.19	0.21	0.28	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	362	1274		135	839	366	207	671	282	366	938	
v/s Ratio Prot	c0.15	0.20		0.04	c0.16		0.06	c0.12		c0.17	0.15	
v/s Ratio Perm						0.04			0.01			
v/c Ratio	0.75	0.55		0.46	0.66	0.15	0.51	0.66	0.03	0.83	0.54	
Uniform Delay, d1	37.0	24.9		43.8	34.2	29.9	41.1	37.2	32.7	37.6	30.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.5	0.5		2.5	1.9	0.2	2.1	2.3	0.0	14.0	0.6	
Delay (s)	45.5	25.4		46.2	36.1	30.1	43.2	39.5	32.8	51.6	30.9	
Level of Service	D	C		D	D	C	D	D	C	D	C	
Approach Delay (s)		31.0			35.7			39.6			38.3	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	99.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



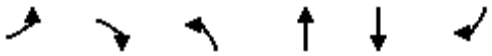
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	257	130	45	383	45	275	385	21	27	293	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1766	3539	1522	1753	3478		1770	3507		1770	3474	
Flt Permitted	0.45	1.00	1.00	0.59	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	837	3539	1522	1094	3478		1770	3507		1770	3474	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	257	130	45	383	45	275	385	21	27	293	34
RTOR Reduction (vph)	0	0	99	0	13	0	0	4	0	0	12	0
Lane Group Flow (vph)	48	257	31	45	415	0	275	402	0	27	315	0
Confl. Peds. (#/hr)	6		23	23		6			15			20
Confl. Bikes (#/hr)			15						16			4
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	11.3	11.3	11.3	11.3	11.3		14.6	22.9		1.3	9.6	
Effective Green, g (s)	11.3	11.3	11.3	11.3	11.3		14.6	22.9		1.3	9.6	
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.24		0.31	0.48		0.03	0.20	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	199	841	362	260	827		544	1690		48	702	
v/s Ratio Prot		0.07			c0.12		c0.16	0.11		0.02	c0.09	
v/s Ratio Perm	0.06		0.02	0.04								
v/c Ratio	0.24	0.31	0.09	0.17	0.50		0.51	0.24		0.56	0.45	
Uniform Delay, d1	14.6	14.9	14.1	14.4	15.7		13.5	7.2		22.8	16.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.2	0.1	0.3	0.5		0.7	0.1		14.2	0.5	
Delay (s)	15.3	15.1	14.2	14.7	16.1		14.2	7.3		37.0	17.1	
Level of Service	B	B	B	B	B		B	A		D	B	
Approach Delay (s)		14.8			16.0			10.1			18.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	47.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	74	22	109	55	145	22	500	77	109	337	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.89		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1753	1793		1768	1629		1760	3456		1765	3487	
Flt Permitted	0.63	1.00		0.69	1.00		0.53	1.00		0.43	1.00	
Satd. Flow (perm)	1167	1793		1293	1629		988	3456		808	3487	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	74	22	109	55	145	22	500	77	109	337	30
RTOR Reduction (vph)	0	12	0	0	105	0	0	20	0	0	10	0
Lane Group Flow (vph)	25	84	0	109	95	0	22	557	0	109	357	0
Confl. Peds. (#/hr)	35		3	3		35	16		9	9		16
Confl. Bikes (#/hr)						2			2			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	8.1	8.1		8.1	8.1		13.2	13.2		13.2	13.2	
Effective Green, g (s)	8.1	8.1		8.1	8.1		13.2	13.2		13.2	13.2	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.45	0.45		0.45	0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	322	495		357	450		445	1556		364	1570	
v/s Ratio Prot		0.05			0.06			c0.16			0.10	
v/s Ratio Perm	0.02			c0.08			0.02			0.13		
v/c Ratio	0.08	0.17		0.31	0.21		0.05	0.36		0.30	0.23	
Uniform Delay, d1	7.8	8.0		8.4	8.1		4.5	5.3		5.1	4.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.5	0.2		0.0	0.1		0.5	0.1	
Delay (s)	7.9	8.2		8.9	8.4		4.6	5.4		5.6	5.0	
Level of Service	A	A		A	A		A	A		A	A	
Approach Delay (s)		8.2			8.6			5.4			5.1	
Approach LOS		A			A			A			A	

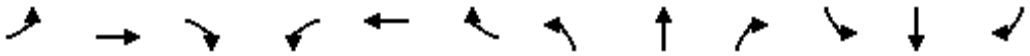
Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	29.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	96	315	515	381	337	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3385	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3385	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	96	315	515	381	337	118
RTOR Reduction (vph)	0	110	0	0	43	0
Lane Group Flow (vph)	96	205	515	381	412	0
Confl. Peds. (#/hr)	41					11
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	8.7	38.9	26.2	43.0	12.8	
Effective Green, g (s)	8.7	38.9	26.2	43.0	12.8	
Actuated g/C Ratio	0.15	0.65	0.44	0.72	0.21	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	257	1815	776	2549	725	
v/s Ratio Prot	c0.05	0.07	c0.29	0.11	c0.12	
v/s Ratio Perm						
v/c Ratio	0.37	0.11	0.66	0.15	0.57	
Uniform Delay, d1	23.0	3.9	13.3	2.6	21.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0	2.1	0.0	1.0	
Delay (s)	24.0	3.9	15.4	2.6	22.0	
Level of Service	C	A	B	A	C	
Approach Delay (s)	8.6			10.0	22.0	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

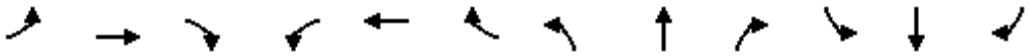
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	153	29	27	298	14	34	428	30	7	200	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.99			0.98	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1799			1841			3479			3434	
Flt Permitted		0.87			0.97			0.93			0.94	
Satd. Flow (perm)		1582			1788			3230			3248	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	63	153	29	27	298	14	34	428	30	7	200	33
RTOR Reduction (vph)	0	7	0	0	2	0	0	7	0	0	16	0
Lane Group Flow (vph)	0	238	0	0	337	0	0	485	0	0	224	0
Confl. Peds. (#/hr)	26		17	17		26	32		23	23		32
Confl. Bikes (#/hr)			6			6			7			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			33.0			33.0	
Effective Green, g (s)		25.0			25.0			33.0			33.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Lane Grp Cap (vph)		608			687			1639			1648	
v/s Ratio Prot												
v/s Ratio Perm		0.15			c0.19			c0.15			0.07	
v/c Ratio		0.39			0.49			0.30			0.14	
Uniform Delay, d1		14.5			15.2			9.3			8.5	
Progression Factor		0.73			1.00			1.00			1.00	
Incremental Delay, d2		1.9			2.5			0.5			0.2	
Delay (s)		12.4			17.7			9.7			8.6	
Level of Service		B			B			A			A	
Approach Delay (s)		12.4			17.7			9.7			8.6	
Approach LOS		B			B			A			A	

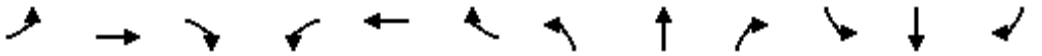
Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	147	0	0	615	55	299	485	104	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.91		0.91	0.91				
Frpb, ped/bikes		1.00			1.00		1.00	1.00				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.99		1.00	0.97				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5085			5023		1610	3288				
Flt Permitted		1.00			1.00		0.95	1.00				
Satd. Flow (perm)		5085			5023		1610	3288				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	147	0	0	615	55	299	485	104	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	16	0	0	0	0
Lane Group Flow (vph)	0	147	0	0	649	0	269	603	0	0	0	0
Confl. Peds. (#/hr)									5			
Confl. Bikes (#/hr)									2			
Turn Type		NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		15.2			15.2		42.3	42.3				
Effective Green, g (s)		15.2			15.2		42.3	42.3				
Actuated g/C Ratio		0.23			0.23		0.65	0.65				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		1189			1174		1047	2139				
v/s Ratio Prot		0.03			c0.13							
v/s Ratio Perm							0.17	0.18				
v/c Ratio		0.12			0.55		0.26	0.28				
Uniform Delay, d1		19.6			21.9		4.8	4.9				
Progression Factor		0.85			0.47		1.00	1.00				
Incremental Delay, d2		0.0			0.5		0.6	0.3				
Delay (s)		16.8			10.9		5.4	5.2				
Level of Service		B			B		A	A				
Approach Delay (s)		16.8			10.9			5.2			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	250	28	17	506	26	167	815	46	0	443	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.91	1.00
Frt	1.00	0.98			0.99		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1835			3509		1770	5045			5085	1583
Flt Permitted	0.28	1.00			0.94		0.95	1.00			1.00	1.00
Satd. Flow (perm)	520	1835			3300		1770	5045			5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	250	28	17	506	26	167	815	46	0	443	355
RTOR Reduction (vph)	0	3	0	0	3	0	0	5	0	0	0	250
Lane Group Flow (vph)	310	275	0	0	546	0	167	856	0	0	443	105
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Effective Green, g (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Actuated g/C Ratio	0.45	0.45			0.30		0.13	0.46			0.30	0.30
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	392	828			974		224	2298			1501	467
v/s Ratio Prot	c0.10	0.15					c0.09	c0.17			0.09	
v/s Ratio Perm	c0.26				0.17							0.07
v/c Ratio	0.79	0.33			0.56		0.75	0.37			0.30	0.22
Uniform Delay, d1	23.0	21.0			35.3		49.9	21.1			32.2	31.5
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	15.0	1.1			2.3		20.0	0.5			0.5	1.1
Delay (s)	38.0	22.0			37.6		69.9	21.6			32.7	32.6
Level of Service	D	C			D		E	C			C	C
Approach Delay (s)		30.5			37.6			29.5			32.7	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	18.5
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

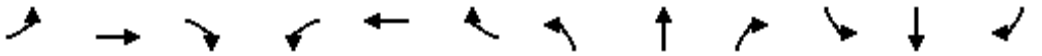
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	0	0	2	104	5	126	11	0	863	97	12	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		0.97			0.99				0.99			1.00
Flpb, ped/bikes		1.00			0.99				1.00			1.00
Frt		0.86			0.93				0.99			1.00
Flt Protected		1.00			0.98				1.00			0.95
Satd. Flow (prot)		1561			1655				4972			1766
Flt Permitted		1.00			0.86				0.93			0.24
Satd. Flow (perm)		1561			1449				4651			451
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	2	104	5	126	11	0	863	97	12	55
RTOR Reduction (vph)	0	2	0	0	51	0	0	0	10	0	0	0
Lane Group Flow (vph)	0	0	0	0	184	0	0	0	961	0	0	67
Confl. Peds. (#/hr)			13	13				4		15		15
Confl. Bikes (#/hr)						9				2		
Turn Type		NA		Perm	NA		Perm		NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		14.6			14.6				52.1			61.3
Effective Green, g (s)		14.6			14.6				52.1			61.3
Actuated g/C Ratio		0.17			0.17				0.61			0.72
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		268			249				2854			398
v/s Ratio Prot		0.00										c0.01
v/s Ratio Perm					c0.13				c0.21			0.11
v/c Ratio		0.00			0.74				0.34			0.17
Uniform Delay, d1		29.1			33.3				8.0			3.8
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			9.4				0.3			0.1
Delay (s)		29.1			42.7				8.3			3.9
Level of Service		C			D				A			A
Approach Delay (s)		29.1			42.7				8.3			
Approach LOS		C			D				A			

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	84.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

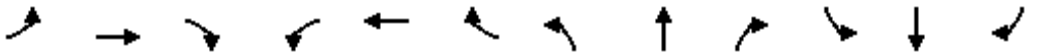
Movement	SBT	SBR
Lane Configurations		
Volume (vph)	391	2
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	5081	
Flt Permitted	1.00	
Satd. Flow (perm)	5081	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	391	2
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	392	0
Confl. Peds. (#/hr)		4
Confl. Bikes (#/hr)		3
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	61.3	
Effective Green, g (s)	61.3	
Actuated g/C Ratio	0.72	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	3668	
v/s Ratio Prot	0.08	
v/s Ratio Perm		
v/c Ratio	0.11	
Uniform Delay, d1	3.6	
Progression Factor	1.00	
Incremental Delay, d2	0.1	
Delay (s)	3.6	
Level of Service	A	
Approach Delay (s)	3.7	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	193	138	57	259	73	96	689	65	23	411	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.94			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1746			3415		1770	3493		1770	3539	1583
Flt Permitted	0.51	1.00			0.86		0.41	1.00		0.37	1.00	1.00
Satd. Flow (perm)	947	1746			2952		764	3493		681	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	154	193	138	57	259	73	96	689	65	23	411	80
RTOR Reduction (vph)	0	30	0	0	24	0	0	8	0	0	0	52
Lane Group Flow (vph)	154	301	0	0	365	0	96	746	0	23	411	28
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	27.1	27.1			27.1		27.9	27.9		27.3	25.3	25.3
Effective Green, g (s)	27.1	27.1			27.1		27.9	27.9		27.3	25.3	25.3
Actuated g/C Ratio	0.38	0.38			0.38		0.39	0.39		0.38	0.35	0.35
Clearance Time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	358	661			1118		383	1363		313	1252	560
v/s Ratio Prot		c0.17					0.02	c0.21		0.00	c0.12	
v/s Ratio Perm	0.16				0.12		0.08			0.02		0.02
v/c Ratio	0.43	0.45			0.33		0.25	0.55		0.07	0.33	0.05
Uniform Delay, d1	16.5	16.7			15.7		14.2	16.9		14.1	16.9	15.2
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.7	2.3			0.8		0.1	1.6		0.0	0.7	0.2
Delay (s)	20.2	18.9			16.5		14.3	18.5		14.2	17.6	15.4
Level of Service	C	B			B		B	B		B	B	B
Approach Delay (s)		19.3			16.5			18.0			17.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	530	337	88	21	472	91	66	296	18	77	174	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	1.00			0.98		1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3254			3370		1770	3478		1770	1863	2787
Flt Permitted	0.95	0.57			0.92		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	1902			3112		1770	3478		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	530	337	88	21	472	91	66	296	18	77	174	242
RTOR Reduction (vph)	0	10	0	0	14	0	0	6	0	0	0	200
Lane Group Flow (vph)	318	627	0	0	570	0	66	308	0	77	174	42
Confl. Peds. (#/hr)			15			155			140			
Confl. Bikes (#/hr)			3			12			8			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	11.2	40.6			25.4		6.7	12.3		6.9	12.5	12.5
Effective Green, g (s)	11.2	40.6			25.4		6.7	12.3		6.9	12.5	12.5
Actuated g/C Ratio	0.16	0.57			0.35		0.09	0.17		0.10	0.17	0.17
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	251	1286			1100		165	595		170	324	485
v/s Ratio Prot	c0.20	0.08					0.04	0.09		c0.04	c0.09	
v/s Ratio Perm		c0.20			0.18							0.02
v/c Ratio	1.27	0.49			0.52		0.40	0.52		0.45	0.54	0.09
Uniform Delay, d1	30.3	9.4			18.4		30.7	27.1		30.7	27.0	24.9
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	147.8	0.3			0.4		1.6	0.8		1.9	1.7	0.1
Delay (s)	178.1	9.7			18.8		32.2	27.8		32.6	28.7	24.9
Level of Service	F	A			B		C	C		C	C	C
Approach Delay (s)		65.7			18.8			28.6			27.5	
Approach LOS		E			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	71.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	423	36	3	659	9	49	7	16	49	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.99			1.00		0.98		0.88		0.85
Flt Protected	1.00			1.00		0.99		0.99		1.00
Satd. Flow (prot)	3498			3538		4969		1629		1504
Flt Permitted	1.00			0.95		0.99		0.99		1.00
Satd. Flow (perm)	3498			3375		4969		1629		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	423	36	3	659	9	49	7	16	49	35
RTOR Reduction (vph)	7	0	0	0	0	0	0	47	0	25
Lane Group Flow (vph)	452	0	0	662	0	65	0	22	0	6
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1399			1350		1516		291		269
v/s Ratio Prot	0.13							c0.01		
v/s Ratio Perm				c0.20		0.01				0.00
v/c Ratio	0.32			0.49		0.04		0.08		0.02
Uniform Delay, d1	19.6			21.3		23.2		32.5		32.1
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	0.6			1.3		0.1		0.5		0.1
Delay (s)	20.3			22.5		23.3		33.0		32.3
Level of Service	C			C		C		C		C
Approach Delay (s)	20.3			22.5		23.3		32.8		
Approach LOS	C			C		C		C		

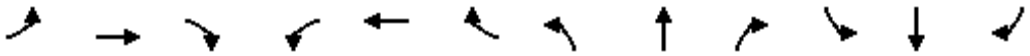
Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	39.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	95	67	10	250	10	47	122	13	6	251	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.98			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.99			0.99			0.97	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1729			1845			1814			1790	
Flt Permitted		0.89			0.99			0.87			1.00	
Satd. Flow (perm)		1563			1827			1595			1785	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	95	67	10	250	10	47	122	13	6	251	73
RTOR Reduction (vph)	0	27	0	0	2	0	0	4	0	0	16	0
Lane Group Flow (vph)	0	178	0	0	268	0	0	178	0	0	314	0
Confl. Peds. (#/hr)	21		14	14		21	12		4	4		12
Confl. Bikes (#/hr)			7			11			9			9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		553			646			809			906	
v/s Ratio Prot												
v/s Ratio Perm		0.11			c0.15			0.11			c0.18	
v/c Ratio		0.32			0.41			0.22			0.35	
Uniform Delay, d1		15.3			15.9			8.9			9.6	
Progression Factor		1.01			1.39			1.00			1.00	
Incremental Delay, d2		1.5			1.8			0.6			1.1	
Delay (s)		17.0			23.9			9.5			10.6	
Level of Service		B			C			A			B	
Approach Delay (s)		17.0			23.9			9.5			10.6	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



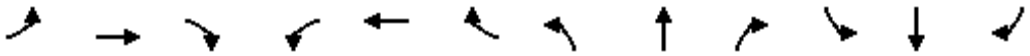
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	158	36	17	260	103	108	544	6	76	255	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.96		1.00	1.00		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1807			1791		1770	5077		1770	5030	
Flt Permitted		0.88			0.98		0.58	1.00		0.42	1.00	
Satd. Flow (perm)		1607			1767		1073	5077		784	5030	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	158	36	17	260	103	108	544	6	76	255	20
RTOR Reduction (vph)	0	9	0	0	20	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	235	0	0	360	0	108	548	0	76	263	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		766			842		429	2030		313	2012	
v/s Ratio Prot								c0.11			0.05	
v/s Ratio Perm		0.15			c0.20		0.10			0.10		
v/c Ratio		0.31			0.43		0.25	0.27		0.24	0.13	
Uniform Delay, d1		10.4			11.2		13.0	13.1		13.0	12.3	
Progression Factor		1.00			0.73		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0			1.5		1.4	0.3		1.8	0.1	
Delay (s)		11.4			9.6		14.4	13.4		14.8	12.5	
Level of Service		B			A		B	B		B	B	
Approach Delay (s)		11.4			9.6			13.6			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

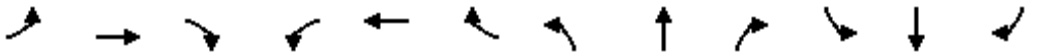
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	270	609	95	177	0	0	0	66	267	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Frt	1.00	0.85	1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3535	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3535	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	609	95	177	0	0	0	66	267	2
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	270	609	95	177	0	0	0	66	268	0
Confl. Peds. (#/hr)										12
Confl. Bikes (#/hr)										5
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	15.0	26.1	6.1	65.0				28.9	28.9	
Effective Green, g (s)	15.0	26.1	6.1	65.0				28.9	28.9	
Actuated g/C Ratio	0.23	0.40	0.09	1.00				0.44	0.44	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	408	1449	322	1583				786	1571	
v/s Ratio Prot	c0.15	c0.17						0.04	c0.08	
v/s Ratio Perm			0.03	0.11						
v/c Ratio	0.66	0.42	0.30	0.11				0.08	0.17	
Uniform Delay, d1	22.7	14.0	27.4	0.0				10.4	10.8	
Progression Factor	1.64	0.86	1.00	1.00				1.00	1.00	
Incremental Delay, d2	3.9	0.2	0.5	0.1				0.2	0.2	
Delay (s)	41.1	12.3	28.0	0.1				10.6	11.1	
Level of Service	D	B	C	A				B	B	
Approach Delay (s)	21.1		9.9			0.0			11.0	
Approach LOS	C		A			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	423	154	282	436	2	250	0	524	0	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Lane Util. Factor		0.95		0.91	0.91			1.00	1.00		1.00	
Frt		0.96		1.00	1.00			1.00	0.85		0.86	
Flt Protected		1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)		3395		1610	3371			1770	1583		1611	
Flt Permitted		0.88		0.95	0.87			0.75	1.00		1.00	
Satd. Flow (perm)		3009		1610	2948			1402	1583		1611	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	423	154	282	436	2	250	0	524	0	0	8
RTOR Reduction (vph)	0	32	0	0	0	0	0	0	396	0	6	0
Lane Group Flow (vph)	0	591	0	234	486	0	0	250	128	0	2	0
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		40.3		15.3	59.6			21.9	21.9		21.9	
Effective Green, g (s)		40.3		15.3	59.6			21.9	21.9		21.9	
Actuated g/C Ratio		0.45		0.17	0.66			0.24	0.24		0.24	
Clearance Time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1347		273	2024			341	385		392	
v/s Ratio Prot				c0.15	0.04						0.00	
v/s Ratio Perm		c0.20			0.12			c0.18	0.08			
v/c Ratio		0.44		0.86	0.24			0.73	0.33		0.00	
Uniform Delay, d1		17.1		36.3	6.1			31.4	28.0		25.8	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.0		22.3	0.1			7.9	0.5		0.0	
Delay (s)		18.1		58.6	6.2			39.3	28.5		25.8	
Level of Service		B		E	A			D	C		C	
Approach Delay (s)		18.1			23.2			32.0			25.8	
Approach LOS		B			C			C			C	

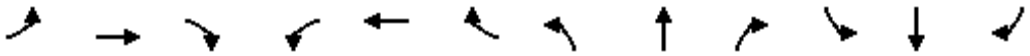
Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	355	58	53	505	56	122	811	40	18	342	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frt		0.98			0.99			0.99			1.00	0.85
Flt Protected		0.99			1.00			0.99			1.00	1.00
Satd. Flow (prot)		3446			3476			3495			3530	1583
Flt Permitted		0.71			0.87			0.83			0.89	1.00
Satd. Flow (perm)		2478			3030			2933			3162	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	355	58	53	505	56	122	811	40	18	342	126
RTOR Reduction (vph)	0	13	0	0	11	0	0	4	0	0	0	70
Lane Group Flow (vph)	0	500	0	0	604	0	0	969	0	0	360	56
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		30.0			30.0			32.0			32.0	32.0
Effective Green, g (s)		30.0			30.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42			0.42			0.44			0.44	0.44
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)		1032			1262			1303			1405	703
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.20			c0.33			0.11	0.04
v/c Ratio		0.48			0.48			0.74			0.26	0.08
Uniform Delay, d1		15.3			15.3			16.6			12.5	11.5
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		1.6			1.3			3.9			0.4	0.2
Delay (s)		17.0			16.6			20.5			13.0	11.7
Level of Service		B			B			C			B	B
Approach Delay (s)		17.0			16.6			20.5			12.7	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

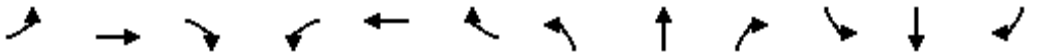
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	107	17	58	151	29	36	964	24	15	443	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.99			0.98		1.00	1.00			0.98	
Flt Protected		0.98			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1789			1788		1751	3490			3408	
Flt Permitted		0.70			0.88		0.45	1.00			0.93	
Satd. Flow (perm)		1274			1595		830	3490			3162	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	107	17	58	151	29	36	964	24	15	443	83
RTOR Reduction (vph)	0	6	0	0	8	0	0	2	0	0	14	0
Lane Group Flow (vph)	0	178	0	0	230	0	36	986	0	0	527	0
Confl. Peds. (#/hr)	3		1	1		3	2		7	7		2
Confl. Bikes (#/hr)			1			3			4			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		11.0			12.0		41.2	41.2			41.2	
Effective Green, g (s)		11.0			12.0		41.2	41.2			41.2	
Actuated g/C Ratio		0.18			0.20		0.67	0.67			0.67	
Clearance Time (s)		5.0			4.0		4.0	4.0			4.0	
Vehicle Extension (s)		1.0			1.0		1.0	1.0			1.0	
Lane Grp Cap (vph)		228			312		558	2349			2128	
v/s Ratio Prot								c0.28				
v/s Ratio Perm		0.14			c0.14		0.04				0.17	
v/c Ratio		0.78			0.74		0.06	0.42			0.25	
Uniform Delay, d1		24.0			23.1		3.4	4.6			3.9	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		14.8			7.6		0.2	0.6			0.3	
Delay (s)		38.7			30.7		3.6	5.1			4.2	
Level of Service		D			C		A	A			A	
Approach Delay (s)		38.7			30.7			5.1			4.2	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	61.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

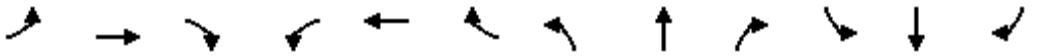
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	17	286	1	111	18	1002	141	75	503	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.86			0.96		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1166			1723		1751	3431		1752	3498	
Flt Permitted		1.00			0.78		0.45	1.00		0.18	1.00	
Satd. Flow (perm)		1166			1386		827	3431		329	3498	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	17	286	1	111	18	1002	141	75	503	6
RTOR Reduction (vph)	0	12	0	0	20	0	0	13	0	0	1	0
Lane Group Flow (vph)	0	5	0	0	378	0	18	1130	0	75	508	0
Confl. Peds. (#/hr)	2					2	2					2
Confl. Bikes (#/hr)						2			1			
Heavy Vehicles (%)	41%	41%	41%	2%	2%	2%	3%	3%	3%	3%	3%	3%
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		22.6			22.6		40.3	40.3		40.3	40.3	
Effective Green, g (s)		22.6			22.6		40.3	40.3		40.3	40.3	
Actuated g/C Ratio		0.32			0.32		0.57	0.57		0.57	0.57	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		371			441		470	1950		187	1988	
v/s Ratio Prot		0.00						c0.33			0.15	
v/s Ratio Perm					c0.27		0.02			0.23		
v/c Ratio		0.01			0.86		0.04	0.58		0.40	0.26	
Uniform Delay, d1		16.5			22.6		6.8	9.8		8.6	7.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			14.6		0.2	1.3		6.3	0.3	
Delay (s)		16.5			37.3		6.9	11.1		14.9	8.0	
Level of Service		B			D		A	B		B	A	
Approach Delay (s)		16.5			37.3			11.0			8.9	
Approach LOS		B			D			B			A	

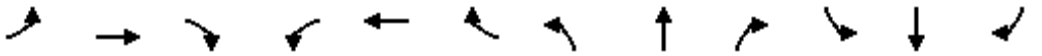
Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	70.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



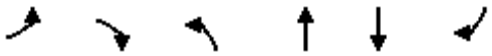
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	196	153	81	313	33	237	607	60	240	387	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1836		1770	3491		1770	3483	
Flt Permitted	0.44	1.00	1.00	0.62	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	812	1863	1583	1155	1836		1770	3491		1770	3483	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	196	153	81	313	33	237	607	60	240	387	46
RTOR Reduction (vph)	0	0	95	0	4	0	0	8	0	0	10	0
Lane Group Flow (vph)	130	196	58	81	342	0	237	659	0	240	423	0
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8								
Actuated Green, G (s)	34.0	34.0	34.0	34.0	34.0		12.0	27.0		12.0	27.0	
Effective Green, g (s)	34.0	34.0	34.0	34.0	34.0		12.0	27.0		12.0	27.0	
Actuated g/C Ratio	0.38	0.38	0.38	0.38	0.38		0.13	0.30		0.13	0.30	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)	308	707	601	438	697		237	1053		237	1050	
v/s Ratio Prot		0.11			c0.19		0.13	c0.19		c0.14	0.12	
v/s Ratio Perm	0.16		0.04	0.07								
v/c Ratio	0.42	0.28	0.10	0.18	0.49		1.00	0.63		1.01	0.40	
Uniform Delay, d1	20.5	19.2	17.9	18.5	21.1		38.8	26.9		38.8	24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1	0.0	0.1	0.2		58.5	0.8		61.7	0.1	
Delay (s)	20.8	19.3	17.9	18.6	21.3		97.2	27.7		100.5	24.9	
Level of Service	C	B	B	B	C		F	C		F	C	
Approach Delay (s)		19.3			20.8			46.0			51.9	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	89.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



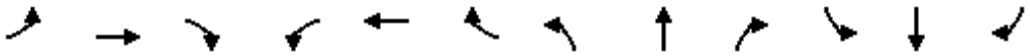
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	20	150	33	50	111	100	587	65	40	430	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.92		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1704		1770	3486		1770	3416	
Flt Permitted	0.64	1.00	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1201	1863	1583		1642		1770	3486		1770	3416	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	20	150	33	50	111	100	587	65	40	430	130
RTOR Reduction (vph)	0	0	108	0	57	0	0	8	0	0	29	0
Lane Group Flow (vph)	150	20	42	0	137	0	100	644	0	40	531	0
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	13.4	13.4	13.4		13.4		6.2	19.0		2.1	14.9	
Effective Green, g (s)	13.4	13.4	13.4		13.4		6.2	19.0		2.1	14.9	
Actuated g/C Ratio	0.28	0.28	0.28		0.28		0.13	0.40		0.04	0.31	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	338	525	446		463		231	1394		78	1071	
v/s Ratio Prot		0.01					c0.06	c0.18		0.02	0.16	
v/s Ratio Perm	c0.12		0.03		0.08							
v/c Ratio	0.44	0.04	0.09		0.30		0.43	0.46		0.51	0.50	
Uniform Delay, d1	14.0	12.4	12.6		13.4		19.0	10.5		22.2	13.2	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.0	0.0		0.1		0.5	0.1		2.4	0.1	
Delay (s)	14.3	12.4	12.6		13.5		19.5	10.6		24.6	13.4	
Level of Service	B	B	B		B		B	B		C	B	
Approach Delay (s)		13.4			13.5			11.8			14.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	47.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



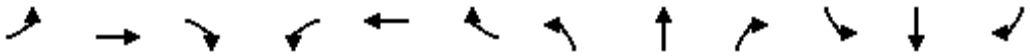
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	146	771	356	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.94	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3330	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3330	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	146	771	356	232
RTOR Reduction (vph)	0	0	0	0	102	0
Lane Group Flow (vph)	0	0	146	771	486	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			5.4	30.4	17.0	
Effective Green, g (s)			5.4	30.4	17.0	
Actuated g/C Ratio			0.18	1.00	0.56	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			609	3539	1862	
v/s Ratio Prot			0.04	c0.22	0.15	
v/s Ratio Perm						
v/c Ratio			0.24	0.22	0.26	
Uniform Delay, d1			10.7	0.0	3.5	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			0.2	0.0	0.1	
Delay (s)			10.9	0.0	3.5	
Level of Service			B	A	A	
Approach Delay (s)	0.0			1.8	3.5	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	2.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	30.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



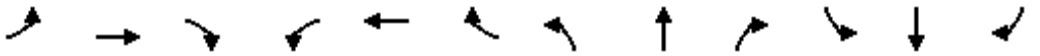
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	109	81	54	0	207	0	584	100	26	347	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.89			0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1762	1583		1646			3462		1770	3539	
Flt Permitted	0.95	1.00	1.00		0.99			1.00		0.32	1.00	
Satd. Flow (perm)	1681	1762	1583		1646			3462		602	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	109	81	54	0	207	0	584	100	26	347	0
RTOR Reduction (vph)	0	0	68	0	162	0	0	16	0	0	0	0
Lane Group Flow (vph)	87	119	13	0	99	0	0	668	0	26	347	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	7.3	7.3	7.3		8.4			16.7		16.7	16.7	
Effective Green, g (s)	7.3	7.3	7.3		8.4			16.7		16.7	16.7	
Actuated g/C Ratio	0.16	0.16	0.16		0.19			0.38		0.38	0.38	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	276	289	260		311			1302		226	1331	
v/s Ratio Prot	0.05	c0.07			c0.06			c0.19			0.10	
v/s Ratio Perm			0.01							0.04		
v/c Ratio	0.32	0.41	0.05		0.32			0.51		0.12	0.26	
Uniform Delay, d1	16.3	16.6	15.6		15.5			10.7		9.0	9.6	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.7	1.0	0.1		0.6			0.3		0.2	0.1	
Delay (s)	17.0	17.6	15.7		16.1			11.0		9.3	9.7	
Level of Service	B	B	B		B			B		A	A	
Approach Delay (s)		16.9			16.1			11.0			9.7	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	0	67	0	169	0	936	92	106	512	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		1.00			0.90			0.99		1.00	1.00	
Flt Protected		0.95			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1699			1579			3352		1703	3402	
Flt Permitted		0.55			0.92			1.00		0.95	1.00	
Satd. Flow (perm)		976			1473			3352		1703	3402	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	0	0	67	0	169	0	936	92	106	512	3
RTOR Reduction (vph)	0	0	0	0	117	0	0	10	0	0	1	0
Lane Group Flow (vph)	0	2	0	0	119	0	0	1018	0	106	514	0
Confl. Peds. (#/hr)	3					3			2	2		
Confl. Bikes (#/hr)									3			5
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		23.0			23.0			26.0		14.0	26.0	
Effective Green, g (s)		23.0			23.0			26.0		14.0	26.0	
Actuated g/C Ratio		0.31			0.31			0.35		0.19	0.35	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)		299			451			1162		317	1179	
v/s Ratio Prot								c0.30		c0.06	0.15	
v/s Ratio Perm		0.00			c0.08							
v/c Ratio		0.01			0.26			0.88		0.33	0.44	
Uniform Delay, d1		18.1			19.6			23.0		26.5	18.9	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		0.0			1.4			9.4		2.8	1.2	
Delay (s)		18.1			21.0			32.4		29.3	20.0	
Level of Service		B			C			C		C	C	
Approach Delay (s)		18.1			21.0			32.4			21.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



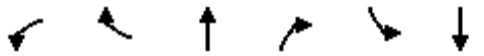
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	109	28	29	206	146	84	806	51	110	366	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.95		1.00	0.99		1.00	0.97	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1727			1683		1697	3370		1702	3291	
Flt Permitted		0.67			0.96		0.49	1.00		0.29	1.00	
Satd. Flow (perm)		1180			1627		878	3370		520	3291	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	71	109	28	29	206	146	84	806	51	110	366	85
RTOR Reduction (vph)	0	11	0	0	42	0	0	6	0	0	28	0
Lane Group Flow (vph)	0	197	0	0	339	0	84	851	0	110	423	0
Confl. Peds. (#/hr)	2		3	3		2	3		1	1		3
Confl. Bikes (#/hr)						3			4			3
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.9			16.9		33.1	33.1		33.1	33.1	
Effective Green, g (s)		16.9			16.9		33.1	33.1		33.1	33.1	
Actuated g/C Ratio		0.28			0.28		0.55	0.55		0.55	0.55	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		332			458		484	1859		286	1815	
v/s Ratio Prot								c0.25			0.13	
v/s Ratio Perm		0.17			c0.21		0.10			0.21		
v/c Ratio		0.59			0.74		0.17	0.46		0.38	0.23	
Uniform Delay, d1		18.6			19.6		6.7	8.1		7.7	6.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.8			6.2		0.8	0.8		3.9	0.3	
Delay (s)		21.4			25.7		7.4	8.9		11.5	7.2	
Level of Service		C			C		A	A		B	A	
Approach Delay (s)		21.4			25.7			8.8			8.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	152	462	104	32	678	135	154	439	57	73	226	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1561	1770	3438		1770	3478		1770	3539	1555
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1561	1770	3438		1770	3478		1770	3539	1555
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	152	462	104	32	678	135	154	439	57	73	226	149
RTOR Reduction (vph)	0	0	69	0	16	0	0	8	0	0	0	97
Lane Group Flow (vph)	152	462	35	32	797	0	154	488	0	73	226	52
Confl. Peds. (#/hr)			2			8						1
Confl. Bikes (#/hr)						2						8
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	7.0	36.5	36.5	5.1	34.6		11.7	44.0		6.4	38.7	38.7
Effective Green, g (s)	7.0	36.5	36.5	5.1	34.6		11.7	44.0		6.4	38.7	38.7
Actuated g/C Ratio	0.06	0.33	0.33	0.05	0.31		0.11	0.40		0.06	0.35	0.35
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	112	1174	517	82	1081		188	1391		102	1245	547
v/s Ratio Prot	c0.09	0.13		0.02	c0.23		c0.09	c0.14		0.04	0.06	
v/s Ratio Perm			0.02									0.03
v/c Ratio	1.36	0.39	0.07	0.39	0.74		0.82	0.35		0.72	0.18	0.10
Uniform Delay, d1	51.5	28.2	25.1	50.9	33.6		48.1	23.0		50.9	24.7	23.9
Progression Factor	1.28	0.49	0.19	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	203.4	0.2	0.0	3.1	2.7		23.4	0.7		21.1	0.3	0.3
Delay (s)	269.6	14.1	4.8	54.0	36.3		71.5	23.7		72.0	25.0	24.3
Level of Service	F	B	A	D	D		E	C		E	C	C
Approach Delay (s)		66.8			37.0			35.1			32.4	
Approach LOS		E			D			D			C	

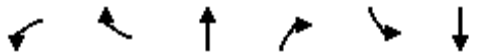
Intersection Summary			
HCM 2000 Control Delay	43.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	65	108	614	22	29	242
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	65	108	614	22	29	242
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	804	318			636	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	804	318			636	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	79	84			97	
cM capacity (veh/h)	311	678			943	

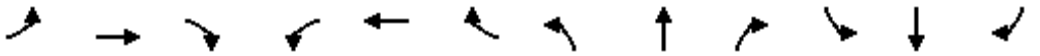
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	173	409	227	110	161
Volume Left	65	0	0	29	0
Volume Right	108	0	22	0	0
cSH	469	1700	1700	943	1700
Volume to Capacity	0.37	0.24	0.13	0.03	0.09
Queue Length 95th (ft)	42	0	0	2	0
Control Delay (s)	17.1	0.0	0.0	2.6	0.0
Lane LOS	C			A	
Approach Delay (s)	17.1	0.0		1.0	
Approach LOS	C				

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	219	61	577	111	106	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.97		0.98			1.00
Flt Protected	0.96		1.00			0.98
Satd. Flow (prot)	1740		3454			3478
Flt Permitted	0.96		1.00			0.70
Satd. Flow (perm)	1740		3454			2484
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	219	61	577	111	106	193
RTOR Reduction (vph)	17	0	24	0	0	0
Lane Group Flow (vph)	263	0	664	0	0	299
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	9.3		16.6			16.6
Effective Green, g (s)	9.3		16.6			16.6
Actuated g/C Ratio	0.27		0.49			0.49
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	477		1691			1216
v/s Ratio Prot	c0.15		c0.19			
v/s Ratio Perm						0.12
v/c Ratio	0.55		0.39			0.25
Uniform Delay, d1	10.5		5.5			5.0
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.4		0.2			0.1
Delay (s)	11.9		5.6			5.1
Level of Service	B		A			A
Approach Delay (s)	11.9		5.6			5.1
Approach LOS	B		A			A

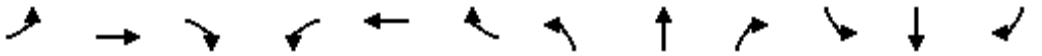
Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	33.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	254	400	108	130	654	132	306	443	111	48	309	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1547	3433	3539	1556	3433	3414		3433	3274	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1547	3433	3539	1556	3433	3414		3433	3274	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	254	400	108	130	654	132	306	443	111	48	309	225
RTOR Reduction (vph)	0	0	75	0	0	95	0	19	0	0	130	0
Lane Group Flow (vph)	254	400	33	130	654	37	306	535	0	48	404	0
Confl. Peds. (#/hr)			14			7			16			11
Confl. Bikes (#/hr)			1						6			10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.5	23.5	23.5	8.5	21.5	21.5	11.2	24.6		4.0	17.4	
Effective Green, g (s)	10.5	23.5	23.5	8.5	21.5	21.5	11.2	24.6		4.0	17.4	
Actuated g/C Ratio	0.14	0.31	0.31	0.11	0.28	0.28	0.15	0.32		0.05	0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	470	1085	474	380	993	436	501	1096		179	743	
v/s Ratio Prot	c0.07	0.11		0.04	c0.18		c0.09	c0.16		0.01	0.12	
v/s Ratio Perm			0.02			0.02						
v/c Ratio	0.54	0.37	0.07	0.34	0.66	0.08	0.61	0.49		0.27	0.54	
Uniform Delay, d1	30.8	20.8	18.8	31.5	24.3	20.3	30.7	20.9		34.9	26.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	0.2	0.1	0.5	1.6	0.1	2.2	0.3		0.8	0.8	
Delay (s)	32.1	21.0	18.9	32.0	25.9	20.4	32.9	21.3		35.7	26.9	
Level of Service	C	C	B	C	C	C	C	C		D	C	
Approach Delay (s)		24.4			26.0			25.4			27.6	
Approach LOS		C			C			C			C	

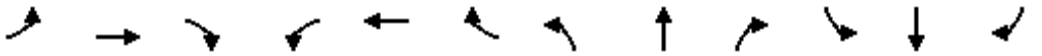
Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	76.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	90	70	11	106	9	97	765	13	15	292	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93			0.99		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1757	1726			1832		1770	3527		1770	3539	1534
Flt Permitted	0.77	1.00			0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1431	1726			1786		1770	3527		1770	3539	1534
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	134	90	70	11	106	9	97	765	13	15	292	205
RTOR Reduction (vph)	0	23	0	0	2	0	0	1	0	0	0	134
Lane Group Flow (vph)	134	137	0	0	124	0	97	777	0	15	292	71
Confl. Peds. (#/hr)	20		9	9		20	3		23	23		3
Confl. Bikes (#/hr)			3			10			5			7
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	11.5	11.5			11.5		6.7	21.6		1.0	15.9	15.9
Effective Green, g (s)	11.5	11.5			11.5		6.7	21.6		1.0	15.9	15.9
Actuated g/C Ratio	0.25	0.25			0.25		0.15	0.47		0.02	0.34	0.34
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	356	430			445		257	1652		38	1220	529
v/s Ratio Prot		0.08					c0.05	c0.22		0.01	0.08	
v/s Ratio Perm	c0.09				0.07							0.05
v/c Ratio	0.38	0.32			0.28		0.38	0.47		0.39	0.24	0.13
Uniform Delay, d1	14.3	14.1			14.0		17.8	8.4		22.3	10.8	10.4
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.4			0.3		0.9	0.2		6.6	0.1	0.1
Delay (s)	15.0	14.5			14.3		18.7	8.6		28.9	10.9	10.5
Level of Service	B	B			B		B	A		C	B	B
Approach Delay (s)		14.7			14.3			9.7			11.3	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	281	361	2	313	15	348	701	7	37	508	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	0.97	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1862	1583	3433	3534		1770	3397	
Flt Permitted	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1859	1583	3433	3534		1770	3397	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	290	281	361	2	313	15	348	701	7	37	508	185
RTOR Reduction (vph)	0	0	212	0	0	12	0	1	0	0	39	0
Lane Group Flow (vph)	290	281	149	0	315	3	348	707	0	37	654	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	12.2	36.5	36.5		19.3	19.3	11.9	32.3		4.7	25.1	
Effective Green, g (s)	12.2	36.5	36.5		19.3	19.3	11.9	32.3		4.7	25.1	
Actuated g/C Ratio	0.14	0.41	0.41		0.22	0.22	0.13	0.36		0.05	0.28	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	244	768	652		405	345	461	1289		94	963	
v/s Ratio Prot	c0.16	0.15					c0.10	0.20		0.02	c0.19	
v/s Ratio Perm			0.09		c0.17	0.00						
v/c Ratio	1.19	0.37	0.23		0.78	0.01	0.75	0.55		0.39	0.68	
Uniform Delay, d1	38.1	18.0	16.9		32.6	27.1	36.9	22.3		40.5	28.1	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	118.2	0.3	0.2		9.1	0.0	6.9	0.5		2.7	1.9	
Delay (s)	156.4	18.3	17.0		41.7	27.1	43.8	22.8		43.2	30.1	
Level of Service	F	B	B		D	C	D	C		D	C	
Approach Delay (s)		60.8			41.0			29.7			30.7	
Approach LOS		E			D			C			C	

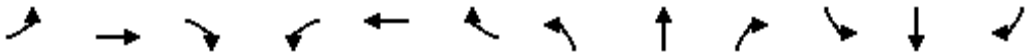
Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	88.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	431	265	115	55	177	17	7	72	382	58	6	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.95		1.00	0.99			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3363		1770	3489			1770	3460			1764
Flt Permitted	0.95	1.00		0.95	1.00			0.36	1.00			1.00
Satd. Flow (perm)	3433	3363		1770	3489			671	3460			1857
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	431	265	115	55	177	17	7	72	382	58	6	17
RTOR Reduction (vph)	0	52	0	0	8	0	0	0	11	0	0	0
Lane Group Flow (vph)	431	328	0	55	186	0	0	79	429	0	0	23
Confl. Peds. (#/hr)			2	2						10		10
Confl. Bikes (#/hr)			2			1				4		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	11.1	17.5		4.8	11.2			11.1	24.1			1.8
Effective Green, g (s)	11.1	17.5		4.8	11.2			11.1	24.1			1.8
Actuated g/C Ratio	0.17	0.27		0.07	0.17			0.17	0.38			0.03
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	593	916		132	608			116	1298			52
v/s Ratio Prot	c0.13	c0.10		0.03	0.05				c0.12			
v/s Ratio Perm								c0.12				0.01
v/c Ratio	0.73	0.36		0.42	0.31			0.68	0.33			0.44
Uniform Delay, d1	25.1	18.8		28.4	23.1			24.9	14.3			30.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	4.4	0.2		2.1	0.3			15.2	0.2			5.9
Delay (s)	29.5	19.1		30.5	23.4			40.1	14.4			36.6
Level of Service	C	B		C	C			D	B			D
Approach Delay (s)		24.6			25.0				18.4			
Approach LOS		C			C				B			

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	64.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	289	248
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1563
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1563
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	289	248
RTOR Reduction (vph)	0	191
Lane Group Flow (vph)	289	57
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		1
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	14.8	14.8
Effective Green, g (s)	14.8	14.8
Actuated g/C Ratio	0.23	0.23
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	815	360
v/s Ratio Prot	0.08	
v/s Ratio Perm		0.04
v/c Ratio	0.35	0.16
Uniform Delay, d1	20.7	19.7
Progression Factor	1.00	1.00
Incremental Delay, d2	0.3	0.2
Delay (s)	21.0	19.9
Level of Service	C	B
Approach Delay (s)	21.2	
Approach LOS	C	

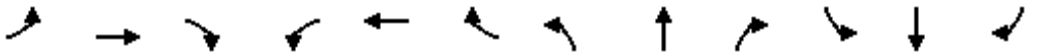
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	3	2	198	5	88	5	159	135	53	149	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	3	2	198	5	88	5	159	135	53	149	4
Pedestrians					2							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					4.0							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	516	563	151	432	430	161	153			296		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	516	563	151	432	430	161	153			296		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	100	61	99	90	100			96		
cM capacity (veh/h)	401	412	890	507	490	877	1415			1252		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	9	291	164	135	206
Volume Left	4	198	5	0	53
Volume Right	2	88	0	135	4
cSH	462	581	1415	1700	1252
Volume to Capacity	0.02	0.50	0.00	0.08	0.04
Queue Length 95th (ft)	1	70	0	0	3
Control Delay (s)	13.0	17.3	0.3	0.0	2.3
Lane LOS	B	C	A		A
Approach Delay (s)	13.0	17.3	0.1		2.3
Approach LOS	B	C			

Intersection Summary				
Average Delay	7.0			
Intersection Capacity Utilization	52.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	283	426	230	29	587	88	225	80	24	72	52	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.97		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.99	0.85	1.00	0.98		1.00	1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (prot)	1687	3029	2564	1703	4785		1643	3360	1571		2736	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (perm)	1687	3029	2564	1703	4785		1643	3360	1571		2736	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	283	426	230	29	587	88	225	80	24	72	52	134
RTOR Reduction (vph)	0	2	104	0	17	0	0	0	20	0	116	0
Lane Group Flow (vph)	283	447	104	29	658	0	112	193	4	0	142	0
Confl. Peds. (#/hr)	8					8			8	8		
Confl. Bikes (#/hr)			1			3			7			
Heavy Vehicles (%)	7%	7%	7%	6%	6%	6%	0%	0%	0%	20%	20%	20%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	18.2	35.1	35.1	2.7	19.6		11.1	11.1	11.1		9.3	
Effective Green, g (s)	18.2	35.1	35.1	2.7	19.6		11.1	11.1	11.1		9.3	
Actuated g/C Ratio	0.26	0.50	0.50	0.04	0.28		0.16	0.16	0.16		0.13	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	437	1514	1282	65	1335		259	531	248		362	
v/s Ratio Prot	c0.17	0.15		0.02	c0.14		c0.07	0.06			c0.05	
v/s Ratio Perm			0.04						0.00			
v/c Ratio	0.65	0.30	0.08	0.45	0.49		0.43	0.36	0.02		0.39	
Uniform Delay, d1	23.1	10.3	9.1	33.0	21.1		26.7	26.4	24.9		27.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	3.3	0.1	0.0	4.8	0.3		1.2	0.4	0.0		0.7	
Delay (s)	26.4	10.4	9.2	37.8	21.4		27.9	26.8	25.0		28.6	
Level of Service	C	B	A	D	C		C	C	C		C	
Approach Delay (s)		15.0			22.1			27.0			28.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	70.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

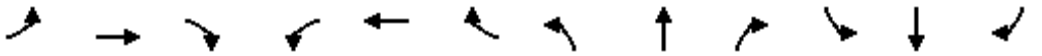
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	31	0	1101	97	103	1368	0	108	0	94	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Lane Util. Factor		1.00	0.86		1.00	0.86			1.00	1.00		
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00		
Flpb, ped/bikes		1.00	1.00		1.00	1.00			0.99	1.00		
Frt		1.00	0.99		1.00	1.00			1.00	0.85		
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1680	6024		1687	6108			1667	1509		
Flt Permitted		0.63	1.00		0.95	1.00			0.76	1.00		
Satd. Flow (perm)		1123	6024		1687	6108			1328	1509		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	0	1101	97	103	1368	0	108	0	94	0	0
RTOR Reduction (vph)	0	0	9	0	0	0	0	0	0	82	0	0
Lane Group Flow (vph)	0	31	1189	0	103	1368	0	0	108	12	0	0
Confl. Peds. (#/hr)		10					10	11				
Confl. Bikes (#/hr)				2			3					
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type	custom	Prot	NA		Prot	NA		Perm	NA	Perm		
Protected Phases		5	2		1	6			3			3
Permitted Phases	5							3	3	3	3	3
Actuated Green, G (s)		6.3	71.4		9.6	74.7			13.0	13.0		
Effective Green, g (s)		6.3	71.4		9.6	74.7			13.0	13.0		
Actuated g/C Ratio		0.06	0.67		0.09	0.70			0.12	0.12		
Clearance Time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Vehicle Extension (s)		2.0	2.0		2.0	2.0			2.0	2.0		
Lane Grp Cap (vph)		66	4057		152	4304			162	185		
v/s Ratio Prot			0.20		c0.06	c0.22						
v/s Ratio Perm		0.03							c0.08	0.01		
v/c Ratio		0.47	0.29		0.68	0.32			0.67	0.06		
Uniform Delay, d1		48.2	7.0		46.7	6.0			44.4	41.1		
Progression Factor		0.96	1.16		1.00	1.00			1.00	1.00		
Incremental Delay, d2		1.9	0.2		9.0	0.2			7.8	0.1		
Delay (s)		48.3	8.3		55.7	6.1			52.2	41.2		
Level of Service		D	A		E	A			D	D		
Approach Delay (s)			9.3			9.6			47.1			0.0
Approach LOS			A			A			D			A

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

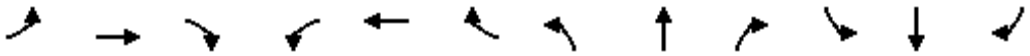
Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	11
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	7%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	488	135	66	826	99	458	155	311	31	11	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.97		1.00	0.98		1.00	0.92			0.90	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99			0.99	1.00
Satd. Flow (prot)	3433	4920		1770	6305		1610	3094			1572	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.99			0.99	1.00
Satd. Flow (perm)	3433	4920		1770	6305		1610	3094			1572	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	89	488	135	66	826	99	458	155	311	31	11	211
RTOR Reduction (vph)	0	31	0	0	13	0	0	190	0	0	80	114
Lane Group Flow (vph)	89	592	0	66	912	0	316	418	0	0	49	10
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	6.2	47.9		7.4	49.1		25.5	25.5			8.2	8.2
Effective Green, g (s)	6.2	47.9		7.4	49.1		25.5	25.5			8.2	8.2
Actuated g/C Ratio	0.06	0.45		0.07	0.46		0.24	0.24			0.08	0.08
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	200	2223		123	2920		387	744			121	116
v/s Ratio Prot	0.03	0.12		c0.04	c0.14		c0.20	0.14			c0.03	
v/s Ratio Perm												0.01
v/c Ratio	0.45	0.27		0.54	0.31		0.82	0.56			0.40	0.08
Uniform Delay, d1	48.2	18.1		47.6	17.9		38.0	35.3			46.6	45.4
Progression Factor	1.00	1.00		0.85	0.79		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.6	0.3		2.2	0.3		11.9	0.6			0.8	0.1
Delay (s)	48.8	18.4		42.7	14.3		49.9	35.9			47.4	45.5
Level of Service	D	B		D	B		D	D			D	D
Approach Delay (s)		22.2			16.2			40.7			46.5	
Approach LOS		C			B			D			D	

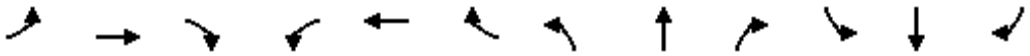
Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	609	119	49	942	182	194	182	83	71	90	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3312		1719	3338		1719	1710		1719	1664	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	3312		1719	3338		1719	1710		1719	1664	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	72	609	119	49	942	182	194	182	83	71	90	84
RTOR Reduction (vph)	0	13	0	0	11	0	0	18	0	0	37	0
Lane Group Flow (vph)	72	715	0	49	1113	0	194	247	0	71	137	0
Confl. Peds. (#/hr)	3		18	18		3	2		14	14		2
Confl. Bikes (#/hr)			4			1						2
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	6.0	47.4		14.0	55.4		14.3	22.6		6.0	14.3	
Effective Green, g (s)	6.0	47.4		14.0	55.4		14.3	22.6		6.0	14.3	
Actuated g/C Ratio	0.05	0.43		0.13	0.50		0.13	0.21		0.05	0.13	
Clearance Time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	93	1427		218	1681		223	351		93	216	
v/s Ratio Prot	c0.04	0.22		0.03	c0.33		c0.11	c0.14		0.04	c0.08	
v/s Ratio Perm												
v/c Ratio	0.77	0.50		0.22	0.66		0.87	0.70		0.76	0.63	
Uniform Delay, d1	51.3	22.7		43.1	20.3		46.9	40.6		51.3	45.4	
Progression Factor	1.00	1.00		1.13	1.51		1.00	1.00		1.00	1.00	
Incremental Delay, d2	29.8	0.1		0.2	1.8		27.5	5.1		27.7	4.4	
Delay (s)	81.1	22.8		48.7	32.6		74.4	45.7		79.0	49.7	
Level of Service	F	C		D	C		E	D		E	D	
Approach Delay (s)		28.1			33.3			57.9			58.2	
Approach LOS		C			C			E			E	

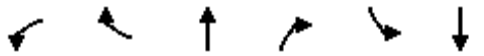
Intersection Summary			
HCM 2000 Control Delay	38.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	344	0	0	772	525	1	949	212	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	4.0			
Lane Util. Factor		0.95			0.95			0.95	1.00			
Frt		1.00			0.94			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3539			3324			3539	1583			
Flt Permitted		1.00			1.00			1.00	1.00			
Satd. Flow (perm)		3539			3324			3539	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	344	0	0	772	525	1	949	212	0	0	0
RTOR Reduction (vph)	0	0	0	0	105	0	0	0	115	0	0	0
Lane Group Flow (vph)	0	344	0	0	1192	0	0	950	97	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)		26.3			26.3			25.8	25.8			
Effective Green, g (s)		26.3			26.3			25.8	25.8			
Actuated g/C Ratio		0.44			0.44			0.43	0.43			
Clearance Time (s)		4.0			4.0			4.0	4.0			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		1548			1454			1519	679			
v/s Ratio Prot		0.10			c0.36							
v/s Ratio Perm								0.27	0.06			
v/c Ratio		0.22			0.82			0.63	0.14			
Uniform Delay, d1		10.5			14.8			13.4	10.4			
Progression Factor		1.00			1.00			1.00	1.00			
Incremental Delay, d2		0.1			3.7			0.8	0.1			
Delay (s)		10.6			18.6			14.2	10.5			
Level of Service		B			B			B	B			
Approach Delay (s)		10.6			18.6			13.5			0.0	
Approach LOS		B			B			B			A	

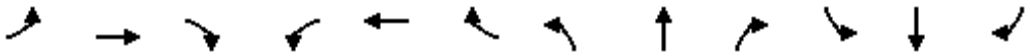
Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	60.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	845	0	0	0	415	1092
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0
Lane Util. Factor	0.97					0.91
Frt	1.00					1.00
Flt Protected	0.95					0.99
Satd. Flow (prot)	3433					5016
Flt Permitted	0.95					0.99
Satd. Flow (perm)	3433					5016
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	845	0	0	0	415	1092
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	845	0	0	0	0	1507
Turn Type	Prot				Split	NA
Protected Phases	8				6	6
Permitted Phases						
Actuated Green, G (s)	11.0					31.0
Effective Green, g (s)	11.0					31.0
Actuated g/C Ratio	0.22					0.62
Clearance Time (s)	4.0					4.0
Lane Grp Cap (vph)	755					3109
v/s Ratio Prot	c0.25					c0.30
v/s Ratio Perm						
v/c Ratio	1.12					0.48
Uniform Delay, d1	19.5					5.2
Progression Factor	1.00					1.00
Incremental Delay, d2	70.6					0.5
Delay (s)	90.1					5.7
Level of Service	F					A
Approach Delay (s)	90.1		0.0			5.7
Approach LOS	F		A			A

Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	139	388	442	36	631	102	216	339	438	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	1.00				
Frt	1.00	0.92		1.00	0.98		1.00	0.92				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	3433	3257		1770	3465		1770	1705				
Flt Permitted	0.95	1.00		0.34	1.00		0.95	1.00				
Satd. Flow (perm)	3433	3257		632	3465		1770	1705				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	139	388	442	36	631	102	216	339	438	0	0	0
RTOR Reduction (vph)	0	247	0	0	16	0	0	61	0	0	0	0
Lane Group Flow (vph)	139	583	0	36	717	0	216	716	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	7.1	34.6		23.0	23.0		36.4	36.4				
Effective Green, g (s)	7.1	34.6		23.0	23.0		36.4	36.4				
Actuated g/C Ratio	0.09	0.43		0.29	0.29		0.45	0.45				
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0		2.0	2.0		2.0	2.0				
Lane Grp Cap (vph)	304	1408		181	996		805	775				
v/s Ratio Prot	0.04	c0.18			c0.21			c0.42				
v/s Ratio Perm				0.06			0.12					
v/c Ratio	0.46	0.41		0.20	0.72		0.27	0.92				
Uniform Delay, d1	34.6	15.7		21.5	25.6		13.5	20.5				
Progression Factor	1.21	0.20		1.00	1.00		1.00	1.00				
Incremental Delay, d2	0.8	0.5		2.5	4.5		0.1	16.3				
Delay (s)	42.8	3.6		24.0	30.1		13.6	36.8				
Level of Service	D	A		C	C		B	D				
Approach Delay (s)		9.2			29.8			31.8			0.0	
Approach LOS		A			C			C			A	

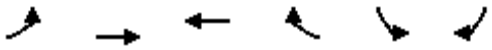
Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	700	613	377	387	449	6	28	90	144	746	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Lane Util. Factor	0.95		1.00	0.95			1.00	1.00		0.91	
Frt	0.93		1.00	0.92			1.00	0.85		0.97	
Flt Protected	1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	3291		1770	3254			1770	1583		4894	
Flt Permitted	1.00		0.95	1.00			0.17	1.00		0.99	
Satd. Flow (perm)	3291		1770	3254			312	1583		4894	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	700	613	377	387	449	6	28	90	144	746	237
RTOR Reduction (vph)	25	0	0	0	0	0	0	63	0	0	0
Lane Group Flow (vph)	1288	0	377	836	0	0	34	27	0	1127	0
Turn Type	NA		Prot	NA		Perm	Perm	Perm	Perm	NA	
Protected Phases	2		1	6						4	
Permitted Phases						8	8	8	4		
Actuated Green, G (s)	32.1		11.5	47.1			23.9	23.9		23.9	
Effective Green, g (s)	32.1		11.5	47.1			23.9	23.9		23.9	
Actuated g/C Ratio	0.40		0.14	0.59			0.30	0.30		0.30	
Clearance Time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Vehicle Extension (s)	2.0		2.0	2.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	1320		254	1915			93	472		1462	
v/s Ratio Prot	c0.39		c0.21	0.26							
v/s Ratio Perm							0.11	0.02		0.23	
v/c Ratio	0.98		1.48	0.44			0.37	0.06		0.77	
Uniform Delay, d1	23.6		34.2	9.1			22.1	20.0		25.6	
Progression Factor	1.00		0.96	1.88			1.00	1.00		1.00	
Incremental Delay, d2	19.6		236.4	0.7			0.9	0.0		2.3	
Delay (s)	43.2		269.2	17.8			23.0	20.0		27.9	
Level of Service	D		F	B			C	C		C	
Approach Delay (s)	43.2			95.9						27.9	
Approach LOS	D			F						C	

Intersection Summary			
HCM 2000 Control Delay	54.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

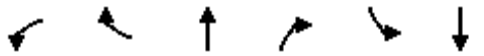
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	442	0	0	555	184	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	442	0	0	555	184	370
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	442	0	0	555	184	370
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	12.3			12.3	13.1	13.1
Effective Green, g (s)	12.3			12.3	13.1	13.1
Actuated g/C Ratio	0.37			0.37	0.39	0.39
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1872			1303	694	620
v/s Ratio Prot	0.09			c0.16	0.10	c0.23
v/s Ratio Perm						
v/c Ratio	0.24			0.43	0.27	0.60
Uniform Delay, d1	7.3			7.9	6.9	8.1
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.2	0.2	1.6
Delay (s)	7.4			8.1	7.1	9.6
Level of Service	A			A	A	A
Approach Delay (s)	7.4			8.1	8.8	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	33.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



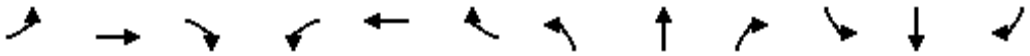
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	135	366	0	379	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.94	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3539	3539		3289	
Flt Permitted		1.00	1.00		0.97	
Satd. Flow (perm)		3539	3539		3289	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	135	366	0	379	280
RTOR Reduction (vph)	0	0	0	0	181	0
Lane Group Flow (vph)	0	135	366	0	478	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		8.3	8.3		8.9	
Effective Green, g (s)		8.3	8.3		8.9	
Actuated g/C Ratio		0.33	0.33		0.35	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1165	1165		1161	
v/s Ratio Prot		0.04	c0.10		c0.15	
v/s Ratio Perm						
v/c Ratio		0.12	0.31		0.41	
Uniform Delay, d1		5.9	6.3		6.2	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.0	0.2		0.2	
Delay (s)		5.9	6.5		6.4	
Level of Service		A	A		A	
Approach Delay (s)		5.9	6.5		6.4	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	25.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	532	138	69	189	96	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		4.0			4.0
Lane Util. Factor	0.97		1.00			1.00
Frpb, ped/bikes	1.00		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.97		0.90			1.00
Flt Protected	0.96		1.00			0.97
Satd. Flow (prot)	3304		1541			1668
Flt Permitted	0.96		1.00			0.74
Satd. Flow (perm)	3304		1541			1274
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	532	138	69	189	96	89
RTOR Reduction (vph)	26	0	91	0	0	0
Lane Group Flow (vph)	644	0	167	0	0	185
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	4%	4%	10%	10%	11%	11%
Turn Type	Prot		NA		Perm	NA
Protected Phases	6		8			4
Permitted Phases					4	
Actuated Green, G (s)	12.2		12.1			12.1
Effective Green, g (s)	12.2		12.1			12.1
Actuated g/C Ratio	0.38		0.38			0.38
Clearance Time (s)	3.5		4.0			4.0
Vehicle Extension (s)	2.2		2.0			2.0
Lane Grp Cap (vph)	1267		586			484
v/s Ratio Prot	c0.19		0.11			
v/s Ratio Perm						c0.15
v/c Ratio	0.51		0.28			0.38
Uniform Delay, d1	7.5		6.8			7.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.2		0.1			0.2
Delay (s)	7.7		6.9			7.3
Level of Service	A		A			A
Approach Delay (s)	7.7		6.9			7.3
Approach LOS	A		A			A

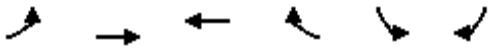
Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	31.8	Sum of lost time (s)	11.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	891	0	122	0	0	0	144	229	0	0	153	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.99	
Flt Protected	0.95		1.00					0.98			1.00	
Satd. Flow (prot)	3273		1509					3220			1790	
Flt Permitted	0.95		1.00					0.98			1.00	
Satd. Flow (perm)	3273		1509					3220			1790	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	891	0	122	0	0	0	144	229	0	0	153	11
RTOR Reduction (vph)	0	0	75	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	891	0	47	0	0	0	0	373	0	0	162	0
Confl. Peds. (#/hr)	1						2					2
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	10%	10%	10%	5%	5%	5%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4						2	2			6	
Permitted Phases			4									
Actuated Green, G (s)	27.2		27.2					15.0			13.0	
Effective Green, g (s)	27.2		27.2					15.0			13.0	
Actuated g/C Ratio	0.38		0.38					0.21			0.18	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1250		576					678			326	
v/s Ratio Prot	c0.27							c0.12			c0.09	
v/s Ratio Perm			0.03									
v/c Ratio	0.71		0.08					0.55			0.50	
Uniform Delay, d1	18.7		14.0					25.1			26.2	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	2.0		0.1					1.0			1.2	
Delay (s)	20.6		14.1					26.1			27.4	
Level of Service	C		B					C			C	
Approach Delay (s)		19.8			0.0			26.1			27.4	
Approach LOS		B			A			C			C	

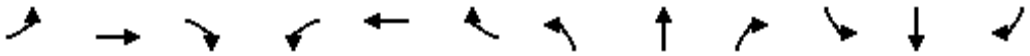
Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	71.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	952	1084	0	346	919
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5711	5711		3060	2484
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5711	5711		3060	2484
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	952	1084	0	346	919
RTOR Reduction (vph)	0	0	0	0	0	34
Lane Group Flow (vph)	0	952	1084	0	346	885
Confl. Bikes (#/hr)				2		2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		32.3	18.3		11.1	25.1
Effective Green, g (s)		32.3	18.3		11.1	25.1
Actuated g/C Ratio		0.63	0.36		0.22	0.49
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		3588	2033		660	1213
v/s Ratio Prot		0.17	c0.19		0.11	c0.36
v/s Ratio Perm						
v/c Ratio		0.27	0.53		0.52	0.73
Uniform Delay, d1		4.3	13.2		17.8	10.5
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.0	0.3		0.8	2.2
Delay (s)		4.3	13.4		18.6	12.7
Level of Service		A	B		B	B
Approach Delay (s)		4.3	13.4		14.3	
Approach LOS		A	B		B	

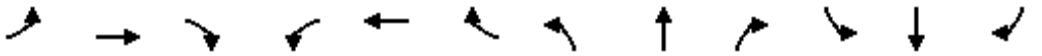
Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	51.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	534	377	0	920	293	894	0	243	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frpb, ped/bikes		1.00	0.99		1.00		1.00		1.00			
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00			
Frt		0.98	0.85		0.96		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3148	1357		4672		3273		1509			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3148	1357		4672		3273		1509			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	534	377	0	920	293	894	0	243	0	0	0
RTOR Reduction (vph)	0	14	0	0	55	0	0	0	148	0	0	0
Lane Group Flow (vph)	0	622	275	0	1158	0	894	0	95	0	0	0
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		56.0	105.0		56.0		41.0		41.0			
Effective Green, g (s)		56.0	105.0		56.0		41.0		41.0			
Actuated g/C Ratio		0.53	1.00		0.53		0.39		0.39			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1678	1357		2491		1278		589			
v/s Ratio Prot		0.20			c0.25		c0.27					
v/s Ratio Perm			0.20						0.06			
v/c Ratio		0.37	0.20		0.47		0.70		0.16			
Uniform Delay, d1		14.3	0.0		15.2		26.8		20.8			
Progression Factor		1.00	1.00		1.00		1.00		1.00			
Incremental Delay, d2		0.6	0.3		0.6		3.2		0.6			
Delay (s)		14.9	0.3		15.8		30.0		21.4			
Level of Service		B	A		B		C		C			
Approach Delay (s)		10.5			15.8			28.2			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	615	638	0	1374	0	0	0	0	307	0	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.95	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4369	1310		4893					3303		1500
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4369	1310		4893					3303		1500
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	615	638	0	1374	0	0	0	0	307	0	475
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	36
Lane Group Flow (vph)	0	934	319	0	1374	0	0	0	0	307	0	439
Confl. Peds. (#/hr)							5					5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		28.9	28.9		28.9					29.2		29.2
Effective Green, g (s)		28.9	28.9		28.9					29.2		29.2
Actuated g/C Ratio		0.44	0.44		0.44					0.44		0.44
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		1910	572		2139					1459		662
v/s Ratio Prot		0.21	0.24		c0.28							
v/s Ratio Perm										0.09		c0.29
v/c Ratio		0.49	0.56		0.64					0.21		0.66
Uniform Delay, d1		13.3	13.8		14.6					11.4		14.6
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.2	1.2		0.7					0.1		2.5
Delay (s)		13.5	15.0		15.2					11.4		17.1
Level of Service		B	B		B					B		B
Approach Delay (s)		13.9			15.2			0.0			14.9	
Approach LOS		B			B			A			B	

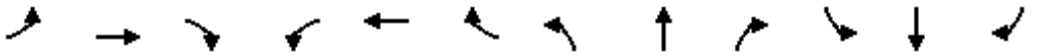
Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	66.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	566	120	0	904	469	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.99	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3471	1518		3471	3358	1413
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3471	1518		3471	3358	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	566	120	0	904	469	248
RTOR Reduction (vph)	0	0	0	0	3	155
Lane Group Flow (vph)	566	120	0	904	491	68
Confl. Peds. (#/hr)		4	4			
Confl. Bikes (#/hr)		2				
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	19.1	38.9		19.1	11.8	11.8
Effective Green, g (s)	19.1	38.9		19.1	11.8	11.8
Actuated g/C Ratio	0.49	1.00		0.49	0.30	0.30
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1704	1518		1704	1018	428
v/s Ratio Prot	0.16			c0.26	c0.15	
v/s Ratio Perm		0.08				0.05
v/c Ratio	0.33	0.08		0.53	0.48	0.16
Uniform Delay, d1	6.0	0.0		6.8	11.1	9.9
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.3	0.4	0.2
Delay (s)	6.1	0.1		7.1	11.4	10.1
Level of Service	A	A		A	B	B
Approach Delay (s)	5.1			7.1	11.0	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	38.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

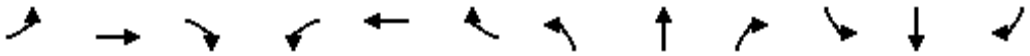


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	545	1010	0	1147	390	0	0	0	159	0	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00		0.95					0.95	0.91	0.95
Frt		1.00	0.85		0.96					1.00	0.86	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		3539	1583		3405					1681	1456	1504
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		3539	1583		3405					1681	1456	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	545	1010	0	1147	390	0	0	0	159	0	358
RTOR Reduction (vph)	0	0	363	0	31	0	0	0	0	0	76	76
Lane Group Flow (vph)	0	545	647	0	1506	0	0	0	0	143	112	110
Turn Type		NA	Perm		NA					Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4							6		6
Actuated Green, G (s)		36.0	36.0		36.0					12.2	12.2	12.2
Effective Green, g (s)		36.0	36.0		36.0					12.2	12.2	12.2
Actuated g/C Ratio		0.64	0.64		0.64					0.22	0.22	0.22
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2266	1014		2181					364	316	326
v/s Ratio Prot		0.15			c0.44							
v/s Ratio Perm			0.41							c0.09	0.08	0.07
v/c Ratio		0.24	0.64		0.69					0.39	0.35	0.34
Uniform Delay, d1		4.3	6.1		6.5					18.8	18.7	18.6
Progression Factor		1.00	1.00		1.00					1.00	1.00	1.00
Incremental Delay, d2		0.1	1.3		1.0					0.7	0.7	0.6
Delay (s)		4.3	7.5		7.5					19.5	19.3	19.2
Level of Service		A	A		A					B	B	B
Approach Delay (s)		6.4			7.5			0.0			19.3	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

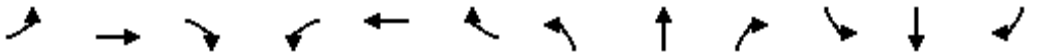
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	723	179	46	532	314	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3434		1770	3539	3393	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3434		1770	3539	3393	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	723	179	46	532	314	50
RTOR Reduction (vph)	22	0	0	0	14	0
Lane Group Flow (vph)	880	0	46	532	350	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	17.8		2.1	23.9	10.3	
Effective Green, g (s)	17.8		2.1	23.9	10.3	
Actuated g/C Ratio	0.44		0.05	0.59	0.26	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1520		92	2104	869	
v/s Ratio Prot	c0.26		c0.03	0.15	c0.10	
v/s Ratio Perm						
v/c Ratio	0.58		0.50	0.25	0.40	
Uniform Delay, d1	8.4		18.5	3.9	12.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.3		1.6	0.0	0.1	
Delay (s)	8.7		20.1	3.9	12.5	
Level of Service	A		C	A	B	
Approach Delay (s)	8.7			5.2	12.5	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	40.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



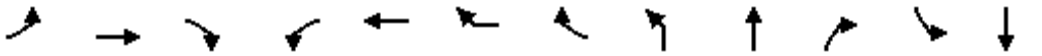
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	1243	26	6	637	221	15	100	375	225	26	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.96			0.90			1.00	
Flt Protected		1.00			1.00			1.00			0.96	
Satd. Flow (prot)		3524			3402			1668			1777	
Flt Permitted		0.92			0.95			0.99			0.26	
Satd. Flow (perm)		3236			3221			1650			487	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	33	1243	26	6	637	221	15	100	375	225	26	9
RTOR Reduction (vph)	0	2	0	0	43	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1300	0	0	821	0	0	490	0	0	259	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		36.1			36.1			21.5			21.5	
Effective Green, g (s)		36.1			36.1			21.5			21.5	
Actuated g/C Ratio		0.51			0.51			0.30			0.30	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1654			1646			502			148	
v/s Ratio Prot												
v/s Ratio Perm		c0.40			0.26			0.30			c0.53	
v/c Ratio		0.79			0.50			0.98			1.75	
Uniform Delay, d1		14.1			11.3			24.3			24.5	
Progression Factor		1.00			1.00			0.15			1.00	
Incremental Delay, d2		2.5			0.2			21.8			362.7	
Delay (s)		16.6			11.6			25.3			387.2	
Level of Service		B			B			C			F	
Approach Delay (s)		16.6			11.6			25.3			387.2	
Approach LOS		B			B			C			F	

Intersection Summary			
HCM 2000 Control Delay	49.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	455	95	134	492	186	57	322	370	54	71	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.97		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1770	3448		1770	3394			1849	1583		1823	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (perm)	1770	3448		1770	3394			1849	1583		1823	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	455	95	134	492	186	57	322	370	54	71	7
RTOR Reduction (vph)	0	19	0	0	37	0	0	0	142	0	0	6
Lane Group Flow (vph)	15	531	0	134	641	0	0	379	228	0	125	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	1.2	19.5		8.2	26.5			17.7	17.7		8.2	8.2
Effective Green, g (s)	1.2	19.5		8.2	26.5			17.7	17.7		8.2	8.2
Actuated g/C Ratio	0.02	0.28		0.12	0.38			0.25	0.25		0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	30	966		208	1292			470	402		214	186
v/s Ratio Prot	0.01	0.15		c0.08	c0.19			c0.20			c0.07	
v/s Ratio Perm									0.14			0.00
v/c Ratio	0.50	0.55		0.64	0.50			0.81	0.57		0.58	0.00
Uniform Delay, d1	33.9	21.3		29.3	16.5			24.3	22.6		29.1	27.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	12.5	0.6		6.7	0.3			9.8	1.8		4.0	0.0
Delay (s)	46.4	22.0		36.0	16.8			34.1	24.5		33.1	27.1
Level of Service	D	C		D	B			C	C		C	C
Approach Delay (s)		22.6			19.9			29.3			32.8	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	69.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

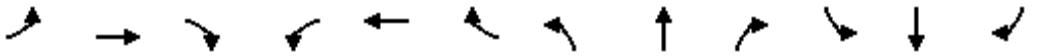


Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	110	673	6	210	407	0	64	1	451	207	120	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.95		1.00	0.98
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1848		1770	1863	1583			3372		1770	1820
Flt Permitted		0.88		0.95	1.00	1.00			0.95		0.29	1.00
Satd. Flow (perm)		1630		1770	1863	1583			3220		534	1820
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	673	6	210	407	0	64	1	451	207	120	168
RTOR Reduction (vph)	0	0	0	0	0	29	0	0	54	0	0	0
Lane Group Flow (vph)	0	789	0	210	407	35	0	0	605	0	120	198
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.0		12.8	39.8	39.8			26.0		26.0	26.0
Effective Green, g (s)		23.0		12.8	39.8	39.8			26.0		26.0	26.0
Actuated g/C Ratio		0.31		0.17	0.54	0.54			0.35		0.35	0.35
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		507		306	1004	853			1134		188	641
v/s Ratio Prot				c0.12	0.22							0.11
v/s Ratio Perm		c0.48				0.02			0.19		c0.22	
v/c Ratio		1.56		0.69	0.41	0.04			0.53		0.64	0.31
Uniform Delay, d1		25.4		28.6	10.0	8.0			19.1		20.0	17.4
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		259.9		6.3	0.3	0.0			0.5		6.9	0.3
Delay (s)		285.3		34.9	10.3	8.0			19.6		26.9	17.6
Level of Service		F		C	B	A			B		C	B
Approach Delay (s)		285.3			17.7				19.6			21.1
Approach LOS		F			B				B			C

Intersection Summary			
HCM 2000 Control Delay	104.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	73.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

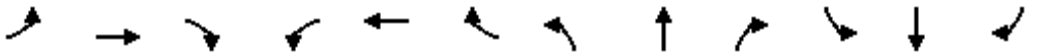
Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	30	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	30	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	337	2	199	415	8	9	436	235	15	74	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3526		1770	3529			1861	1583		1847	1583
Flt Permitted		1.00		0.95	1.00			1.00	1.00		0.92	1.00
Satd. Flow (perm)		3526		1770	3529			1855	1583		1712	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	337	2	199	415	8	9	436	235	15	74	21
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	104	0	0	13
Lane Group Flow (vph)	0	359	0	199	421	0	0	445	131	0	89	8
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		12.4		14.7	14.7			21.9	21.9		21.9	21.9
Effective Green, g (s)		12.4		14.7	14.7			21.9	21.9		21.9	21.9
Actuated g/C Ratio		0.20		0.24	0.24			0.36	0.36		0.36	0.36
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		716		426	850			665	568		614	568
v/s Ratio Prot		c0.10		0.11	c0.12							
v/s Ratio Perm								c0.24	0.08		0.05	0.00
v/c Ratio		0.50		0.47	0.50			0.67	0.23		0.14	0.01
Uniform Delay, d1		21.6		19.8	20.0			16.5	13.7		13.2	12.6
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.6		0.8	0.5			2.6	0.2		0.1	0.0
Delay (s)		22.1		20.6	20.4			19.1	13.9		13.3	12.6
Level of Service		C		C	C			B	B		B	B
Approach Delay (s)		22.1			20.5			17.3			13.2	
Approach LOS		C			C			B			B	

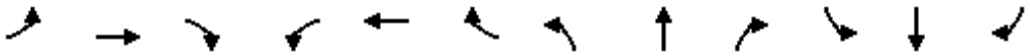
Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	659	54	20	439	61	88	259	43	161	202	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.99			0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3489			3462		1752	3448		1747	3539	1542
Flt Permitted		0.93			0.92		0.62	1.00		0.56	1.00	1.00
Satd. Flow (perm)		3246			3191		1153	3448		1034	3539	1542
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	659	54	20	439	61	88	259	43	161	202	23
RTOR Reduction (vph)	0	8	0	0	15	0	0	19	0	0	0	14
Lane Group Flow (vph)	0	731	0	0	505	0	88	283	0	161	202	9
Confl. Peds. (#/hr)	8		7	7		8	15		22	22		15
Confl. Bikes (#/hr)			3			5			3			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51			0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1669			1641		428	1280		384	1314	572
v/s Ratio Prot								0.08			0.06	
v/s Ratio Perm		c0.23			0.16		0.08			c0.16		0.01
v/c Ratio		0.44			0.31		0.21	0.22		0.42	0.15	0.01
Uniform Delay, d1		10.7			9.8		15.0	15.1		16.4	14.7	13.9
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8			0.5		1.1	0.4		3.3	0.2	0.0
Delay (s)		11.5			10.3		16.1	15.5		19.7	14.9	14.0
Level of Service		B			B		B	B		B	B	B
Approach Delay (s)		11.5			10.3			15.6			16.9	
Approach LOS		B			B			B			B	

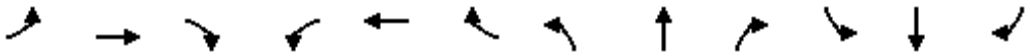
Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



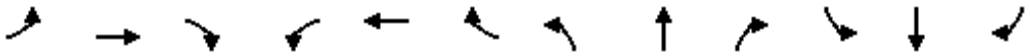
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	123	48	114	153	88	121	483	102	147	385	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3527	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3527	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	123	48	114	153	88	121	483	102	147	385	9
RTOR Reduction (vph)	0	0	0	0	0	63	0	0	75	0	2	0
Lane Group Flow (vph)	6	123	48	114	153	25	121	483	27	147	392	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.0	9.9	9.9	7.3	16.2	16.2	6.6	15.2	15.2	9.1	17.7	
Effective Green, g (s)	1.0	9.9	9.9	7.3	16.2	16.2	6.6	15.2	15.2	9.1	17.7	
Actuated g/C Ratio	0.02	0.17	0.17	0.13	0.28	0.28	0.11	0.26	0.26	0.16	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	30	320	272	224	524	445	203	935	418	280	1085	
v/s Ratio Prot	0.00	c0.07		c0.06	0.08		0.07	c0.14		c0.08	0.11	
v/s Ratio Perm			0.03			0.02			0.02			
v/c Ratio	0.20	0.38	0.18	0.51	0.29	0.06	0.60	0.52	0.06	0.53	0.36	
Uniform Delay, d1	27.9	21.1	20.3	23.4	16.2	15.1	24.2	18.0	15.8	22.2	15.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.3	0.8	0.3	1.8	0.3	0.1	4.6	0.5	0.1	1.8	0.2	
Delay (s)	31.1	21.9	20.6	25.2	16.5	15.1	28.8	18.5	15.9	24.0	15.7	
Level of Service	C	C	C	C	B	B	C	B	B	C	B	
Approach Delay (s)		21.8			19.0			19.9			18.0	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	116	127	241	73	60	91	611	499	64	547	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1733		1770	1737		1770	1863	1583	1770	3530	
Flt Permitted		0.99		0.53	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1717		988	1737		1770	1863	1583	1770	3530	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	11	116	127	241	73	60	91	611	499	64	547	10
RTOR Reduction (vph)	0	56	0	0	41	0	0	0	292	0	2	0
Lane Group Flow (vph)	0	198	0	241	92	0	91	611	207	64	555	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		18.6		18.6	18.6		3.5	24.2	24.2	3.5	24.2	
Effective Green, g (s)		18.6		18.6	18.6		3.5	24.2	24.2	3.5	24.2	
Actuated g/C Ratio		0.32		0.32	0.32		0.06	0.42	0.42	0.06	0.42	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		547		315	554		106	773	657	106	1465	
v/s Ratio Prot					0.05		c0.05	c0.33		0.04	0.16	
v/s Ratio Perm		0.12		c0.24					0.13			
v/c Ratio		0.36		0.77	0.17		0.86	0.79	0.32	0.60	0.38	
Uniform Delay, d1		15.3		17.9	14.3		27.2	14.8	11.5	26.7	11.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.4		10.6	0.1		45.6	5.5	0.3	9.3	0.2	
Delay (s)		15.7		28.4	14.4		72.8	20.4	11.8	36.1	12.0	
Level of Service		B		C	B		E	C	B	D	B	
Approach Delay (s)		15.7			23.5			20.8			14.5	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	58.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	35	124	236	37	84	86	1071	159	75	722	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.90			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1673			1746		1770	3471		1770	3531	
Flt Permitted		0.97			0.69		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1636			1238		1770	3471		1770	3531	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	35	124	236	37	84	86	1071	159	75	722	12
RTOR Reduction (vph)	0	86	0	0	15	0	0	17	0	0	2	0
Lane Group Flow (vph)	0	83	0	0	342	0	86	1213	0	75	732	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		20.4			20.4		5.9	28.0		5.8	27.9	
Effective Green, g (s)		20.4			20.4		5.9	28.0		5.8	27.9	
Actuated g/C Ratio		0.31			0.31		0.09	0.42		0.09	0.42	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		504			381		157	1468		155	1488	
v/s Ratio Prot							c0.05	c0.35		0.04	0.21	
v/s Ratio Perm		0.05			c0.28							
v/c Ratio		0.17			0.90		0.55	0.83		0.48	0.49	
Uniform Delay, d1		16.7			21.9		28.9	16.9		28.8	14.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			22.8		3.9	4.0		2.4	0.3	
Delay (s)		16.8			44.6		32.7	20.9		31.1	14.2	
Level of Service		B			D		C	C		C	B	
Approach Delay (s)		16.8			44.6			21.7			15.8	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	622	31	1280	681	45	1013
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.99		0.95		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	3425		3355		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	3425		3355		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	622	31	1280	681	45	1013
RTOR Reduction (vph)	5	0	62	0	0	0
Lane Group Flow (vph)	648	0	1899	0	45	1013
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	18.2		36.7		3.3	44.0
Effective Green, g (s)	18.2		36.7		3.3	44.0
Actuated g/C Ratio	0.26		0.52		0.05	0.63
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	887		1753		83	2218
v/s Ratio Prot	c0.19		c0.57		0.03	c0.29
v/s Ratio Perm						
v/c Ratio	0.73		1.08		0.54	0.46
Uniform Delay, d1	23.8		16.8		32.7	6.9
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	3.1		48.0		7.1	0.1
Delay (s)	26.9		64.8		39.8	7.0
Level of Service	C		E		D	A
Approach Delay (s)	26.9		64.8			8.4
Approach LOS	C		E			A

Intersection Summary			
HCM 2000 Control Delay	41.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	70.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	5	21	0	97	40	0	370	120	8	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95		1.00	0.95
Frpb, ped/bikes		0.99		1.00	0.98			1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt		0.86		1.00	0.85			1.00	0.96		1.00	1.00
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)		1591		1618	1426			1703	3256		1696	3406
Flt Permitted		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)		1591		1618	1426			1703	3256		1696	3406
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	5	21	0	97	40	0	370	120	8	140
RTOR Reduction (vph)	0	5	0	0	86	0	0	0	30	0	0	0
Lane Group Flow (vph)	0	0	0	19	13	0	0	40	460	0	8	140
Confl. Peds. (#/hr)			1			1				7	7	
Confl. Bikes (#/hr)						2				2		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type		NA		Split	NA		Prot	Prot	NA		Prot	NA
Protected Phases	4	4		8	8		5	5	2		1	6
Permitted Phases												
Actuated Green, G (s)		0.7		5.2	5.2			1.1	17.6		0.8	17.3
Effective Green, g (s)		0.7		5.2	5.2			1.1	17.6		0.8	17.3
Actuated g/C Ratio		0.02		0.13	0.13			0.03	0.44		0.02	0.43
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		27		208	184			46	1421		33	1462
v/s Ratio Prot		c0.00		c0.01	0.01			c0.02	c0.14		0.00	0.04
v/s Ratio Perm												
v/c Ratio		0.00		0.09	0.07			0.87	0.32		0.24	0.10
Uniform Delay, d1		19.5		15.5	15.4			19.5	7.4		19.5	6.8
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.0		0.2	0.2			83.5	0.1		3.8	0.0
Delay (s)		19.5		15.7	15.6			103.1	7.6		23.2	6.9
Level of Service		B		B	B			F	A		C	A
Approach Delay (s)		19.5			15.6				14.8			7.8
Approach LOS		B			B				B			A

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	40.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	3
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	22	250	841	22	16	154	1073	756	16	69	146	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	0.99	0.97		1.00	0.99	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.96	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1719	6197			1752	5697	1231		1696	1435	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1719	6197			1752	5697	1231		1696	1435	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	250	841	22	16	154	1073	756	16	69	146	3
RTOR Reduction (vph)	0	0	2	0	0	0	40	249	0	0	129	0
Lane Group Flow (vph)	0	272	861	0	0	170	1411	129	0	85	17	0
Confl. Peds. (#/hr)		12		1		1		12	64			
Confl. Bikes (#/hr)				1							1	
Heavy Vehicles (%)	5%	5%	5%	5%	3%	3%	3%	3%	11%	11%	11%	3%
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		20.3	42.1			15.2	37.0	37.0		12.7	12.7	
Effective Green, g (s)		20.3	42.1			15.2	37.0	37.0		12.7	12.7	
Actuated g/C Ratio		0.19	0.39			0.14	0.34	0.34		0.12	0.12	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		322	2411			246	1948	420		199	168	
v/s Ratio Prot		c0.16	0.14			0.10	c0.25			c0.05		
v/s Ratio Perm								0.11			0.01	
v/c Ratio		0.84	0.36			0.69	0.72	0.31		0.43	0.10	
Uniform Delay, d1		42.4	23.4			44.3	31.1	26.2		44.4	42.7	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		17.3	0.0			6.6	1.2	0.2		0.5	0.1	
Delay (s)		59.8	23.5			50.9	32.3	26.3		44.9	42.8	
Level of Service		E	C			D	C	C		D	D	
Approach Delay (s)			32.2				32.7			43.5		
Approach LOS			C				C			D		

Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	108.2	Sum of lost time (s)	21.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	298	149	69
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.96	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.95	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3400	1684	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3400	1684	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	298	149	69
RTOR Reduction (vph)	0	10	0
Lane Group Flow (vph)	301	208	0
Confl. Peds. (#/hr)	1		64
Confl. Bikes (#/hr)			1
Heavy Vehicles (%)	3%	3%	3%
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	17.2	17.2	
Effective Green, g (s)	17.2	17.2	
Actuated g/C Ratio	0.16	0.16	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	540	267	
v/s Ratio Prot	0.09	c0.12	
v/s Ratio Perm			
v/c Ratio	0.56	0.78	
Uniform Delay, d1	42.0	43.7	
Progression Factor	1.00	1.00	
Incremental Delay, d2	0.7	12.3	
Delay (s)	42.7	55.9	
Level of Service	D	E	
Approach Delay (s)		48.3	
Approach LOS		D	

Intersection Summary

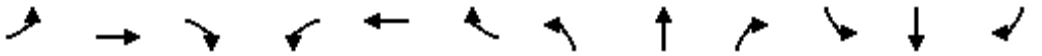
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	4	4	395	21	3	61	820	168	1	133	171	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00		1.00	0.91	1.00		1.00	1.00	0.88
Frpb, ped/bikes		1.00	1.00	0.98		1.00	1.00	0.98		1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1375	2756	1213		1719	4940	1509		1652	1743	2574
Flt Permitted		0.33	1.00	1.00		0.95	1.00	1.00		0.65	1.00	1.00
Satd. Flow (perm)		478	2756	1213		1719	4940	1509		1129	1743	2574
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	4	395	21	3	61	820	168	1	133	171	254
RTOR Reduction (vph)	0	0	0	16	0	0	0	106	0	0	0	201
Lane Group Flow (vph)	0	8	395	5	0	64	820	62	0	134	171	53
Confl. Peds. (#/hr)		6		4		4		6		4		
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	31%	31%	31%	31%	5%	5%	5%	5%	9%	9%	9%	9%
Turn Type	Perm	Perm	NA	Perm	Prot	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases			6		5	5	2				4	
Permitted Phases	6	6		6				2	4	4		4
Actuated Green, G (s)		20.6	20.6	20.6		7.4	32.0	32.0		17.8	17.8	17.8
Effective Green, g (s)		20.6	20.6	20.6		7.4	32.0	32.0		17.8	17.8	17.8
Actuated g/C Ratio		0.24	0.24	0.24		0.09	0.37	0.37		0.21	0.21	0.21
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		114	659	290		147	1836	560		233	360	532
v/s Ratio Prot			c0.14			0.04	c0.17				0.10	
v/s Ratio Perm		0.02		0.00				0.04		c0.12		0.02
v/c Ratio		0.07	0.60	0.02		0.44	0.45	0.11		0.58	0.47	0.10
Uniform Delay, d1		25.3	29.1	25.0		37.4	20.4	17.7		30.7	30.0	27.7
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.3	1.5	0.0		2.1	0.2	0.1		3.4	1.0	0.1
Delay (s)		25.6	30.6	25.0		39.4	20.6	17.8		34.2	31.0	27.7
Level of Service		C	C	C		D	C	B		C	C	C
Approach Delay (s)			30.2				21.3				30.3	
Approach LOS			C				C				C	

Intersection Summary			
HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	308	145	26
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.0	4.0	
Lane Util. Factor	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.98	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	1752	1799	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	1752	1799	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	308	145	26
RTOR Reduction (vph)	0	3	0
Lane Group Flow (vph)	308	168	0
Confl. Peds. (#/hr)			4
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	3%	3%	3%
Turn Type	Prot	NA	
Protected Phases	3	8	
Permitted Phases			
Actuated Green, G (s)	24.3	46.1	
Effective Green, g (s)	24.3	46.1	
Actuated g/C Ratio	0.28	0.54	
Clearance Time (s)	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	
Lane Grp Cap (vph)	494	963	
v/s Ratio Prot	c0.18	0.09	
v/s Ratio Perm			
v/c Ratio	0.62	0.17	
Uniform Delay, d1	26.9	10.2	
Progression Factor	1.00	1.00	
Incremental Delay, d2	2.5	0.1	
Delay (s)	29.4	10.3	
Level of Service	C	B	
Approach Delay (s)		22.6	
Approach LOS		C	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	810	11	85	986	354	32	181	122	158	52	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.97	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		5057		1752	5036	1549	1671	4387	1286	1480	2959	1324
Flt Permitted		0.77		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3926		1752	5036	1549	1671	4387	1286	1480	2959	1324
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	68	810	11	85	986	354	32	181	122	158	52	10
RTOR Reduction (vph)	0	0	0	0	0	133	0	47	63	0	0	8
Lane Group Flow (vph)	0	889	0	85	986	221	32	186	7	158	52	2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	8%	8%	8%	22%	22%	22%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		58.4		9.3	71.7	71.7	5.4	11.8	11.8	17.5	23.9	23.9
Effective Green, g (s)		58.4		9.3	71.7	71.7	5.4	11.8	11.8	17.5	23.9	23.9
Actuated g/C Ratio		0.51		0.08	0.62	0.62	0.05	0.10	0.10	0.15	0.21	0.21
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1993		141	3139	965	78	450	131	225	614	275
v/s Ratio Prot				c0.05	0.20		0.02	c0.04		c0.11	0.02	
v/s Ratio Perm		c0.23				0.14			0.01			0.00
v/c Ratio		0.45		0.60	0.31	0.23	0.41	0.41	0.05	0.70	0.08	0.01
Uniform Delay, d1		18.0		51.1	10.1	9.5	53.3	48.4	46.6	46.3	36.7	36.1
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.7		7.1	0.3	0.6	3.5	0.6	0.2	9.5	0.1	0.0
Delay (s)		18.7		58.1	10.4	10.1	56.7	49.0	46.7	55.8	36.8	36.2
Level of Service		B		E	B	B	E	D	D	E	D	D
Approach Delay (s)		18.7			13.2			49.3			50.4	
Approach LOS		B			B			D			D	

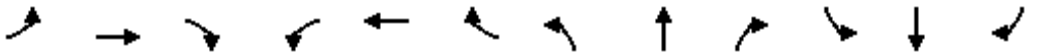
Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1046	679	194	699	1221	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3330		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3330		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1046	679	194	699	1221	211
RTOR Reduction (vph)	176	0	0	0	0	0
Lane Group Flow (vph)	1549	0	194	699	1221	211
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		10.0	37.0	14.0	59.0
Effective Green, g (s)	23.0		10.0	37.0	14.0	59.0
Actuated g/C Ratio	0.39		0.17	0.63	0.24	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1298		300	2219	814	1583
v/s Ratio Prot	c0.47		c0.11	0.20	c0.36	
v/s Ratio Perm						0.13
v/c Ratio	1.19		0.65	0.32	1.50	0.13
Uniform Delay, d1	18.0		22.9	5.1	22.5	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	95.0		4.7	0.1	231.4	0.2
Delay (s)	113.0		27.6	5.2	253.9	0.2
Level of Service	F		C	A	F	A
Approach Delay (s)	113.0			10.1	216.6	
Approach LOS	F			B	F	

Intersection Summary			
HCM 2000 Control Delay	126.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	596	354	163	635	247	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	596	354	163	635	247	88
RTOR Reduction (vph)	0	220	0	0	0	70
Lane Group Flow (vph)	596	134	163	635	247	18
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	16.6	16.6	6.1	26.7	9.0	9.0
Effective Green, g (s)	16.6	16.6	6.1	26.7	9.0	9.0
Actuated g/C Ratio	0.38	0.38	0.14	0.61	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1344	601	479	2162	707	326
v/s Ratio Prot	c0.17		0.05	c0.18	c0.07	
v/s Ratio Perm		0.08				0.01
v/c Ratio	0.44	0.22	0.34	0.29	0.35	0.06
Uniform Delay, d1	10.1	9.2	17.0	4.0	14.8	13.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.4	0.1	0.3	0.1
Delay (s)	10.3	9.4	17.4	4.1	15.1	14.0
Level of Service	B	A	B	A	B	B
Approach Delay (s)	10.0			6.8	14.8	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	43.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	5	116	17	18	82	90	826	26	42	770	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1649	1736	1553	1736	3044		3367	3454		1736	3464	
Flt Permitted	0.69	1.00	1.00	0.75	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1196	1736	1553	1378	3044		3367	3454		1736	3464	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	5	116	17	18	82	90	826	26	42	770	10
RTOR Reduction (vph)	0	0	91	0	64	0	0	2	0	0	1	0
Lane Group Flow (vph)	4	5	25	17	36	0	90	850	0	42	779	0
Confl. Peds. (#/hr)									3	3		
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.1	10.1	10.1	10.1	10.1		3.5	22.6		2.4	21.5	
Effective Green, g (s)	10.1	10.1	10.1	10.1	10.1		3.5	22.6		2.4	21.5	
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.08	0.48		0.05	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	259	376	336	298	659		252	1675		89	1598	
v/s Ratio Prot					0.01		c0.03	c0.25		0.02	0.23	
v/s Ratio Perm	0.00	0.00	c0.02	0.01								
v/c Ratio	0.02	0.01	0.07	0.06	0.05		0.36	0.51		0.47	0.49	
Uniform Delay, d1	14.3	14.3	14.5	14.5	14.5		20.5	8.2		21.5	8.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0	0.2	0.2	0.1		0.3	0.1		1.4	0.1	
Delay (s)	14.4	14.4	14.7	14.6	14.5		20.8	8.3		22.9	8.8	
Level of Service	B	B	B	B	B		C	A		C	A	
Approach Delay (s)		14.7			14.5			9.5			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	11.5
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

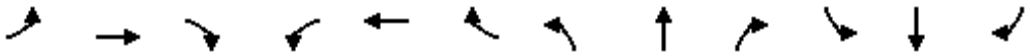
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	0	10	105	517	289	414	654	135	218	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91		0.97	0.95	1.00	0.97	0.95
Frpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt					1.00	0.95		1.00	1.00	0.85	1.00	1.00
Flt Protected					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)					1736	4697		3367	3471	1553	3367	3471
Flt Permitted					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)					1736	4697		3367	3471	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	10	105	517	289	414	654	135	218	535
RTOR Reduction (vph)	0	0	0	0	0	129	0	0	0	62	0	0
Lane Group Flow (vph)	0	0	0	0	115	677	0	414	654	73	218	535
Confl. Peds. (#/hr)	1						1					
Confl. Bikes (#/hr)			3									
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	Perm	NA		Prot	NA	Perm	Prot	NA
Protected Phases						8		5	2		1	6
Permitted Phases				8	8					2		
Actuated Green, G (s)					22.3	22.3		15.4	53.9	53.9	11.8	50.3
Effective Green, g (s)					22.3	22.3		15.4	53.9	53.9	11.8	50.3
Actuated g/C Ratio					0.22	0.22		0.15	0.54	0.54	0.12	0.50
Clearance Time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					387	1047		518	1870	837	397	1745
v/s Ratio Prot						c0.14		c0.12	c0.19		0.06	0.15
v/s Ratio Perm					0.07					0.05		
v/c Ratio					0.30	0.65		0.80	0.35	0.09	0.55	0.31
Uniform Delay, d1					32.3	35.3		40.8	13.1	11.1	41.6	14.6
Progression Factor					1.00	1.00		0.77	1.61	4.10	1.00	1.00
Incremental Delay, d2					0.4	1.4		7.7	0.5	0.2	1.6	0.5
Delay (s)					32.8	36.7		39.1	21.6	45.9	43.1	15.1
Level of Service					C	D		D	C	D	D	B
Approach Delay (s)		0.0				36.2			30.3			21.6
Approach LOS		A				D			C			C

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	141
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1532
Flt Permitted	1.00
Satd. Flow (perm)	1532
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	141
RTOR Reduction (vph)	70
Lane Group Flow (vph)	71
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	3
Heavy Vehicles (%)	4%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	50.3
Effective Green, g (s)	50.3
Actuated g/C Ratio	0.50
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	770
v/s Ratio Prot	
v/s Ratio Perm	0.05
v/c Ratio	0.09
Uniform Delay, d1	13.0
Progression Factor	1.00
Incremental Delay, d2	0.2
Delay (s)	13.2
Level of Service	B
Approach Delay (s)	
Approach LOS	

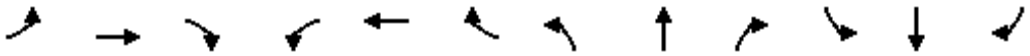
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	37	222	77	0	58	0	1061	280	21	470	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00		1.00		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5085	1556	3367		1553		3343	1466	1770	3539	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5085	1556	3367		1553		3343	1466	1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	119	37	222	77	0	58	0	1061	280	21	470	0
RTOR Reduction (vph)	0	0	194	0	0	54	0	0	107	0	0	0
Lane Group Flow (vph)	119	37	28	77	0	4	0	1061	173	21	470	0
Confl. Peds. (#/hr)									5	5		
Confl. Bikes (#/hr)			3						6			3
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	8%	8%	8%	2%	2%	2%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	12.4	12.4	12.4	6.5		6.5		61.9	61.9	3.2	69.1	
Effective Green, g (s)	12.4	12.4	12.4	6.5		6.5		61.9	61.9	3.2	69.1	
Actuated g/C Ratio	0.12	0.12	0.12	0.06		0.06		0.62	0.62	0.03	0.69	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	219	630	192	218		100		2069	907	56	2445	
v/s Ratio Prot	c0.07	0.01		c0.02				c0.32		c0.01	0.13	
v/s Ratio Perm			0.02			0.00			0.12			
v/c Ratio	0.54	0.06	0.14	0.35		0.04		0.51	0.19	0.38	0.19	
Uniform Delay, d1	41.1	38.7	39.1	44.7		43.8		10.6	8.2	47.4	5.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.76	1.88	
Incremental Delay, d2	2.7	0.0	0.3	1.0		0.2		0.9	0.5	4.1	0.2	
Delay (s)	43.9	38.7	39.4	45.7		44.0		11.5	8.7	40.0	10.5	
Level of Service	D	D	D	D		D		B	A	D	B	
Approach Delay (s)		40.7			45.0			11.0			11.8	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



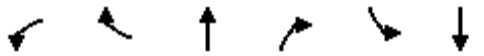
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	139	30	253	126	742	49	763	241	375	353	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1299	2522		3242	1759	1486	1671	4803	1480	3335	3392	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1299	2522		3242	1759	1486	1671	4803	1480	3335	3392	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	139	30	253	126	742	49	763	241	375	353	35
RTOR Reduction (vph)	0	19	0	0	0	134	0	0	140	0	6	0
Lane Group Flow (vph)	53	150	0	253	126	608	49	763	101	375	382	0
Confl. Peds. (#/hr)			2	2					3	3		
Confl. Bikes (#/hr)						1			4			
Heavy Vehicles (%)	39%	39%	39%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	5.7	11.9		11.4	17.6	33.8	11.8	20.4	31.8	16.2	24.8	
Effective Green, g (s)	5.7	11.9		11.4	17.6	33.8	11.8	20.4	31.8	16.2	24.8	
Actuated g/C Ratio	0.08	0.16		0.15	0.23	0.45	0.16	0.27	0.42	0.21	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	97	395		486	407	740	259	1290	698	711	1108	
v/s Ratio Prot	0.04	0.06		c0.08	0.07	c0.18	0.03	c0.16	0.02	0.11	0.11	
v/s Ratio Perm						0.23			0.05			
v/c Ratio	0.55	0.38		0.52	0.31	0.82	0.19	0.59	0.14	0.53	0.34	
Uniform Delay, d1	33.9	28.7		29.7	24.1	18.4	27.9	24.1	13.6	26.5	19.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.2	0.6		1.0	0.4	7.3	0.4	0.7	0.1	0.7	0.2	
Delay (s)	40.0	29.3		30.7	24.6	25.7	28.2	24.9	13.7	27.2	19.6	
Level of Service	D	C		C	C	C	C	C	B	C	B	
Approach Delay (s)		31.9			26.7			22.5			23.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	75.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

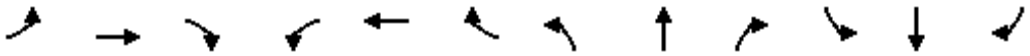
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	265	20	20	556	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1845			1860	1695	
Flt Permitted	1.00			0.98	0.98	
Satd. Flow (perm)	1845			1832	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	265	20	20	556	20	20
RTOR Reduction (vph)	3	0	0	0	17	0
Lane Group Flow (vph)	282	0	0	576	23	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	24.4			24.4	10.1	
Effective Green, g (s)	24.4			24.4	10.1	
Actuated g/C Ratio	0.34			0.34	0.14	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	620			616	236	
v/s Ratio Prot	0.15				c0.01	
v/s Ratio Perm				c0.31		
v/c Ratio	0.45			0.94	0.10	
Uniform Delay, d1	18.8			23.3	27.2	
Progression Factor	1.00			0.49	1.00	
Incremental Delay, d2	0.2			16.3	0.1	
Delay (s)	19.0			27.6	27.3	
Level of Service	B			C	C	
Approach Delay (s)	19.0			27.6	27.3	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	72.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	490	10	0	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1858			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1858			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	490	10	0	58
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	500	0	0	58
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.0		21.5			21.5
Effective Green, g (s)	1.0		21.5			21.5
Actuated g/C Ratio	0.01		0.30			0.30
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	25		565			567
v/s Ratio Prot	c0.01		c0.27			0.03
v/s Ratio Perm						
v/c Ratio	0.40		0.88			0.10
Uniform Delay, d1	34.5		23.4			17.6
Progression Factor	1.00		1.00			0.97
Incremental Delay, d2	10.2		15.3			0.0
Delay (s)	44.7		38.7			17.1
Level of Service	D		D			B
Approach Delay (s)	44.7		38.7			17.1
Approach LOS	D		D			B

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	105	36	553	48	29	14	20	165	29	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	105	36	553	48	29	14	20	165	29	0	0	0

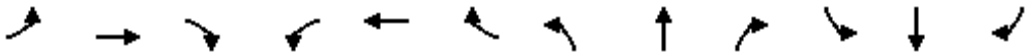
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	694	91	214
Volume Left (vph)	105	48	20
Volume Right (vph)	553	14	29
Hadj (s)	-0.41	0.05	-0.03
Departure Headway (s)	4.3	5.4	5.6
Degree Utilization, x	0.82	0.14	0.34
Capacity (veh/h)	827	623	600
Control Delay (s)	23.8	9.3	11.5
Approach Delay (s)	23.8	9.3	11.5
Approach LOS	C	A	B

Intersection Summary				
Delay	19.8			
Level of Service	C			
Intersection Capacity Utilization	60.9%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	4	11	467	8	14	597
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	11	467	8	14	597
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1097	474			476	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1097	474			476	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	98			99	
cM capacity (veh/h)	233	589			1085	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	475	611
Volume Left	4	0	14
Volume Right	11	8	0
cSH	418	1700	1085
Volume to Capacity	0.04	0.28	0.01
Queue Length 95th (ft)	3	0	1
Control Delay (s)	13.9	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	13.9	0.0	0.4
Approach LOS	B		

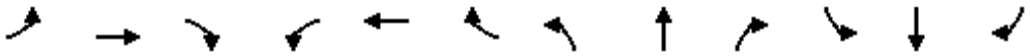
Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		53.3%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	632	248	36	2	399	2	0	0	6	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95			1.00	
Frpb, ped/bikes		1.00		1.00	1.00		1.00	1.00			0.99	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00			1.00	
Frt		0.87		1.00	0.99		1.00	1.00			0.91	
Flt Protected		1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1628		1787	1885		1783	3610			1709	
Flt Permitted		1.00		0.95	1.00		0.75	1.00			1.00	
Satd. Flow (perm)		1628		1787	1885		1401	3610			1709	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	0	632	248	36	2	399	2	0	0	6	11
RTOR Reduction (vph)	0	555	0	0	2	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	79	0	248	36	0	399	2	0	0	12	0
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2					
Actuated Green, G (s)		10.9		18.3	18.3		48.8	48.8			48.8	
Effective Green, g (s)		10.9		18.3	18.3		48.8	48.8			48.8	
Actuated g/C Ratio		0.12		0.20	0.20		0.54	0.54			0.54	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		197		363	383		759	1957			926	
v/s Ratio Prot		c0.05		c0.14	0.02			0.00			0.01	
v/s Ratio Perm							c0.28					
v/c Ratio		0.40		0.68	0.10		0.53	0.00			0.01	
Uniform Delay, d1		36.5		33.2	29.1		13.2	9.4			9.5	
Progression Factor		1.00		1.00	1.00		0.66	1.08			1.00	
Incremental Delay, d2		1.3		5.2	0.1		2.4	0.0			0.0	
Delay (s)		37.8		38.4	29.2		11.0	10.2			9.5	
Level of Service		D		D	C		B	B			A	
Approach Delay (s)		37.8			37.2			11.0			9.5	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

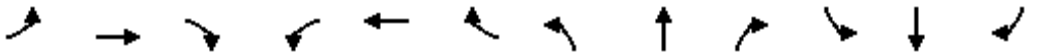
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	424	481	41	0	0	0	13	31	14	476	99	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95						1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00						1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00						1.00		1.00	1.00	
Frt	1.00	0.99						0.97		1.00	0.89	
Flt Protected	0.95	1.00						0.99		0.95	1.00	
Satd. Flow (prot)	1698	1757						1691		1805	1623	
Flt Permitted	0.95	1.00						0.99		0.95	1.00	
Satd. Flow (perm)	1698	1757						1691		1805	1623	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	424	481	41	0	0	0	13	31	14	476	99	305
RTOR Reduction (vph)	0	3	0	0	0	0	0	13	0	0	125	0
Lane Group Flow (vph)	382	561	0	0	0	0	0	45	0	476	279	0
Confl. Peds. (#/hr)			1				1		1	1		1
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	1%	1%	2%	0%	0%	0%	8%	10%	0%	0%	2%	2%
Turn Type	Split	NA					Split	NA		Split	NA	
Protected Phases	4	4					2	2		6	6	
Permitted Phases												
Actuated Green, G (s)	43.6	43.6						8.2		26.2	26.2	
Effective Green, g (s)	43.6	43.6						8.2		26.2	26.2	
Actuated g/C Ratio	0.48	0.48						0.09		0.29	0.29	
Clearance Time (s)	4.0	4.0						4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	822	851						154		525	472	
v/s Ratio Prot	0.23	c0.32						c0.03		c0.26	0.17	
v/s Ratio Perm												
v/c Ratio	0.46	0.66						0.29		0.91	0.59	
Uniform Delay, d1	15.4	17.6						38.2		30.7	27.3	
Progression Factor	0.79	0.89						1.00		0.81	0.69	
Incremental Delay, d2	1.7	3.7						1.1		15.2	1.5	
Delay (s)	14.0	19.4						39.3		40.0	20.2	
Level of Service	B	B						D		D	C	
Approach Delay (s)		17.2			0.0			39.3			30.9	
Approach LOS		B			A			D			C	

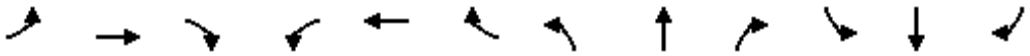
Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



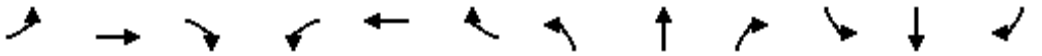
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	738	1	11	326	0	2	0	13	223	99	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor		0.95		1.00	1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	1.00
Frt		1.00		1.00	1.00			0.88			1.00	0.85
Flt Protected		1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (prot)		3573		1354	1863			1559			1831	1599
Flt Permitted		1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (perm)		3573		1354	1863			1559			1831	1599
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	738	1	11	326	0	2	0	13	223	99	444
RTOR Reduction (vph)	0	0	0	0	0	0	0	14	0	0	0	339
Lane Group Flow (vph)	0	739	0	11	326	0	0	1	0	0	322	105
Confl. Peds. (#/hr)			3	3								
Heavy Vehicles (%)	0%	1%	0%	33%	2%	0%	0%	0%	8%	0%	1%	1%
Turn Type		NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)		46.1		0.8	50.9			5.9			21.2	21.2
Effective Green, g (s)		46.1		0.8	50.9			5.9			21.2	21.2
Actuated g/C Ratio		0.51		0.01	0.57			0.07			0.24	0.24
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1830		12	1053			102			431	376
v/s Ratio Prot		c0.21		c0.01	0.18			c0.00			c0.18	
v/s Ratio Perm												0.07
v/c Ratio		0.40		0.92	0.31			0.01			0.75	0.28
Uniform Delay, d1		13.5		44.6	10.3			39.3			31.9	28.1
Progression Factor		1.00		0.74	1.03			1.00			1.00	1.00
Incremental Delay, d2		0.7		187.6	0.6			0.0			6.9	0.4
Delay (s)		14.2		220.6	11.2			39.4			38.8	28.5
Level of Service		B		F	B			D			D	C
Approach Delay (s)		14.2			18.1			39.4			32.9	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	521	65	205	16	2	28	177	18	21	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.89			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1805	1663			1631	1517	1787	1900	1503			
Flt Permitted	0.95	1.00			0.65	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1805	1663			1105	1517	1787	1900	1503			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	521	65	205	16	2	28	177	18	21	0	0	0
RTOR Reduction (vph)	0	69	0	0	0	23	0	0	18	0	0	0
Lane Group Flow (vph)	521	201	0	0	18	5	177	18	3	0	0	0
Confl. Peds. (#/hr)						1			1			
Heavy Vehicles (%)	0%	2%	1%	13%	0%	4%	1%	0%	5%	0%	0%	0%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	19.7	30.5			7.3	7.3	7.9	7.9	7.9			
Effective Green, g (s)	18.7	30.5			7.8	7.8	7.4	7.4	7.4			
Actuated g/C Ratio	0.41	0.66			0.17	0.17	0.16	0.16	0.16			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	735	1105			187	257	288	306	242			
v/s Ratio Prot	c0.29	c0.12						0.01				
v/s Ratio Perm					0.02	0.00	c0.10		0.00			
v/c Ratio	0.71	0.18			0.10	0.02	0.61	0.06	0.01			
Uniform Delay, d1	11.3	2.9			16.1	15.9	17.9	16.3	16.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	3.1	0.1			0.1	0.0	2.7	0.0	0.0			
Delay (s)	14.5	3.0			16.2	15.9	20.7	16.3	16.2			
Level of Service	B	A			B	B	C	B	B			
Approach Delay (s)		10.6			16.0			19.9			0.0	
Approach LOS		B			B			B			A	

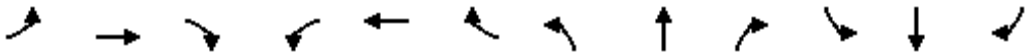
Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	45.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	709	2	2	180	0	3	0	2	79	1	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.95
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			0.95			1.00	0.85
Flt Protected		1.00			1.00			0.97			0.95	1.00
Satd. Flow (prot)		1899			1880			1454			1721	1523
Flt Permitted		1.00			1.00			0.97			0.95	1.00
Satd. Flow (perm)		1899			1872			1454			1721	1523
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	709	2	2	180	0	3	0	2	79	1	420
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	345
Lane Group Flow (vph)	0	711	0	0	182	0	0	0	0	0	80	75
Confl. Peds. (#/hr)	2					2						20
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	50%	4%	100%	1%
Turn Type		NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		24.3			24.3			0.7			8.0	8.0
Effective Green, g (s)		24.3			24.3			0.7			8.0	8.0
Actuated g/C Ratio		0.54			0.54			0.02			0.18	0.18
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		1025			1010			22			305	270
v/s Ratio Prot		c0.37						c0.00			0.05	
v/s Ratio Perm					0.10							c0.05
v/c Ratio		0.69			0.18			0.00			0.26	0.28
Uniform Delay, d1		7.6			5.3			21.8			16.0	16.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.2			0.1			0.1			0.2	0.2
Delay (s)		9.8			5.4			21.9			16.1	16.2
Level of Service		A			A			C			B	B
Approach Delay (s)		9.8			5.4			21.9			16.2	
Approach LOS		A			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	99	157	524	181	0	46	0	669	139	583	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.98	1.00	1.00		1.00		1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		0.99	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1881	1557	3433	1881		1770		2814		3506	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1881	1557	3433	1881		1770		2814		3506	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	99	157	524	181	0	46	0	669	139	583	31
RTOR Reduction (vph)	0	0	142	0	0	0	0	0	341	0	4	0
Lane Group Flow (vph)	0	99	15	524	181	0	46	0	328	0	749	0
Confl. Peds. (#/hr)			2			20			20			20
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	2%	0%	1%	1%	1%	0%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		9.6	9.6	38.7	53.3		6.4		50.1		26.3	
Effective Green, g (s)		9.6	9.6	38.7	53.3		5.4		49.1		26.3	
Actuated g/C Ratio		0.10	0.10	0.39	0.53		0.05		0.49		0.26	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		180	149	1328	1002		95		1381		922	
v/s Ratio Prot		c0.05		c0.15	0.10		c0.03		0.12		c0.21	
v/s Ratio Perm			0.01									
v/c Ratio		0.55	0.10	0.39	0.18		0.48		0.24		0.81	
Uniform Delay, d1		43.1	41.3	22.2	12.1		45.9		14.7		34.5	
Progression Factor		1.00	1.00	1.03	0.77		1.00		1.00		1.00	
Incremental Delay, d2		2.1	0.1	0.7	0.3		1.4		0.0		5.2	
Delay (s)		45.2	41.4	23.5	9.6		47.4		14.7		39.8	
Level of Service		D	D	C	A		D		B		D	
Approach Delay (s)		42.8			19.9			16.8			39.8	
Approach LOS		D			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	613	301	0	0	249	136	449	1	212	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3467	1881			1810	1577		1810	1599			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3467	1881			1810	1577		1810	1599			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	613	301	0	0	249	136	449	1	212	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	108	0	0	116	0	0	0
Lane Group Flow (vph)	613	301	0	0	249	28	0	450	96	0	0	0
Confl. Peds. (#/hr)			3	3		1						
Heavy Vehicles (%)	1%	1%	0%	0%	5%	1%	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	20.4	45.6			20.7	20.7		45.4	45.4			
Effective Green, g (s)	20.4	45.6			20.7	20.7		45.4	45.4			
Actuated g/C Ratio	0.20	0.46			0.21	0.21		0.45	0.45			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	707	857			374	326		821	725			
v/s Ratio Prot	c0.18	0.16			c0.14							
v/s Ratio Perm						0.02		0.25	0.06			
v/c Ratio	0.87	0.35			0.67	0.09		0.55	0.13			
Uniform Delay, d1	38.5	17.6			36.5	32.0		19.8	15.9			
Progression Factor	0.99	1.26			1.00	1.00		1.00	1.00			
Incremental Delay, d2	11.0	0.5			5.8	0.2		2.6	0.4			
Delay (s)	49.1	22.7			42.3	32.3		22.5	16.2			
Level of Service	D	C			D	C		C	B			
Approach Delay (s)		40.4			38.8			20.5			0.0	
Approach LOS		D			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	719	395	270	996
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	719	395	270	996
Pedestrians	2					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.87					
vC, conflicting volume	1956	559			721	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1796	559			721	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			69	
cM capacity (veh/h)	44	478			883	

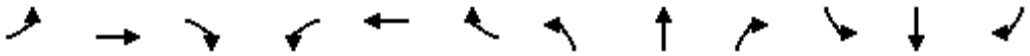
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	479	635	270	498	498
Volume Left	0	0	270	0	0
Volume Right	0	395	0	0	0
cSH	1700	1700	883	1700	1700
Volume to Capacity	0.28	0.37	0.31	0.29	0.29
Queue Length 95th (ft)	0	0	32	0	0
Control Delay (s)	0.0	0.0	10.9	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.3		
Approach LOS					

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	366	97	6	244	457	163	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.93	
Flt Protected	1.00	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3539	1583		1766	3539	1678	
Flt Permitted	1.00	1.00		0.42	1.00	0.98	
Satd. Flow (perm)	3539	1583		787	3539	1678	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	366	97	6	244	457	163	166
RTOR Reduction (vph)	0	30	0	0	0	40	0
Lane Group Flow (vph)	366	67	0	250	457	289	0
Confl. Peds. (#/hr)		5		5			10
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	11.5	30.8		24.5	24.5	13.8	
Effective Green, g (s)	11.5	30.8		24.5	24.5	13.8	
Actuated g/C Ratio	0.24	0.64		0.51	0.51	0.29	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	842	1009		601	1795	479	
v/s Ratio Prot	0.10	0.04		c0.09	0.13	c0.17	
v/s Ratio Perm				c0.12			
v/c Ratio	0.43	0.07		0.42	0.25	0.60	
Uniform Delay, d1	15.6	3.3		7.0	6.7	14.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.0		0.5	0.1	2.1	
Delay (s)	16.0	3.3		7.4	6.8	17.0	
Level of Service	B	A		A	A	B	
Approach Delay (s)	13.3				7.0	17.0	
Approach LOS	B				A	B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	48.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

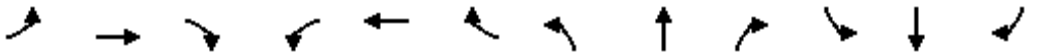
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	229	10	125	265	222	8	221	78	164	382	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		1.00			1.00	0.85		0.96		1.00	0.97	
Flt Protected		0.99			0.98	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1826			3483	1583		3388		1770	1793	
Flt Permitted		0.99			0.98	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1826			3483	1583		3388		1770	1793	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	229	10	125	265	222	8	221	78	164	382	101
RTOR Reduction (vph)	0	1	0	0	0	90	0	33	0	0	7	0
Lane Group Flow (vph)	0	336	0	0	390	132	0	274	0	164	476	0
Confl. Peds. (#/hr)	3		11	11		3	12		1	1		12
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		22.0			15.6	30.3		13.0		30.3	30.3	
Effective Green, g (s)		22.0			15.6	30.3		13.0		30.3	30.3	
Actuated g/C Ratio		0.24			0.17	0.33		0.14		0.33	0.33	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		432			584	516		474		577	584	
v/s Ratio Prot		c0.18			c0.11	0.08		c0.08		0.09	c0.27	
v/s Ratio Perm												
v/c Ratio		0.78			0.67	0.26		0.58		0.28	0.81	
Uniform Delay, d1		33.2			36.2	23.0		37.4		23.2	28.7	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		8.6			2.9	0.3		1.7		0.3	8.5	
Delay (s)		41.8			39.1	23.3		39.1		23.5	37.3	
Level of Service		D			D	C		D		C	D	
Approach Delay (s)		41.8			33.4			39.1			33.8	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	92.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	601	177	38	436	29	97	179	29	97	256	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			0.99			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (prot)	1736	1881	1575	1805	1846			3384			3409	1449
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (perm)	1736	1881	1575	1805	1846			3384			3409	1449
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	162	601	177	38	436	29	97	179	29	97	256	125
RTOR Reduction (vph)	0	0	67	0	2	0	0	5	0	0	0	0
Lane Group Flow (vph)	162	601	110	38	463	0	0	300	0	0	353	125
Confl. Peds. (#/hr)			2						17			4
Confl. Bikes (#/hr)						1						1
Heavy Vehicles (%)	4%	1%	1%	0%	2%	0%	7%	1%	0%	3%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	15.9	45.9	45.9	5.4	35.4			15.8			17.7	104.3
Effective Green, g (s)	15.9	47.4	47.4	5.4	36.9			16.8			18.7	104.3
Actuated g/C Ratio	0.15	0.45	0.45	0.05	0.35			0.16			0.18	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	264	854	715	93	653			545			611	1449
v/s Ratio Prot	0.09	c0.32		0.02	c0.25			c0.09			c0.10	
v/s Ratio Perm			0.07									0.09
v/c Ratio	0.61	0.70	0.15	0.41	0.71			0.55			0.58	0.09
Uniform Delay, d1	41.3	22.8	16.7	47.9	29.1			40.3			39.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	4.2	2.7	0.1	2.9	3.5			1.2			1.3	0.1
Delay (s)	45.5	25.5	16.8	50.8	32.6			41.5			40.5	0.1
Level of Service	D	C	B	D	C			D			D	A
Approach Delay (s)		27.3			34.0			41.5			30.0	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	104.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	3	611	17	18	25	434	183	10	12	18	242	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0				4.0			4.0			4.0
Lane Util. Factor		0.95				0.95			1.00			0.95
Frpb, ped/bikes		1.00				0.99			1.00			0.99
Flpb, ped/bikes		1.00				1.00			0.99			1.00
Frt		1.00				0.96			0.94			0.98
Flt Protected		1.00				1.00			0.99			0.96
Satd. Flow (prot)		3517				3353			1715			3297
Flt Permitted		0.95				0.89			0.89			0.75
Satd. Flow (perm)		3354				2996			1550			2574
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	611	17	18	25	434	183	10	12	18	242	12
RTOR Reduction (vph)	0	2	0	0	0	50	0	0	15	0	0	24
Lane Group Flow (vph)	0	629	0	0	0	610	0	0	25	0	0	273
Confl. Peds. (#/hr)	28		57		57		28	42				
Confl. Bikes (#/hr)			9				1					
Turn Type	Perm	NA			Perm	NA		Perm	NA		Perm	NA
Protected Phases		1				1			2			2
Permitted Phases	1				1			2			2	
Actuated Green, G (s)		44.8				44.8			12.2			12.2
Effective Green, g (s)		44.8				44.8			12.2			12.2
Actuated g/C Ratio		0.69				0.69			0.19			0.19
Clearance Time (s)		4.0				4.0			4.0			4.0
Vehicle Extension (s)		3.0				3.0			3.0			3.0
Lane Grp Cap (vph)		2311				2064			290			483
v/s Ratio Prot												
v/s Ratio Perm		0.19				c0.20			0.02			c0.11
v/c Ratio		0.27				0.30			0.09			0.87dl
Uniform Delay, d1		3.9				3.9			21.8			24.0
Progression Factor		1.00				1.00			1.00			1.00
Incremental Delay, d2		0.3				0.4			0.1			1.5
Delay (s)		4.2				4.3			21.9			25.5
Level of Service		A				A			C			C
Approach Delay (s)		4.2				4.3			21.9			25.5
Approach LOS		A				A			C			C

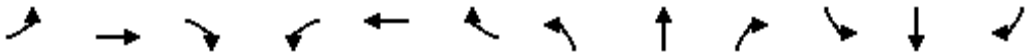
Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

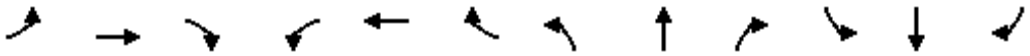
Movement	SBR
Lane Configurations	
Volume (vph)	43
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	43
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	42
Confl. Bikes (#/hr)	3
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



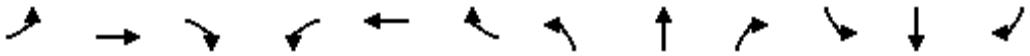
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	823	215	106	497	76	26	130	7	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			1.00				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.98			0.99				
Flt Protected		1.00	1.00		0.99			0.99				
Satd. Flow (prot)		3539	1573		3448			3482				
Flt Permitted		1.00	1.00		0.66			0.99				
Satd. Flow (perm)		3539	1573		2278			3482				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	823	215	106	497	76	26	130	7	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	823	215	0	658	0	0	160	0	0	0	0
Confl. Peds. (#/hr)	22								17			
Confl. Bikes (#/hr)			13			3			17			
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		24.2	57.5		24.2			33.3				
Effective Green, g (s)		24.2	57.5		24.2			33.3				
Actuated g/C Ratio		0.37	0.88		0.37			0.51				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		1317	1500		848			1783				
v/s Ratio Prot		0.23	c0.07									
v/s Ratio Perm			0.06		c0.29			0.05				
v/c Ratio		0.62	0.14		0.78			0.09				
Uniform Delay, d1		16.7	0.5		18.0			8.1				
Progression Factor		0.67	2.72		1.00			1.00				
Incremental Delay, d2		0.9	0.0		4.5			0.1				
Delay (s)		12.2	1.4		22.5			8.2				
Level of Service		B	A		C			A				
Approach Delay (s)		10.0			22.5			8.2			0.0	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



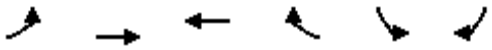
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	265	33	19	182	33	27	264	24	39	337	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.99			0.98	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		1815			1806			3448			3400	
Flt Permitted		0.96			0.96			0.90			0.90	
Satd. Flow (perm)		1759			1740			3122			3079	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	265	33	19	182	33	27	264	24	39	337	51
RTOR Reduction (vph)	0	7	0	0	9	0	0	7	0	0	13	0
Lane Group Flow (vph)	0	322	0	0	225	0	0	308	0	0	414	0
Confl. Peds. (#/hr)	29		42	42		29	39		26	26		39
Confl. Bikes (#/hr)			11			3			9			16
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		31.0			16.2			25.3			25.3	
Effective Green, g (s)		27.0			16.2			25.3			25.3	
Actuated g/C Ratio		0.41			0.25			0.39			0.39	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		727			431			1209			1192	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			c0.13			0.10			c0.13	
v/c Ratio		0.44			0.52			0.25			0.35	
Uniform Delay, d1		13.7			21.2			13.6			14.2	
Progression Factor		0.11			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.5			0.5			0.8	
Delay (s)		1.7			21.7			14.1			15.0	
Level of Service		A			C			B			B	
Approach Delay (s)		1.7			21.7			14.1			15.0	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



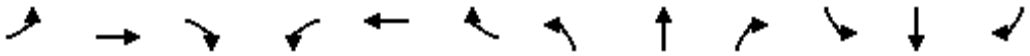
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	649	99	17	281	45	114	296	25	54	270	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.96			0.94		1.00	0.97		1.00	0.95	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3334			1701		1770	1793		1770	1728	
Flt Permitted		0.95			0.95		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3176			1621		1770	1793		1770	1728	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	649	99	17	281	45	114	296	25	54	270	38
RTOR Reduction (vph)	0	9	0	0	4	0	0	4	0	0	8	0
Lane Group Flow (vph)	0	745	0	0	339	0	114	317	0	54	300	0
Confl. Peds. (#/hr)	153		85	85		153			216			136
Confl. Bikes (#/hr)			3			13			19			9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		46.8			46.8		15.1	26.7		11.0	22.6	
Effective Green, g (s)		46.8			46.8		15.1	26.7		11.0	22.6	
Actuated g/C Ratio		0.47			0.47		0.15	0.27		0.11	0.23	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1486			758		267	478		194	390	
v/s Ratio Prot							c0.06	0.18		0.03	c0.17	
v/s Ratio Perm		c0.23			0.21							
v/c Ratio		0.50			0.45		0.43	0.66		0.28	0.77	
Uniform Delay, d1		18.5			17.9		38.5	32.6		40.9	36.3	
Progression Factor		1.00			1.00		0.96	0.68		1.00	1.00	
Incremental Delay, d2		1.2			1.9		0.3	2.3		0.3	8.0	
Delay (s)		19.7			19.8		37.3	24.5		41.1	44.3	
Level of Service		B			B		D	C		D	D	
Approach Delay (s)		19.7			19.8			27.9			43.8	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



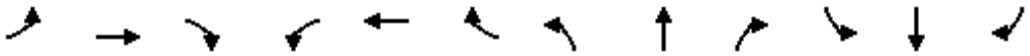
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	98	456	386	121	233	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.97	
Flt Protected	0.95	1.00	1.00		0.96	
Satd. Flow (prot)	1770	1863	1756		1727	
Flt Permitted	0.95	1.00	1.00		0.96	
Satd. Flow (perm)	1770	1863	1756		1727	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	456	386	121	233	70
RTOR Reduction (vph)	0	0	6	0	12	0
Lane Group Flow (vph)	98	456	501	0	291	0
Confl. Peds. (#/hr)	99			99	29	
Confl. Bikes (#/hr)				6		4
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	8.1	69.5	56.9		22.0	
Effective Green, g (s)	8.1	69.5	56.9		22.0	
Actuated g/C Ratio	0.08	0.70	0.57		0.22	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	143	1294	999		379	
v/s Ratio Prot	c0.06	0.24	c0.29		c0.17	
v/s Ratio Perm						
v/c Ratio	0.69	0.35	0.50		0.77	
Uniform Delay, d1	44.7	6.2	13.0		36.6	
Progression Factor	0.91	1.89	0.45		1.00	
Incremental Delay, d2	12.5	0.7	1.6		9.0	
Delay (s)	53.2	12.3	7.4		45.6	
Level of Service	D	B	A		D	
Approach Delay (s)		19.6	7.4		45.6	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



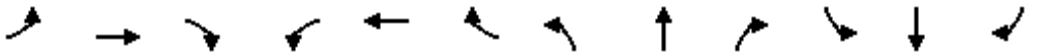
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	456	113	111	533	73	116	331	85	69	441	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.97			0.99			0.98		1.00	0.99	
Flt Protected		1.00			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1811			1823			3417		1770	3489	
Flt Permitted		0.96			0.83			0.65		0.32	1.00	
Satd. Flow (perm)		1740			1526			2255		596	3489	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	456	113	111	533	73	116	331	85	69	441	46
RTOR Reduction (vph)	0	6	0	0	3	0	0	19	0	0	9	0
Lane Group Flow (vph)	0	588	0	0	714	0	0	513	0	69	478	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		62.0			62.0			28.0		28.0	28.0	
Effective Green, g (s)		62.0			62.0			28.0		28.0	28.0	
Actuated g/C Ratio		0.62			0.62			0.28		0.28	0.28	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		1078			946			631		166	976	
v/s Ratio Prot											0.14	
v/s Ratio Perm		0.34			c0.47			c0.23		0.12		
v/c Ratio		0.55			0.75			0.81		0.42	0.49	
Uniform Delay, d1		10.9			13.6			33.6		29.3	30.0	
Progression Factor		1.00			1.00			1.00		0.71	0.73	
Incremental Delay, d2		2.0			5.6			7.9		1.6	0.4	
Delay (s)		12.9			19.1			41.5		22.5	22.3	
Level of Service		B			B			D		C	C	
Approach Delay (s)		12.9			19.1			41.5			22.4	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	116.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



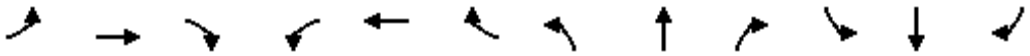
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	187	41	57	145	42	31	498	71	48	625	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99		0.95	1.00		0.99	1.00		0.99	1.00	
Frt		0.98		1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1763		1677	1768		1743	1816		1748	1825	
Flt Permitted		0.93		0.46	1.00		0.29	1.00		0.37	1.00	
Satd. Flow (perm)		1650		818	1768		528	1816		672	1825	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	187	41	57	145	42	31	498	71	48	625	63
RTOR Reduction (vph)	0	10	0	0	16	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	260	0	57	171	0	31	561	0	48	682	0
Confl. Peds. (#/hr)	29		52	52		29	56		36	36		56
Confl. Bikes (#/hr)			11			4			7			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		431		213	462		324	1117		413	1123	
v/s Ratio Prot					0.10			0.31			c0.37	
v/s Ratio Perm		c0.16		0.07			0.06			0.07		
v/c Ratio		0.60		0.27	0.37		0.10	0.50		0.12	0.61	
Uniform Delay, d1		21.0		19.1	19.6		5.1	7.0		5.2	7.7	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		6.2		0.7	0.5		0.6	1.6		0.6	2.4	
Delay (s)		27.2		19.7	20.1		5.7	8.6		5.8	10.1	
Level of Service		C		B	C		A	A		A	B	
Approach Delay (s)		27.2			20.0			8.4			9.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	223	208	34	3	154	55	64	392	14	69	439	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00		1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1818			3374		1770	1851		1770	1863	1492
Flt Permitted	0.95	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1818			3214		1770	1851		1770	1863	1492
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	223	208	34	3	154	55	64	392	14	69	439	215
RTOR Reduction (vph)	0	6	0	0	35	0	0	1	0	0	0	140
Lane Group Flow (vph)	223	236	0	0	177	0	64	405	0	69	439	75
Confl. Peds. (#/hr)	4		6	6		4	39		19	19		39
Confl. Bikes (#/hr)			4						4			8
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	15.3	44.6			24.3		5.4	31.1		4.7	32.4	32.4
Effective Green, g (s)	15.3	44.6			24.3		5.4	31.1		4.7	32.4	32.4
Actuated g/C Ratio	0.17	0.48			0.26		0.06	0.34		0.05	0.35	0.35
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	293	877			845		103	623		90	653	523
v/s Ratio Prot	c0.13	c0.13					0.04	0.22		c0.04	c0.24	
v/s Ratio Perm					0.06							0.05
v/c Ratio	0.76	0.27			0.21		0.62	0.65		0.77	0.67	0.14
Uniform Delay, d1	36.8	14.2			26.6		42.5	26.0		43.3	25.5	20.5
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.0	0.8			0.6		8.1	5.2		28.9	5.5	0.6
Delay (s)	46.8	15.0			27.1		50.6	31.2		72.2	30.9	21.1
Level of Service	D	B			C		D	C		E	C	C
Approach Delay (s)		30.2			27.1			33.8			31.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	92.4	Sum of lost time (s)	17.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	534	59	66	333	12	51	310	76	17	373	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			1.00			0.97			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3434			3477			3406			3434	
Flt Permitted		0.72			0.75			0.85			0.94	
Satd. Flow (perm)		2491			2644			2911			3221	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	124	534	59	66	333	12	51	310	76	17	373	69
RTOR Reduction (vph)	0	8	0	0	3	0	0	23	0	0	18	0
Lane Group Flow (vph)	0	709	0	0	408	0	0	414	0	0	441	0
Confl. Peds. (#/hr)	51		45	45		51	18		9	9		18
Confl. Bikes (#/hr)			3			3			8			7
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1136			892			982			1419	
v/s Ratio Prot		c0.03									c0.02	
v/s Ratio Perm		c0.24			0.15			c0.14			0.12	
v/c Ratio		0.62			0.46			0.42			0.31	
Uniform Delay, d1		17.4			20.8			20.5			14.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.6			1.7			1.3			0.6	
Delay (s)		20.0			22.5			21.8			15.2	
Level of Service		B			C			C			B	
Approach Delay (s)		20.0			22.5			21.8			15.2	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

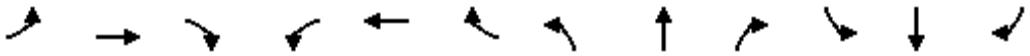
c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Volume (vph)	59	9	311	37	18	345	38	5	13	184	2	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0			4.0			4.0	4.0	4.0	
Lane Util. Factor			1.00			1.00			1.00	1.00	1.00	
Frpb, ped/bikes			0.99			0.99			1.00	1.00	0.93	
Flpb, ped/bikes			1.00			1.00			0.99	1.00	1.00	
Frt			0.99			0.99			1.00	1.00	0.85	
Flt Protected			0.99			1.00			0.95	1.00	1.00	
Satd. Flow (prot)			1806			1815			1746	1863	1478	
Flt Permitted			0.89			0.98			0.38	1.00	1.00	
Satd. Flow (perm)			1620			1781			707	1863	1478	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	59	9	311	37	18	345	38	5	13	184	2	33
RTOR Reduction (vph)	0	0	4	0	0	0	0	0	0	0	28	0
Lane Group Flow (vph)	0	0	412	0	0	406	0	0	13	184	7	0
Confl. Peds. (#/hr)	16	36		37	37		16	36	12			23
Confl. Bikes (#/hr)				1			1					2
Turn Type	Perm	Perm	NA		Perm	NA			Perm	NA	Perm	
Protected Phases			2			6				8		
Permitted Phases	2	2			6				8		8	
Actuated Green, G (s)			38.1			38.1			13.7	13.7	13.7	
Effective Green, g (s)			38.1			38.1			13.7	13.7	13.7	
Actuated g/C Ratio			0.59			0.59			0.21	0.21	0.21	
Clearance Time (s)			4.0			4.0			4.0	4.0	4.0	
Vehicle Extension (s)			3.0			3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)			949			1043			149	392	311	
v/s Ratio Prot										0.10		
v/s Ratio Perm			c0.25			0.23			0.02		0.00	
v/c Ratio			0.43			0.39			0.09	0.47	0.02	
Uniform Delay, d1			7.5			7.2			20.6	22.5	20.3	
Progression Factor			1.11			1.00			1.00	1.00	1.00	
Incremental Delay, d2			1.4			1.1			0.3	0.9	0.0	
Delay (s)			9.7			8.3			20.9	23.4	20.4	
Level of Service			A			A			C	C	C	
Approach Delay (s)			9.7			8.3				22.8		
Approach LOS			A			A				C		

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Volume (vph)	6	40	223	42	3	3	4	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0		
Lane Util. Factor		1.00	1.00			1.00		
Frpb, ped/bikes		1.00	0.99			1.00		
Flpb, ped/bikes		0.97	1.00			1.00		
Frt		1.00	0.98			0.91		
Flt Protected		0.95	1.00			0.98		
Satd. Flow (prot)		1713	1805			1667		
Flt Permitted		0.56	1.00			1.00		
Satd. Flow (perm)		1001	1805			1695		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	40	223	42	3	3	4	8
RTOR Reduction (vph)	0	0	11	0	0	0	0	0
Lane Group Flow (vph)	0	46	254	0	0	18	0	0
Confl. Peds. (#/hr)		23		12				
Confl. Bikes (#/hr)				2				
Turn Type	Perm	Perm	NA		Perm	Prot		
Protected Phases			4			9		
Permitted Phases	4	4			9			
Actuated Green, G (s)		13.7	13.7			1.2		
Effective Green, g (s)		13.7	13.7			1.2		
Actuated g/C Ratio		0.21	0.21			0.02		
Clearance Time (s)		4.0	4.0			4.0		
Vehicle Extension (s)		3.0	3.0			3.0		
Lane Grp Cap (vph)		210	380			31		
v/s Ratio Prot			c0.14					
v/s Ratio Perm		0.05				c0.01		
v/c Ratio		0.22	0.67			0.58		
Uniform Delay, d1		21.2	23.6			31.7		
Progression Factor		1.00	1.00			1.00		
Incremental Delay, d2		0.5	4.4			24.7		
Delay (s)		21.8	28.0			56.4		
Level of Service		C	C			E		
Approach Delay (s)			27.1			56.4		
Approach LOS			C			E		

Intersection Summary



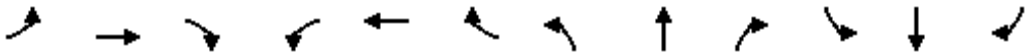
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	197	25	121	333	10	35	206	119	15	245	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	0.99			0.99	
Flpb, ped/bikes	0.98	1.00			1.00		0.99	1.00			1.00	
Frt	1.00	0.98			1.00		1.00	0.95			0.97	
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1742	1824			3469		1760	1743			1796	
Flt Permitted	0.49	1.00			0.80		0.34	1.00			0.95	
Satd. Flow (perm)	890	1824			2825		629	1743			1715	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	33	197	25	121	333	10	35	206	119	15	245	69
RTOR Reduction (vph)	0	3	0	0	1	0	0	40	0	0	18	0
Lane Group Flow (vph)	33	219	0	0	463	0	35	285	0	0	311	0
Confl. Peds. (#/hr)	20		10	10		20	18		7	7		18
Confl. Bikes (#/hr)			2			2						3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	53.8	53.8			53.8		21.2	21.2			21.2	
Effective Green, g (s)	53.8	53.8			53.8		21.2	21.2			21.2	
Actuated g/C Ratio	0.63	0.63			0.63		0.25	0.25			0.25	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	563	1154			1788		156	434			427	
v/s Ratio Prot		0.12						0.16				
v/s Ratio Perm	0.04				c0.16		0.06				c0.18	
v/c Ratio	0.06	0.19			0.26		0.22	0.66			0.73	
Uniform Delay, d1	5.9	6.5			6.8		25.4	28.6			29.3	
Progression Factor	0.64	0.73			1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.3			0.4		0.7	3.6			6.1	
Delay (s)	3.9	5.0			7.2		26.1	32.2			35.4	
Level of Service	A	A			A		C	C			D	
Approach Delay (s)		4.9			7.2			31.6			35.4	
Approach LOS		A			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	357	0	0	437	95	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	3539			3539	3208	
Flt Permitted	1.00			1.00	0.98	
Satd. Flow (perm)	3539			3539	3208	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	357	0	0	437	95	110
RTOR Reduction (vph)	0	0	0	0	96	0
Lane Group Flow (vph)	357	0	0	437	109	0
Confl. Bikes (#/hr)		2				1
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	43.1			43.1	7.4	
Effective Green, g (s)	43.1			43.1	7.4	
Actuated g/C Ratio	0.72			0.72	0.12	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2542			2542	395	
v/s Ratio Prot	0.10			c0.12	c0.03	
v/s Ratio Perm						
v/c Ratio	0.14			0.17	0.27	
Uniform Delay, d1	2.6			2.7	23.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.1	0.4	
Delay (s)	2.8			2.9	24.2	
Level of Service	A			A	C	
Approach Delay (s)	2.8			2.9	24.2	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



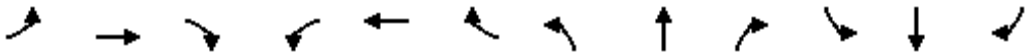
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	650	0	0	488	13	83	154	86	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			1.00				
Frt		1.00			1.00			0.96				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3528			3523			3310				
Flt Permitted		0.91			1.00			0.99				
Satd. Flow (perm)		3220			3523			3310				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	650	0	0	488	13	83	154	86	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	70	0	0	0	0
Lane Group Flow (vph)	0	688	0	0	499	0	0	253	0	0	0	0
Confl. Peds. (#/hr)	31		61	61		31	15		22	22		15
Confl. Bikes (#/hr)			4			7			2			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		45.8			45.8			9.2				
Effective Green, g (s)		45.8			45.8			9.2				
Actuated g/C Ratio		0.70			0.70			0.14				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		2268			2482			468				
v/s Ratio Prot					0.14							
v/s Ratio Perm		c0.21						0.08				
v/c Ratio		0.30			0.20			0.54				
Uniform Delay, d1		3.6			3.3			25.9				
Progression Factor		0.73			1.00			1.00				
Incremental Delay, d2		0.3			0.2			0.6				
Delay (s)		3.0			3.5			26.5				
Level of Service		A			A			C				
Approach Delay (s)		3.0			3.5			26.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	360	159	105	431	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.95		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3362		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3362		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	360	159	105	431	0	0
RTOR Reduction (vph)	87	0	0	0	0	0
Lane Group Flow (vph)	432	0	105	431	0	0
Confl. Peds. (#/hr)		2	2			1
Confl. Bikes (#/hr)		2				
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1512		663	3539		
v/s Ratio Prot	c0.13		c0.06	0.12		
v/s Ratio Perm						
v/c Ratio	0.29		0.16	0.12		
Uniform Delay, d1	6.9		8.3	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.5		0.5	0.1		
Delay (s)	7.4		8.8	0.1		
Level of Service	A		A	A		
Approach Delay (s)	7.4			1.8	0.0	
Approach LOS	A			A	A	

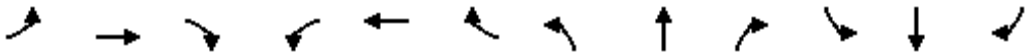
Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



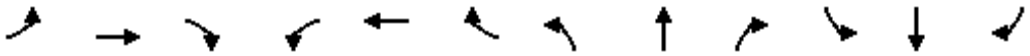
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	682	92	68	503	0	0	0	0	40	188	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		0.99			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.98			1.00						0.98	
Flt Protected		1.00			0.99						0.99	
Satd. Flow (prot)		3458			3514						3391	
Flt Permitted		1.00			0.80						0.99	
Satd. Flow (perm)		3458			2835						3391	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	682	92	68	503	0	0	0	0	40	188	41
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	24	0
Lane Group Flow (vph)	0	760	0	0	571	0	0	0	0	0	245	0
Confl. Peds. (#/hr)	36		71	71		36	18		25	25		18
Confl. Bikes (#/hr)			9			2			1			4
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		45.1			45.1						9.9	
Effective Green, g (s)		45.1			45.1						9.9	
Actuated g/C Ratio		0.69			0.69						0.15	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2399			1967						516	
v/s Ratio Prot		c0.22										
v/s Ratio Perm					0.20						0.07	
v/c Ratio		0.32			0.29						0.48	
Uniform Delay, d1		3.9			3.8						25.2	
Progression Factor		1.00			0.68						1.00	
Incremental Delay, d2		0.3			0.4						0.7	
Delay (s)		4.3			3.0						25.9	
Level of Service		A			A						C	
Approach Delay (s)		4.3			3.0			0.0			25.9	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



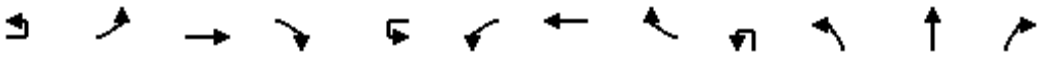
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	312	47	29	321	26	33	305	6	48	307	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	
Frt		0.98			0.99		1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1815			1832		1758	1856		1758	1852	
Flt Permitted		0.98			0.96		0.35	1.00		0.36	1.00	
Satd. Flow (perm)		1785			1761		653	1856		672	1852	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	312	47	29	321	26	33	305	6	48	307	10
RTOR Reduction (vph)	0	5	0	0	3	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	369	0	0	373	0	33	310	0	48	315	0
Confl. Peds. (#/hr)	8		28	28		8	10		10	10		10
Confl. Bikes (#/hr)						1			2			3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		38.8			38.8		16.7	16.7		16.7	16.7	
Effective Green, g (s)		38.8			38.8		16.7	16.7		16.7	16.7	
Actuated g/C Ratio		0.60			0.60		0.26	0.26		0.26	0.26	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1065			1051		167	476		172	475	
v/s Ratio Prot								0.17			c0.17	
v/s Ratio Perm		0.21			c0.21		0.05			0.07		
v/c Ratio		0.35			0.36		0.20	0.65		0.28	0.66	
Uniform Delay, d1		6.7			6.7		18.9	21.5		19.3	21.6	
Progression Factor		1.00			1.27		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			0.9		0.6	3.2		0.9	3.5	
Delay (s)		7.5			9.4		19.5	24.7		20.2	25.1	
Level of Service		A			A		B	C		C	C	
Approach Delay (s)		7.5			9.4			24.2			24.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



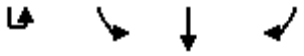
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	168	115	192	194	34	52	363	83	7	397	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00	1.00	0.95	0.95			1.00			0.95	
Frpb, ped/bikes		1.00	0.96	1.00	0.98			0.99			0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	
Frt		1.00	0.85	1.00	0.98			0.98			0.98	
Flt Protected		0.99	1.00	0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1846	1516	1681	1697			1795			3461	
Flt Permitted		0.99	1.00	0.95	1.00			0.92			0.95	
Satd. Flow (perm)		1846	1516	1681	1697			1652			3285	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	37	168	115	192	194	34	52	363	83	7	397	48
RTOR Reduction (vph)	0	0	96	0	7	0	0	8	0	0	10	0
Lane Group Flow (vph)	0	205	19	173	240	0	0	490	0	0	442	0
Confl. Peds. (#/hr)	40		18	18		40	29		52	52		29
Confl. Bikes (#/hr)			2						2			2
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases			2				4			8		
Actuated Green, G (s)		13.7	13.7	14.9	14.9			45.4			45.4	
Effective Green, g (s)		13.7	13.7	14.9	14.9			45.4			45.4	
Actuated g/C Ratio		0.16	0.16	0.18	0.18			0.53			0.53	
Clearance Time (s)		3.0	3.0	3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		297	244	294	297			882			1754	
v/s Ratio Prot		c0.11		0.10	c0.14							
v/s Ratio Perm			0.01					c0.30			0.13	
v/c Ratio		0.69	0.08	0.59	0.81			0.56			0.25	
Uniform Delay, d1		33.6	30.3	32.2	33.7			13.1			10.7	
Progression Factor		1.00	1.00	0.76	0.76			1.00			1.00	
Incremental Delay, d2		6.7	0.1	2.9	14.6			2.5			0.3	
Delay (s)		40.4	30.4	27.3	40.3			15.6			11.0	
Level of Service		D	C	C	D			B			B	
Approach Delay (s)		36.8			35.0			15.6			11.0	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	105.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



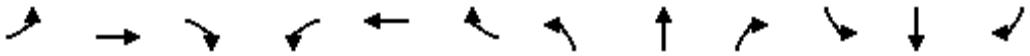
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	15	240	722	166	4	157	596	65	5	146	349	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00		1.00	0.95	
Frpb, ped/bikes		1.00	1.00	0.95		1.00	1.00	0.93		1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	3539	1504		1770	3539	1479		1770	3527	
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		1770	3539	1504		1770	3539	1479		1770	3527	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	240	722	166	4	157	596	65	5	146	349	6
RTOR Reduction (vph)	0	0	0	107	0	0	0	46	0	0	1	0
Lane Group Flow (vph)	0	255	722	59	0	161	596	19	0	151	354	0
Confl. Peds. (#/hr)		42		29		29		42		19		27
Confl. Bikes (#/hr)				7				6				3
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	
Protected Phases	5	5	2		1	1	6		7	7	4	
Permitted Phases				2				6				
Actuated Green, G (s)		21.8	41.5	41.5		13.5	33.2	33.2		13.4	36.1	
Effective Green, g (s)		21.8	41.5	41.5		13.5	33.2	33.2		13.4	36.1	
Actuated g/C Ratio		0.19	0.36	0.36		0.12	0.29	0.29		0.12	0.31	
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	5.0		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		332	1266	538		205	1012	423		204	1097	
v/s Ratio Prot		c0.14	0.20			c0.09	c0.17			c0.09	0.10	
v/s Ratio Perm				0.04				0.01				
v/c Ratio		0.77	0.57	0.11		0.79	0.59	0.04		0.74	0.32	
Uniform Delay, d1		44.7	30.1	24.9		49.8	35.5	29.9		49.6	30.6	
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		9.2	0.4	0.0		16.5	2.5	0.2		11.9	0.1	
Delay (s)		53.9	30.4	24.9		66.3	38.1	30.1		61.5	30.7	
Level of Service		D	C	C		E	D	C		E	C	
Approach Delay (s)			34.9				43.0				39.9	
Approach LOS			C				D				D	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



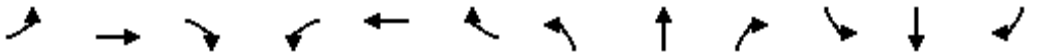
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	3	49	482	262
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	
Lane Util. Factor		1.00	0.95	
Frpb, ped/bikes		1.00	0.98	
Flpb, ped/bikes		1.00	1.00	
Frt		1.00	0.95	
Flt Protected		0.95	1.00	
Satd. Flow (prot)		1770	3298	
Flt Permitted		0.95	1.00	
Satd. Flow (perm)		1770	3298	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	49	482	262
RTOR Reduction (vph)	0	0	59	0
Lane Group Flow (vph)	0	52	685	0
Confl. Peds. (#/hr)		27		19
Confl. Bikes (#/hr)				12
Turn Type	Prot	Prot	NA	
Protected Phases	3	3	8	
Permitted Phases				
Actuated Green, G (s)		6.9	29.6	
Effective Green, g (s)		6.9	29.6	
Actuated g/C Ratio		0.06	0.26	
Clearance Time (s)		4.0	5.0	
Vehicle Extension (s)		2.0	2.0	
Lane Grp Cap (vph)		105	841	
v/s Ratio Prot		0.03	c0.21	
v/s Ratio Perm				
v/c Ratio		0.50	0.81	
Uniform Delay, d1		52.9	40.6	
Progression Factor		1.00	1.00	
Incremental Delay, d2		1.3	5.8	
Delay (s)		54.2	46.4	
Level of Service		D	D	
Approach Delay (s)			46.9	
Approach LOS			D	

Intersection Summary



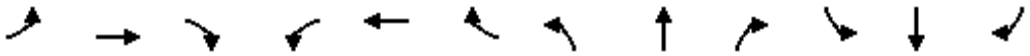
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	176	15	56	110	54	20	469	54	34	635	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.99			1.00	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1650			1586			3116			3159	
Flt Permitted		0.98			0.85			0.93			0.92	
Satd. Flow (perm)		1624			1360			2893			2902	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	13	176	15	56	110	54	20	469	54	34	635	19
RTOR Reduction (vph)	0	5	0	0	20	0	0	10	0	0	3	0
Lane Group Flow (vph)	0	199	0	0	200	0	0	533	0	0	685	0
Confl. Peds. (#/hr)	7		25	25		7	24		28	28		24
Confl. Bikes (#/hr)						2			11			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		13.8			13.8			44.2			44.2	
Effective Green, g (s)		13.8			13.8			44.2			44.2	
Actuated g/C Ratio		0.21			0.21			0.68			0.68	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		344			288			1967			1973	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.15			0.18			c0.24	
v/c Ratio		0.58			0.70			0.27			0.35	
Uniform Delay, d1		23.0			23.7			4.1			4.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.4			7.1			0.3			0.5	
Delay (s)		25.4			30.8			4.4			4.8	
Level of Service		C			C			A			A	
Approach Delay (s)		25.4			30.8			4.4			4.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



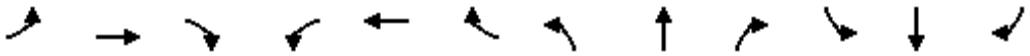
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	568	76	6	359	65	113	538	104	86	668	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.98			0.98		1.00	0.96		1.00	0.98	
Flpb, ped/bikes		1.00			1.00		0.93	1.00		0.92	1.00	
Frt		0.98			0.98		1.00	0.98		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3399			1788		1637	3321		1619	3436	
Flt Permitted		0.92			0.99		0.35	1.00		0.38	1.00	
Satd. Flow (perm)		3134			1772		595	3321		653	3436	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	23	568	76	6	359	65	113	538	104	86	668	54
RTOR Reduction (vph)	0	13	0	0	8	0	0	14	0	0	5	0
Lane Group Flow (vph)	0	654	0	0	422	0	113	628	0	86	717	0
Confl. Peds. (#/hr)	93		135	135		93	156		152	152		156
Confl. Bikes (#/hr)			13			8			4			9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.3			26.3		54.2	54.2		54.2	54.2	
Effective Green, g (s)		26.3			26.3		54.2	54.2		54.2	54.2	
Actuated g/C Ratio		0.29			0.29		0.60	0.60		0.60	0.60	
Clearance Time (s)		4.5			4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		915			517		358	1999		393	2069	
v/s Ratio Prot								0.19			c0.21	
v/s Ratio Perm		0.21			c0.24		0.19			0.13		
v/c Ratio		0.72			0.82		0.32	0.31		0.22	0.35	
Uniform Delay, d1		28.5			29.6		8.8	8.8		8.2	9.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.2			9.1		2.3	0.4		1.3	0.5	
Delay (s)		30.7			38.7		11.1	9.2		9.5	9.5	
Level of Service		C			D		B	A		A	A	
Approach Delay (s)		30.7			38.7			9.5			9.5	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



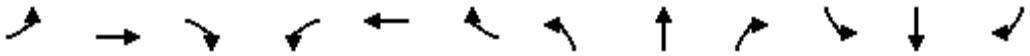
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	208	384	95	34	350	103	134	803	38	173	843	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3434		1770	3419		1770	3515		1770	3483	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3434		1770	3419		1770	3515		1770	3483	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	208	384	95	34	350	103	134	803	38	173	843	99
RTOR Reduction (vph)	0	22	0	0	28	0	0	4	0	0	9	0
Lane Group Flow (vph)	208	457	0	34	425	0	134	837	0	173	933	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.9	28.2		4.1	19.4		10.1	38.9		12.3	41.1	
Effective Green, g (s)	12.9	28.2		4.1	19.4		10.1	38.9		12.3	41.1	
Actuated g/C Ratio	0.13	0.28		0.04	0.19		0.10	0.39		0.12	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.5		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	228	968		72	663		178	1367		217	1431	
v/s Ratio Prot	c0.12	0.13		0.02	c0.12		0.08	0.24		c0.10	c0.27	
v/s Ratio Perm												
v/c Ratio	0.91	0.47		0.47	0.64		0.75	0.61		0.80	0.65	
Uniform Delay, d1	43.0	29.7		46.9	37.1		43.7	24.5		42.6	23.7	
Progression Factor	1.00	1.00		1.00	1.00		0.94	0.95		1.00	1.00	
Incremental Delay, d2	36.0	0.1		1.8	2.2		13.2	1.8		17.0	2.3	
Delay (s)	79.0	29.9		48.7	39.3		54.5	25.0		59.7	26.0	
Level of Service	E	C		D	D		D	C		E	C	
Approach Delay (s)		44.7			40.0			29.1			31.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



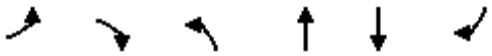
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	497	65	74	376	103	95	856	134	82	862	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.98			0.97		1.00	0.98		1.00	0.99	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3469			3417		1770	3467		1770	3513	
Flt Permitted		0.77			0.65		0.28	1.00		0.25	1.00	
Satd. Flow (perm)		2691			2227		514	3467		461	3513	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	49	497	65	74	376	103	95	856	134	82	862	45
RTOR Reduction (vph)	0	10	0	0	21	0	0	11	0	0	3	0
Lane Group Flow (vph)	0	601	0	0	532	0	95	979	0	82	904	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0		65.5	65.5		65.5	65.5	
Effective Green, g (s)		26.0			26.0		65.5	65.5		65.5	65.5	
Actuated g/C Ratio		0.26			0.26		0.66	0.66		0.66	0.66	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		2.0			2.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		699			579		336	2270		301	2301	
v/s Ratio Prot								c0.28			0.26	
v/s Ratio Perm		0.22			c0.24		0.18			0.18		
v/c Ratio		0.86			0.92		0.28	0.43		0.27	0.39	
Uniform Delay, d1		35.3			36.0		7.3	8.3		7.2	8.0	
Progression Factor		1.00			1.00		1.00	1.00		1.02	1.11	
Incremental Delay, d2		10.2			19.2		2.1	0.6		1.8	0.4	
Delay (s)		45.5			55.2		9.4	8.9		9.2	9.3	
Level of Service		D			E		A	A		A	A	
Approach Delay (s)		45.5			55.2			8.9			9.3	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	221	25	84	211	77	28	742	102	76	891	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.99			0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1819			1774		1765	3448		1750	3481	
Flt Permitted		0.88			0.82		0.24	1.00		0.29	1.00	
Satd. Flow (perm)		1613			1463		448	3448		542	3481	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	45	221	25	84	211	77	28	742	102	76	891	86
RTOR Reduction (vph)	0	6	0	0	15	0	0	14	0	0	9	0
Lane Group Flow (vph)	0	285	0	0	357	0	28	830	0	76	968	0
Confl. Peds. (#/hr)	15		41	41		15	11		43	43		11
Confl. Bikes (#/hr)			2			3			11			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.2			18.2		35.2	35.2		35.2	35.2	
Effective Green, g (s)		18.2			18.2		35.2	35.2		35.2	35.2	
Actuated g/C Ratio		0.29			0.29		0.56	0.56		0.56	0.56	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		463			419		248	1914		300	1932	
v/s Ratio Prot								0.24			c0.28	
v/s Ratio Perm		0.18			c0.24		0.06			0.14		
v/c Ratio		0.62			0.85		0.11	0.43		0.25	0.50	
Uniform Delay, d1		19.6			21.3		6.7	8.3		7.3	8.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.7			14.8		0.1	0.1		0.2	0.1	
Delay (s)		21.3			36.1		6.8	8.3		7.5	8.8	
Level of Service		C			D		A	A		A	A	
Approach Delay (s)		21.3			36.1			8.3			8.7	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	63.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



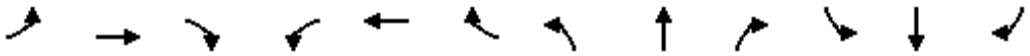
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	176	250	186	684	790	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3418	
Flt Permitted	0.95	1.00	0.23	1.00	1.00	
Satd. Flow (perm)	1770	1583	424	3539	3418	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	176	250	186	684	790	122
RTOR Reduction (vph)	0	13	0	0	9	0
Lane Group Flow (vph)	176	237	186	684	903	0
Confl. Peds. (#/hr)	19					76
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	10.9	20.2	37.6	28.3	28.6	
Effective Green, g (s)	10.9	20.2	37.6	28.3	28.6	
Actuated g/C Ratio	0.19	0.34	0.64	0.48	0.49	
Clearance Time (s)	4.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	3.0	3.0	2.0	2.0	
Lane Grp Cap (vph)	328	543	484	1703	1662	
v/s Ratio Prot	c0.10	c0.07	0.06	0.19	c0.26	
v/s Ratio Perm		0.08	0.18			
v/c Ratio	0.54	0.44	0.38	0.40	0.54	
Uniform Delay, d1	21.7	14.9	5.0	9.8	10.5	
Progression Factor	1.00	1.00	2.00	0.46	1.00	
Incremental Delay, d2	0.8	0.6	0.5	0.1	0.2	
Delay (s)	22.5	15.5	10.5	4.6	10.7	
Level of Service	C	B	B	A	B	
Approach Delay (s)	18.4			5.8	10.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	58.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

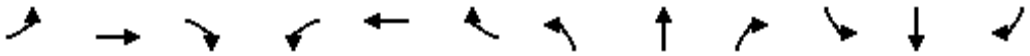
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	108	175	695	94	265	775
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0		3.0	3.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3450		1770	3539
Flt Permitted	0.95	1.00	1.00		0.27	1.00
Satd. Flow (perm)	1770	1583	3450		510	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	108	175	695	94	265	775
RTOR Reduction (vph)	0	28	8	0	0	0
Lane Group Flow (vph)	108	147	781	0	265	775
Confl. Peds. (#/hr)	27			36		
Confl. Bikes (#/hr)				3		
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	10.9	20.5	28.3		38.2	28.6
Effective Green, g (s)	10.9	20.5	28.3		38.2	28.6
Actuated g/C Ratio	0.19	0.35	0.48		0.65	0.49
Clearance Time (s)	4.0	3.0	3.0		3.0	3.0
Vehicle Extension (s)	2.0	3.0	2.0		3.0	2.0
Lane Grp Cap (vph)	328	551	1660		537	1721
v/s Ratio Prot	c0.06	0.04	0.23		c0.08	0.22
v/s Ratio Perm		0.05			c0.24	
v/c Ratio	0.33	0.27	0.47		0.49	0.45
Uniform Delay, d1	20.8	13.8	10.2		4.8	9.9
Progression Factor	1.00	1.00	1.00		2.01	0.56
Incremental Delay, d2	0.2	0.3	0.1		0.7	0.1
Delay (s)	21.0	14.0	10.3		10.4	5.6
Level of Service	C	B	B		B	A
Approach Delay (s)	16.7		10.3			6.8
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	58.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



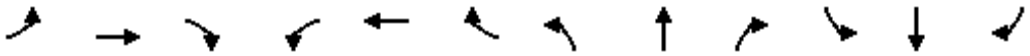
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	187	820	179	207	677	132	130	489	139	136	540	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.91	1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1436	1770	4852		1770	3390		1770	3381	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1436	1770	4852		1770	3390		1770	3381	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	187	820	179	207	677	132	130	489	139	136	540	140
RTOR Reduction (vph)	0	0	132	0	22	0	0	20	0	0	20	0
Lane Group Flow (vph)	187	820	47	207	787	0	130	608	0	136	660	0
Confl. Peds. (#/hr)			62			96			34			56
Confl. Bikes (#/hr)			7			9			2			12
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8									
Actuated Green, G (s)	15.9	24.9	24.9	16.5	26.0		13.0	25.7		13.4	26.1	
Effective Green, g (s)	15.9	24.9	24.9	16.5	26.0		13.0	25.7		13.4	26.1	
Actuated g/C Ratio	0.17	0.26	0.26	0.17	0.27		0.14	0.27		0.14	0.27	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	294	1325	374	305	1320		240	912		248	924	
v/s Ratio Prot	0.11	0.16		c0.12	c0.16		0.07	0.18		c0.08	c0.20	
v/s Ratio Perm			0.03									
v/c Ratio	0.64	0.62	0.12	0.68	0.60		0.54	0.67		0.55	0.71	
Uniform Delay, d1	37.1	31.1	27.0	37.0	30.2		38.5	31.1		38.2	31.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.5	0.9	0.2	5.9	0.7		2.5	1.9		2.5	2.6	
Delay (s)	41.6	32.0	27.1	42.9	30.9		41.0	32.9		40.7	34.0	
Level of Service	D	C	C	D	C		D	C		D	C	
Approach Delay (s)		32.8			33.4			34.3			35.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	95.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



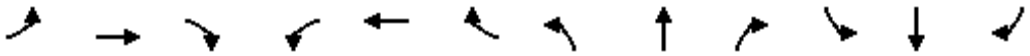
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	338	735	206	144	376	141	109	496	174	311	621	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.91	1.00	1.00	0.94	1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3355		1770	3539	1448	1770	3539	1494	1770	3350	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3355		1770	3539	1448	1770	3539	1494	1770	3350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	338	735	206	144	376	141	109	496	174	311	621	163
RTOR Reduction (vph)	0	20	0	0	0	112	0	0	99	0	17	0
Lane Group Flow (vph)	338	921	0	144	376	29	109	496	75	311	767	0
Confl. Peds. (#/hr)			39			38			19			48
Confl. Bikes (#/hr)			6						8			8
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	25.0	33.1		13.9	22.0	22.0	12.0	21.9	21.9	20.3	30.2	
Effective Green, g (s)	25.0	33.1		13.9	22.0	22.0	12.0	21.9	21.9	20.3	30.2	
Actuated g/C Ratio	0.24	0.31		0.13	0.21	0.21	0.11	0.21	0.21	0.19	0.29	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	420	1055		233	740	302	201	736	311	341	961	
v/s Ratio Prot	c0.19	c0.27		0.08	0.11		0.06	0.14		c0.18	c0.23	
v/s Ratio Perm						0.02			0.05			
v/c Ratio	0.80	0.87		0.62	0.51	0.10	0.54	0.67	0.24	0.91	0.80	
Uniform Delay, d1	37.8	34.1		43.1	36.8	33.6	44.0	38.4	34.7	41.6	34.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.7	8.1		4.8	0.6	0.1	3.0	2.4	0.4	27.6	4.7	
Delay (s)	48.5	42.2		48.0	37.4	33.7	47.0	40.8	35.1	69.2	39.4	
Level of Service	D	D		D	D	C	D	D	D	E	D	
Approach Delay (s)		43.9			38.9			40.4			47.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	105.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



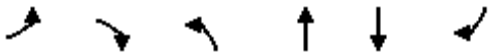
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	585	241	25	260	42	255	472	82	64	494	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1763	3539	1521	1752	3457		1770	3443		1770	3486	
Flt Permitted	0.57	1.00	1.00	0.33	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1054	3539	1521	609	3457		1770	3443		1770	3486	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	108	585	241	25	260	42	255	472	82	64	494	43
RTOR Reduction (vph)	0	0	166	0	17	0	0	14	0	0	8	0
Lane Group Flow (vph)	108	585	75	25	285	0	255	540	0	64	529	0
Confl. Peds. (#/hr)	8		35	35		8			29			22
Confl. Bikes (#/hr)			5						5			12
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	18.2	18.2	18.2	18.2	18.2		13.4	23.3		4.8	14.7	
Effective Green, g (s)	18.2	18.2	18.2	18.2	18.2		13.4	23.3		4.8	14.7	
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31		0.23	0.40		0.08	0.25	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	329	1104	474	190	1079		406	1376		145	878	
v/s Ratio Prot		c0.17			0.08		c0.14	0.16		0.04	c0.15	
v/s Ratio Perm	0.10		0.05	0.04								
v/c Ratio	0.33	0.53	0.16	0.13	0.26		0.63	0.39		0.44	0.60	
Uniform Delay, d1	15.4	16.5	14.5	14.4	15.0		20.2	12.5		25.5	19.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.5	0.2	0.3	0.1		3.0	0.2		2.1	1.2	
Delay (s)	16.0	17.0	14.7	14.7	15.2		23.2	12.6		27.6	20.4	
Level of Service	B	B	B	B	B		C	B		C	C	
Approach Delay (s)		16.3			15.1			16.0			21.2	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	58.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



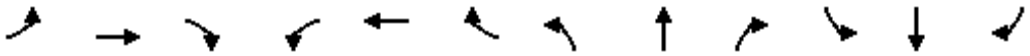
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	141	30	192	95	171	42	541	81	179	504	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.90		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1729	1808		1762	1632		1754	3453		1759	3459	
Flt Permitted	0.57	1.00		0.65	1.00		0.43	1.00		0.40	1.00	
Satd. Flow (perm)	1032	1808		1204	1632		792	3453		737	3459	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	141	30	192	95	171	42	541	81	179	504	67
RTOR Reduction (vph)	0	8	0	0	67	0	0	19	0	0	16	0
Lane Group Flow (vph)	97	163	0	192	199	0	42	603	0	179	555	0
Confl. Peds. (#/hr)	70		11	11		70	25		18	18		25
Confl. Bikes (#/hr)			2			3			4			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.7	13.7		13.7	13.7		18.8	18.8		18.8	18.8	
Effective Green, g (s)	13.7	13.7		13.7	13.7		18.8	18.8		18.8	18.8	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	349	611		407	552		367	1602		342	1605	
v/s Ratio Prot		0.09			0.12			0.17			0.16	
v/s Ratio Perm	0.09			c0.16			0.05			c0.24		
v/c Ratio	0.28	0.27		0.47	0.36		0.11	0.38		0.52	0.35	
Uniform Delay, d1	9.8	9.7		10.6	10.1		6.1	7.0		7.7	6.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.2		0.9	0.4		0.1	0.1		1.4	0.1	
Delay (s)	10.2	10.0		11.4	10.5		6.3	7.2		9.1	7.1	
Level of Service	B	A		B	B		A	A		A	A	
Approach Delay (s)		10.1			10.9			7.1			7.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	40.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	52	539	278	501	508	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3489	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3489	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	52	539	278	501	508	47
RTOR Reduction (vph)	0	216	0	0	6	0
Lane Group Flow (vph)	52	323	278	501	549	0
Confl. Peds. (#/hr)	14					5
Confl. Bikes (#/hr)						4
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	7.7	26.5	14.8	34.4	15.6	
Effective Green, g (s)	7.7	26.5	14.8	34.4	15.6	
Actuated g/C Ratio	0.15	0.53	0.30	0.69	0.31	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	272	1474	522	2429	1086	
v/s Ratio Prot	0.03	c0.12	c0.16	0.14	c0.16	
v/s Ratio Perm						
v/c Ratio	0.19	0.22	0.53	0.21	0.51	
Uniform Delay, d1	18.5	6.3	14.8	2.9	14.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.1	1.0	0.0	0.4	
Delay (s)	18.8	6.4	15.8	2.9	14.5	
Level of Service	B	A	B	A	B	
Approach Delay (s)	7.5			7.5	14.5	
Approach LOS	A			A	B	

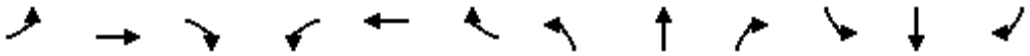
Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	50.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	311	77	39	173	9	31	305	58	18	478	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.97	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1794			1832			3425			3395	
Flt Permitted		0.92			0.90			0.89			0.94	
Satd. Flow (perm)		1663			1667			3073			3199	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	72	311	77	39	173	9	31	305	58	18	478	104
RTOR Reduction (vph)	0	11	0	0	2	0	0	22	0	0	27	0
Lane Group Flow (vph)	0	449	0	0	219	0	0	372	0	0	573	0
Confl. Peds. (#/hr)	17		24	24		17	52		12	12		52
Confl. Bikes (#/hr)			7						2			10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			33.0			33.0	
Effective Green, g (s)		25.0			25.0			33.0			33.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
Clearance Time (s)		3.5			3.5			3.5			3.5	
Lane Grp Cap (vph)		639			641			1560			1624	
v/s Ratio Prot												
v/s Ratio Perm		c0.27			0.13			0.12			c0.18	
v/c Ratio		0.70			0.34			0.24			0.35	
Uniform Delay, d1		16.9			14.2			9.0			9.6	
Progression Factor		0.35			1.00			1.00			1.00	
Incremental Delay, d2		5.3			1.4			0.4			0.6	
Delay (s)		11.2			15.6			9.3			10.2	
Level of Service		B			B			A			B	
Approach Delay (s)		11.2			15.6			9.3			10.2	
Approach LOS		B			B			A			B	

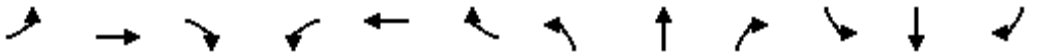
Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	461	0	0	479	62	175	345	224	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.91		0.91	0.91				
Frpb, ped/bikes		1.00			1.00		1.00	0.99				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.98		1.00	0.94				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5083			4998		1610	3165				
Flt Permitted		0.93			1.00		0.95	1.00				
Satd. Flow (perm)		4753			4998		1610	3165				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	461	0	0	479	62	175	345	224	0	0	0
RTOR Reduction (vph)	0	0	0	0	35	0	0	69	0	0	0	0
Lane Group Flow (vph)	0	465	0	0	506	0	157	518	0	0	0	0
Confl. Peds. (#/hr)									11			
Confl. Bikes (#/hr)									7			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		12.6			12.6		44.9	44.9				
Effective Green, g (s)		12.6			12.6		44.9	44.9				
Actuated g/C Ratio		0.19			0.19		0.69	0.69				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		921			968		1112	2186				
v/s Ratio Prot					c0.10							
v/s Ratio Perm		0.10					0.10	0.16				
v/c Ratio		0.50			0.52		0.14	0.24				
Uniform Delay, d1		23.4			23.5		3.4	3.7				
Progression Factor		1.42			0.39		1.00	1.00				
Incremental Delay, d2		0.4			0.5		0.3	0.3				
Delay (s)		33.6			9.7		3.7	4.0				
Level of Service		C			A		A	A				
Approach Delay (s)		33.6			9.7			3.9			0.0	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	436	28	31	416	5	143	396	69	0	804	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.91	1.00
Frt	1.00	0.99			1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1846			3521		1770	4972			5085	1583
Flt Permitted	0.35	1.00			0.89		0.95	1.00			1.00	1.00
Satd. Flow (perm)	648	1846			3153		1770	4972			5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	436	28	31	416	5	143	396	69	0	804	494
RTOR Reduction (vph)	0	2	0	0	1	0	0	21	0	0	0	285
Lane Group Flow (vph)	300	462	0	0	451	0	143	444	0	0	804	209
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Effective Green, g (s)	53.5	53.5			35.0		15.0	54.0			35.0	35.0
Actuated g/C Ratio	0.45	0.45			0.30		0.13	0.46			0.30	0.30
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	434	833			931		224	2265			1501	467
v/s Ratio Prot	c0.09	0.25					c0.08	0.09			c0.16	
v/s Ratio Perm	c0.22				0.14							0.13
v/c Ratio	0.69	0.55			0.48		0.64	0.20			0.54	0.45
Uniform Delay, d1	22.3	23.8			34.3		49.2	19.3			34.9	33.9
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	8.7	2.7			1.8		13.1	0.2			1.4	3.1
Delay (s)	31.0	26.4			36.1		62.3	19.5			36.3	37.0
Level of Service	C	C			D		E	B			D	D
Approach Delay (s)		28.2			36.1			29.5			36.6	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	18.5
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

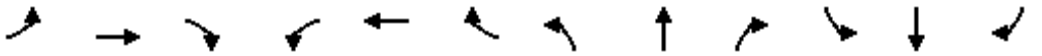
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	3	3	3	85	1	78	3	1	519	129	10	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		1.00			0.99				0.99			1.00
Flpb, ped/bikes		1.00			1.00				1.00			1.00
Frt		0.95			0.94				0.97			1.00
Flt Protected		0.98			0.97				1.00			0.95
Satd. Flow (prot)		1742			1687				4876			1768
Flt Permitted		0.93			0.83				0.94			0.36
Satd. Flow (perm)		1655			1441				4567			665
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	3	3	85	1	78	3	1	519	129	10	152
RTOR Reduction (vph)	0	3	0	0	41	0	0	0	31	0	0	0
Lane Group Flow (vph)	0	6	0	0	123	0	0	0	621	0	0	162
Confl. Peds. (#/hr)			1	1						13		3
Confl. Bikes (#/hr)						1						
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		10.8			10.8				48.1			59.3
Effective Green, g (s)		10.8			10.8				48.1			59.3
Actuated g/C Ratio		0.14			0.14				0.61			0.75
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		225			196				2777			591
v/s Ratio Prot												c0.02
v/s Ratio Perm		0.00			c0.09				0.14			c0.18
v/c Ratio		0.03			0.63				0.22			0.27
Uniform Delay, d1		29.6			32.2				7.0			2.9
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			4.4				0.2			0.1
Delay (s)		29.6			36.7				7.2			3.0
Level of Service		C			D				A			A
Approach Delay (s)		29.6			36.7				7.2			
Approach LOS		C			D				A			

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	79.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

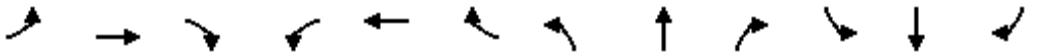
Movement	SBT	SBR
Lane Configurations		
Volume (vph)	819	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	5085	
Flt Permitted	1.00	
Satd. Flow (perm)	5085	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	819	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	819	0
Confl. Peds. (#/hr)		1
Confl. Bikes (#/hr)		8
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	59.3	
Effective Green, g (s)	59.3	
Actuated g/C Ratio	0.75	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	3812	
v/s Ratio Prot	0.16	
v/s Ratio Perm		
v/c Ratio	0.21	
Uniform Delay, d1	3.0	
Progression Factor	1.00	
Incremental Delay, d2	0.1	
Delay (s)	3.1	
Level of Service	A	
Approach Delay (s)	3.1	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	191	262	212	71	188	48	91	385	93	48	660	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.93			0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1738			3417		1770	3436		1770	3539	1583
Flt Permitted	0.56	1.00			0.70		0.22	1.00		0.48	1.00	1.00
Satd. Flow (perm)	1052	1738			2406		411	3436		892	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	191	262	212	71	188	48	91	385	93	48	660	169
RTOR Reduction (vph)	0	34	0	0	18	0	0	24	0	0	0	103
Lane Group Flow (vph)	191	440	0	0	289	0	91	454	0	48	660	66
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	27.1	27.1			27.1		25.9	25.9		26.7	24.7	24.7
Effective Green, g (s)	27.1	27.1			27.1		25.9	25.9		26.7	24.7	24.7
Actuated g/C Ratio	0.38	0.38			0.38		0.37	0.37		0.38	0.35	0.35
Clearance Time (s)	5.0	5.0			5.0		3.0	5.0		3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	403	666			922		263	1258		395	1236	553
v/s Ratio Prot		c0.25					0.03	c0.13		0.01	c0.19	
v/s Ratio Perm	0.18				0.12		0.10			0.04		0.04
v/c Ratio	0.47	0.66			0.31		0.35	0.36		0.12	0.53	0.12
Uniform Delay, d1	16.4	18.0			15.3		15.6	16.4		14.5	18.4	15.6
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.0	5.1			0.9		0.3	0.8		0.1	1.7	0.4
Delay (s)	20.4	23.1			16.2		15.9	17.2		14.5	20.1	16.0
Level of Service	C	C			B		B	B		B	C	B
Approach Delay (s)		22.3			16.2			17.0			19.0	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	502	135	54	406	36	107	161	47	153	287	565
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	0.99			0.99		1.00	0.97		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97			0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3258			3440		1770	3332		1770	1863	2787
Flt Permitted	0.95	0.94			0.81		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	3067			2799		1770	3332		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	287	502	135	54	406	36	107	161	47	153	287	565
RTOR Reduction (vph)	0	19	0	0	5	0	0	27	0	0	0	412
Lane Group Flow (vph)	258	647	0	0	491	0	107	181	0	153	287	153
Confl. Peds. (#/hr)			19			134			77			
Confl. Bikes (#/hr)			1			14			8			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	19.8	47.1			23.3		7.8	21.5		11.2	24.9	24.9
Effective Green, g (s)	19.8	47.1			23.3		7.8	21.5		11.2	24.9	24.9
Actuated g/C Ratio	0.22	0.51			0.25		0.08	0.23		0.12	0.27	0.27
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	347	1614			710		150	780		215	505	755
v/s Ratio Prot	c0.16	0.09					0.06	0.05		c0.09	c0.15	
v/s Ratio Perm		0.12			c0.18							0.05
v/c Ratio	0.74	0.40			0.69		0.71	0.23		0.71	0.57	0.20
Uniform Delay, d1	33.6	13.7			31.0		40.9	28.5		38.7	28.8	25.8
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.4	0.2			2.9		14.8	0.2		10.6	1.5	0.1
Delay (s)	42.0	13.9			33.9		55.7	28.6		49.3	30.3	25.9
Level of Service	D	B			C		E	C		D	C	C
Approach Delay (s)		21.7			33.9			37.8			30.7	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	91.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

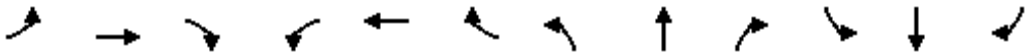
Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	555	62	7	532	50	108	18	6	66	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.98			1.00		0.98		0.86		0.85
Flt Protected	1.00			1.00		0.99		1.00		1.00
Satd. Flow (prot)	3486			3537		4937		1600		1504
Flt Permitted	1.00			0.95		0.99		1.00		1.00
Satd. Flow (perm)	3486			3354		4937		1600		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	555	62	7	532	50	108	18	6	66	11
RTOR Reduction (vph)	9	0	0	0	0	0	0	47	0	8
Lane Group Flow (vph)	608	0	0	539	0	176	0	26	0	2
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1394			1341		1507		286		269
v/s Ratio Prot	c0.17							c0.02		
v/s Ratio Perm				0.16		0.04				0.00
v/c Ratio	0.44			0.40		0.12		0.09		0.01
Uniform Delay, d1	20.7			20.4		23.8		32.6		32.1
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	1.0			0.9		0.2		0.6		0.0
Delay (s)	21.7			21.3		23.9		33.2		32.1
Level of Service	C			C		C		C		C
Approach Delay (s)	21.7			21.3		23.9		33.1		
Approach LOS	C			C		C		C		

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	351	21	10	164	35	21	97	17	87	192	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1838			1805			1809			1776	
Flt Permitted		0.96			0.98			0.93			0.89	
Satd. Flow (perm)		1774			1768			1701			1609	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	351	21	10	164	35	21	97	17	87	192	67
RTOR Reduction (vph)	0	3	0	0	11	0	0	8	0	0	13	0
Lane Group Flow (vph)	0	404	0	0	198	0	0	127	0	0	333	0
Confl. Peds. (#/hr)	7		3	3		7	10		4	4		10
Confl. Bikes (#/hr)			8			8			6			17
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		627			625			863			816	
v/s Ratio Prot												
v/s Ratio Perm		c0.23			0.11			0.07			c0.21	
v/c Ratio		0.64			0.32			0.15			0.41	
Uniform Delay, d1		17.6			15.3			8.5			9.9	
Progression Factor		1.01			1.13			1.00			1.00	
Incremental Delay, d2		4.6			1.3			0.4			1.5	
Delay (s)		22.4			18.6			8.9			11.4	
Level of Service		C			B			A			B	
Approach Delay (s)		22.4			18.6			8.9			11.4	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



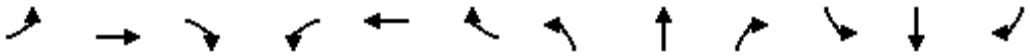
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	295	60	29	235	76	50	241	3	115	822	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1813			1799		1770	5076		1770	4956	
Flt Permitted		0.90			0.95		0.22	1.00		0.59	1.00	
Satd. Flow (perm)		1651			1717		401	5076		1107	4956	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	295	60	29	235	76	50	241	3	115	822	167
RTOR Reduction (vph)	0	9	0	0	16	0	0	2	0	0	47	0
Lane Group Flow (vph)	0	411	0	0	324	0	50	242	0	115	942	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		787			818		160	2030		442	1982	
v/s Ratio Prot								0.05			c0.19	
v/s Ratio Perm		c0.25			0.19		0.12			0.10		
v/c Ratio		0.52			0.40		0.31	0.12		0.26	0.48	
Uniform Delay, d1		11.8			11.0		13.4	12.3		13.1	14.4	
Progression Factor		1.00			0.85		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.5			1.4		5.0	0.1		1.4	0.8	
Delay (s)		14.3			10.8		18.4	12.4		14.5	15.3	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.3			10.8			13.4			15.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

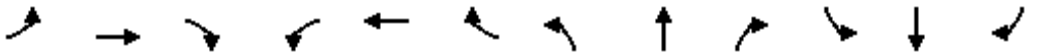
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	260	410	236	416	0	0	0	192	370	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frt	1.00	0.85	1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3525	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3525	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	260	410	236	416	0	0	0	192	370	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	260	410	236	416	0	0	0	192	378	0
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	14.2	29.0	9.8	65.0				26.0	26.0	
Effective Green, g (s)	14.2	29.0	9.8	65.0				26.0	26.0	
Actuated g/C Ratio	0.22	0.45	0.15	1.00				0.40	0.40	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	386	1610	517	1583				708	1410	
v/s Ratio Prot	c0.15	0.11						0.11	0.11	
v/s Ratio Perm			c0.07	c0.26						
v/c Ratio	0.67	0.25	0.46	0.26				0.27	0.27	
Uniform Delay, d1	23.3	11.2	25.2	0.0				13.1	13.1	
Progression Factor	1.69	0.56	1.00	1.00				1.00	1.00	
Incremental Delay, d2	4.5	0.1	0.6	0.4				0.9	0.5	
Delay (s)	43.8	6.4	25.8	0.4				14.1	13.6	
Level of Service	D	A	C	A				B	B	
Approach Delay (s)	20.9		9.6			0.0			13.7	
Approach LOS	C		A			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	537	154	453	472	3	229	0	377	4	17	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Lane Util. Factor		0.95		0.91	0.91			1.00	1.00		1.00	
Frt		0.97		1.00	1.00			1.00	0.85		0.93	
Flt Protected		1.00		0.95	0.99			0.95	1.00		1.00	
Satd. Flow (prot)		3421		1610	3348			1770	1583		1729	
Flt Permitted		0.95		0.95	0.61			0.73	1.00		0.97	
Satd. Flow (perm)		3261		1610	2078			1359	1583		1689	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	537	154	453	472	3	229	0	377	4	17	21
RTOR Reduction (vph)	0	25	0	0	0	0	0	0	301	0	17	0
Lane Group Flow (vph)	0	669	0	304	624	0	0	229	76	0	25	0
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		45.1		22.3	71.4			20.1	20.1		20.1	
Effective Green, g (s)		45.1		22.3	71.4			20.1	20.1		20.1	
Actuated g/C Ratio		0.45		0.22	0.71			0.20	0.20		0.20	
Clearance Time (s)		4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1470		359	1766			273	318		339	
v/s Ratio Prot				c0.19	0.08							
v/s Ratio Perm		c0.21			0.17			c0.17	0.05		0.01	
v/c Ratio		0.46		0.85	0.35			0.84	0.24		0.07	
Uniform Delay, d1		19.0		37.2	5.5			38.4	33.5		32.4	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.0		16.6	0.1			19.7	0.4		0.1	
Delay (s)		20.0		53.8	5.6			58.0	33.9		32.5	
Level of Service		B		D	A			E	C		C	
Approach Delay (s)		20.0			21.4			43.0			32.5	
Approach LOS		B			C			D			C	

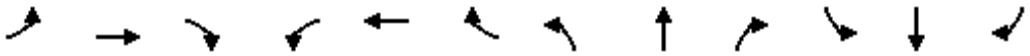
Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	497	84	57	408	70	106	549	82	44	589	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frt		0.98			0.98			0.98			1.00	0.85
Flt Protected		0.99			0.99			0.99			1.00	1.00
Satd. Flow (prot)		3449			3451			3455			3527	1583
Flt Permitted		0.79			0.82			0.74			0.86	1.00
Satd. Flow (perm)		2730			2856			2579			3053	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	96	497	84	57	408	70	106	549	82	44	589	127
RTOR Reduction (vph)	0	15	0	0	16	0	0	13	0	0	0	71
Lane Group Flow (vph)	0	662	0	0	519	0	0	724	0	0	633	56
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		30.0			30.0			32.0			32.0	32.0
Effective Green, g (s)		30.0			30.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42			0.42			0.44			0.44	0.44
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)		1137			1190			1146			1356	703
v/s Ratio Prot												
v/s Ratio Perm		c0.24			0.18			c0.28			0.21	0.04
v/c Ratio		0.58			0.44			0.63			0.47	0.08
Uniform Delay, d1		16.2			15.0			15.4			14.0	11.5
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.2			1.2			2.6			1.2	0.2
Delay (s)		18.4			16.1			18.1			15.2	11.7
Level of Service		B			B			B			B	B
Approach Delay (s)		18.4			16.1			18.1			14.6	
Approach LOS		B			B			B			B	

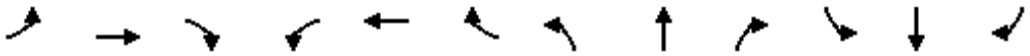
Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	242	29	81	118	28	15	532	33	43	890	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.99			0.98		1.00	0.99			0.99	
Flt Protected		0.99			0.98		0.95	1.00			1.00	
Satd. Flow (prot)		1816			1795		1767	3503			3502	
Flt Permitted		0.81			0.72		0.24	1.00			0.91	
Satd. Flow (perm)		1499			1315		448	3503			3198	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	99	242	29	81	118	28	15	532	33	43	890	46
RTOR Reduction (vph)	0	4	0	0	7	0	0	5	0	0	4	0
Lane Group Flow (vph)	0	366	0	0	220	0	15	560	0	0	975	0
Confl. Peds. (#/hr)	3		2	2		3	7		4	4		7
Confl. Bikes (#/hr)			2			3			5			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		19.1			20.1		41.3	41.3			41.3	
Effective Green, g (s)		19.1			20.1		41.3	41.3			41.3	
Actuated g/C Ratio		0.28			0.29		0.60	0.60			0.60	
Clearance Time (s)		5.0			4.0		4.0	4.0			4.0	
Vehicle Extension (s)		1.0			1.0		1.0	1.0			1.0	
Lane Grp Cap (vph)		412			380		266	2084			1903	
v/s Ratio Prot								0.16				
v/s Ratio Perm		c0.24			0.17		0.03				c0.30	
v/c Ratio		0.89			0.58		0.06	0.27			0.51	
Uniform Delay, d1		24.1			21.0		5.9	6.8			8.2	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		19.5			1.3		0.4	0.3			1.0	
Delay (s)		43.6			22.4		6.3	7.1			9.2	
Level of Service		D			C		A	A			A	
Approach Delay (s)		43.6			22.4			7.1			9.2	
Approach LOS		D			C			A			A	

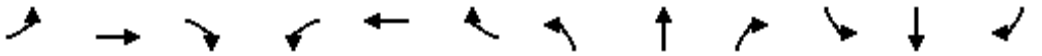
Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	4	7	246	1	67	5	554	245	116	909	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.97		1.00	0.95		1.00	1.00	
Flt Protected		0.99			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1689			1719		1751	3344		1752	3504	
Flt Permitted		0.94			0.76		0.27	1.00		0.31	1.00	
Satd. Flow (perm)		1611			1363		496	3344		579	3504	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	4	7	246	1	67	5	554	245	116	909	2
RTOR Reduction (vph)	0	5	0	0	14	0	0	54	0	0	0	0
Lane Group Flow (vph)	0	9	0	0	300	0	5	745	0	116	911	0
Confl. Peds. (#/hr)	2					2	2					2
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.8			18.8		40.8	40.8		40.8	40.8	
Effective Green, g (s)		18.8			18.8		40.8	40.8		40.8	40.8	
Actuated g/C Ratio		0.28			0.28		0.60	0.60		0.60	0.60	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		448			379		299	2018		349	2114	
v/s Ratio Prot								0.22			c0.26	
v/s Ratio Perm		0.01			c0.22		0.01			0.20		
v/c Ratio		0.02			0.79		0.02	0.37		0.33	0.43	
Uniform Delay, d1		17.7			22.6		5.4	6.8		6.6	7.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			10.0		0.1	0.5		2.5	0.6	
Delay (s)		17.7			32.6		5.5	7.4		9.2	7.8	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		17.7			32.6			7.3			8.0	
Approach LOS		B			C			A			A	

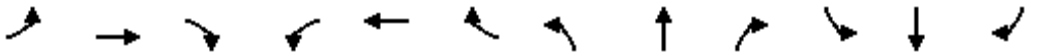
Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	67.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



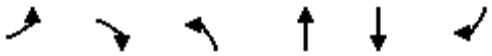
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	233	404	379	131	382	85	249	625	183	72	705	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1812		1770	3419		1770	3423	
Flt Permitted	0.29	1.00	1.00	0.36	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	548	1863	1583	680	1812		1770	3419		1770	3423	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	233	404	379	131	382	85	249	625	183	72	705	198
RTOR Reduction (vph)	0	0	191	0	9	0	0	29	0	0	28	0
Lane Group Flow (vph)	233	404	188	131	458	0	249	779	0	72	875	0
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8								
Actuated Green, G (s)	34.0	34.0	34.0	34.0	34.0		12.0	33.5		6.5	28.0	
Effective Green, g (s)	34.0	34.0	34.0	34.0	34.0		12.0	33.5		6.5	28.0	
Actuated g/C Ratio	0.38	0.38	0.38	0.38	0.38		0.13	0.37		0.07	0.31	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)	205	699	594	255	680		234	1265		127	1059	
v/s Ratio Prot		0.22			0.25		c0.14	0.23		0.04	c0.26	
v/s Ratio Perm	c0.43		0.12	0.19								
v/c Ratio	1.14	0.58	0.32	0.51	0.67		1.06	0.62		0.57	0.83	
Uniform Delay, d1	28.2	22.5	20.0	21.9	23.6		39.2	23.3		40.6	29.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	104.5	0.7	0.1	0.7	2.1		76.8	0.6		3.4	5.1	
Delay (s)	132.7	23.3	20.1	22.6	25.7		116.1	23.9		44.1	34.1	
Level of Service	F	C	C	C	C		F	C		D	C	
Approach Delay (s)		47.2			25.0			45.6			34.8	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	39.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



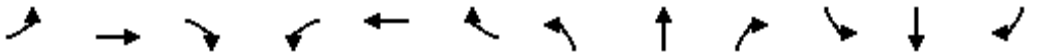
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	30	170	53	60	38	134	761	23	44	1035	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.97		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1768		1770	3524		1770	3464	
Flt Permitted	0.64	1.00	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1187	1863	1583		1607		1770	3524		1770	3464	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	30	170	53	60	38	134	761	23	44	1035	170
RTOR Reduction (vph)	0	0	131	0	14	0	0	2	0	0	12	0
Lane Group Flow (vph)	170	30	39	0	137	0	134	782	0	44	1193	0
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	15.9	15.9	15.9		15.9		7.9	36.7		3.0	31.8	
Effective Green, g (s)	15.9	15.9	15.9		15.9		7.9	36.7		3.0	31.8	
Actuated g/C Ratio	0.23	0.23	0.23		0.23		0.12	0.53		0.04	0.46	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	275	431	366		372		203	1885		77	1605	
v/s Ratio Prot		0.02					c0.08	0.22		0.02	c0.34	
v/s Ratio Perm	c0.14		0.02		0.09							
v/c Ratio	0.62	0.07	0.11		0.37		0.66	0.41		0.57	0.74	
Uniform Delay, d1	23.6	20.6	20.8		22.1		29.1	9.5		32.2	15.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.9	0.0	0.0		0.2		6.1	0.1		6.2	1.7	
Delay (s)	26.5	20.6	20.8		22.4		35.2	9.6		38.4	16.7	
Level of Service	C	C	C		C		D	A		D	B	
Approach Delay (s)		23.4			22.4			13.3			17.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	68.6	Sum of lost time (s)	13.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	184	922	841	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.96	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3398	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3398	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	184	922	841	306
RTOR Reduction (vph)	0	0	0	0	69	0
Lane Group Flow (vph)	0	0	184	922	1078	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			6.0	39.4	25.4	
Effective Green, g (s)			6.0	39.4	25.4	
Actuated g/C Ratio			0.15	1.00	0.64	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			522	3539	2190	
v/s Ratio Prot			0.05	c0.26	c0.32	
v/s Ratio Perm						
v/c Ratio			0.35	0.26	0.49	
Uniform Delay, d1			15.0	0.0	3.6	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			0.4	0.0	0.2	
Delay (s)			15.4	0.0	3.8	
Level of Service			B	A	A	
Approach Delay (s)	0.0			2.6	3.8	
Approach LOS	A			A	A	

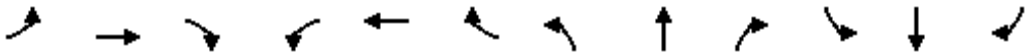
Intersection Summary			
HCM 2000 Control Delay	3.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	39.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	121	123	136	0	255	0	687	142	208	603	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.91			0.97		1.00	1.00	
Flt Protected	0.95	0.98	1.00		0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1741	1583		1670			3448		1770	3539	
Flt Permitted	0.95	0.98	1.00		0.98			1.00		0.24	1.00	
Satd. Flow (perm)	1681	1741	1583		1670			3448		452	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	231	121	123	136	0	255	0	687	142	208	603	0
RTOR Reduction (vph)	0	0	101	0	76	0	0	18	0	0	0	0
Lane Group Flow (vph)	173	179	22	0	315	0	0	811	0	208	603	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	14.3	14.3	14.3		18.5			36.3		36.3	36.3	
Effective Green, g (s)	14.3	14.3	14.3		18.5			36.3		36.3	36.3	
Actuated g/C Ratio	0.18	0.18	0.18		0.23			0.45		0.45	0.45	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	296	306	279		380			1543		202	1584	
v/s Ratio Prot	c0.10	0.10			c0.19			0.24			0.17	
v/s Ratio Perm			0.01							c0.46		
v/c Ratio	0.58	0.58	0.08		0.83			0.53		1.03	0.38	
Uniform Delay, d1	30.7	30.7	27.9		29.8			16.2		22.4	14.9	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	2.9	2.8	0.1		13.9			0.3		71.3	0.2	
Delay (s)	33.6	33.5	28.0		43.7			16.5		93.7	15.1	
Level of Service	C	C	C		D			B		F	B	
Approach Delay (s)		32.1			43.7			16.5			35.2	
Approach LOS		C			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

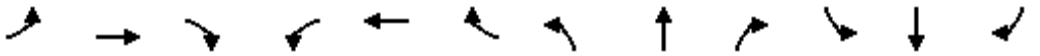
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	67	0	100	0	618	53	134	989	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frpb, ped/bikes					1.00			1.00		1.00	1.00	
Flpb, ped/bikes					1.00			1.00		1.00	1.00	
Frt					0.92			0.99		1.00	1.00	
Flt Protected					0.98			1.00		0.95	1.00	
Satd. Flow (prot)					1678			3491		1770	3539	
Flt Permitted					0.89			1.00		0.95	1.00	
Satd. Flow (perm)					1525			3491		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	67	0	100	0	618	53	134	989	0
RTOR Reduction (vph)	0	0	0	0	69	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	98	0	0	663	0	134	989	0
Confl. Peds. (#/hr)			1	1						3		
Confl. Bikes (#/hr)									2			
Turn Type				Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)					23.0			26.0		14.0	26.0	
Effective Green, g (s)					23.0			26.0		14.0	26.0	
Actuated g/C Ratio					0.31			0.35		0.19	0.35	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)					467			1210		330	1226	
v/s Ratio Prot								0.19		c0.08	c0.28	
v/s Ratio Perm					c0.06							
v/c Ratio					0.21			0.55		0.41	0.81	
Uniform Delay, d1					19.3			19.8		26.8	22.2	
Progression Factor					1.00			0.70		1.00	1.00	
Incremental Delay, d2					1.0			1.6		3.7	5.7	
Delay (s)					20.3			15.4		30.5	28.0	
Level of Service					C			B		C	C	
Approach Delay (s)		0.0			20.3			15.4			28.3	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

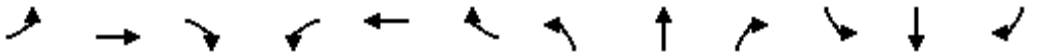
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	264	131	46	166	122	40	458	71	157	786	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.95		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1753			1726		1747	3422		1748	3435	
Flt Permitted		0.78			0.83		0.28	1.00		0.45	1.00	
Satd. Flow (perm)		1381			1442		510	3422		822	3435	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	94	264	131	46	166	122	40	458	71	157	786	93
RTOR Reduction (vph)	0	18	0	0	28	0	0	17	0	0	12	0
Lane Group Flow (vph)	0	471	0	0	306	0	40	512	0	157	867	0
Confl. Peds. (#/hr)	11					11	5		2	2		5
Confl. Bikes (#/hr)			1			2			2			7
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		22.0			22.0		43.0	43.0		43.0	43.0	
Effective Green, g (s)		22.0			22.0		43.0	43.0		43.0	43.0	
Actuated g/C Ratio		0.29			0.29		0.57	0.57		0.57	0.57	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		405			422		292	1961		471	1969	
v/s Ratio Prot								0.15			c0.25	
v/s Ratio Perm		c0.34			0.21		0.08			0.19		
v/c Ratio		1.16			0.73		0.14	0.26		0.33	0.44	
Uniform Delay, d1		26.5			23.8		7.4	8.0		8.4	9.1	
Progression Factor		1.00			1.00		1.00	1.00		3.07	3.20	
Incremental Delay, d2		97.6			6.1		1.0	0.3		1.2	0.4	
Delay (s)		124.1			29.9		8.4	8.4		27.1	29.6	
Level of Service		F			C		A	A		C	C	
Approach Delay (s)		124.1			29.9			8.4			29.3	
Approach LOS		F			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	43.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



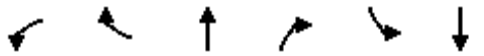
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	771	222	77	682	97	143	209	68	162	626	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1550	1770	3473		1770	3398		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1550	1770	3473		1770	3398		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	771	222	77	682	97	143	209	68	162	626	112
RTOR Reduction (vph)	0	0	99	0	11	0	0	25	0	0	0	71
Lane Group Flow (vph)	120	771	123	77	768	0	143	252	0	162	626	41
Confl. Peds. (#/hr)			6						1			
Confl. Bikes (#/hr)			3									
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	7.0	31.5	31.5	8.9	33.4		11.5	43.6		8.0	40.1	40.1
Effective Green, g (s)	7.0	31.5	31.5	8.9	33.4		11.5	43.6		8.0	40.1	40.1
Actuated g/C Ratio	0.06	0.29	0.29	0.08	0.30		0.10	0.40		0.07	0.36	0.36
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	112	1013	443	143	1054		185	1346		128	1290	577
v/s Ratio Prot	c0.07	0.22		0.04	c0.22		0.08	c0.07		c0.09	c0.18	
v/s Ratio Perm			0.08									0.03
v/c Ratio	1.07	0.76	0.28	0.54	0.73		0.77	0.19		1.27	0.49	0.07
Uniform Delay, d1	51.5	35.8	30.4	48.6	34.2		48.0	21.6		51.0	27.0	22.8
Progression Factor	1.19	0.91	1.10	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	96.3	2.7	0.3	3.9	2.5		18.0	0.3		167.4	1.3	0.2
Delay (s)	157.5	35.2	33.6	52.4	36.8		66.0	22.0		218.4	28.3	23.0
Level of Service	F	D	C	D	D		E	C		F	C	C
Approach Delay (s)		48.1			38.2			36.9			61.9	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	47.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	66	72	508	92	49	541
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	66	72	508	92	49	541
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	922	300			600	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	922	300			600	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	74	90			95	
cM capacity (veh/h)	255	696			973	

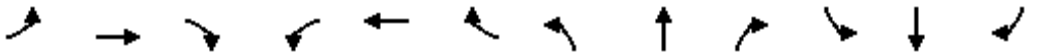
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	138	339	261	229	361
Volume Left	66	0	0	49	0
Volume Right	72	0	92	0	0
cSH	381	1700	1700	973	1700
Volume to Capacity	0.36	0.20	0.15	0.05	0.21
Queue Length 95th (ft)	40	0	0	4	0
Control Delay (s)	19.7	0.0	0.0	2.3	0.0
Lane LOS	C			A	
Approach Delay (s)	19.7	0.0		0.9	
Approach LOS	C				

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		



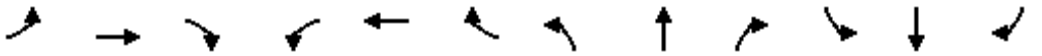
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	128	168	388	296	175	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.92		0.94			1.00
Flt Protected	0.98		1.00			0.98
Satd. Flow (prot)	1684		3309			3485
Flt Permitted	0.98		1.00			0.66
Satd. Flow (perm)	1684		3309			2327
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	168	388	296	175	390
RTOR Reduction (vph)	72	0	160	0	0	0
Lane Group Flow (vph)	224	0	524	0	0	565
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	11.4		16.5			16.5
Effective Green, g (s)	11.4		16.5			16.5
Actuated g/C Ratio	0.32		0.46			0.46
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	534		1520			1069
v/s Ratio Prot	c0.13		0.16			
v/s Ratio Perm						c0.24
v/c Ratio	0.42		0.34			0.53
Uniform Delay, d1	9.6		6.2			6.9
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.5		0.1			0.5
Delay (s)	10.2		6.4			7.4
Level of Service	B		A			A
Approach Delay (s)	10.2		6.4			7.4
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	35.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



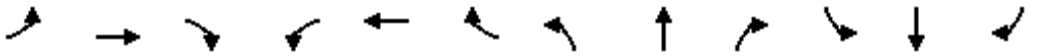
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	829	165	152	685	75	246	435	157	134	503	317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1524	3433	3539	1541	3433	3365		3433	3281	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1524	3433	3539	1541	3433	3365		3433	3281	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	341	829	165	152	685	75	246	435	157	134	503	317
RTOR Reduction (vph)	0	0	55	0	0	55	0	28	0	0	79	0
Lane Group Flow (vph)	341	829	110	152	685	20	246	564	0	134	741	0
Confl. Peds. (#/hr)			23			15			26			28
Confl. Bikes (#/hr)			6			1			2			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	15.3	31.5	31.5	9.9	26.1	26.1	10.8	29.2		9.1	27.5	
Effective Green, g (s)	15.3	31.5	31.5	9.9	26.1	26.1	10.8	29.2		9.1	27.5	
Actuated g/C Ratio	0.16	0.33	0.33	0.10	0.27	0.27	0.11	0.31		0.10	0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	548	1164	501	355	965	420	387	1026		326	942	
v/s Ratio Prot	c0.10	c0.23		0.04	0.19		c0.07	0.17		0.04	c0.23	
v/s Ratio Perm			0.07			0.01						
v/c Ratio	0.62	0.71	0.22	0.43	0.71	0.05	0.64	0.55		0.41	0.79	
Uniform Delay, d1	37.5	28.1	23.2	40.2	31.4	25.6	40.6	27.8		40.8	31.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	2.1	0.2	0.8	2.4	0.0	3.4	0.6		0.8	4.4	
Delay (s)	39.7	30.2	23.4	41.1	33.8	25.7	44.0	28.4		41.6	35.8	
Level of Service	D	C	C	D	C	C	D	C		D	D	
Approach Delay (s)		31.8			34.3			32.9			36.6	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	95.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	186	147	14	103	17	102	566	20	17	579	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1749	1721			1814		1770	3515		1770	3539	1529
Flt Permitted	0.71	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1309	1721			1738		1770	3515		1770	3539	1529
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	182	186	147	14	103	17	102	566	20	17	579	311
RTOR Reduction (vph)	0	27	0	0	5	0	0	2	0	0	0	198
Lane Group Flow (vph)	182	306	0	0	129	0	102	584	0	17	579	113
Confl. Peds. (#/hr)	26		9	9		26	7		18	18		7
Confl. Bikes (#/hr)			9			5			2			3
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	16.9	16.9			16.9		7.1	26.6		1.1	20.6	20.6
Effective Green, g (s)	16.9	16.9			16.9		7.1	26.6		1.1	20.6	20.6
Actuated g/C Ratio	0.30	0.30			0.30		0.13	0.47		0.02	0.36	0.36
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	390	513			518		222	1651		34	1288	556
v/s Ratio Prot		c0.18					c0.06	0.17		0.01	c0.16	
v/s Ratio Perm	0.14				0.07							0.07
v/c Ratio	0.47	0.60			0.25		0.46	0.35		0.50	0.45	0.20
Uniform Delay, d1	16.2	16.9			15.0		23.0	9.5		27.5	13.7	12.4
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	1.9			0.3		1.5	0.1		11.1	0.3	0.2
Delay (s)	17.1	18.8			15.3		24.5	9.7		38.6	13.9	12.5
Level of Service	B	B			B		C	A		D	B	B
Approach Delay (s)		18.2			15.3			11.9			13.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	443	427	4	192	13	227	391	15	69	669	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	0.97	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1861	1583	3433	3520		1770	3438	
Flt Permitted	0.95	1.00	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1840	1583	3433	3520		1770	3438	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	360	443	427	4	192	13	227	391	15	69	669	158
RTOR Reduction (vph)	0	0	207	0	0	11	0	3	0	0	20	0
Lane Group Flow (vph)	360	443	220	0	196	2	227	403	0	69	807	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	12.3	32.3	32.3		15.0	15.0	10.4	31.0		7.3	27.9	
Effective Green, g (s)	12.3	32.3	32.3		15.0	15.0	10.4	31.0		7.3	27.9	
Actuated g/C Ratio	0.14	0.38	0.38		0.18	0.18	0.12	0.36		0.09	0.33	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	254	702	597		322	277	417	1274		150	1120	
v/s Ratio Prot	c0.20	c0.24					c0.07	c0.11		0.04	c0.23	
v/s Ratio Perm			0.14		0.11	0.00						
v/c Ratio	1.42	0.63	0.37		0.61	0.01	0.54	0.32		0.46	0.72	
Uniform Delay, d1	36.6	21.8	19.3		32.6	29.2	35.4	19.7		37.3	25.4	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	209.4	1.9	0.4		3.2	0.0	1.5	0.1		2.2	2.3	
Delay (s)	246.0	23.6	19.7		35.8	29.2	36.8	19.8		39.5	27.7	
Level of Service	F	C	B		D	C	D	B		D	C	
Approach Delay (s)		87.3			35.4			25.9			28.6	
Approach LOS		F			D			C			C	

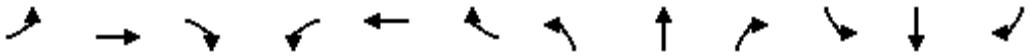
Intersection Summary			
HCM 2000 Control Delay	52.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	85.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	292	226	89	100	287	16	2	124	279	42	13	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.96		1.00	0.99			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3373		1770	3508			1768	3461			1763
Flt Permitted	0.95	1.00		0.95	1.00			0.36	1.00			0.69
Satd. Flow (perm)	3433	3373		1770	3508			665	3461			1280
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	292	226	89	100	287	16	2	124	279	42	13	23
RTOR Reduction (vph)	0	39	0	0	4	0	0	0	11	0	0	0
Lane Group Flow (vph)	292	276	0	100	299	0	0	126	310	0	0	36
Confl. Peds. (#/hr)	2		7	7		2		3		9		9
Confl. Bikes (#/hr)						2				3		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	11.2	15.7		7.8	12.3			11.2	23.0			5.8
Effective Green, g (s)	11.2	15.7		7.8	12.3			11.2	23.0			5.8
Actuated g/C Ratio	0.16	0.23		0.11	0.18			0.16	0.34			0.08
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	562	775		202	631			109	1165			108
v/s Ratio Prot	c0.09	c0.08		0.06	c0.09				0.09			
v/s Ratio Perm								c0.19				0.03
v/c Ratio	0.52	0.36		0.50	0.47			1.16	0.27			0.33
Uniform Delay, d1	26.1	22.1		28.4	25.1			28.5	16.5			29.4
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	0.8	0.3		1.9	0.6			134.2	0.1			1.8
Delay (s)	26.9	22.3		30.3	25.7			162.7	16.6			31.3
Level of Service	C	C		C	C			F	B			C
Approach Delay (s)		24.5			26.8				57.8			
Approach LOS		C			C				E			

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	68.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	425	433
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.98
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1559
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1559
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	425	433
RTOR Reduction (vph)	0	321
Lane Group Flow (vph)	425	112
Confl. Peds. (#/hr)		3
Confl. Bikes (#/hr)		2
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	17.6	17.6
Effective Green, g (s)	17.6	17.6
Actuated g/C Ratio	0.26	0.26
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	911	401
v/s Ratio Prot	c0.12	
v/s Ratio Perm		0.07
v/c Ratio	0.47	0.28
Uniform Delay, d1	21.4	20.3
Progression Factor	1.00	1.00
Incremental Delay, d2	0.4	0.4
Delay (s)	21.8	20.7
Level of Service	C	C
Approach Delay (s)	21.6	
Approach LOS	C	

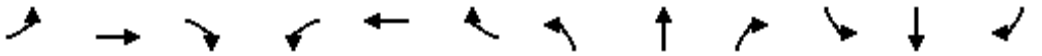
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	9	2	133	3	68	1	135	157	217	117	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	9	2	133	3	68	1	135	157	217	117	0
Pedestrians								2				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	758	845	119	696	688	135	117			292		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	758	845	119	696	688	135	117			292		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	96	100	55	99	92	100			83		
cM capacity (veh/h)	255	245	923	295	302	906	1453			1253		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	16	204	136	157	334
Volume Left	5	133	1	0	217
Volume Right	2	68	0	157	0
cSH	273	381	1453	1700	1253
Volume to Capacity	0.06	0.54	0.00	0.09	0.17
Queue Length 95th (ft)	5	76	0	0	16
Control Delay (s)	19.0	24.8	0.1	0.0	6.1
Lane LOS	C	C	A		A
Approach Delay (s)	19.0	24.8	0.0		6.1
Approach LOS	C	C			

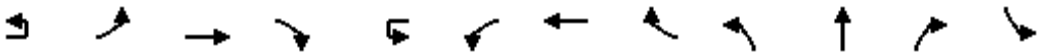
Intersection Summary				
Average Delay	8.7			
Intersection Capacity Utilization	53.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	631	375	45	577	68	375	104	59	126	92	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.99	0.85	1.00	0.98		1.00	1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (prot)	1736	3113	2633	1736	4900		1579	3221	1530		3126	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (perm)	1736	3113	2633	1736	4900		1579	3221	1530		3126	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	147	631	375	45	577	68	375	104	59	126	92	242
RTOR Reduction (vph)	0	3	206	0	12	0	0	0	46	0	159	0
Lane Group Flow (vph)	147	666	131	45	633	0	187	292	13	0	301	0
Confl. Peds. (#/hr)	4					4			4	4		
Confl. Bikes (#/hr)			4			2						4
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	12.6	29.1	29.1	4.6	21.1		16.0	16.0	16.0		13.0	
Effective Green, g (s)	12.6	29.1	29.1	4.6	21.1		16.0	16.0	16.0		13.0	
Actuated g/C Ratio	0.17	0.39	0.39	0.06	0.28		0.21	0.21	0.21		0.17	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	292	1212	1025	106	1384		338	689	327		544	
v/s Ratio Prot	c0.08	c0.21		0.03	0.13		c0.12	0.09			c0.10	
v/s Ratio Perm			0.05						0.01			
v/c Ratio	0.50	0.55	0.13	0.42	0.46		0.55	0.42	0.04		0.55	
Uniform Delay, d1	28.2	17.7	14.6	33.8	22.1		26.2	25.4	23.3		28.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	1.4	0.5	0.1	2.7	0.2		2.0	0.4	0.0		1.2	
Delay (s)	29.6	18.2	14.7	36.5	22.3		28.1	25.8	23.3		29.4	
Level of Service	C	B	B	D	C		C	C	C		C	
Approach Delay (s)		18.6			23.2			26.3			29.4	
Approach LOS		B			C			C			C	

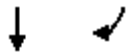
Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



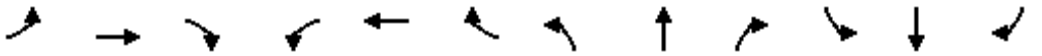
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	30	0	1407	84	10	126	1276	0	110	0	111	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0			3.0	4.0			5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.86			1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00			1.00	0.99	
Flpb, ped/bikes		0.99	1.00			1.00	1.00			0.99	1.00	
Frt		1.00	0.99			1.00	1.00			1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1758	6345			1768	6408			1754	1561	
Flt Permitted		0.50	1.00			0.27	1.00			0.76	1.00	
Satd. Flow (perm)		925	6345			496	6408			1398	1561	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	0	1407	84	10	126	1276	0	110	0	111	0
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	0	0	98	0
Lane Group Flow (vph)	0	30	1485	0	0	136	1276	0	0	110	13	0
Confl. Peds. (#/hr)		15		4		4		15	8			
Confl. Bikes (#/hr)				1				3			1	
Turn Type	custom	Prot	NA		custom	Prot	NA		Perm	NA	Perm	
Protected Phases		5	2			1	6			3		
Permitted Phases	5				1				3	3	3	3
Actuated Green, G (s)		8.0	66.2			15.0	73.2			12.8	12.8	
Effective Green, g (s)		8.0	66.2			15.0	73.2			12.8	12.8	
Actuated g/C Ratio		0.08	0.62			0.14	0.69			0.12	0.12	
Clearance Time (s)		3.0	4.0			3.0	4.0			5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0			2.0	2.0	
Lane Grp Cap (vph)		69	3962			70	4425			168	188	
v/s Ratio Prot			c0.23				0.20					
v/s Ratio Perm		0.03				c0.27				c0.08	0.01	
v/c Ratio		0.43	0.37			1.94	0.29			0.65	0.07	
Uniform Delay, d1		46.8	9.8			45.5	6.3			44.5	41.3	
Progression Factor		0.67	1.96			1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.3	0.2			471.9	0.2			6.8	0.1	
Delay (s)		32.6	19.4			517.4	6.5			51.3	41.4	
Level of Service		C	B			F	A			D	D	
Approach Delay (s)			19.7				55.7			46.3		
Approach LOS			B				E			D		

Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Volume (vph)	0	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		
Lane Util. Factor		
Frpb, ped/bikes		
Flpb, ped/bikes		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	0	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Confl. Peds. (#/hr)		8
Confl. Bikes (#/hr)		
Turn Type		Perm
Protected Phases	3	
Permitted Phases	3	3
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)	0.0	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	974	82	106	883	51	437	181	480	53	20	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.99		1.00	0.99		1.00	0.90			0.91	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	3433	5026		1770	6355		1610	3037			1584	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (perm)	3433	5026		1770	6355		1610	3037			1584	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	974	82	106	883	51	437	181	480	53	20	298
RTOR Reduction (vph)	0	7	0	0	5	0	0	352	0	0	65	161
Lane Group Flow (vph)	98	1049	0	106	929	0	385	361	0	0	124	21
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	6.4	37.8		10.5	41.9		28.2	28.2			12.5	12.5
Effective Green, g (s)	6.4	37.8		10.5	41.9		28.2	28.2			12.5	12.5
Actuated g/C Ratio	0.06	0.36		0.10	0.40		0.27	0.27			0.12	0.12
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	207	1792		175	2512		428	807			186	177
v/s Ratio Prot	0.03	c0.21		c0.06	0.15		c0.24	0.12			c0.08	
v/s Ratio Perm												0.01
v/c Ratio	0.47	0.59		0.61	0.37		0.90	0.45			0.67	0.12
Uniform Delay, d1	48.2	27.7		45.8	22.7		37.5	32.4			44.7	41.8
Progression Factor	1.00	1.00		0.87	0.81		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.6	1.4		3.9	0.4		20.7	0.1			6.8	0.1
Delay (s)	48.8	29.1		43.9	18.8		58.2	32.5			51.5	41.9
Level of Service	D	C		D	B		E	C			D	D
Approach Delay (s)		30.8			21.3			41.6			46.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

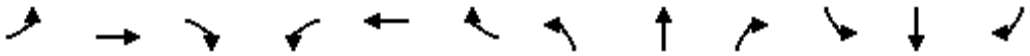
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	65	1029	147	53	724	73	7	144	89	60	2	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.99			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.98		1.00	0.99			1.00	0.94			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	1752	3423		1752	3433			1752	1713			1719
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (perm)	1752	3423		1752	3433			1752	1713			1719
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	1029	147	53	724	73	7	144	89	60	2	83
RTOR Reduction (vph)	0	7	0	0	5	0	0	0	28	0	0	0
Lane Group Flow (vph)	65	1169	0	53	792	0	0	151	121	0	0	85
Confl. Peds. (#/hr)	18		6	6		18		19		16		16
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA		Prot	Prot
Protected Phases	5	2		1	6		3	3	8		7	7
Permitted Phases												
Actuated Green, G (s)	7.1	56.5		6.1	55.5			12.5	14.9			12.5
Effective Green, g (s)	7.1	56.5		6.1	55.5			12.5	14.9			12.5
Actuated g/C Ratio	0.06	0.51		0.06	0.50			0.11	0.14			0.11
Clearance Time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)	113	1758		97	1732			199	232			195
v/s Ratio Prot	0.04	c0.34		c0.03	0.23			c0.09	0.07			0.05
v/s Ratio Perm												
v/c Ratio	0.58	0.66		0.55	0.46			0.76	0.52			0.44
Uniform Delay, d1	50.0	19.8		50.6	17.6			47.3	44.2			45.5
Progression Factor	1.12	1.05		0.95	1.41			1.00	1.00			1.00
Incremental Delay, d2	3.2	0.5		2.8	0.7			13.6	1.0			0.6
Delay (s)	59.1	21.2		50.8	25.5			60.9	45.2			46.0
Level of Service	E	C		D	C			E	D			D
Approach Delay (s)		23.2			27.1				53.1			
Approach LOS		C			C				D			

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

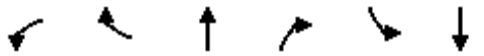
Movement	SBT	SBR
Lane Configurations		
Volume (vph)	83	114
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.98	
Flpb, ped/bikes	1.00	
Frt	0.91	
Flt Protected	1.00	
Satd. Flow (prot)	1618	
Flt Permitted	1.00	
Satd. Flow (perm)	1618	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	83	114
RTOR Reduction (vph)	54	0
Lane Group Flow (vph)	143	0
Confl. Peds. (#/hr)		19
Confl. Bikes (#/hr)		2
Heavy Vehicles (%)	5%	5%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	14.9	
Effective Green, g (s)	14.9	
Actuated g/C Ratio	0.14	
Clearance Time (s)	5.0	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	219	
v/s Ratio Prot	c0.09	
v/s Ratio Perm		
v/c Ratio	0.65	
Uniform Delay, d1	45.1	
Progression Factor	1.00	
Incremental Delay, d2	5.2	
Delay (s)	50.3	
Level of Service	D	
Approach Delay (s)	49.0	
Approach LOS	D	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	622	0	0	695	449	2	1011	562	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95			0.95	1.00			
Frt	1.00	1.00			0.94			1.00	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	1770	3539			3331			3539	1583			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	1770	3539			3331			3539	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	622	0	0	695	449	2	1011	562	0	0	0
RTOR Reduction (vph)	0	0	0	0	105	0	0	0	75	0	0	0
Lane Group Flow (vph)	2	622	0	0	1039	0	0	1013	487	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	0.9	31.7			26.8			34.2	34.2			
Effective Green, g (s)	0.9	31.7			26.8			34.2	34.2			
Actuated g/C Ratio	0.01	0.43			0.36			0.46	0.46			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	21	1518			1207			1637	732			
v/s Ratio Prot	0.00	c0.18			c0.31							
v/s Ratio Perm								0.29	c0.31			
v/c Ratio	0.10	0.41			0.86			0.62	0.67			
Uniform Delay, d1	36.1	14.6			21.8			14.9	15.4			
Progression Factor	1.00	1.00			1.00			1.00	1.00			
Incremental Delay, d2	2.0	0.2			6.5			0.7	2.3			
Delay (s)	38.1	14.8			28.3			15.6	17.7			
Level of Service	D	B			C			B	B			
Approach Delay (s)		14.9			28.3			16.4			0.0	
Approach LOS		B			C			B			A	

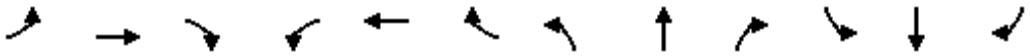
Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	73.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	713	0	0	0	624	999
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0
Lane Util. Factor	0.97					0.91
Frt	1.00					1.00
Flt Protected	0.95					0.98
Satd. Flow (prot)	3433					4989
Flt Permitted	0.95					0.98
Satd. Flow (perm)	3433					4989
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	713	0	0	0	624	999
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	713	0	0	0	0	1623
Turn Type	Prot				Split	NA
Protected Phases	8				6	6
Permitted Phases						
Actuated Green, G (s)	11.0					31.0
Effective Green, g (s)	11.0					31.0
Actuated g/C Ratio	0.22					0.62
Clearance Time (s)	4.0					4.0
Lane Grp Cap (vph)	755					3093
v/s Ratio Prot	c0.21					c0.33
v/s Ratio Perm						
v/c Ratio	0.94					0.52
Uniform Delay, d1	19.2					5.4
Progression Factor	1.00					1.00
Incremental Delay, d2	21.7					0.6
Delay (s)	40.9					6.0
Level of Service	D					A
Approach Delay (s)	40.9		0.0			6.0
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	500	426	93	32	571	128	241	521	547	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	1.00				
Frt	1.00	0.97		1.00	0.97		1.00	0.92				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	3433	3444		1770	3442		1770	1720				
Flt Permitted	0.95	1.00		0.46	1.00		0.95	1.00				
Satd. Flow (perm)	3433	3444		857	3442		1770	1720				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	500	426	93	32	571	128	241	521	547	0	0	0
RTOR Reduction (vph)	0	20	0	0	20	0	0	40	0	0	0	0
Lane Group Flow (vph)	500	499	0	32	679	0	241	1028	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	12.5	36.5		19.5	19.5		49.5	49.5				
Effective Green, g (s)	12.5	36.5		19.5	19.5		49.5	49.5				
Actuated g/C Ratio	0.13	0.38		0.21	0.21		0.52	0.52				
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0		2.0	2.0		2.0	2.0				
Lane Grp Cap (vph)	451	1323		175	706		922	896				
v/s Ratio Prot	c0.15	0.14			c0.20			c0.60				
v/s Ratio Perm				0.04			0.14					
v/c Ratio	1.11	0.38		0.18	0.96		0.26	1.15				
Uniform Delay, d1	41.2	21.1		31.2	37.4		12.6	22.8				
Progression Factor	0.94	0.36		1.00	1.00		1.00	1.00				
Incremental Delay, d2	64.2	0.4		2.3	25.7		0.1	79.5				
Delay (s)	103.2	8.0		33.5	63.1		12.7	102.2				
Level of Service	F	A		C	E		B	F				
Approach Delay (s)		54.7			61.8			85.7			0.0	
Approach LOS		D			E			F			A	

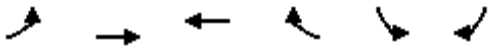
Intersection Summary			
HCM 2000 Control Delay	69.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	106.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	903	441	360	850	357	17	25	91	108	918	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Lane Util. Factor	0.95		1.00	0.95			1.00	1.00		0.91	
Frt	0.95		1.00	0.96			1.00	0.85		0.96	
Flt Protected	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	3365		1770	3382			1770	1583		4880	
Flt Permitted	1.00		0.95	1.00			0.15	1.00		1.00	
Satd. Flow (perm)	3365		1770	3382			271	1583		4880	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	903	441	360	850	357	17	25	91	108	918	330
RTOR Reduction (vph)	12	0	0	0	0	0	0	65	0	0	0
Lane Group Flow (vph)	1332	0	360	1207	0	0	42	26	0	1356	0
Turn Type	NA		Prot	NA		Perm	Perm	Perm	Perm	NA	
Protected Phases	2		1	6						4	
Permitted Phases						8	8	8	4		
Actuated Green, G (s)	41.5		13.5	58.5			27.5	27.5		27.5	
Effective Green, g (s)	41.5		13.5	58.5			27.5	27.5		27.5	
Actuated g/C Ratio	0.44		0.14	0.62			0.29	0.29		0.29	
Clearance Time (s)	4.5		3.5	4.5			4.5	4.5		4.5	
Vehicle Extension (s)	2.0		2.0	2.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	1469		251	2082			78	458		1412	
v/s Ratio Prot	c0.40		c0.20	0.36							
v/s Ratio Perm							0.16	0.02		0.28	
v/c Ratio	0.91		1.43	0.58			0.54	0.06		0.96	
Uniform Delay, d1	24.9		40.8	10.9			28.4	24.4		33.2	
Progression Factor	1.00		0.92	1.88			1.00	1.00		1.00	
Incremental Delay, d2	9.7		215.5	1.1			3.5	0.0		15.4	
Delay (s)	34.6		253.1	21.6			32.0	24.4		48.6	
Level of Service	C		F	C			C	C		D	
Approach Delay (s)	34.6			74.8						48.6	
Approach LOS	C			E						D	

Intersection Summary			
HCM 2000 Control Delay	53.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	119.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	630	0	0	784	71	588
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	630	0	0	784	71	588
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	630	0	0	784	71	588
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	17.4			17.4	21.2	21.2
Effective Green, g (s)	17.4			17.4	21.2	21.2
Actuated g/C Ratio	0.37			0.37	0.45	0.45
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1898			1321	805	720
v/s Ratio Prot	0.12			c0.22	0.04	c0.37
v/s Ratio Perm						
v/c Ratio	0.33			0.59	0.09	0.82
Uniform Delay, d1	10.4			11.8	7.2	11.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.7	0.0	7.1
Delay (s)	10.5			12.5	7.3	18.1
Level of Service	B			B	A	B
Approach Delay (s)	10.5			12.5	17.0	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



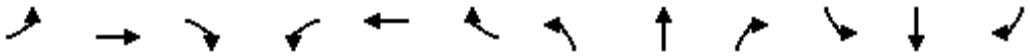
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	601	238	0	438	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.96	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3539	3539		3354	
Flt Permitted		1.00	1.00		0.96	
Satd. Flow (perm)		3539	3539		3354	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	601	238	0	438	143
RTOR Reduction (vph)	0	0	0	0	64	0
Lane Group Flow (vph)	0	601	238	0	517	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		11.6	11.6		10.2	
Effective Green, g (s)		11.6	11.6		10.2	
Actuated g/C Ratio		0.39	0.39		0.34	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1377	1377		1148	
v/s Ratio Prot		c0.17	0.07		c0.15	
v/s Ratio Perm						
v/c Ratio		0.44	0.17		0.45	
Uniform Delay, d1		6.7	6.0		7.6	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.2	0.1		0.3	
Delay (s)		6.9	6.0		7.9	
Level of Service		A	A		A	
Approach Delay (s)		6.9	6.0		7.9	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	29.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBU	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	16	367	100	115	571	133	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5		4.0			4.0
Lane Util. Factor		0.97		1.00			1.00
Frpb, ped/bikes		1.00		1.00			1.00
Flpb, ped/bikes		1.00		1.00			1.00
Frt		0.97		0.89			1.00
Flt Protected		0.96		1.00			0.97
Satd. Flow (prot)		3328		1637			1796
Flt Permitted		0.96		1.00			0.36
Satd. Flow (perm)		3328		1637			667
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	367	100	115	571	133	113
RTOR Reduction (vph)	0	26	0	138	0	0	0
Lane Group Flow (vph)	0	457	0	548	0	0	246
Confl. Peds. (#/hr)		2					
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom	Prot		NA		Perm	NA
Protected Phases		6		8			4
Permitted Phases						4	
Actuated Green, G (s)		20.8		26.3			26.3
Effective Green, g (s)		20.8		26.3			26.3
Actuated g/C Ratio		0.38		0.48			0.48
Clearance Time (s)		3.5		4.0			4.0
Vehicle Extension (s)		2.2		2.0			2.0
Lane Grp Cap (vph)		1267		788			321
v/s Ratio Prot				0.33			
v/s Ratio Perm		0.14					c0.37
v/c Ratio		2.38dr		0.69			0.77
Uniform Delay, d1		12.1		11.0			11.6
Progression Factor		1.00		1.00			1.00
Incremental Delay, d2		0.1		2.2			9.5
Delay (s)		12.2		13.2			21.1
Level of Service		B		B			C
Approach Delay (s)		12.2		13.2			21.1
Approach LOS		B		B			C

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	54.6	Sum of lost time (s)	11.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

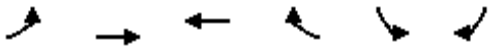
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	767	0	142	0	0	0	154	152	0	0	144	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.98	
Flt Protected	0.95		1.00					0.98			1.00	
Satd. Flow (prot)	3367		1553					3386			1798	
Flt Permitted	0.95		1.00					0.98			1.00	
Satd. Flow (perm)	3367		1553					3386			1798	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	767	0	142	0	0	0	154	152	0	0	144	19
RTOR Reduction (vph)	0	0	92	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	767	0	50	0	0	0	0	306	0	0	159	0
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	4%	2%	4%	2%	2%	2%	4%	4%	2%	2%	4%	4%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4				8		2	2			6	
Permitted Phases			4	8						6		
Actuated Green, G (s)	21.7		21.7					12.2			12.1	
Effective Green, g (s)	21.7		21.7					12.2			12.1	
Actuated g/C Ratio	0.35		0.35					0.20			0.20	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1178		543					666			350	
v/s Ratio Prot	c0.23							c0.09			c0.09	
v/s Ratio Perm			0.03									
v/c Ratio	0.65		0.09					0.46			0.45	
Uniform Delay, d1	17.0		13.5					22.0			22.0	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	1.3		0.1					0.5			0.9	
Delay (s)	18.3		13.6					22.5			23.0	
Level of Service	B		B					C			C	
Approach Delay (s)		17.5			0.0			22.5			23.0	
Approach LOS		B			A			C			C	

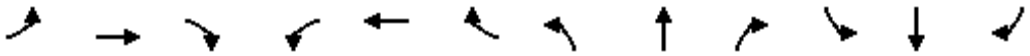
Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



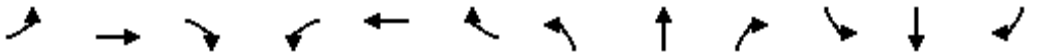
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1342	997	0	262	588
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5767	5767		3090	2508
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5767	5767		3090	2508
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1342	997	0	262	588
RTOR Reduction (vph)	0	0	0	0	0	122
Lane Group Flow (vph)	0	1342	997	0	262	466
Confl. Peds. (#/hr)	8			8		8
Confl. Bikes (#/hr)				3		
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		27.0	16.5		9.9	20.4
Effective Green, g (s)		27.0	16.5		9.9	20.4
Actuated g/C Ratio		0.60	0.37		0.22	0.45
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		3467	2119		681	1139
v/s Ratio Prot		0.23	c0.17		0.08	c0.19
v/s Ratio Perm						
v/c Ratio		0.39	0.47		0.38	0.41
Uniform Delay, d1		4.7	10.9		14.9	8.2
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1	0.2		0.4	0.2
Delay (s)		4.7	11.0		15.3	8.4
Level of Service		A	B		B	A
Approach Delay (s)		4.7	11.0		10.6	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	782	523	0	797	283	589	0	612	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frt		0.98	0.85		0.96		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3256	1413		4791		3367		1553			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3256	1413		4791		3367		1553			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	782	523	0	797	283	589	0	612	0	0	0
RTOR Reduction (vph)	0	11	0	0	58	0	0	0	133	0	0	0
Lane Group Flow (vph)	0	897	397	0	1022	0	589	0	479	0	0	0
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		66.0	110.0		66.0		36.0		36.0			
Effective Green, g (s)		66.0	110.0		66.0		36.0		36.0			
Actuated g/C Ratio		0.60	1.00		0.60		0.33		0.33			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1953	1413		2874		1101		508			
v/s Ratio Prot		c0.28			0.21		0.17					
v/s Ratio Perm			0.28						c0.31			
v/c Ratio		0.46	0.28		0.36		0.53		0.94			
Uniform Delay, d1		12.1	0.0		11.2		30.2		36.0			
Progression Factor		1.00	1.00		1.01		1.00		1.00			
Incremental Delay, d2		0.8	0.5		0.3		1.9		27.9			
Delay (s)		12.9	0.5		11.6		32.0		63.9			
Level of Service		B	A		B		C		E			
Approach Delay (s)		9.1			11.6			48.3			0.0	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

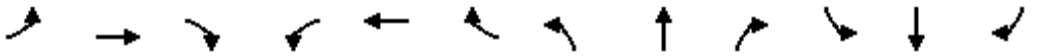


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1049	905	0	1034	0	0	0	0	276	0	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		0.99
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.95	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4500	1335		4988					3367		1532
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4500	1335		4988					3367		1532
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1049	905	0	1034	0	0	0	0	276	0	145
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	108
Lane Group Flow (vph)	0	1502	452	0	1034	0	0	0	0	276	0	37
Confl. Peds. (#/hr)							5					2
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	4%	4%	4%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		40.4	40.4		40.4					11.2		11.2
Effective Green, g (s)		40.4	40.4		40.4					11.2		11.2
Actuated g/C Ratio		0.68	0.68		0.68					0.19		0.19
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3050	904		3381					632		287
v/s Ratio Prot		0.33	c0.34		0.21							
v/s Ratio Perm										c0.08		0.02
v/c Ratio		0.49	0.50		0.31					0.44		0.13
Uniform Delay, d1		4.6	4.7		3.9					21.4		20.1
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.1	0.4		0.1					0.5		0.2
Delay (s)		4.8	5.1		4.0					21.9		20.3
Level of Service		A	A		A					C		C
Approach Delay (s)		4.8			4.0			0.0			21.4	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	59.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1049	520	0	975	499	538
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.96	0.85
Flt Protected	1.00	1.00		1.00	0.97	1.00
Satd. Flow (prot)	3471	1519		3471	3272	1413
Flt Permitted	1.00	1.00		1.00	0.97	1.00
Satd. Flow (perm)	3471	1519		3471	3272	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1049	520	0	975	499	538
RTOR Reduction (vph)	0	0	0	0	44	78
Lane Group Flow (vph)	1049	520	0	975	665	250
Confl. Peds. (#/hr)		4	4			
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	25.7	50.7		25.7	17.0	17.0
Effective Green, g (s)	25.7	50.7		25.7	17.0	17.0
Actuated g/C Ratio	0.51	1.00		0.51	0.34	0.34
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1759	1519		1759	1097	473
v/s Ratio Prot	c0.30			0.28	c0.20	
v/s Ratio Perm		0.34				0.18
v/c Ratio	0.60	0.34		0.55	0.61	0.53
Uniform Delay, d1	8.8	0.0		8.6	14.1	13.6
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.6		0.4	1.0	1.1
Delay (s)	9.4	0.6		9.0	15.0	14.7
Level of Service	A	A		A	B	B
Approach Delay (s)	6.5			9.0	14.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	50.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

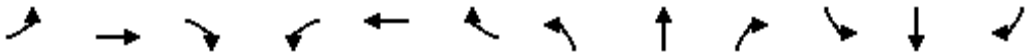


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1311	477	0	1065	400	0	0	0	363	0	359
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00		0.95					0.95	0.91	0.95
Frt		1.00	0.85		0.96					1.00	0.92	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		3539	1583		3394					1681	1524	1504
Flt Permitted		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (perm)		3539	1583		3394					1681	1524	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1311	477	0	1065	400	0	0	0	363	0	359
RTOR Reduction (vph)	0	0	185	0	39	0	0	0	0	0	41	85
Lane Group Flow (vph)	0	1311	292	0	1426	0	0	0	0	250	201	145
Turn Type		NA	Perm		NA					Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4							6		6
Actuated Green, G (s)		41.0	41.0		41.0					18.0	18.0	18.0
Effective Green, g (s)		41.0	41.0		41.0					18.0	18.0	18.0
Actuated g/C Ratio		0.61	0.61		0.61					0.27	0.27	0.27
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2165	968		2076					451	409	404
v/s Ratio Prot		0.37			c0.42							
v/s Ratio Perm			0.18							c0.15	0.13	0.10
v/c Ratio		0.61	0.30		0.69					0.55	0.49	0.36
Uniform Delay, d1		8.0	6.2		8.7					21.1	20.6	19.8
Progression Factor		1.00	1.00		1.00					1.00	1.00	1.00
Incremental Delay, d2		0.5	0.2		1.0					1.5	0.9	0.5
Delay (s)		8.5	6.4		9.7					22.5	21.6	20.4
Level of Service		A	A		A					C	C	C
Approach Delay (s)		7.9			9.7			0.0			21.5	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	489	200	64	872	303	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3385		1770	3539	3370	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3385		1770	3539	3370	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	489	200	64	872	303	76
RTOR Reduction (vph)	49	0	0	0	24	0
Lane Group Flow (vph)	640	0	64	872	355	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	14.3		3.6	21.9	9.7	
Effective Green, g (s)	14.3		3.6	21.9	9.7	
Actuated g/C Ratio	0.38		0.10	0.58	0.26	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1287		169	2061	869	
v/s Ratio Prot	0.19		0.04	c0.25	c0.11	
v/s Ratio Perm						
v/c Ratio	0.50		0.38	0.42	0.41	
Uniform Delay, d1	8.9		16.0	4.3	11.6	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		0.5	0.1	0.1	
Delay (s)	9.0		16.5	4.4	11.7	
Level of Service	A		B	A	B	
Approach Delay (s)	9.0			5.2	11.7	
Approach LOS	A			A	B	

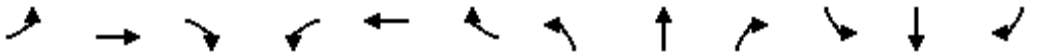
Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	37.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	1068	26	6	1165	298	18	62	140	167	43	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.97			0.91			0.99	
Flt Protected		1.00			1.00			1.00			0.97	
Satd. Flow (prot)		3526			3410			1651			1728	
Flt Permitted		0.94			0.95			0.97			0.57	
Satd. Flow (perm)		3332			3244			1604			1020	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	1068	26	6	1165	298	18	62	140	167	43	25
RTOR Reduction (vph)	0	2	0	0	27	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	1099	0	0	1442	0	0	220	0	0	230	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	5%	5%	5%	5%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.5			40.5			21.3			21.3	
Effective Green, g (s)		40.5			40.5			21.3			21.3	
Actuated g/C Ratio		0.54			0.54			0.28			0.28	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1804			1756			456			290	
v/s Ratio Prot												
v/s Ratio Perm		0.33			c0.44			0.14			c0.23	
v/c Ratio		0.61			0.82			0.48			0.79	
Uniform Delay, d1		11.7			14.2			22.2			24.7	
Progression Factor		1.00			1.00			0.08			1.00	
Incremental Delay, d2		0.6			3.2			0.7			13.8	
Delay (s)		12.3			17.4			2.5			38.5	
Level of Service		B			B			A			D	
Approach Delay (s)		12.3			17.4			2.5			38.5	
Approach LOS		B			B			A			D	

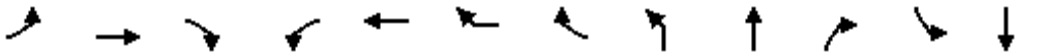
Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	429	141	300	651	215	57	163	118	120	150	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.96		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1770	3408		1770	3407			1839	1583		1822	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (perm)	1770	3408		1770	3407			1839	1583		1822	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	28	429	141	300	651	215	57	163	118	120	150	26
RTOR Reduction (vph)	0	36	0	0	29	0	0	0	91	0	0	21
Lane Group Flow (vph)	28	534	0	300	837	0	0	220	27	0	270	5
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	2.9	20.5		14.3	31.9			13.5	13.5		15.7	15.7
Effective Green, g (s)	2.9	20.5		14.3	31.9			13.5	13.5		15.7	15.7
Actuated g/C Ratio	0.04	0.26		0.18	0.40			0.17	0.17		0.20	0.20
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	64	873		316	1358			310	267		357	310
v/s Ratio Prot	0.02	0.16		c0.17	c0.25			c0.12			c0.15	
v/s Ratio Perm									0.02			0.00
v/c Ratio	0.44	0.61		0.95	0.62			0.71	0.10		0.76	0.02
Uniform Delay, d1	37.8	26.2		32.5	19.2			31.4	28.1		30.3	25.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	4.7	1.3		36.9	0.8			7.3	0.2		8.8	0.0
Delay (s)	42.5	27.5		69.4	20.0			38.7	28.3		39.2	25.9
Level of Service	D	C		E	C			D	C		D	C
Approach Delay (s)		28.2			32.7			35.0			38.0	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



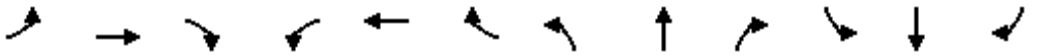
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	51	374	12	255	557	0	64	4	192	230	145	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.97			1.00		1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.92		1.00	0.98
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1843		1770	1863	1534			3251		1763	1810
Flt Permitted		0.89		0.95	1.00	1.00			0.95		0.43	1.00
Satd. Flow (perm)		1657		1770	1863	1534			3096		794	1810
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	51	374	12	255	557	0	64	4	192	230	145	313
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	164	0	0	0
Lane Group Flow (vph)	0	436	0	255	557	38	0	0	262	0	145	373
Confl. Peds. (#/hr)	6		2	2		6					4	
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.2		13.8	41.0	41.0			19.7		19.7	19.7
Effective Green, g (s)		23.2		13.8	41.0	41.0			19.7		19.7	19.7
Actuated g/C Ratio		0.34		0.20	0.60	0.60			0.29		0.29	0.29
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		559		355	1111	915			887		227	519
v/s Ratio Prot				c0.14	0.30							c0.21
v/s Ratio Perm		c0.26				0.02			0.08		0.18	
v/c Ratio		0.78		0.72	0.50	0.04			0.30		0.64	0.72
Uniform Delay, d1		20.4		25.6	8.0	5.7			19.1		21.4	22.0
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		6.8		6.8	0.4	0.0			0.2		5.8	4.7
Delay (s)		27.2		32.4	8.3	5.7			19.3		27.2	26.7
Level of Service		C		C	A	A			B		C	C
Approach Delay (s)		27.2			15.2				19.3			26.9
Approach LOS		C			B				B			C

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	68.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

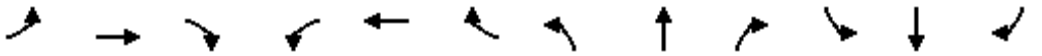
Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	60	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frpb, ped/bikes			
Flpb, ped/bikes			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	60	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Confl. Peds. (#/hr)	4		
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	316	5	336	469	12	7	174	203	37	219	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		0.99		0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3514		1770	3526			1859	1583		1849	1583
Flt Permitted		0.99		0.95	1.00			0.99	1.00		0.94	1.00
Satd. Flow (perm)		3514		1770	3526			1837	1583		1743	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	36	316	5	336	469	12	7	174	203	37	219	34
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	151	0	0	25
Lane Group Flow (vph)	0	356	0	336	479	0	0	181	52	0	256	9
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		12.3		19.1	19.1			15.0	15.0		15.0	15.0
Effective Green, g (s)		12.3		19.1	19.1			15.0	15.0		15.0	15.0
Actuated g/C Ratio		0.21		0.33	0.33			0.26	0.26		0.26	0.26
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		740		578	1153			471	406		447	406
v/s Ratio Prot		c0.10		c0.19	0.14							
v/s Ratio Perm								0.10	0.03		c0.15	0.01
v/c Ratio		0.48		0.58	0.42			0.38	0.13		0.57	0.02
Uniform Delay, d1		20.2		16.3	15.3			17.9	16.7		18.9	16.2
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.5		1.5	0.2			0.5	0.1		1.8	0.0
Delay (s)		20.7		17.8	15.5			18.4	16.8		20.7	16.2
Level of Service		C		B	B			B	B		C	B
Approach Delay (s)		20.7			16.5			17.6			20.2	
Approach LOS		C			B			B			C	

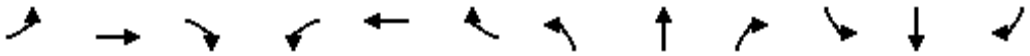
Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	537	76	47	677	68	140	316	76	135	259	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		0.99			1.00		1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.98			0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3443			3478		1753	3416		1751	3539	1544
Flt Permitted		0.86			0.89		0.59	1.00		0.49	1.00	1.00
Satd. Flow (perm)		2964			3088		1092	3416		896	3539	1544
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	537	76	47	677	68	140	316	76	135	259	82
RTOR Reduction (vph)	0	15	0	0	10	0	0	30	0	0	0	52
Lane Group Flow (vph)	0	646	0	0	782	0	140	362	0	135	259	30
Confl. Peds. (#/hr)	50		44	7		8	15		22	22		15
Confl. Bikes (#/hr)			14									
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0			36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51			0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1524			1588		405	1268		332	1314	573
v/s Ratio Prot								0.11			0.07	
v/s Ratio Perm		0.22			c0.25		0.13			c0.15		0.02
v/c Ratio		0.42			0.49		0.35	0.29		0.41	0.20	0.05
Uniform Delay, d1		10.6			11.1		15.9	15.5		16.3	14.9	14.1
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.9			1.1		2.3	0.6		3.7	0.3	0.2
Delay (s)		11.4			12.2		18.2	16.0		20.0	15.3	14.3
Level of Service		B			B		B	B		B	B	B
Approach Delay (s)		11.4			12.2			16.6			16.4	
Approach LOS		B			B			B			B	

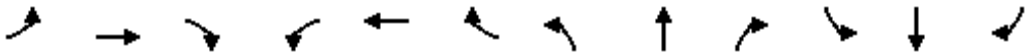
Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



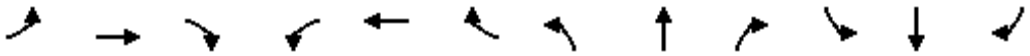
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	194	141	138	353	103	191	610	126	245	623	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3518	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3518	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	194	141	138	353	103	191	610	126	245	623	26
RTOR Reduction (vph)	0	0	0	0	0	70	0	0	60	0	2	0
Lane Group Flow (vph)	16	194	141	138	353	33	191	610	66	245	647	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	2.5	19.0	19.0	13.2	29.7	29.7	15.7	24.1	24.1	19.6	28.0	
Effective Green, g (s)	2.5	19.0	19.0	13.2	29.7	29.7	15.7	24.1	24.1	19.6	28.0	
Actuated g/C Ratio	0.03	0.21	0.21	0.14	0.32	0.32	0.17	0.26	0.26	0.21	0.30	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	48	385	327	254	602	511	302	928	415	377	1071	
v/s Ratio Prot	0.01	0.10		c0.08	c0.19		0.11	0.17		c0.14	c0.18	
v/s Ratio Perm			0.09			0.02			0.04			
v/c Ratio	0.33	0.50	0.43	0.54	0.59	0.07	0.63	0.66	0.16	0.65	0.60	
Uniform Delay, d1	43.9	32.3	31.7	36.6	26.0	21.5	35.4	30.2	26.1	33.0	27.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.1	1.0	0.9	2.4	1.5	0.1	4.3	1.7	0.2	3.8	1.0	
Delay (s)	48.0	33.3	32.7	38.9	27.4	21.6	39.7	31.9	26.3	36.9	28.2	
Level of Service	D	C	C	D	C	C	D	C	C	D	C	
Approach Delay (s)		33.7			29.1			32.7			30.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	91.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	69	96	268	137	120	97	687	258	121	778	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1721		1770	1732		1770	1863	1583	1770	3530	
Flt Permitted		0.97		0.62	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1683		1160	1732		1770	1863	1583	1770	3530	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	69	96	268	137	120	97	687	258	121	778	13
RTOR Reduction (vph)	0	67	0	0	50	0	0	0	150	0	2	0
Lane Group Flow (vph)	0	110	0	268	207	0	97	687	108	121	789	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		18.7		18.7	18.7		5.2	25.9	25.9	5.2	25.9	
Effective Green, g (s)		18.7		18.7	18.7		5.2	25.9	25.9	5.2	25.9	
Actuated g/C Ratio		0.30		0.30	0.30		0.08	0.42	0.42	0.08	0.42	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		509		351	524		148	780	663	148	1479	
v/s Ratio Prot					0.12		0.05	c0.37		c0.07	0.22	
v/s Ratio Perm		0.07		c0.23					0.07			
v/c Ratio		0.22		0.76	0.39		0.66	0.88	0.16	0.82	0.53	
Uniform Delay, d1		16.1		19.5	17.1		27.4	16.5	11.2	27.8	13.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2		9.5	0.5		10.0	11.4	0.1	28.2	0.4	
Delay (s)		16.3		29.0	17.6		37.4	27.9	11.3	56.1	13.8	
Level of Service		B		C	B		D	C	B	E	B	
Approach Delay (s)		16.3			23.4			24.7			19.4	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	61.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	27	131	198	50	116	97	990	72	94	978	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.89			0.96		1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1660			1735		1770	3503		1770	3532	
Flt Permitted		0.98			0.74		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1635			1313		1770	3503		1770	3532	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	27	131	198	50	116	97	990	72	94	978	14
RTOR Reduction (vph)	0	91	0	0	24	0	0	8	0	0	1	0
Lane Group Flow (vph)	0	74	0	0	340	0	97	1054	0	94	991	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		19.6			19.6		5.8	26.3		5.8	26.3	
Effective Green, g (s)		19.6			19.6		5.8	26.3		5.8	26.3	
Actuated g/C Ratio		0.31			0.31		0.09	0.41		0.09	0.41	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		503			404		161	1446		161	1458	
v/s Ratio Prot							c0.05	c0.30		0.05	0.28	
v/s Ratio Perm		0.05			c0.26							
v/c Ratio		0.15			0.84		0.60	0.73		0.58	0.68	
Uniform Delay, d1		16.0			20.6		27.8	15.7		27.8	15.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			14.7		6.2	1.9		5.3	1.3	
Delay (s)		16.1			35.3		34.1	17.6		33.1	16.5	
Level of Service		B			D		C	B		C	B	
Approach Delay (s)		16.1			35.3			19.0			18.0	
Approach LOS		B			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	63.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	883	18	1178	844	38	1215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frpb, ped/bikes	1.00		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		1.00	1.00
Frt	1.00		0.94		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	3433		3300		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	3433		3300		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	883	18	1178	844	38	1215
RTOR Reduction (vph)	2	0	125	0	0	0
Lane Group Flow (vph)	899	0	1897	0	38	1215
Confl. Peds. (#/hr)		1				
Confl. Bikes (#/hr)		3		2		
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	25.5		36.9		3.2	44.1
Effective Green, g (s)	25.5		36.9		3.2	44.1
Actuated g/C Ratio	0.33		0.48		0.04	0.57
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1128		1569		72	2011
v/s Ratio Prot	c0.26		c0.57		0.02	c0.34
v/s Ratio Perm						
v/c Ratio	0.80		1.21		0.53	0.60
Uniform Delay, d1	23.7		20.3		36.5	11.0
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	4.0		100.2		6.8	0.5
Delay (s)	27.7		120.5		43.3	11.5
Level of Service	C		F		D	B
Approach Delay (s)	27.7		120.5			12.5
Approach LOS	C		F			B

Intersection Summary			
HCM 2000 Control Delay	68.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	77.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	4	5	25	432	0	17	33	0	127	107	2	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95			1.00
Frpb, ped/bikes		0.99		1.00	1.00			1.00	0.98			1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00			0.99
Frt		0.90		1.00	0.99			1.00	0.93			1.00
Flt Protected		0.99		0.95	0.96			0.95	1.00			0.95
Satd. Flow (prot)		1652		1618	1608			1703	3115			1692
Flt Permitted		0.99		0.95	0.96			0.95	1.00			0.30
Satd. Flow (perm)		1652		1618	1608			1703	3115			540
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	5	25	432	0	17	33	0	127	107	2	19
RTOR Reduction (vph)	0	24	0	0	83	0	0	0	87	0	0	0
Lane Group Flow (vph)	0	10	0	225	141	0	0	33	147	0	0	21
Confl. Peds. (#/hr)			1	1						9		9
Confl. Bikes (#/hr)						1				2		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA			Prot
Protected Phases	4	4		8	8		5	5	2			1
Permitted Phases												
Actuated Green, G (s)		2.4		13.2	13.2			2.6	10.5			13.2
Effective Green, g (s)		2.4		13.2	13.2			2.6	10.5			13.2
Actuated g/C Ratio		0.04		0.24	0.24			0.05	0.19			0.24
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		71		386	383			80	591			128
v/s Ratio Prot		c0.01		c0.14	0.09			c0.02	0.05			
v/s Ratio Perm												0.04
v/c Ratio		0.14		0.58	0.37			0.41	0.25			0.16
Uniform Delay, d1		25.5		18.6	17.6			25.6	19.0			16.7
Progression Factor		1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2		0.9		2.2	0.6			3.4	0.2			0.6
Delay (s)		26.4		20.9	18.2			29.0	19.3			17.3
Level of Service		C		C	B			C	B			B
Approach Delay (s)		26.4			19.5				20.5			
Approach LOS		C			B				C			

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	55.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	371	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3406	
Flt Permitted	1.00	
Satd. Flow (perm)	3406	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	371	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	371	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		1
Heavy Vehicles (%)	6%	2%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	21.1	
Effective Green, g (s)	21.1	
Actuated g/C Ratio	0.38	
Clearance Time (s)	4.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1299	
v/s Ratio Prot	c0.11	
v/s Ratio Perm		
v/c Ratio	0.29	
Uniform Delay, d1	11.9	
Progression Factor	1.00	
Incremental Delay, d2	0.1	
Delay (s)	12.0	
Level of Service	B	
Approach Delay (s)	12.3	
Approach LOS	B	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	3	99	988	13	41	117	1011	470	19	51	182	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	0.99	0.94		1.00	0.99	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.98	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1770	6395			1770	5830	1211		1838	1561	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1770	6395			1770	5830	1211		1838	1561	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	99	988	13	41	117	1011	470	19	51	182	1
RTOR Reduction (vph)	0	0	1	0	0	0	23	184	0	0	164	0
Lane Group Flow (vph)	0	102	1000	0	0	158	1190	84	0	70	18	0
Confl. Peds. (#/hr)		35						35	29			
Confl. Bikes (#/hr)								2			1	
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		9.9	23.0			12.7	25.8	25.8		8.2	8.2	
Effective Green, g (s)		9.9	23.0			12.7	25.8	25.8		8.2	8.2	
Actuated g/C Ratio		0.12	0.28			0.15	0.31	0.31		0.10	0.10	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		213	1789			273	1829	380		183	155	
v/s Ratio Prot		0.06	0.16			c0.09	c0.20			c0.04		
v/s Ratio Perm								0.07			0.01	
v/c Ratio		0.48	0.56			0.58	0.65	0.22		0.38	0.12	
Uniform Delay, d1		33.7	25.3			32.3	24.3	20.8		34.6	33.7	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	0.2			1.8	0.6	0.1		0.5	0.1	
Delay (s)		34.4	25.5			34.1	25.0	20.9		35.1	33.8	
Level of Service		C	C			C	C	C		D	C	
Approach Delay (s)			26.3				25.2			34.2		
Approach LOS			C				C			C		

Intersection Summary			
HCM 2000 Control Delay	46.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	82.2	Sum of lost time (s)	21.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	838	89	149
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.97	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.91	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3433	1631	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3433	1631	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	838	89	149
RTOR Reduction (vph)	0	34	0
Lane Group Flow (vph)	839	204	0
Confl. Peds. (#/hr)			29
Confl. Bikes (#/hr)			1
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	17.3	17.3	
Effective Green, g (s)	17.3	17.3	
Actuated g/C Ratio	0.21	0.21	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	722	343	
v/s Ratio Prot	c0.24	0.13	
v/s Ratio Perm			
v/c Ratio	1.16	0.59	
Uniform Delay, d1	32.5	29.3	
Progression Factor	1.00	1.00	
Incremental Delay, d2	87.8	1.8	
Delay (s)	120.2	31.1	
Level of Service	F	C	
Approach Delay (s)		100.5	
Approach LOS		F	

Intersection Summary

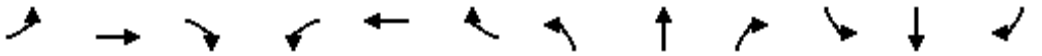
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	3	12	487	53	2	190	1030	189	2	144	117	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00		1.00	0.91	1.00		1.00	1.00	0.88
Frpb, ped/bikes		1.00	1.00	0.99		1.00	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1715	3438	1516		1719	4940	1504		1717	1810	2707
Flt Permitted		0.27	1.00	1.00		0.95	1.00	1.00		0.70	1.00	1.00
Satd. Flow (perm)		480	3438	1516		1719	4940	1504		1257	1810	2707
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	12	487	53	2	190	1030	189	2	144	117	270
RTOR Reduction (vph)	0	0	0	41	0	0	0	102	0	0	0	216
Lane Group Flow (vph)	0	15	487	12	0	192	1030	87	0	146	117	54
Confl. Peds. (#/hr)		8		2		2		8		2		
Confl. Bikes (#/hr)								1				
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm	Perm	NA	Perm	Prot	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases			6		5	5	2				4	
Permitted Phases	6	6		6				2	4	4		4
Actuated Green, G (s)		21.6	21.6	21.6		17.4	43.0	43.0		18.7	18.7	18.7
Effective Green, g (s)		21.6	21.6	21.6		17.4	43.0	43.0		18.7	18.7	18.7
Actuated g/C Ratio		0.23	0.23	0.23		0.19	0.46	0.46		0.20	0.20	0.20
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		110	791	349		318	2264	689		250	360	539
v/s Ratio Prot			c0.14			c0.11	0.21				0.06	
v/s Ratio Perm		0.03		0.01				0.06		c0.12		0.02
v/c Ratio		0.14	0.62	0.03		0.60	0.45	0.13		0.58	0.33	0.10
Uniform Delay, d1		28.7	32.4	28.0		35.0	17.4	14.6		34.0	32.1	30.7
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.6	1.4	0.0		3.2	0.1	0.1		3.5	0.5	0.1
Delay (s)		29.3	33.8	28.1		38.3	17.5	14.7		37.5	32.7	30.8
Level of Service		C	C	C		D	B	B		D	C	C
Approach Delay (s)			33.1				20.0				33.0	
Approach LOS			C				B				C	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	93.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	241	68	27
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.0	4.0	
Lane Util. Factor	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.96	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	1719	1726	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	1719	1726	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	241	68	27
RTOR Reduction (vph)	0	9	0
Lane Group Flow (vph)	241	86	0
Confl. Peds. (#/hr)			2
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	5%	5%	5%
Turn Type	Prot	NA	
Protected Phases	3	8	
Permitted Phases			
Actuated Green, G (s)	20.1	42.8	
Effective Green, g (s)	20.1	42.8	
Actuated g/C Ratio	0.21	0.46	
Clearance Time (s)	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	
Lane Grp Cap (vph)	368	787	
v/s Ratio Prot	c0.14	0.05	
v/s Ratio Perm			
v/c Ratio	0.65	0.11	
Uniform Delay, d1	33.7	14.6	
Progression Factor	1.00	1.00	
Incremental Delay, d2	4.2	0.1	
Delay (s)	37.8	14.7	
Level of Service	D	B	
Approach Delay (s)		31.3	
Approach LOS		C	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	1125	9	184	473	362	20	129	152	106	126	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.94	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		4961		1736	4988	1532	1736	4451	1335	1736	3471	1553
Flt Permitted		0.83		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		4119		1736	4988	1532	1736	4451	1335	1736	3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	102	1125	9	184	473	362	20	129	152	106	126	16
RTOR Reduction (vph)	0	0	0	0	0	111	0	69	69	0	0	13
Lane Group Flow (vph)	0	1236	0	184	473	251	20	136	7	106	126	3
Confl. Peds. (#/hr)	1					1						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		67.1		15.4	86.5	86.5	3.4	11.5	11.5	13.0	21.1	21.1
Effective Green, g (s)		67.1		15.4	86.5	86.5	3.4	11.5	11.5	13.0	21.1	21.1
Actuated g/C Ratio		0.54		0.12	0.69	0.69	0.03	0.09	0.09	0.10	0.17	0.17
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		2211		213	3451	1060	47	409	122	180	585	262
v/s Ratio Prot				c0.11	0.09		0.01	c0.03		c0.06	0.04	
v/s Ratio Perm		c0.30				0.16			0.01			0.00
v/c Ratio		0.56		0.86	0.14	0.24	0.43	0.33	0.06	0.59	0.22	0.01
Uniform Delay, d1		19.2		53.8	6.6	7.1	59.8	53.2	51.8	53.4	44.8	43.3
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.0		28.4	0.1	0.5	6.1	0.5	0.2	4.9	0.2	0.0
Delay (s)		20.2		82.2	6.6	7.6	65.9	53.6	52.0	58.3	45.0	43.3
Level of Service		C		F	A	A	E	D	D	E	D	D
Approach Delay (s)		20.2			20.6			54.0			50.6	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	620	1347	285	1145	691	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.90		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3176		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3176		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	620	1347	285	1145	691	160
RTOR Reduction (vph)	415	0	0	0	0	0
Lane Group Flow (vph)	1552	0	285	1145	691	160
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		11.0	38.0	13.9	59.9
Effective Green, g (s)	23.0		11.0	38.0	13.9	59.9
Actuated g/C Ratio	0.38		0.18	0.63	0.23	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1219		325	2245	796	1583
v/s Ratio Prot	c0.49		c0.16	0.32	c0.20	
v/s Ratio Perm						0.10
v/c Ratio	1.30dr		0.88	0.51	0.87	0.10
Uniform Delay, d1	18.4		23.8	5.9	22.1	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	129.6		22.3	0.2	9.9	0.1
Delay (s)	148.1		46.1	6.1	32.0	0.1
Level of Service	F		D	A	C	A
Approach Delay (s)	148.1			14.1	26.0	
Approach LOS	F			B	C	

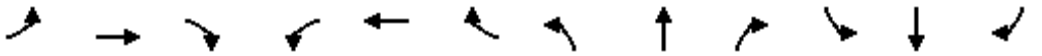
Intersection Summary			
HCM 2000 Control Delay	78.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	656	92	119	944	453	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	656	92	119	944	453	109
RTOR Reduction (vph)	0	60	0	0	0	80
Lane Group Flow (vph)	656	32	119	944	453	29
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	16.3	16.3	5.7	26.0	12.5	12.5
Effective Green, g (s)	16.3	16.3	5.7	26.0	12.5	12.5
Actuated g/C Ratio	0.35	0.35	0.12	0.56	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1240	554	420	1978	922	425
v/s Ratio Prot	0.19		0.03	c0.27	c0.13	
v/s Ratio Perm		0.02				0.02
v/c Ratio	0.53	0.06	0.28	0.48	0.49	0.07
Uniform Delay, d1	12.0	10.0	18.5	6.2	14.3	12.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.4	0.2	0.4	0.1
Delay (s)	12.4	10.1	18.9	6.3	14.7	12.7
Level of Service	B	B	B	A	B	B
Approach Delay (s)	12.2			7.8	14.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	46.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	19	127	25	13	123	73	964	14	48	1007	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.86		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1663	1748	1568	1752	2994		3400	3497		1752	3502	
Flt Permitted	0.67	0.99	1.00	0.74	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1165	1729	1568	1372	2994		3400	3497		1752	3502	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	19	127	25	13	123	73	964	14	48	1007	5
RTOR Reduction (vph)	0	0	99	0	96	0	0	1	0	0	0	0
Lane Group Flow (vph)	5	20	28	25	40	0	73	977	0	48	1012	0
Confl. Peds. (#/hr)	3											
Confl. Bikes (#/hr)						1			3			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.1	10.1	10.1	10.1	10.1		3.3	22.6		2.4	21.7	
Effective Green, g (s)	10.1	10.1	10.1	10.1	10.1		3.3	22.6		2.4	21.7	
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.07	0.48		0.05	0.47	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	252	374	339	297	648		240	1695		90	1630	
v/s Ratio Prot					0.01		0.02	0.28		c0.03	c0.29	
v/s Ratio Perm	0.00	0.01	0.02	c0.02								
v/c Ratio	0.02	0.05	0.08	0.08	0.06		0.30	0.58		0.53	0.62	
Uniform Delay, d1	14.4	14.5	14.6	14.6	14.5		20.6	8.6		21.6	9.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.1	0.2	0.2	0.1		0.3	0.3		3.0	0.5	
Delay (s)	14.4	14.6	14.7	14.8	14.6		20.8	8.9		24.6	9.9	
Level of Service	B	B	B	B	B		C	A		C	A	
Approach Delay (s)		14.7			14.6			9.7			10.6	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	11.5
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

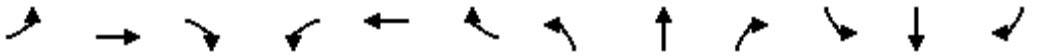
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	0	0	0	9	266	396	379	3	176	632	178	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91			0.97	0.95	1.00	0.97
Frpb, ped/bikes					1.00	0.99			1.00	1.00	0.99	1.00
Flpb, ped/bikes					1.00	1.00			1.00	1.00	1.00	1.00
Frt					1.00	0.93			1.00	1.00	0.85	1.00
Flt Protected					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (prot)					1752	4629			3400	3505	1548	3400
Flt Permitted					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (perm)					1752	4629			3400	3505	1548	3400
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	9	266	396	379	3	176	632	178	276
RTOR Reduction (vph)	0	0	0	0	0	213	0	0	0	0	89	0
Lane Group Flow (vph)	0	0	0	0	275	562	0	0	179	632	89	276
Confl. Peds. (#/hr)							2					
Confl. Bikes (#/hr)							2				2	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm	Perm	NA		Prot	Prot	NA	Perm	Prot
Protected Phases						8		5	5	2		1
Permitted Phases				8	8						2	
Actuated Green, G (s)					24.9	24.9			10.6	50.0	50.0	13.1
Effective Green, g (s)					24.9	24.9			10.6	50.0	50.0	13.1
Actuated g/C Ratio					0.25	0.25			0.11	0.50	0.50	0.13
Clearance Time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					436	1152			360	1752	774	445
v/s Ratio Prot						0.12			0.05	0.18		c0.08
v/s Ratio Perm					c0.16						0.06	
v/c Ratio					0.63	0.49			0.50	0.36	0.11	0.62
Uniform Delay, d1					33.5	32.1			42.2	15.3	13.3	41.1
Progression Factor					1.00	1.00			0.68	1.40	4.13	1.00
Incremental Delay, d2					3.0	0.3			1.0	0.5	0.3	2.7
Delay (s)					36.4	32.4			29.5	21.8	55.0	43.8
Level of Service					D	C			C	C	E	D
Approach Delay (s)		0.0				33.5				29.2		
Approach LOS		A				C				C		

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	785	92
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3505	1546
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3505	1546
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	785	92
RTOR Reduction (vph)	0	44
Lane Group Flow (vph)	785	48
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		4
Heavy Vehicles (%)	3%	3%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	52.5	52.5
Effective Green, g (s)	52.5	52.5
Actuated g/C Ratio	0.52	0.52
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1840	811
v/s Ratio Prot	c0.22	
v/s Ratio Perm		0.03
v/c Ratio	0.43	0.06
Uniform Delay, d1	14.5	11.6
Progression Factor	1.00	1.00
Incremental Delay, d2	0.7	0.1
Delay (s)	15.3	11.8
Level of Service	B	B
Approach Delay (s)	21.8	
Approach LOS	C	

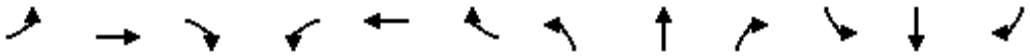
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	83	400	220	0	75	0	762	193	23	902	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	5036	1568	3400		1530		3505	1543	1752	3505	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	5036	1568	3400		1530		3505	1543	1752	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	153	83	400	220	0	75	0	762	193	23	902	0
RTOR Reduction (vph)	0	0	95	0	0	66	0	0	104	0	0	0
Lane Group Flow (vph)	153	83	305	220	0	9	0	762	89	23	902	0
Confl. Peds. (#/hr)						5			2	2		
Confl. Bikes (#/hr)									4			3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	22.9	22.9	22.9	11.8		11.8		46.0	46.0	3.3	53.3	
Effective Green, g (s)	22.9	22.9	22.9	11.8		11.8		46.0	46.0	3.3	53.3	
Actuated g/C Ratio	0.23	0.23	0.23	0.12		0.12		0.46	0.46	0.03	0.53	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	401	1153	359	401		180		1612	709	57	1868	
v/s Ratio Prot	0.09	0.02		c0.06				0.22		0.01	c0.26	
v/s Ratio Perm			c0.19			0.01			0.06			
v/c Ratio	0.38	0.07	0.85	0.55		0.05		0.47	0.13	0.40	0.48	
Uniform Delay, d1	32.6	30.2	36.9	41.6		39.1		18.6	15.5	47.4	14.7	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.85	1.29	
Incremental Delay, d2	0.6	0.0	17.2	1.5		0.1		1.0	0.4	4.3	0.8	
Delay (s)	33.2	30.2	54.1	43.1		39.2		19.6	15.8	44.4	19.8	
Level of Service	C	C	D	D		D		B	B	D	B	
Approach Delay (s)		46.0			42.1			18.9			20.4	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



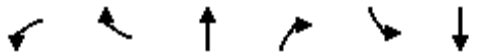
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	90	36	197	82	438	28	414	243	678	1065	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1504	2866		3242	1759	1495	1671	4803	1482	3335	3403	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1504	2866		3242	1759	1495	1671	4803	1482	3335	3403	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	84	90	36	197	82	438	28	414	243	678	1065	68
RTOR Reduction (vph)	0	31	0	0	0	176	0	0	136	0	3	0
Lane Group Flow (vph)	84	95	0	197	82	262	28	414	107	678	1130	0
Confl. Peds. (#/hr)			1	1			2		1	1		2
Confl. Bikes (#/hr)			2									1
Heavy Vehicles (%)	20%	20%	20%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	8.2	9.9		9.9	11.6	27.9	2.8	23.2	33.1	16.3	36.7	
Effective Green, g (s)	8.2	9.9		9.9	11.6	27.9	2.8	23.2	33.1	16.3	36.7	
Actuated g/C Ratio	0.11	0.13		0.13	0.15	0.37	0.04	0.31	0.44	0.22	0.49	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	163	376		426	270	633	62	1479	730	721	1658	
v/s Ratio Prot	0.06	0.03		c0.06	0.05	c0.09	0.02	c0.09	0.02	c0.20	c0.33	
v/s Ratio Perm						0.09			0.05			
v/c Ratio	0.52	0.25		0.46	0.30	0.41	0.45	0.28	0.15	0.94	0.68	
Uniform Delay, d1	31.7	29.4		30.2	28.3	17.6	35.5	19.7	12.6	29.0	14.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.7	0.4		0.8	0.6	0.4	5.2	0.1	0.1	20.3	1.2	
Delay (s)	34.4	29.7		31.0	28.9	18.1	40.7	19.8	12.7	49.3	16.0	
Level of Service	C	C		C	C	B	D	B	B	D	B	
Approach Delay (s)		31.6			22.9			18.2			28.5	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	309	20	20	240	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1847			1856	1695	
Flt Permitted	1.00			0.92	0.98	
Satd. Flow (perm)	1847			1707	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	20	20	240	20	20
RTOR Reduction (vph)	4	0	0	0	17	0
Lane Group Flow (vph)	325	0	0	260	23	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	16.2			16.2	10.8	
Effective Green, g (s)	16.2			16.2	10.8	
Actuated g/C Ratio	0.25			0.25	0.17	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	458			423	280	
v/s Ratio Prot	c0.18				c0.01	
v/s Ratio Perm				0.15		
v/c Ratio	0.71			0.61	0.08	
Uniform Delay, d1	22.4			21.8	23.1	
Progression Factor	1.00			0.63	1.00	
Incremental Delay, d2	4.3			1.8	0.0	
Delay (s)	26.7			15.4	23.1	
Level of Service	C			B	C	
Approach Delay (s)	26.7			15.4	23.1	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	21.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	220	10	0	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1852			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1852			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	220	10	0	75
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	230	0	0	75
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.0		21.3			21.3
Effective Green, g (s)	1.0		21.3			21.3
Actuated g/C Ratio	0.01		0.28			0.28
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	23		527			530
v/s Ratio Prot	c0.01		c0.12			0.04
v/s Ratio Perm						
v/c Ratio	0.43		0.44			0.14
Uniform Delay, d1	36.6		21.8			19.9
Progression Factor	1.00		1.00			0.78
Incremental Delay, d2	12.6		0.6			0.1
Delay (s)	49.2		22.4			15.7
Level of Service	D		C			B
Approach Delay (s)	49.2		22.4			15.7
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix K

LOS Calculation Worksheets
2035 No Project Conditions

FEHR PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	240	30	50	40	20	30	20	530	50	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	240	30	50	40	20	30	20	530	50	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	320	90	600
Volume Left (vph)	240	40	20
Volume Right (vph)	50	30	50
Hadj (s)	0.09	-0.08	-0.01
Departure Headway (s)	5.8	6.1	5.1
Degree Utilization, x	0.52	0.15	0.85
Capacity (veh/h)	573	549	691
Control Delay (s)	15.0	10.2	30.4
Approach Delay (s)	15.0	10.2	30.4
Approach LOS	B	B	D

Intersection Summary				
Delay	23.7			
Level of Service	C			
Intersection Capacity Utilization	63.4%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	20	30	850	20	10	80
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	30	850	20	10	80
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	962	865			872	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	962	865			872	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	91			99	
cM capacity (veh/h)	280	352			772	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	50	870	90
Volume Left	20	0	10
Volume Right	30	20	0
cSH	319	1700	772
Volume to Capacity	0.16	0.51	0.01
Queue Length 95th (ft)	14	0	1
Control Delay (s)	18.4	0.0	1.2
Lane LOS	C		A
Approach Delay (s)	18.4	0.0	1.2
Approach LOS	C		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	110	190	50	20	800	20	0	0	10	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	0	110	190	50	20	800	20	0	0	10	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1670	1635	15	1745	1640	10	20			20		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1670	1635	15	1745	1640	10	20			20		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	0	100	90	0	0	98	50			100		
cM capacity (veh/h)	0	51	1064	30	47	1075	1595			1609		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1
Volume Total	120	190	70	800	10	10	20
Volume Left	10	190	0	800	0	0	0
Volume Right	110	0	20	0	0	0	10
cSH	0	30	64	1595	1700	1700	1700
Volume to Capacity	Err	6.35	1.09	0.50	0.01	0.01	0.01
Queue Length 95th (ft)	Err	Err	138	73	0	0	0
Control Delay (s)	Err	Err	249.2	9.5	0.0	0.0	0.0
Lane LOS	F	F	F	A			
Approach Delay (s)	Err	7374.1		9.3			0.0
Approach LOS	F	F					

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	74.8%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	650	380	40	0	0	0	40	170	50	90	30	190
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	650	380	40	0	0	0	40	170	50	90	30	190

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	840	230	260	90	220
Volume Left (vph)	650	0	40	90	0
Volume Right (vph)	0	40	50	0	190
Hadj (s)	0.42	-0.11	-0.06	0.52	-0.58
Departure Headway (s)	6.7	6.2	6.9	7.7	6.6
Degree Utilization, x	1.0	0.40	0.50	0.19	0.40
Capacity (veh/h)	543	573	516	459	537
Control Delay (s)	281.1	12.0	16.5	11.3	12.7
Approach Delay (s)	223.3		16.5	12.3	
Approach LOS	F		C	B	

Intersection Summary				
Delay	150.6			
Level of Service	F			
Intersection Capacity Utilization	73.8%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1000	50	10	220	0	30	0	30	40	50	690
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1000	50	10	220	0	30	0	30	40	50	690
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	220			1053			1983	1268	528	770	1293	220
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	220			1053			1983	1268	528	770	1293	220
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			99			0	100	94	85	68	11
cM capacity (veh/h)	1361			667			3	167	499	267	157	772

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	667	383	10	220	60	90	690
Volume Left	0	0	10	0	30	40	0
Volume Right	0	50	0	0	30	0	690
cSH	1700	1700	667	1700	6	193	772
Volume to Capacity	0.39	0.23	0.01	0.13	10.29	0.47	0.89
Queue Length 95th (ft)	0	0	1	0	Err	56	294
Control Delay (s)	0.0	0.0	10.5	0.0	Err	39.1	35.3
Lane LOS			B		F	E	E
Approach Delay (s)	0.0		0.5		Err	35.7	
Approach LOS					F	E	

Intersection Summary				
Average Delay	296.2			
Intersection Capacity Utilization	67.8%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	570	40	150	30	20	70	250	390	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			5.0	5.0	4.0	4.0	3.5			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.88			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1752	1515			1783	1568	1752	1863	1383			
Flt Permitted	0.95	1.00			0.71	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1752	1515			1304	1568	1752	1863	1383			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	570	40	150	30	20	70	250	390	20	0	0	0
RTOR Reduction (vph)	0	62	0	0	0	62	0	0	14	0	0	0
Lane Group Flow (vph)	570	128	0	0	50	8	250	390	6	0	0	0
Confl. Peds. (#/hr)			6	6								
Confl. Bikes (#/hr)			2						3			
Heavy Vehicles (%)	3%	0%	10%	5%	0%	3%	3%	2%	14%	2%	2%	2%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	25.6	36.7			7.6	7.6	18.3	18.3	18.3			
Effective Green, g (s)	24.6	36.7			7.1	7.1	17.8	17.8	18.3			
Actuated g/C Ratio	0.39	0.59			0.11	0.11	0.28	0.28	0.29			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	689	889			148	178	498	530	404			
v/s Ratio Prot	c0.33	0.08						c0.21				
v/s Ratio Perm					c0.04	0.01	0.14		0.00			
v/c Ratio	0.83	0.14			0.34	0.04	0.50	0.74	0.01			
Uniform Delay, d1	17.0	5.8			25.5	24.7	18.7	20.2	15.7			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	8.1	0.1			0.5	0.0	0.3	4.6	0.0			
Delay (s)	25.1	5.9			26.0	24.7	18.9	24.8	15.7			
Level of Service	C	A			C	C	B	C	B			
Approach Delay (s)		20.3			25.3			22.3			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	720	10	0	270	0	10	0	0	40	0	630
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			1.00			1.00	0.85
Flt Protected		1.00			1.00			0.95			0.95	1.00
Satd. Flow (prot)		1824			1863			1805			1656	1562
Flt Permitted		1.00			1.00			0.95			0.95	1.00
Satd. Flow (perm)		1824			1863			1805			1656	1562
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	720	10	0	270	0	10	0	0	40	0	630
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	520
Lane Group Flow (vph)	0	730	0	0	270	0	0	10	0	0	40	110
Confl. Peds. (#/hr)			5	5								2
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	0%	4%	0%	0%	2%	0%	0%	0%	2%	9%	0%	1%
Turn Type		NA			NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		27.7			27.7			1.9			8.8	8.8
Effective Green, g (s)		27.7			27.7			1.9			8.8	8.8
Actuated g/C Ratio		0.55			0.55			0.04			0.17	0.17
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		1002			1023			68			289	272
v/s Ratio Prot		c0.40			0.14			c0.01			0.02	
v/s Ratio Perm												c0.07
v/c Ratio		0.73			0.26			0.15			0.14	0.40
Uniform Delay, d1		8.5			6.0			23.5			17.6	18.5
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.9			0.2			1.0			0.1	0.4
Delay (s)		11.4			6.2			24.5			17.7	18.8
Level of Service		B			A			C			B	B
Approach Delay (s)		11.4			6.2			24.5			18.8	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	110	240	600	220	0	80	0	800	160	830	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.98	1.00	1.00		1.00		1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		1.00	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1900	1571	3433	1881		1736		2760		3487	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1900	1571	3433	1881		1736		2760		3487	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	110	240	600	220	0	80	0	800	160	830	30
RTOR Reduction (vph)	0	0	177	0	0	0	0	0	481	0	2	0
Lane Group Flow (vph)	0	110	63	600	220	0	80	0	319	0	1018	0
Confl. Peds. (#/hr)	3		2			3						5
Heavy Vehicles (%)	0%	0%	1%	2%	1%	0%	4%	0%	2%	2%	2%	7%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		11.8	11.8	36.9	53.7		7.0		48.9		45.3	
Effective Green, g (s)		11.8	11.8	36.9	53.7		6.0		47.9		45.3	
Actuated g/C Ratio		0.10	0.10	0.31	0.45		0.05		0.40		0.38	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		186	154	1055	841		86		1101		1316	
v/s Ratio Prot		c0.06		c0.17	0.12		c0.05		0.12		c0.29	
v/s Ratio Perm			0.04									
v/c Ratio		0.59	0.41	0.57	0.26		0.93		0.29		0.77	
Uniform Delay, d1		51.8	50.8	34.9	20.7		56.8		24.5		32.8	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		3.3	0.7	2.2	0.8		73.2		0.1		2.6	
Delay (s)		55.1	51.5	37.1	21.5		130.0		24.5		35.5	
Level of Service		E	D	D	C		F		C		D	
Approach Delay (s)		52.6			32.9			34.1			35.5	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	36.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	530	540	0	0	430	180	390	10	380	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3433	1827			1845	1549		1794	1542			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3433	1827			1845	1549		1794	1542			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	530	540	0	0	430	180	390	10	380	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	106	0	0	164	0	0	0
Lane Group Flow (vph)	530	540	0	0	430	74	0	400	216	0	0	0
Confl. Peds. (#/hr)			12			8			3			
Heavy Vehicles (%)	2%	4%	0%	0%	3%	2%	1%	0%	2%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	21.7	51.2			25.0	25.0		39.8	39.8			
Effective Green, g (s)	21.7	51.2			25.0	25.0		39.8	39.8			
Actuated g/C Ratio	0.22	0.51			0.25	0.25		0.40	0.40			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	744	935			461	387		714	613			
v/s Ratio Prot	c0.15	0.30			c0.23							
v/s Ratio Perm						0.05		0.22	0.14			
v/c Ratio	0.71	0.58			0.93	0.19		0.56	0.35			
Uniform Delay, d1	36.3	16.9			36.7	29.5		23.3	21.1			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	4.0	1.4			26.7	0.5		3.2	1.6			
Delay (s)	40.3	18.3			63.4	30.0		26.5	22.7			
Level of Service	D	B			E	C		C	C			
Approach Delay (s)		29.2			53.6			24.6			0.0	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	880	510	370	1300
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	880	510	370	1300
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.79					
vC, conflicting volume	2525	695			880	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2399	695			880	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			52	
cM capacity (veh/h)	12	389			770	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	587	803	370	650	650
Volume Left	0	0	370	0	0
Volume Right	0	510	0	0	0
cSH	1700	1700	770	1700	1700
Volume to Capacity	0.35	0.47	0.48	0.38	0.38
Queue Length 95th (ft)	0	0	66	0	0
Control Delay (s)	0.0	0.0	13.9	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		3.1		
Approach LOS					

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	67.8%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	510	70	10	220	610	160	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.93	
Flt Protected	1.00	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3539	1583		1770	3539	1671	
Flt Permitted	1.00	1.00		0.35	1.00	0.98	
Satd. Flow (perm)	3539	1583		657	3539	1671	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	510	70	10	220	610	160	190
RTOR Reduction (vph)	0	14	0	0	0	47	0
Lane Group Flow (vph)	510	56	0	230	610	303	0
Confl. Peds. (#/hr)							9
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	14.1	34.6		26.8	26.8	15.0	
Effective Green, g (s)	14.1	34.6		26.8	26.8	15.0	
Actuated g/C Ratio	0.27	0.67		0.52	0.52	0.29	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	963	1057		548	1830	483	
v/s Ratio Prot	c0.14	0.04		c0.08	0.17	c0.18	
v/s Ratio Perm				0.14			
v/c Ratio	0.53	0.05		0.42	0.33	0.63	
Uniform Delay, d1	16.0	3.0		7.2	7.3	16.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.0		0.5	0.1	2.5	
Delay (s)	16.6	3.0		7.7	7.4	18.5	
Level of Service	B	A		A	A	B	
Approach Delay (s)	14.9				7.5	18.5	
Approach LOS	B				A	B	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	51.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	330	20	100	370	300	20	240	80	170	340	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.99			1.00	0.85		0.96		1.00	0.95	
Flt Protected		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1824			3502	1583		3339		1770	1746	
Flt Permitted		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1824			3502	1583		3339		1770	1746	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	330	20	100	370	300	20	240	80	170	340	180
RTOR Reduction (vph)	0	1	0	0	0	111	0	26	0	0	16	0
Lane Group Flow (vph)	0	459	0	0	470	189	0	314	0	170	504	0
Confl. Peds. (#/hr)	20		21	21		20	12		41	41		12
Confl. Bikes (#/hr)			2			2						
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		30.0			18.0	34.6		15.3		34.6	34.6	
Effective Green, g (s)		30.0			18.0	34.6		15.3		34.6	34.6	
Actuated g/C Ratio		0.27			0.16	0.31		0.14		0.31	0.31	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		497			573	498		464		557	549	
v/s Ratio Prot		c0.25			c0.13	0.12		c0.09		0.10	c0.29	
v/s Ratio Perm												
v/c Ratio		0.92			0.82	0.38		0.68		0.31	0.92	
Uniform Delay, d1		38.8			44.4	29.3		45.0		28.5	36.3	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		22.8			9.2	0.5		3.9		0.3	20.2	
Delay (s)		61.6			53.6	29.8		48.9		28.9	56.4	
Level of Service		E			D	C		D		C	E	
Approach Delay (s)		61.6			44.3			48.9			49.6	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	109.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	430	90	40	550	50	180	480	50	90	560	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			0.99			1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1687	1845	1577	1719	1840			3423			3383	1429
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1687	1845	1577	1719	1840			3423			3383	1429
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	430	90	40	550	50	180	480	50	90	560	140
RTOR Reduction (vph)	0	0	60	0	2	0	0	4	0	0	0	0
Lane Group Flow (vph)	160	430	30	40	598	0	0	706	0	0	650	140
Confl. Peds. (#/hr)			5						15			48
Confl. Bikes (#/hr)						3			2			2
Heavy Vehicles (%)	7%	3%	0%	5%	2%	0%	3%	2%	4%	12%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	16.3	48.7	48.7	19.9	52.3			32.0			30.3	150.4
Effective Green, g (s)	16.3	50.2	50.2	19.9	53.8			33.0			31.3	150.4
Actuated g/C Ratio	0.11	0.33	0.33	0.13	0.36			0.22			0.21	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	182	615	526	227	658			751			704	1429
v/s Ratio Prot	c0.09	0.23		0.02	c0.32			c0.21			c0.19	
v/s Ratio Perm			0.02									0.10
v/c Ratio	0.88	0.70	0.06	0.18	0.91			0.94			0.92	0.10
Uniform Delay, d1	66.1	43.5	34.0	58.0	46.0			57.7			58.4	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	34.8	3.5	0.0	0.4	16.4			19.7			17.7	0.1
Delay (s)	100.8	47.0	34.1	58.3	62.4			77.4			76.1	0.1
Level of Service	F	D	C	E	E			E			E	A
Approach Delay (s)		58.0			62.1			77.4			62.6	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	65.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	150.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	460	20	50	790	370	10	50	20	190	40	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			0.95	
Frpb, ped/bikes		1.00			1.00			0.98			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			0.96	
Frt		0.99			0.95			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.97	
Satd. Flow (prot)		3497			3363			1747			3125	
Flt Permitted		0.93			0.92			0.94			0.83	
Satd. Flow (perm)		3262			3091			1646			2657	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	460	20	50	790	370	10	50	20	190	40	90
RTOR Reduction (vph)	0	4	0	0	60	0	0	16	0	0	72	0
Lane Group Flow (vph)	0	486	0	0	1150	0	0	64	0	0	248	0
Confl. Peds. (#/hr)			122	122			32		60	60		32
Confl. Bikes (#/hr)			9						2			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)		45.5			45.5			11.5			11.5	
Effective Green, g (s)		45.5			45.5			11.5			11.5	
Actuated g/C Ratio		0.70			0.70			0.18			0.18	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		2283			2163			291			470	
v/s Ratio Prot												
v/s Ratio Perm		0.15			c0.37			0.04			c0.09	
v/c Ratio		0.21			0.53			0.22			0.53	
Uniform Delay, d1		3.4			4.7			22.9			24.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			0.9			0.4			1.1	
Delay (s)		3.7			5.6			23.3			25.4	
Level of Service		A			A			C			C	
Approach Delay (s)		3.7			5.6			23.3			25.4	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	450	180	260	1230	170	240	630	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			1.00				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.98			0.99				
Flt Protected		1.00	1.00		0.99			0.99				
Satd. Flow (prot)		3539	1570		3453			3451				
Flt Permitted		1.00	1.00		0.77			0.99				
Satd. Flow (perm)		3539	1570		2678			3451				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	450	180	260	1230	170	240	630	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	450	180	0	1647	0	0	914	0	0	0	0
Confl. Peds. (#/hr)									33	33		
Confl. Bikes (#/hr)			3			5			18			2
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		39.0	57.5		39.0			18.5				
Effective Green, g (s)		39.0	57.5		39.0			18.5				
Actuated g/C Ratio		0.60	0.88		0.60			0.28				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		2123	1497		1606			982				
v/s Ratio Prot		0.13	0.03									
v/s Ratio Perm			0.08		c0.61			0.26				
v/c Ratio		0.21	0.12		1.03			0.93				
Uniform Delay, d1		6.0	0.5		13.0			22.6				
Progression Factor		0.76	0.57		1.00			1.00				
Incremental Delay, d2		0.0	0.0		29.2			16.2				
Delay (s)		4.6	0.3		42.2			38.8				
Level of Service		A	A		D			D				
Approach Delay (s)		3.4			42.2			38.8			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM 2000 Control Delay	33.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	260	100	50	600	140	60	550	30	30	400	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.98			0.98			0.99			0.93	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.97			0.98			0.99			0.95	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1750			1769			3440			3123	
Flt Permitted		0.79			0.95			0.74			0.86	
Satd. Flow (perm)		1399			1688			2550			2687	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	260	100	50	600	140	60	550	30	30	400	190
RTOR Reduction (vph)	0	16	0	0	11	0	0	4	0	0	67	0
Lane Group Flow (vph)	0	424	0	0	779	0	0	636	0	0	553	0
Confl. Peds. (#/hr)	95		60	60		95	81		83	83		81
Confl. Bikes (#/hr)			5			26			6			11
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		45.3			36.3			19.8			19.8	
Effective Green, g (s)		41.3			36.3			19.8			19.8	
Actuated g/C Ratio		0.56			0.49			0.27			0.27	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		779			826			681			717	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			c0.46			c0.25			0.21	
v/c Ratio		0.54			0.94			0.93			0.77	
Uniform Delay, d1		10.4			17.9			26.5			25.1	
Progression Factor		0.25			1.00			1.00			1.00	
Incremental Delay, d2		0.4			18.7			21.5			7.9	
Delay (s)		3.0			36.6			48.0			32.9	
Level of Service		A			D			D			C	
Approach Delay (s)		3.0			36.6			48.0			32.9	
Approach LOS		A			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	520	140	90	610	80	170	780	120	60	490	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.91			0.94		1.00	0.96		1.00	0.97	
Flpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.97			0.99		1.00	0.98		1.00	0.98	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3125			1701		1770	1744		1770	1773	
Flt Permitted		0.92			0.74		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2882			1261		1770	1744		1770	1773	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	520	140	90	610	80	170	780	120	60	490	60
RTOR Reduction (vph)	0	24	0	0	4	0	0	6	0	0	4	0
Lane Group Flow (vph)	0	656	0	0	776	0	170	894	0	60	546	0
Confl. Peds. (#/hr)	215		132	132		215			234			90
Confl. Bikes (#/hr)			2									
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		42.1			42.1		10.9	38.4		4.0	31.5	
Effective Green, g (s)		42.1			42.1		10.9	38.4		4.0	31.5	
Actuated g/C Ratio		0.42			0.42		0.11	0.38		0.04	0.32	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1213			530		192	669		70	558	
v/s Ratio Prot							c0.10	c0.51		0.03	0.31	
v/s Ratio Perm		0.23			c0.62							
v/c Ratio		0.54			1.46		0.89	1.34		0.86	0.98	
Uniform Delay, d1		21.7			28.9		43.9	30.8		47.7	33.9	
Progression Factor		1.00			1.00		1.05	0.95		1.00	1.00	
Incremental Delay, d2		1.7			219.0		4.7	152.6		58.8	32.1	
Delay (s)		23.4			248.0		50.7	181.9		106.5	66.0	
Level of Service		C			F		D	F		F	E	
Approach Delay (s)		23.4			248.0			161.0			70.0	
Approach LOS		C			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	135.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	134.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	80	660	840	140	330	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.98		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1770	1863	1793		1691	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1770	1863	1793		1691	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	660	840	140	330	200
RTOR Reduction (vph)	0	0	4	0	22	0
Lane Group Flow (vph)	80	660	976	0	508	0
Confl. Peds. (#/hr)	101			101		
Confl. Bikes (#/hr)				21		14
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	5.2	61.0	51.3		30.5	
Effective Green, g (s)	5.2	61.0	51.3		30.5	
Actuated g/C Ratio	0.05	0.61	0.51		0.30	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	92	1136	919		515	
v/s Ratio Prot	c0.05	0.35	c0.54		c0.30	
v/s Ratio Perm						
v/c Ratio	0.87	0.58	1.06		0.99	
Uniform Delay, d1	47.1	11.8	24.4		34.6	
Progression Factor	0.70	1.65	0.67		1.00	
Incremental Delay, d2	26.2	0.8	30.7		36.0	
Delay (s)	59.4	20.3	47.0		70.6	
Level of Service	E	C	D		E	
Approach Delay (s)		24.5	47.0		70.6	
Approach LOS		C	D		E	

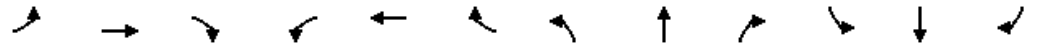
Intersection Summary			
HCM 2000 Control Delay	45.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	550	170	160	600	230	90	830	120	110	670	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.97			0.97			0.98		1.00	0.99	
Flt Protected		1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1800			1790			3463		1770	3509	
Flt Permitted		0.80			0.68			0.70		0.12	1.00	
Satd. Flow (perm)		1451			1227			2445		215	3509	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	550	170	160	600	230	90	830	120	110	670	40
RTOR Reduction (vph)	0	10	0	0	11	0	0	10	0	0	4	0
Lane Group Flow (vph)	0	790	0	0	979	0	0	1030	0	110	706	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		52.0			52.0			38.0		38.0	38.0	
Effective Green, g (s)		52.0			52.0			38.0		38.0	38.0	
Actuated g/C Ratio		0.52			0.52			0.38		0.38	0.38	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		754			638			929		81	1333	
v/s Ratio Prot											0.20	
v/s Ratio Perm		0.54			c0.80			0.42		c0.51		
v/c Ratio		1.05			1.53			1.11		1.36	0.53	
Uniform Delay, d1		24.0			24.0			31.0		31.0	24.1	
Progression Factor		1.00			1.00			1.00		0.65	0.59	
Incremental Delay, d2		46.1			248.3			64.1		206.1	0.3	
Delay (s)		70.1			272.3			95.1		226.2	14.4	
Level of Service		E			F			F		F	B	
Approach Delay (s)		70.1			272.3			95.1			42.8	
Approach LOS		E			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	125.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	146.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	140	60	90	300	110	50	750	90	60	890	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99		0.89	1.00		0.99	1.00		0.98	1.00	
Frt		0.97		1.00	0.96		1.00	0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1676		1573	1718		1744	1813		1738	1829	
Flt Permitted		0.60		0.51	1.00		0.12	1.00		0.19	1.00	
Satd. Flow (perm)		1015		837	1718		221	1813		354	1829	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	140	60	90	300	110	50	750	90	60	890	70
RTOR Reduction (vph)	0	18	0	0	21	0	0	7	0	0	4	0
Lane Group Flow (vph)	0	222	0	90	389	0	50	833	0	60	956	0
Confl. Peds. (#/hr)	57		102	102		57	98		92	92		98
Confl. Bikes (#/hr)			6			15			14			9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		265		218	449		136	1115		217	1125	
v/s Ratio Prot					c0.23			0.46			c0.52	
v/s Ratio Perm		0.22		0.11			0.23			0.17		
v/c Ratio		0.84		0.41	0.87		0.37	0.75		0.28	0.85	
Uniform Delay, d1		22.7		19.9	22.9		6.2	8.9		5.8	10.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		25.7		1.3	16.0		7.5	4.6		3.1	8.1	
Delay (s)		48.4		21.1	38.9		13.7	13.5		8.9	18.1	
Level of Service		D		C	D		B	B		A	B	
Approach Delay (s)		48.4			35.7			13.5			17.6	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	320	200	60	20	320	90	240	500	30	70	490	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98			0.95		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1759			3243		1770	1844		1770	1863	1536
Flt Permitted	0.95	1.00			0.93		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1759			3034		1770	1844		1770	1863	1536
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	320	200	60	20	320	90	240	500	30	70	490	580
RTOR Reduction (vph)	0	13	0	0	28	0	0	3	0	0	0	287
Lane Group Flow (vph)	320	247	0	0	402	0	240	527	0	70	490	293
Confl. Peds. (#/hr)	101		63	63		101	14		12	12		14
Confl. Bikes (#/hr)			15			12			2			6
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	15.0	41.0			21.0		7.0	28.0		4.8	27.8	27.8
Effective Green, g (s)	15.0	41.0			21.0		7.0	28.0		4.8	27.8	27.8
Actuated g/C Ratio	0.17	0.48			0.24		0.08	0.33		0.06	0.32	0.32
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	309	840			742		144	601		99	603	497
v/s Ratio Prot	c0.18	0.14					c0.14	c0.29		0.04	0.26	
v/s Ratio Perm					c0.13							0.19
v/c Ratio	1.04	0.29			0.54		1.67	0.88		0.71	0.81	0.59
Uniform Delay, d1	35.4	13.6			28.2		39.4	27.3		39.8	26.6	24.2
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	60.7	0.9			2.8		328.5	16.5		17.1	11.4	5.1
Delay (s)	96.1	14.5			31.0		367.9	43.8		56.9	38.0	29.3
Level of Service	F	B			C		F	D		E	D	C
Approach Delay (s)		59.5			31.0			144.8			34.7	
Approach LOS		E			C			F			C	

Intersection Summary			
HCM 2000 Control Delay	68.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	17.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	90	320	60	80	770	40	150	590	110	20	470	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		3413			3478			3394			3413	
Flt Permitted		0.58			0.85			0.74			0.92	
Satd. Flow (perm)		2011			2968			2529			3131	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	320	60	80	770	40	150	590	110	20	470	80
RTOR Reduction (vph)	0	15	0	0	4	0	0	15	0	0	16	0
Lane Group Flow (vph)	0	455	0	0	886	0	0	835	0	0	554	0
Confl. Peds. (#/hr)	77		24	24		77	17		69	69		66
Confl. Bikes (#/hr)			9			6			5			11
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		949			1001			853			1383	
v/s Ratio Prot		c0.02									c0.02	
v/s Ratio Perm		0.19			c0.30			c0.33			0.16	
v/c Ratio		0.48			0.89			0.98			0.40	
Uniform Delay, d1		16.0			25.0			26.2			15.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.7			11.4			26.2			0.9	
Delay (s)		17.8			36.4			52.4			16.2	
Level of Service		B			D			D			B	
Approach Delay (s)		17.8			36.4			52.4			16.2	
Approach LOS		B			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	30	380	110	70	500	40	10	30	440	10	50	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	4.0	4.0		
Lane Util. Factor		1.00			1.00			1.00	1.00	1.00		
Frpb, ped/bikes		0.99			1.00			1.00	1.00	0.91		
Flpb, ped/bikes		1.00			1.00			0.99	1.00	1.00		
Frt		0.97			0.99			1.00	1.00	0.85		
Flt Protected		1.00			0.99			0.95	1.00	1.00		
Satd. Flow (prot)		1782			1823			1754	1863	1448		
Flt Permitted		0.95			0.91			0.21	1.00	1.00		
Satd. Flow (perm)		1702			1664			389	1863	1448		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	380	110	70	500	40	10	30	440	10	50	10
RTOR Reduction (vph)	0	14	0	0	1	0	0	0	0	42	0	0
Lane Group Flow (vph)	0	506	0	0	619	0	0	30	440	18	0	0
Confl. Peds. (#/hr)			35	35		15		20		35		
Confl. Bikes (#/hr)						6						
Turn Type	Perm	NA		Perm	NA			Perm	NA	Perm		Perm
Protected Phases		2			6				8			
Permitted Phases	2			6				8		8		4
Actuated Green, G (s)		32.0			32.0			19.0	19.0	19.0		
Effective Green, g (s)		32.0			32.0			19.0	19.0	19.0		
Actuated g/C Ratio		0.49			0.49			0.29	0.29	0.29		
Clearance Time (s)		4.0			4.0			4.0	4.0	4.0		
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0		
Lane Grp Cap (vph)		837			819			113	544	423		
v/s Ratio Prot									0.24			
v/s Ratio Perm		0.30			c0.37			0.08		0.01		
v/c Ratio		0.60			0.76			0.27	0.81	0.04		
Uniform Delay, d1		11.9			13.3			17.6	21.3	16.5		
Progression Factor		1.15			1.00			1.00	1.00	1.00		
Incremental Delay, d2		3.0			6.4			1.3	8.6	0.0		
Delay (s)		16.8			19.8			18.9	30.0	16.5		
Level of Service		B			B			B	C	B		
Approach Delay (s)		16.8			19.8				27.8			
Approach LOS		B			B				C			

Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations							
Volume (vph)	40	510	50	10	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		
Lane Util. Factor	1.00	1.00			1.00		
Frpb, ped/bikes	1.00	0.99			1.00		
Flpb, ped/bikes	0.98	1.00			1.00		
Frt	1.00	0.99			0.93		
Flt Protected	0.95	1.00			0.98		
Satd. Flow (prot)	1726	1828			1695		
Flt Permitted	0.22	1.00			1.00		
Satd. Flow (perm)	394	1828			1737		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	510	50	10	10	10	10
RTOR Reduction (vph)	0	6	0	0	0	0	0
Lane Group Flow (vph)	50	554	0	0	40	0	0
Confl. Peds. (#/hr)	35		20				
Confl. Bikes (#/hr)			3				
Turn Type	Perm	NA		Perm	Prot		
Protected Phases		4			9		
Permitted Phases	4			9			
Actuated Green, G (s)	19.0	19.0			2.0		
Effective Green, g (s)	19.0	19.0			2.0		
Actuated g/C Ratio	0.29	0.29			0.03		
Clearance Time (s)	4.0	4.0			4.0		
Vehicle Extension (s)	3.0	3.0			3.0		
Lane Grp Cap (vph)	115	534			53		
v/s Ratio Prot		c0.30					
v/s Ratio Perm	0.13				c0.02		
v/c Ratio	0.43	1.04			0.75		
Uniform Delay, d1	18.6	23.0			31.3		
Progression Factor	1.00	1.00			1.00		
Incremental Delay, d2	2.6	49.2			45.2		
Delay (s)	21.3	72.2			76.5		
Level of Service	C	E			E		
Approach Delay (s)		68.0			76.5		
Approach LOS		E			E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	280	40	140	310	30	50	430	130	10	610	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00			0.99		0.99	1.00			1.00	
Frt	1.00	0.98			0.99		1.00	0.97			0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1815			3418		1756	1765			1817	
Flt Permitted	0.45	1.00			0.71		0.29	1.00			0.99	
Satd. Flow (perm)	838	1815			2451		530	1765			1803	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	280	40	140	310	30	50	430	130	10	610	100
RTOR Reduction (vph)	0	8	0	0	7	0	0	17	0	0	9	0
Lane Group Flow (vph)	60	312	0	0	473	0	50	543	0	0	711	0
Confl. Peds. (#/hr)			27	27		39	42		56			42
Confl. Bikes (#/hr)			2			2			3			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	25.3	25.3			25.3		29.7	29.7			29.7	
Effective Green, g (s)	25.3	25.3			25.3		29.7	29.7			29.7	
Actuated g/C Ratio	0.39	0.39			0.39		0.46	0.46			0.46	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	326	706			954		242	806			823	
v/s Ratio Prot		0.17						0.31				
v/s Ratio Perm	0.07				c0.19		0.09				c0.39	
v/c Ratio	0.18	0.44			0.50		0.21	0.67			0.86	
Uniform Delay, d1	13.1	14.6			15.0		10.6	13.8			15.8	
Progression Factor	0.35	0.36			1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.6	1.0			1.8		0.4	2.2			9.3	
Delay (s)	5.2	6.2			16.9		11.0	16.1			25.2	
Level of Service	A	A			B		B	B			C	
Approach Delay (s)		6.1			16.9			15.7			25.2	
Approach LOS		A			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	440	0	0	1130	180	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.93	
Flt Protected	1.00			1.00	0.97	
Satd. Flow (prot)	3539			3539	3232	
Flt Permitted	1.00			1.00	0.97	
Satd. Flow (perm)	3539			3539	3232	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	440	0	0	1130	180	160
RTOR Reduction (vph)	0	0	0	0	74	0
Lane Group Flow (vph)	440	0	0	1130	266	0
Confl. Peds. (#/hr)						2
Confl. Bikes (#/hr)						2
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	40.3			40.3	10.2	
Effective Green, g (s)	40.3			40.3	10.2	
Actuated g/C Ratio	0.67			0.67	0.17	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2377			2377	549	
v/s Ratio Prot	0.12			c0.32	c0.08	
v/s Ratio Perm						
v/c Ratio	0.19			0.48	0.48	
Uniform Delay, d1	3.7			4.8	22.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.2			0.7	0.7	
Delay (s)	3.9			5.4	23.2	
Level of Service	A			A	C	
Approach Delay (s)	3.9			5.4	23.2	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	400	0	0	990	20	100	300	70	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			0.99				
Frt		1.00			1.00			0.98				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3522			3527			3346				
Flt Permitted		0.83			1.00			0.99				
Satd. Flow (perm)		2929			3527			3346				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	400	0	0	990	20	100	300	70	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	26	0	0	0	0
Lane Group Flow (vph)	0	440	0	0	1008	0	0	444	0	0	0	0
Confl. Peds. (#/hr)	23		11	11		23	54		66	66		54
Confl. Bikes (#/hr)						3			3			11
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		41.8			41.8			13.2				
Effective Green, g (s)		41.8			41.8			13.2				
Actuated g/C Ratio		0.64			0.64			0.20				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		1883			2268			679				
v/s Ratio Prot					c0.29							
v/s Ratio Perm		0.15						0.13				
v/c Ratio		0.23			0.44			0.65				
Uniform Delay, d1		4.9			5.8			23.8				
Progression Factor		0.92			1.00			1.00				
Incremental Delay, d2		0.3			0.6			1.7				
Delay (s)		4.8			6.4			25.5				
Level of Service		A			A			C				
Approach Delay (s)		4.8			6.4			25.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	420	80	70	1230	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.98		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3454		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3454		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	420	80	70	1230	0	0
RTOR Reduction (vph)	40	0	0	0	0	0
Lane Group Flow (vph)	460	0	70	1230	0	0
Confl. Peds. (#/hr)						2
Confl. Bikes (#/hr)						2
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1554		663	3539		
v/s Ratio Prot	0.13		0.04	c0.35		
v/s Ratio Perm						
v/c Ratio	0.30		0.11	0.35		
Uniform Delay, d1	7.0		8.1	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.5		0.3	0.3		
Delay (s)	7.5		8.5	0.3		
Level of Service	A		A	A		
Approach Delay (s)	7.5			0.7	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	2.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	430	140	80	1020	0	0	0	0	30	80	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		0.99			1.00						0.97	
Flpb, ped/bikes		1.00			1.00						0.98	
Frt		0.96			1.00						0.95	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		3392			3525						3183	
Flt Permitted		1.00			0.87						0.99	
Satd. Flow (perm)		3392			3062						3183	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	430	140	80	1020	0	0	0	0	30	80	50
RTOR Reduction (vph)	0	35	0	0	0	0	0	0	0	0	45	0
Lane Group Flow (vph)	0	535	0	0	1100	0	0	0	0	0	115	0
Confl. Peds. (#/hr)	9		20	20		9	50		59	59		50
Confl. Bikes (#/hr)			2			5			5			8
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		48.4			48.4						6.6	
Effective Green, g (s)		48.4			48.4						6.6	
Actuated g/C Ratio		0.74			0.74						0.10	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2525			2280						323	
v/s Ratio Prot		0.16										
v/s Ratio Perm					c0.36						0.04	
v/c Ratio		0.21			0.48						0.36	
Uniform Delay, d1		2.5			3.3						27.2	
Progression Factor		1.00			0.64						1.00	
Incremental Delay, d2		0.2			0.7						0.7	
Delay (s)		2.7			2.8						27.9	
Level of Service		A			A						C	
Approach Delay (s)		2.7			2.8			0.0			27.9	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	360	60	20	530	50	60	310	20	100	240	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		0.97	1.00		0.99	1.00	
Frt		0.98			0.99		1.00	0.99		1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1812			1831		1716	1842		1759	1802	
Flt Permitted		0.97			0.98		0.41	1.00		0.32	1.00	
Satd. Flow (perm)		1756			1800		734	1842		593	1802	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	360	60	20	530	50	60	310	20	100	240	40
RTOR Reduction (vph)	0	8	0	0	4	0	0	4	0	0	10	0
Lane Group Flow (vph)	0	432	0	0	596	0	60	326	0	100	270	0
Confl. Peds. (#/hr)	17		21	21		17	21		5	5		21
Confl. Bikes (#/hr)			3			3			3			3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		39.3			39.3		16.2	16.2		16.2	16.2	
Effective Green, g (s)		39.3			39.3		16.2	16.2		16.2	16.2	
Actuated g/C Ratio		0.60			0.60		0.25	0.25		0.25	0.25	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1061			1088		182	459		147	449	
v/s Ratio Prot								c0.18			0.15	
v/s Ratio Perm		0.25			c0.33		0.08			0.17		
v/c Ratio		0.41			0.55		0.33	0.71		0.68	0.60	
Uniform Delay, d1		6.7			7.6		20.0	22.3		22.1	21.6	
Progression Factor		1.00			1.89		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.2			1.4		1.1	5.1		12.2	2.3	
Delay (s)		7.9			15.8		21.0	27.4		34.3	23.8	
Level of Service		A			B		C	C		C	C	
Approach Delay (s)		7.9			15.8			26.4			26.6	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	280	100	200	240	20	60	320	90	20	300	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes		0.99		1.00	0.99			0.99			0.99	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.97		1.00	0.99			0.97			0.98	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1772		1770	1824			1783			1807	
Flt Permitted		1.00		0.95	1.00			0.92			0.96	
Satd. Flow (perm)		1772		1770	1824			1644			1748	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	280	100	200	240	20	60	320	90	20	300	50
RTOR Reduction (vph)	0	18	0	0	5	0	0	12	0	0	8	0
Lane Group Flow (vph)	0	392	0	200	255	0	0	458	0	0	362	0
Confl. Peds. (#/hr)	45		12	12		45	21		38	38		21
Confl. Bikes (#/hr)			6			8			2			
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)		15.8		13.6	13.6			24.6			24.6	
Effective Green, g (s)		15.8		13.6	13.6			24.6			24.6	
Actuated g/C Ratio		0.24		0.21	0.21			0.38			0.38	
Clearance Time (s)		3.0		3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		430		370	381			622			661	
v/s Ratio Prot		c0.22		0.11	c0.14							
v/s Ratio Perm								c0.28			0.21	
v/c Ratio		0.91		0.54	0.67			0.74			0.55	
Uniform Delay, d1		23.9		22.9	23.6			17.4			15.8	
Progression Factor		1.00		0.68	0.70			1.00			1.00	
Incremental Delay, d2		23.3		1.4	3.8			7.6			3.2	
Delay (s)		47.2		17.1	20.3			25.0			19.1	
Level of Service		D		B	C			C			B	
Approach Delay (s)		47.2			18.9			25.0			19.1	
Approach LOS		D			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	10	180	570	150	90	700	70	240	480	150	60	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes		1.00	1.00	0.97	1.00	1.00	0.87	1.00	1.00		1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.94
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)		1770	3539	1535	1770	3539	1385	1770	3396		1770	3260
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (perm)		1770	3539	1535	1770	3539	1385	1770	3396		1770	3260
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	180	570	150	90	700	70	240	480	150	60	340
RTOR Reduction (vph)	0	0	0	94	0	0	50	0	22	0	0	58
Lane Group Flow (vph)	0	190	570	56	90	700	20	240	608	0	60	522
Confl. Peds. (#/hr)		99		15	15		99	26		6	6	
Confl. Bikes (#/hr)				3			5			2		
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA
Protected Phases	5	5	2		1	6		7	4		3	8
Permitted Phases				2			6					
Actuated Green, G (s)		17.9	41.3	41.3	8.0	31.4	31.4	21.8	35.5		7.2	20.9
Effective Green, g (s)		17.9	41.3	41.3	8.0	31.4	31.4	21.8	35.5		7.2	20.9
Actuated g/C Ratio		0.16	0.38	0.38	0.07	0.29	0.29	0.20	0.32		0.07	0.19
Clearance Time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)		288	1328	576	128	1010	395	350	1095		115	619
v/s Ratio Prot		c0.11	0.16		0.05	c0.20		c0.14	0.18		0.03	c0.16
v/s Ratio Perm				0.04			0.01					
v/c Ratio		0.66	0.43	0.10	0.70	0.69	0.05	0.69	0.55		0.52	0.84
Uniform Delay, d1		43.2	25.6	22.3	49.8	35.0	28.5	40.9	30.7		49.7	43.0
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2		4.1	0.1	0.0	13.3	3.9	0.2	4.4	0.3		2.0	9.8
Delay (s)		47.3	25.7	22.3	63.2	38.9	28.7	45.3	31.1		51.7	52.7
Level of Service		D	C	C	E	D	C	D	C		D	D
Approach Delay (s)			29.6			40.6			35.0			52.6
Approach LOS			C			D			D			D

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	240
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	240
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	26
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	250	130	40	400	70	0	740	60	0	760	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.96			0.98			0.99			0.98	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1599			1639			3149			3135	
Flt Permitted		0.79			0.94			1.00			1.00	
Satd. Flow (perm)		1271			1554			3149			3135	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	250	130	40	400	70	0	740	60	0	760	90
RTOR Reduction (vph)	0	19	0	0	8	0	0	5	0	0	8	0
Lane Group Flow (vph)	0	441	0	0	502	0	0	795	0	0	842	0
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		36.1			36.1			45.9			45.9	
Effective Green, g (s)		36.1			36.1			45.9			45.9	
Actuated g/C Ratio		0.40			0.40			0.51			0.51	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		509			623			1605			1598	
v/s Ratio Prot								0.25			c0.27	
v/s Ratio Perm		c0.35			0.32							
v/c Ratio		0.87			0.81			0.50			0.53	
Uniform Delay, d1		24.7			23.9			14.5			14.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		14.3			7.5			1.1			1.2	
Delay (s)		39.1			31.4			15.5			16.0	
Level of Service		D			C			B			B	
Approach Delay (s)		39.1			31.4			15.5			16.0	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	460	120	60	620	80	220	400	130	80	710	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.70		0.98		1.00	0.92		1.00	0.97	
Flpb, ped/bikes		1.00	1.00		0.99		1.00	1.00		0.89	1.00	
Frt		1.00	0.85		0.98		1.00	0.96		1.00	0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3508	1100		3367		1770	1651		1571	1772	
Flt Permitted		0.68	1.00		0.80		0.20	1.00		0.39	1.00	
Satd. Flow (perm)		2383	1100		2698		369	1651		643	1772	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	460	120	60	620	80	220	400	130	80	710	120
RTOR Reduction (vph)	0	0	87	0	10	0	0	11	0	0	7	0
Lane Group Flow (vph)	0	510	33	0	750	0	220	519	0	80	823	0
Confl. Peds. (#/hr)	83		140	140		83	116		257	257		116
Confl. Bikes (#/hr)			17			15			9			12
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		24.9	24.9		24.9		55.6	55.6		55.6	55.6	
Effective Green, g (s)		24.9	24.9		24.9		55.6	55.6		55.6	55.6	
Actuated g/C Ratio		0.28	0.28		0.28		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		659	304		746		227	1019		397	1094	
v/s Ratio Prot								0.31			0.46	
v/s Ratio Perm		0.21	0.03		c0.28		c0.60			0.12		
v/c Ratio		0.77	0.11		1.01		0.97	0.51		0.20	0.75	
Uniform Delay, d1		30.0	24.3		32.5		16.4	9.6		7.5	12.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		5.7	0.2		34.2		52.3	1.8		1.1	4.8	
Delay (s)		35.6	24.4		66.8		68.7	11.4		8.6	17.1	
Level of Service		D	C		E		E	B		A	B	
Approach Delay (s)		33.5			66.8			28.2			16.3	
Approach LOS		C			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	114.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	270	120	270	610	350	220	530	90	140	890	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3376		1770	3346		1770	3462		1770	3490	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3376		1770	3346		1770	3462		1770	3490	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	270	120	270	610	350	220	530	90	140	890	90
RTOR Reduction (vph)	0	59	0	0	82	0	0	14	0	0	8	0
Lane Group Flow (vph)	140	331	0	270	878	0	220	606	0	140	972	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	10.3	14.1		25.6	29.4		12.0	28.8		15.0	31.8	
Effective Green, g (s)	10.3	14.1		25.6	29.4		12.0	28.8		15.0	31.8	
Actuated g/C Ratio	0.10	0.14		0.26	0.29		0.12	0.29		0.15	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.5		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	182	476		453	983		212	997		265	1109	
v/s Ratio Prot	0.08	c0.10		0.15	c0.26		c0.12	0.18		c0.08	c0.28	
v/s Ratio Perm												
v/c Ratio	0.77	0.69		0.60	0.89		1.04	0.61		0.53	0.88	
Uniform Delay, d1	43.7	40.9		32.7	33.8		44.0	30.7		39.2	32.2	
Progression Factor	1.00	1.00		1.00	1.00		0.96	0.64		1.00	1.00	
Incremental Delay, d2	16.0	3.5		1.4	10.6		64.9	2.2		0.9	9.8	
Delay (s)	59.7	44.4		34.1	44.4		107.3	21.9		40.1	42.1	
Level of Service	E	D		C	D		F	C		D	D	
Approach Delay (s)		48.5			42.1			44.3			41.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	440	40	70	750	280	110	410	90	140	1000	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.96		1.00	0.97		1.00	0.98	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3458			3393		1770	3444		1770	3466	
Flt Permitted		0.52			0.81		0.14	1.00		0.43	1.00	
Satd. Flow (perm)		1825			2749		264	3444		803	3466	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	440	40	70	750	280	110	410	90	140	1000	160
RTOR Reduction (vph)	0	5	0	0	33	0	0	19	0	0	13	0
Lane Group Flow (vph)	0	665	0	0	1067	0	110	481	0	140	1147	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		41.3			41.3		50.2	50.2		50.2	50.2	
Effective Green, g (s)		41.3			41.3		50.2	50.2		50.2	50.2	
Actuated g/C Ratio		0.41			0.41		0.50	0.50		0.50	0.50	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		753			1135		132	1728		403	1739	
v/s Ratio Prot								0.14			0.33	
v/s Ratio Perm		0.36			c0.39		c0.42			0.17		
v/c Ratio		2.13dl			0.94		0.83	0.28		0.35	0.66	
Uniform Delay, d1		27.1			28.2		21.3	14.4		15.0	18.5	
Progression Factor		1.00			1.00		1.00	1.00		0.45	0.46	
Incremental Delay, d2		11.9			14.4		43.2	0.4		1.5	1.2	
Delay (s)		39.1			42.5		64.6	14.8		8.2	9.8	
Level of Service		D			D		E	B		A	A	
Approach Delay (s)		39.1			42.5			23.8			9.6	
Approach LOS		D			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	118.4%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	160	20	190	340	90	40	420	140	60	860	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1832		1770	1804		1770	1793		1770	1842	
Flt Permitted	0.16	1.00		0.54	1.00		0.16	1.00		0.38	1.00	
Satd. Flow (perm)	290	1832		1015	1804		300	1793		706	1842	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	160	20	190	340	90	40	420	140	60	860	70
RTOR Reduction (vph)	0	4	0	0	10	0	0	12	0	0	3	0
Lane Group Flow (vph)	80	176	0	190	420	0	40	548	0	60	927	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.7	25.7		25.7	25.7		65.0	65.0		65.0	65.0	
Effective Green, g (s)	25.7	25.7		25.7	25.7		65.0	65.0		65.0	65.0	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.65	0.65		0.65	0.65	
Clearance Time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	74	470		260	463		195	1165		458	1197	
v/s Ratio Prot		0.10			0.23			0.31			c0.50	
v/s Ratio Perm	c0.28			0.19			0.13			0.09		
v/c Ratio	1.08	0.37		0.73	0.91		0.21	0.47		0.13	0.77	
Uniform Delay, d1	37.1	30.5		34.0	36.0		7.1	8.8		6.7	12.3	
Progression Factor	1.00	1.00		1.00	1.00		0.66	0.75		1.00	1.00	
Incremental Delay, d2	128.5	0.5		10.1	21.3		2.3	1.3		0.6	4.9	
Delay (s)	165.7	31.0		44.1	57.3		7.0	8.0		7.3	17.3	
Level of Service	F	C		D	E		A	A		A	B	
Approach Delay (s)		72.5			53.2			7.9			16.7	
Approach LOS		E			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.3
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	160	240	320	520	910	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3280	
Flt Permitted	0.95	1.00	0.20	1.00	1.00	
Satd. Flow (perm)	1770	1583	378	3539	3280	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	240	320	520	910	170
RTOR Reduction (vph)	0	32	0	0	12	0
Lane Group Flow (vph)	160	208	320	520	1068	0
Confl. Peds. (#/hr)	50					152
Confl. Bikes (#/hr)						12
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	14.3	28.3	74.7	60.7	60.7	
Effective Green, g (s)	14.3	28.3	74.7	60.7	60.7	
Actuated g/C Ratio	0.14	0.28	0.75	0.61	0.61	
Clearance Time (s)	4.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.5	3.5	5.0	5.0	
Lane Grp Cap (vph)	253	495	477	2148	1990	
v/s Ratio Prot	c0.09	0.06	c0.09	0.15	0.33	
v/s Ratio Perm		0.07	c0.41			
v/c Ratio	0.63	0.42	0.67	0.24	0.54	
Uniform Delay, d1	40.4	29.2	17.4	9.1	11.5	
Progression Factor	1.00	1.00	1.22	0.42	1.53	
Incremental Delay, d2	5.1	0.7	3.7	0.3	0.7	
Delay (s)	45.5	29.9	24.9	4.1	18.2	
Level of Service	D	C	C	A	B	
Approach Delay (s)	36.1			12.0	18.2	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	160	270	580	60	180	970
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		3.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.97		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3393		1770	3539
Flt Permitted	0.95	1.00	1.00		0.41	1.00
Satd. Flow (perm)	1770	1583	3393		762	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	270	580	60	180	970
RTOR Reduction (vph)	0	231	6	0	0	0
Lane Group Flow (vph)	160	39	634	0	180	970
Confl. Peds. (#/hr)	113			140		
Confl. Bikes (#/hr)				3		
Turn Type	Prot	Perm	NA		custom	NA
Protected Phases	8		2			6
Permitted Phases		8			1	
Actuated Green, G (s)	14.3	14.3	60.7		14.0	60.7
Effective Green, g (s)	14.3	14.3	60.7		14.0	60.7
Actuated g/C Ratio	0.14	0.14	0.61		0.14	0.61
Clearance Time (s)	4.0	4.0	4.0		3.0	4.0
Vehicle Extension (s)	3.0	3.0	5.0		3.5	5.0
Lane Grp Cap (vph)	253	226	2059		106	2148
v/s Ratio Prot	c0.09		0.19			c0.27
v/s Ratio Perm		0.02			c0.24	
v/c Ratio	0.63	0.17	0.31		1.70	0.45
Uniform Delay, d1	40.4	37.6	9.5		43.0	10.6
Progression Factor	1.00	1.00	1.00		1.00	0.64
Incremental Delay, d2	5.1	0.4	0.4		346.6	0.6
Delay (s)	45.5	38.0	9.9		389.7	7.4
Level of Service	D	D	A		F	A
Approach Delay (s)	40.8		9.9			67.2
Approach LOS	D		A			E

Intersection Summary			
HCM 2000 Control Delay	45.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	580	90	190	810	130	140	260	140	100	690	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.86	1.00	1.00	0.87	1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1363	1770	3539	1381	1770	3309		1770	3315	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1363	1770	3539	1381	1770	3309		1770	3315	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	580	90	190	810	130	140	260	140	100	690	250
RTOR Reduction (vph)	0	0	68	0	0	93	0	56	0	0	30	0
Lane Group Flow (vph)	150	580	22	190	810	37	140	344	0	100	910	0
Confl. Peds. (#/hr)			92			83			26			77
Confl. Bikes (#/hr)			6			8			3			14
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4						
Actuated Green, G (s)	13.0	25.1	25.1	16.9	29.5	29.5	12.3	37.1		10.5	35.3	
Effective Green, g (s)	13.0	25.1	25.1	16.9	29.5	29.5	12.3	37.1		10.5	35.3	
Actuated g/C Ratio	0.12	0.24	0.24	0.16	0.28	0.28	0.12	0.35		0.10	0.34	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	219	1220	327	285	998	389	208	1173		177	1118	
v/s Ratio Prot	0.08	0.11		c0.11	c0.23		c0.08	0.10		0.06	c0.27	
v/s Ratio Perm			0.02			0.03						
v/c Ratio	0.68	0.48	0.07	0.67	0.81	0.09	0.67	0.29		0.56	0.81	
Uniform Delay, d1	43.8	34.1	30.7	41.2	35.0	27.7	44.2	24.3		44.9	31.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.9	0.3	0.1	5.8	5.1	0.1	6.6	0.1		2.5	4.6	
Delay (s)	50.7	34.4	30.8	47.0	40.1	27.8	50.8	24.4		47.3	36.3	
Level of Service	D	C	C	D	D	C	D	C		D	D	
Approach Delay (s)		37.0			39.8			31.3			37.4	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	104.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	270	730	80	100	720	120	160	290	90	360	850	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3481		1770	3539	1545	1770	3355		1770	3429	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3481		1770	3539	1545	1770	3355		1770	3429	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	730	80	100	720	120	160	290	90	360	850	190
RTOR Reduction (vph)	0	7	0	0	0	91	0	22	0	0	14	0
Lane Group Flow (vph)	270	803	0	100	720	29	160	358	0	360	1026	0
Confl. Peds. (#/hr)	11					11			30	30		
Confl. Bikes (#/hr)			8						14			15
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4						
Actuated Green, G (s)	22.0	42.5		9.7	30.2	30.2	14.1	29.1		27.7	42.7	
Effective Green, g (s)	22.0	42.5		9.7	30.2	30.2	14.1	29.1		27.7	42.7	
Actuated g/C Ratio	0.18	0.34		0.08	0.24	0.24	0.11	0.23		0.22	0.34	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.0	3.0	2.0	2.0		2.0	3.0	
Lane Grp Cap (vph)	311	1183		137	855	373	199	781		392	1171	
v/s Ratio Prot	c0.15	0.23		0.06	c0.20		0.09	0.11		c0.20	c0.30	
v/s Ratio Perm						0.02						
v/c Ratio	0.87	0.68		0.73	0.84	0.08	0.80	0.46		0.92	0.88	
Uniform Delay, d1	50.1	35.4		56.4	45.1	36.6	54.1	41.2		47.5	38.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.0	1.2		15.2	7.6	0.1	19.5	1.9		25.5	9.3	
Delay (s)	71.1	36.6		71.5	52.7	36.7	73.6	43.1		73.1	48.0	
Level of Service	E	D		E	D	D	E	D		E	D	
Approach Delay (s)		45.2			52.6			52.1			54.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	51.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	280	210	70	420	60	450	350	30	40	750	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1764	3539	1491	1739	3465		1770	3487		1770	3483	
Flt Permitted	0.36	1.00	1.00	0.57	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	663	3539	1491	1047	3465		1770	3487		1770	3483	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	280	210	70	420	60	450	350	30	40	750	70
RTOR Reduction (vph)	0	0	160	0	16	0	0	5	0	0	8	0
Lane Group Flow (vph)	50	280	50	70	464	0	450	375	0	40	812	0
Confl. Peds. (#/hr)	9		35	35		9			23			30
Confl. Bikes (#/hr)			23						24			6
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	14.6	14.6	14.6	14.6	14.6		14.1	32.2		2.9	21.0	
Effective Green, g (s)	14.6	14.6	14.6	14.6	14.6		14.1	32.2		2.9	21.0	
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.24		0.23	0.52		0.05	0.34	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	156	837	352	247	819		404	1819		83	1185	
v/s Ratio Prot		0.08			c0.13		c0.25	0.11		0.02	c0.23	
v/s Ratio Perm	0.08		0.03	0.07								
v/c Ratio	0.32	0.33	0.14	0.28	0.57		1.11	0.21		0.48	0.69	
Uniform Delay, d1	19.5	19.5	18.6	19.3	20.8		23.8	7.9		28.7	17.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	0.2	0.2	0.6	0.9		79.4	0.1		4.4	1.7	
Delay (s)	20.6	19.8	18.8	19.9	21.7		103.2	8.0		33.0	19.2	
Level of Service	C	B	B	B	C		F	A		C	B	
Approach Delay (s)		19.5			21.4			59.6			19.8	
Approach LOS		B			C			E			B	

Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	90	40	160	80	170	60	610	100	180	790	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.90		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1735	1769		1766	1625		1759	3448		1762	3491	
Flt Permitted	0.55	1.00		0.67	1.00		0.29	1.00		0.36	1.00	
Satd. Flow (perm)	1010	1769		1252	1625		542	3448		666	3491	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	90	40	160	80	170	60	610	100	180	790	60
RTOR Reduction (vph)	0	18	0	0	86	0	0	18	0	0	7	0
Lane Group Flow (vph)	40	112	0	160	164	0	60	692	0	180	843	0
Confl. Peds. (#/hr)	53		5	5		53	24		14	14		24
Confl. Bikes (#/hr)						3			3			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	12.6	12.6		12.6	12.6		23.4	23.4		23.4	23.4	
Effective Green, g (s)	12.6	12.6		12.6	12.6		23.4	23.4		23.4	23.4	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.53	0.53		0.53	0.53	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	289	506		358	465		288	1833		354	1856	
v/s Ratio Prot		0.06			0.10			0.20			0.24	
v/s Ratio Perm	0.04			c0.13			0.11			c0.27		
v/c Ratio	0.14	0.22		0.45	0.35		0.21	0.38		0.51	0.45	
Uniform Delay, d1	11.7	12.0		12.8	12.5		5.4	6.0		6.6	6.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.2		0.9	0.5		0.4	0.1		1.2	0.2	
Delay (s)	11.9	12.2		13.7	12.9		5.8	6.2		7.8	6.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.1			13.2			6.1			6.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	44.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	200	630	640	590	800	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3414	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3414	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	630	640	590	800	200
RTOR Reduction (vph)	0	18	0	0	22	0
Lane Group Flow (vph)	200	612	640	590	978	0
Confl. Peds. (#/hr)	62					17
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	16.7	52.8	32.1	65.6	29.5	
Effective Green, g (s)	16.7	52.8	32.1	65.6	29.5	
Actuated g/C Ratio	0.18	0.58	0.36	0.73	0.33	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	327	1629	629	2570	1115	
v/s Ratio Prot	c0.11	0.22	c0.36	0.17	c0.29	
v/s Ratio Perm						
v/c Ratio	0.61	0.38	1.02	0.23	0.88	
Uniform Delay, d1	33.8	10.0	29.1	4.1	28.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.4	0.1	40.3	0.0	8.0	
Delay (s)	37.2	10.1	69.4	4.1	36.7	
Level of Service	D	B	E	A	D	
Approach Delay (s)	16.6			38.1	36.7	
Approach LOS	B			D	D	

Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	220	60	70	480	30	40	490	40	30	930	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	1779		1732	1838		1759	1833		1745	1826	
Flt Permitted	0.24	1.00		0.50	1.00		0.12	1.00		0.33	1.00	
Satd. Flow (perm)	441	1779		906	1838		224	1833		602	1826	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	220	60	70	480	30	40	490	40	30	930	90
RTOR Reduction (vph)	0	15	0	0	4	0	0	4	0	0	5	0
Lane Group Flow (vph)	80	265	0	70	506	0	40	526	0	30	1015	0
Confl. Peds. (#/hr)	39		26	26		39	48		35	35		48
Confl. Bikes (#/hr)			9			9			11			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Effective Green, g (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.51	0.51		0.51	0.51	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Grp Cap (vph)	169	684		348	706		113	930		305	927	
v/s Ratio Prot		0.15			c0.28			0.29			c0.56	
v/s Ratio Perm	0.18			0.08			0.18			0.05		
v/c Ratio	0.47	0.39		0.20	0.72		0.35	0.57		0.10	1.09	
Uniform Delay, d1	15.0	14.5		13.3	17.0		9.6	11.0		8.3	16.0	
Progression Factor	0.68	0.65		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.0	1.4		1.3	6.2		8.5	2.5		0.6	58.8	
Delay (s)	18.2	10.8		14.6	23.2		18.1	13.5		8.9	74.8	
Level of Service	B	B		B	C		B	B		A	E	
Approach Delay (s)		12.5			22.1			13.8			72.9	
Approach LOS		B			C			B			E	

Intersection Summary			
HCM 2000 Control Delay	39.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↰	↑↑↑				
Volume (vph)	0	290	0	0	1150	80	340	530	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.95		1.00	0.95				
Frpb, ped/bikes		1.00			1.00		1.00	1.00				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.99		1.00	0.97				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5085			3505		1770	3429				
Flt Permitted		1.00			1.00		0.95	1.00				
Satd. Flow (perm)		5085			3505		1770	3429				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	290	0	0	1150	80	340	530	120	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	30	0	0	0	0
Lane Group Flow (vph)	0	290	0	0	1222	0	340	620	0	0	0	0
Confl. Peds. (#/hr)									8			
Confl. Bikes (#/hr)									3			
Turn Type		NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases							8					
Actuated Green, G (s)		27.0			27.0		30.5	30.5				
Effective Green, g (s)		27.0			27.0		30.5	30.5				
Actuated g/C Ratio		0.42			0.42		0.47	0.47				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		2112			1455		830	1608				
v/s Ratio Prot		0.06			c0.35			0.18				
v/s Ratio Perm							c0.19					
v/c Ratio		0.14			0.84		0.41	0.39				
Uniform Delay, d1		11.8			17.1		11.3	11.2				
Progression Factor		0.89			0.81		1.00	1.00				
Incremental Delay, d2		0.0			0.4		1.5	0.7				
Delay (s)		10.5			14.3		12.8	11.9				
Level of Service		B			B		B	B				
Approach Delay (s)		10.5			14.3			12.2			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	280	40	50	670	60	370	800	290	0	910	620
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.95	1.00
Frt	1.00	0.98			0.99		1.00	0.96			1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1828			3487		1770	4882			3539	1583
Flt Permitted	0.14	1.00			0.90		0.95	1.00			1.00	1.00
Satd. Flow (perm)	266	1828			3150		1770	4882			3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	280	40	50	670	60	370	800	290	0	910	620
RTOR Reduction (vph)	0	5	0	0	6	0	0	65	0	0	0	222
Lane Group Flow (vph)	340	315	0	0	774	0	370	1025	0	0	910	398
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	41.0	41.0			24.5		19.0	48.0			25.0	25.0
Effective Green, g (s)	41.0	41.0			24.5		19.0	48.0			25.0	25.0
Actuated g/C Ratio	0.41	0.41			0.24		0.19	0.48			0.25	0.25
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	304	749			771		336	2343			884	395
v/s Ratio Prot	c0.15	0.17					c0.21	0.21			c0.26	
v/s Ratio Perm	c0.31				0.25							0.25
v/c Ratio	1.12	0.42			1.00		1.10	0.44			1.03	1.01
Uniform Delay, d1	26.6	21.0			37.8		40.5	17.1			37.5	37.5
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	87.4	1.7			33.4		79.1	0.6			38.0	47.2
Delay (s)	113.9	22.8			71.1		119.6	17.7			75.5	84.7
Level of Service	F	C			E		F	B			E	F
Approach Delay (s)		69.7			71.1			43.5			79.2	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	64.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	0	0	10	290	10	190	20	0	1250	240	20	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		0.96			0.99				0.98			1.00
Flpb, ped/bikes		1.00			0.98				1.00			1.00
Frt		0.86			0.95				0.98			1.00
Flt Protected		1.00			0.97				1.00			0.95
Satd. Flow (prot)		1542			1669				4882			1770
Flt Permitted		1.00			0.81				0.93			0.10
Satd. Flow (perm)		1542			1397				4522			193
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	10	290	10	190	20	0	1250	240	20	240
RTOR Reduction (vph)	0	7	0	0	25	0	0	0	30	0	0	0
Lane Group Flow (vph)	0	3	0	0	465	0	0	0	1480	0	0	260
Confl. Peds. (#/hr)			20	20				6		23		23
Confl. Bikes (#/hr)						14				3		
Turn Type		NA		Perm	NA		Perm		NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		31.0			31.0				34.2			49.1
Effective Green, g (s)		31.0			31.0				34.2			49.1
Actuated g/C Ratio		0.35			0.35				0.38			0.55
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		536			486				1735			290
v/s Ratio Prot		0.00										c0.10
v/s Ratio Perm					c0.33				0.33			c0.39
v/c Ratio		0.01			0.96				0.85			0.90
Uniform Delay, d1		19.0			28.4				25.1			22.0
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			29.4				5.6			27.2
Delay (s)		19.0			57.8				30.7			49.2
Level of Service		B			E				C			D
Approach Delay (s)		19.0			57.8				30.7			
Approach LOS		B			E				C			

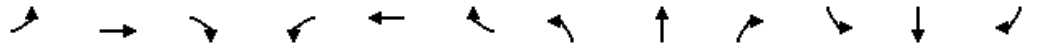
Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	89.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	580	60
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	4993	
Flt Permitted	1.00	
Satd. Flow (perm)	4993	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	580	60
RTOR Reduction (vph)	13	0
Lane Group Flow (vph)	627	0
Confl. Peds. (#/hr)		6
Confl. Bikes (#/hr)		5
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	49.1	
Effective Green, g (s)	49.1	
Actuated g/C Ratio	0.55	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	2751	
v/s Ratio Prot	0.13	
v/s Ratio Perm		
v/c Ratio	0.23	
Uniform Delay, d1	10.3	
Progression Factor	1.00	
Incremental Delay, d2	0.2	
Delay (s)	10.5	
Level of Service	B	
Approach Delay (s)	21.7	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	230	210	190	60	290	100	150	1030	90	50	600	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1730		1770	3403		1770	3539	1583	1770	3539	1583
Flt Permitted	0.50	1.00		0.36	1.00		0.24	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	932	1730		671	3403		441	3539	1583	445	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	230	210	190	60	290	100	150	1030	90	50	600	180
RTOR Reduction (vph)	0	39	0	0	41	0	0	0	56	0	0	119
Lane Group Flow (vph)	230	361	0	60	349	0	150	1030	34	50	600	61
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	27.0	27.0		27.0	27.0		28.0	28.0	28.0	27.3	25.3	25.3
Effective Green, g (s)	27.0	27.0		27.0	27.0		28.0	28.0	28.0	27.3	25.3	25.3
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.38	0.38	0.38	0.37	0.34	0.34
Clearance Time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	338	628		243	1236		327	1333	596	275	1205	539
v/s Ratio Prot		0.21			0.10		0.06	c0.29		0.02	c0.17	
v/s Ratio Perm	c0.25			0.09			0.12		0.02	0.05		0.04
v/c Ratio	0.68	0.58		0.25	0.28		0.46	0.77	0.06	0.18	0.50	0.11
Uniform Delay, d1	20.0	19.0		16.5	16.8		16.4	20.4	14.7	18.6	19.5	16.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.6	3.8		2.4	0.6		0.4	4.4	0.2	0.1	1.5	0.4
Delay (s)	30.6	22.8		19.0	17.3		16.7	24.8	14.9	18.7	20.9	17.2
Level of Service	C	C		B	B		B	C	B	B	C	B
Approach Delay (s)		25.7			17.6			23.1			20.0	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	74.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	850	500	100	30	770	140	80	320	30	160	200	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	1.00			0.97		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3263			3336		1770	3423		1770	1863	2787
Flt Permitted	0.95	0.56			0.90		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	1860			2991		1770	3423		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	850	500	100	30	770	140	80	320	30	160	200	270
RTOR Reduction (vph)	0	7	0	0	13	0	0	9	0	0	0	208
Lane Group Flow (vph)	476	967	0	0	927	0	80	341	0	160	200	62
Confl. Peds. (#/hr)			23			233			210			
Confl. Bikes (#/hr)			5			18			12			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	11.0	40.1			25.1		7.3	14.6		10.5	17.8	17.8
Effective Green, g (s)	11.0	40.1			25.1		7.3	14.6		10.5	17.8	17.8
Actuated g/C Ratio	0.14	0.52			0.33		0.09	0.19		0.14	0.23	0.23
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	229	1166			972		167	647		240	429	642
v/s Ratio Prot	c0.30	0.12					0.05	0.10		c0.09	c0.11	
v/s Ratio Perm		0.31			c0.31							0.02
v/c Ratio	2.08	0.83			0.95		0.48	0.53		0.67	0.47	0.10
Uniform Delay, d1	33.1	15.7			25.5		33.1	28.2		31.7	25.6	23.4
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	500.1	5.0			18.5		2.2	0.8		6.8	0.8	0.1
Delay (s)	533.2	20.7			44.0		35.3	29.0		38.5	26.4	23.4
Level of Service	F	C			D		D	C		D	C	C
Approach Delay (s)		188.9			44.0			30.1			28.2	
Approach LOS		F			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	100.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	570	80	20	1070	80	70	10	50	90	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.98			1.00		0.99		0.90		0.85
Flt Protected	1.00			1.00		0.98		0.98		1.00
Satd. Flow (prot)	3474			3536		4915		1652		1504
Flt Permitted	1.00			0.94		0.98		0.98		1.00
Satd. Flow (perm)	3474			3315		4915		1652		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	570	80	20	1070	80	70	10	50	90	40
RTOR Reduction (vph)	11	0	0	0	0	0	0	47	0	30
Lane Group Flow (vph)	639	0	0	1090	0	160	0	97	0	6
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1389			1326		1500		295		269
v/s Ratio Prot	0.18							c0.06		
v/s Ratio Perm				c0.33		0.03				0.00
v/c Ratio	0.46			0.82		0.11		0.33		0.02
Uniform Delay, d1	21.0			25.5		23.7		34.0		32.2
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	1.1			5.8		0.1		3.0		0.2
Delay (s)	22.1			31.3		23.8		37.0		32.3
Level of Service	C			C		C		D		C
Approach Delay (s)	22.1			31.3		23.8		36.1		
Approach LOS	C			C		C		D		

Intersection Summary			
HCM 2000 Control Delay	28.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	170	80	20	410	90	60	240	30	20	280	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		0.99			1.00			1.00			1.00	
Frt		0.97			0.98			0.99			0.97	
Flt Protected		0.98			1.00			0.99			1.00	
Satd. Flow (prot)		1747			1789			1814			1780	
Flt Permitted		0.57			0.98			0.88			0.98	
Satd. Flow (perm)		1021			1755			1614			1744	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	170	80	20	410	90	60	240	30	20	280	90
RTOR Reduction (vph)	0	16	0	0	12	0	0	5	0	0	17	0
Lane Group Flow (vph)	0	354	0	0	508	0	0	325	0	0	373	0
Confl. Peds. (#/hr)	32		21	21		32	18		6	6		18
Confl. Bikes (#/hr)			11			17			14			14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		361			621			819			885	
v/s Ratio Prot												
v/s Ratio Perm		c0.35			0.29			0.20			c0.21	
v/c Ratio		0.98			0.82			0.40			0.42	
Uniform Delay, d1		20.8			19.1			9.9			10.0	
Progression Factor		1.04			1.29			1.00			1.00	
Incremental Delay, d2		28.0			7.7			1.4			1.5	
Delay (s)		49.8			32.3			11.3			11.5	
Level of Service		D			C			B			B	
Approach Delay (s)		49.8			32.3			11.3			11.5	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	250	100	50	320	200	200	1190	20	140	780	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.91	1.00
Frt		0.97			0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1787			1767		1770	3530		1770	5085	1583
Flt Permitted		0.76			0.93		0.30	1.00		0.15	1.00	1.00
Satd. Flow (perm)		1383			1658		559	3530		287	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	250	100	50	320	200	200	1190	20	140	780	40
RTOR Reduction (vph)	0	15	0	0	10	0	0	2	0	0	0	24
Lane Group Flow (vph)	0	445	0	0	560	0	200	1208	0	140	780	16
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	0.40
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		659			790		223	1412		114	2034	633
v/s Ratio Prot								0.34			0.15	
v/s Ratio Perm		0.32			c0.34		0.36			c0.49		0.01
v/c Ratio		0.68			0.71		0.90	0.86		1.23	0.38	0.03
Uniform Delay, d1		13.1			13.4		18.2	17.8		19.5	13.8	11.8
Progression Factor		1.00			0.66		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		5.5			3.8		38.4	6.8		157.9	0.5	0.1
Delay (s)		18.6			12.6		56.7	24.6		177.4	14.4	11.9
Level of Service		B			B		E	C		F	B	B
Approach Delay (s)		18.6			12.6			29.2			38.0	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	290	1200	160	550	0	0	0	130	790	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Frt	1.00	0.85	1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3523	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3523	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	290	1200	160	550	0	0	0	130	790	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	290	1200	160	550	0	0	0	130	808	0
Confl. Peds. (#/hr)										18
Confl. Bikes (#/hr)										8
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	17.6	30.0	7.4	65.0				25.0	25.0	
Effective Green, g (s)	17.6	30.0	7.4	65.0				25.0	25.0	
Actuated g/C Ratio	0.27	0.46	0.11	1.00				0.38	0.38	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	479	1666	390	1583				680	1355	
v/s Ratio Prot	0.16	c0.33						0.07	c0.23	
v/s Ratio Perm			0.05	0.35						
v/c Ratio	0.61	0.72	0.41	0.35				0.19	0.60	
Uniform Delay, d1	20.7	14.1	26.8	0.0				13.3	16.0	
Progression Factor	1.51	1.21	1.00	1.00				1.00	1.00	
Incremental Delay, d2	1.4	1.0	0.7	0.6				0.6	1.9	
Delay (s)	32.7	18.1	27.5	0.6				13.9	17.9	
Level of Service	C	B	C	A				B	B	
Approach Delay (s)	20.9		6.7			0.0			17.4	
Approach LOS	C		A			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	670	250	440	640	10	330	0	800	0	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00		0.95	
Frt		0.96		1.00	1.00		1.00		0.85		0.85	
Flt Protected		1.00		0.95	1.00		0.95		1.00		1.00	
Satd. Flow (prot)		3395		1770	3531		1770		1583		3008	
Flt Permitted		1.00		0.95	1.00		0.75		1.00		1.00	
Satd. Flow (perm)		3395		1770	3531		1398		1583		3008	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	670	250	440	640	10	330	0	800	0	0	10
RTOR Reduction (vph)	0	41	0	0	1	0	0	0	394	0	7	0
Lane Group Flow (vph)	0	879	0	440	649	0	330	0	406	0	3	0
Turn Type		NA		Prot	NA		Perm		Perm		NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		26.7		23.7	54.4		27.1		27.1		27.1	
Effective Green, g (s)		26.7		23.7	54.4		27.1		27.1		27.1	
Actuated g/C Ratio		0.30		0.26	0.60		0.30		0.30		0.30	
Clearance Time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)		1007		466	2134		420		476		905	
v/s Ratio Prot		c0.26		c0.25	0.18						0.00	
v/s Ratio Perm							0.24		c0.26			
v/c Ratio		0.87		0.94	0.30		0.79		0.85		0.00	
Uniform Delay, d1		30.0		32.5	8.6		28.8		29.6		22.0	
Progression Factor		1.00		1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		10.4		28.0	0.1		9.3		13.8		0.0	
Delay (s)		40.4		60.5	8.7		38.1		43.3		22.0	
Level of Service		D		E	A		D		D		C	
Approach Delay (s)		40.4			29.6			41.8			22.0	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	520	160	190	820	100	120	920	80	50	580	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.97			0.99		1.00	0.99		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3406			3462		1770	3497		1770	3424	
Flt Permitted		0.55			0.63		0.24	1.00		0.17	1.00	
Satd. Flow (perm)		1905			2185		453	3497		310	3424	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	520	160	190	820	100	120	920	80	50	580	160
RTOR Reduction (vph)	0	29	0	0	10	0	0	9	0	0	35	0
Lane Group Flow (vph)	0	801	0	0	1100	0	120	991	0	50	705	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		38.0			38.0		24.0	24.0		24.0	24.0	
Effective Green, g (s)		38.0			38.0		24.0	24.0		24.0	24.0	
Actuated g/C Ratio		0.53			0.53		0.33	0.33		0.33	0.33	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1005			1153		151	1165		103	1141	
v/s Ratio Prot								c0.28			0.21	
v/s Ratio Perm		0.42			c0.50		0.26			0.16		
v/c Ratio		0.80			0.95		0.79	0.85		0.49	0.62	
Uniform Delay, d1		13.9			16.2		21.8	22.3		19.1	20.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		6.6			17.5		33.8	7.9		15.5	2.5	
Delay (s)		20.4			33.6		55.6	30.2		34.5	22.7	
Level of Service		C			C		E	C		C	C	
Approach Delay (s)		20.4			33.6			32.9			23.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	105.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	80	30	90	190	50	70	1040	30	40	830	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00		1.00	0.98	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1761			1815	1535	1751	3487		1749	3407	
Flt Permitted		0.46			0.83	1.00	0.25	1.00		0.23	1.00	
Satd. Flow (perm)		825			1529	1535	465	3487		416	3407	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	80	30	90	190	50	70	1040	30	40	830	160
RTOR Reduction (vph)	0	10	0	0	0	38	0	2	0	0	16	0
Lane Group Flow (vph)	0	190	0	0	280	12	70	1068	0	40	974	0
Confl. Peds. (#/hr)	5		2	2		5	3		11	11		3
Confl. Bikes (#/hr)			2			5			6			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		13.8			14.8	14.8	41.3	41.3		41.3	41.3	
Effective Green, g (s)		13.8			14.8	14.8	41.3	41.3		41.3	41.3	
Actuated g/C Ratio		0.22			0.23	0.23	0.64	0.64		0.64	0.64	
Clearance Time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		1.0			1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)		177			353	354	299	2246		268	2195	
v/s Ratio Prot								c0.31			0.29	
v/s Ratio Perm		c0.23			0.18	0.01	0.15			0.10		
v/c Ratio		1.07			0.79	0.03	0.23	0.48		0.15	0.44	
Uniform Delay, d1		25.1			23.2	19.1	4.8	5.8		4.5	5.7	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		88.2			10.9	0.0	1.8	0.7		1.2	0.7	
Delay (s)		113.3			34.1	19.1	6.6	6.6		5.7	6.3	
Level of Service		F			C	B	A	A		A	A	
Approach Delay (s)		113.3			31.8			6.6			6.3	
Approach LOS		F			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	64.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	20	400	10	130	20	1010	140	130	890	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.86			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1166			1731		1751	3432		1752	3498	
Flt Permitted		1.00			0.77		0.24	1.00		0.16	1.00	
Satd. Flow (perm)		1166			1381		449	3432		287	3498	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	20	400	10	130	20	1010	140	130	890	10
RTOR Reduction (vph)	0	12	0	0	15	0	0	14	0	0	1	0
Lane Group Flow (vph)	0	8	0	0	525	0	20	1136	0	130	899	0
Confl. Peds. (#/hr)	3					3	3					3
Confl. Bikes (#/hr)						3			2			
Heavy Vehicles (%)	41%	41%	41%	2%	2%	2%	3%	3%	3%	3%	3%	3%
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		29.0			29.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.38			0.38		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		439			520		233	1782		149	1817	
v/s Ratio Prot		0.01						0.33			0.26	
v/s Ratio Perm					c0.38		0.04			c0.45		
v/c Ratio		0.02			1.01		0.09	0.64		0.87	0.49	
Uniform Delay, d1		15.1			24.0		9.3	13.3		16.3	12.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			41.9		0.7	1.8		45.9	1.0	
Delay (s)		15.1			65.9		10.0	15.0		62.2	12.9	
Level of Service		B			E		B	B		E	B	
Approach Delay (s)		15.1			65.9			15.0			19.1	
Approach LOS		B			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	240	190	60	440	60	260	1000	90	330	920	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frt		0.95			0.99		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3321			1826		1770	3495		1770	3507	
Flt Permitted		0.60			0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2016			1551		1770	3495		1770	3507	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	240	190	60	440	60	260	1000	90	330	920	60
RTOR Reduction (vph)	0	60	0	0	4	0	0	6	0	0	4	0
Lane Group Flow (vph)	0	500	0	0	556	0	260	1084	0	330	976	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		39.6			39.6		17.9	28.5		22.1	32.7	
Effective Green, g (s)		39.6			39.6		17.9	28.5		22.1	32.7	
Actuated g/C Ratio		0.37			0.37		0.17	0.27		0.21	0.31	
Clearance Time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)		1.0			1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		748			575		296	933		366	1074	
v/s Ratio Prot							0.15	c0.31		c0.19	0.28	
v/s Ratio Perm		0.25			c0.36							
v/c Ratio		0.67			0.97		0.88	1.16		0.90	0.91	
Uniform Delay, d1		28.1			32.9		43.3	39.1		41.2	35.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.8			29.0		23.5	84.8		24.0	10.8	
Delay (s)		29.8			61.9		66.9	123.9		65.2	46.4	
Level of Service		C			E		E	F		E	D	
Approach Delay (s)		29.8			61.9			112.9			51.1	
Approach LOS		C			E			F			D	

Intersection Summary			
HCM 2000 Control Delay	71.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	16.5
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	180	0	190	10	1160	260	220	930	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frt					0.93		1.00	0.97		1.00	1.00	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1692		1770	3442		1770	3539	
Flt Permitted					0.85		0.95	1.00		0.95	1.00	
Satd. Flow (perm)					1465		1770	3442		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	180	0	190	10	1160	260	220	930	0
RTOR Reduction (vph)	0	0	0	0	94	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	276	0	10	1400	0	220	930	0
Turn Type				Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)					18.6		1.1	40.4		13.3	52.6	
Effective Green, g (s)					18.6		1.1	40.4		13.3	52.6	
Actuated g/C Ratio					0.22		0.01	0.47		0.16	0.62	
Clearance Time (s)					4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)					2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)					319		22	1630		275	2182	
v/s Ratio Prot							0.01	c0.41		c0.12	0.26	
v/s Ratio Perm					c0.19							
v/c Ratio					0.87		0.45	0.86		0.80	0.43	
Uniform Delay, d1					32.1		41.8	19.9		34.7	8.5	
Progression Factor					1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2					20.4		5.3	4.6		14.4	0.0	
Delay (s)					52.5		47.1	24.5		49.2	8.6	
Level of Service					D		D	C		D	A	
Approach Delay (s)		0.0			52.5			24.7			16.3	
Approach LOS		A			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	85.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	180	1450	790	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.96	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3386	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3386	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	180	1450	790	320
RTOR Reduction (vph)	0	0	0	0	83	0
Lane Group Flow (vph)	0	0	180	1450	1027	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			5.9	38.7	24.8	
Effective Green, g (s)			5.9	38.7	24.8	
Actuated g/C Ratio			0.15	1.00	0.64	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			523	3539	2169	
v/s Ratio Prot			0.05	c0.41	0.30	
v/s Ratio Perm						
v/c Ratio			0.34	0.41	0.47	
Uniform Delay, d1			14.7	0.0	3.6	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			0.4	0.1	0.2	
Delay (s)			15.1	0.1	3.7	
Level of Service			B	A	A	
Approach Delay (s)	0.0			1.7	3.7	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	2.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	38.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	210	200	120	0	210	0	1230	130	110	680	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.91			0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1762	1583		1672			3488		1770	3539	
Flt Permitted	0.95	1.00	1.00		0.98			1.00		0.11	1.00	
Satd. Flow (perm)	1681	1762	1583		1672			3488		204	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	210	200	120	0	210	0	1230	130	110	680	0
RTOR Reduction (vph)	0	0	160	0	73	0	0	8	0	0	0	0
Lane Group Flow (vph)	171	229	40	0	257	0	0	1352	0	110	680	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	16.3	16.3	16.3		16.4			36.5		36.5	36.5	
Effective Green, g (s)	16.3	16.3	16.3		16.4			36.5		36.5	36.5	
Actuated g/C Ratio	0.20	0.20	0.20		0.20			0.45		0.45	0.45	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	337	353	317		337			1567		91	1590	
v/s Ratio Prot	0.10	c0.13			c0.15			0.39			0.19	
v/s Ratio Perm			0.03							c0.54		
v/c Ratio	0.51	0.65	0.13		0.76			0.86		1.21	0.43	
Uniform Delay, d1	28.9	29.8	26.6		30.6			20.1		22.4	15.2	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	1.2	4.1	0.2		9.9			5.2		160.8	0.2	
Delay (s)	30.1	33.9	26.8		40.4			25.3		183.2	15.4	
Level of Service	C	C	C		D			C		F	B	
Approach Delay (s)		30.4			40.4			25.3			38.8	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	0	0	80	0	180	0	1190	110	140	880	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		1.00			0.91			0.99		1.00	1.00	
Flt Protected		0.95			0.98			1.00		0.95	1.00	
Satd. Flow (prot)		1697			1581			3354		1703	3399	
Flt Permitted		0.49			0.90			1.00		0.95	1.00	
Satd. Flow (perm)		880			1449			3354		1703	3399	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	0	80	0	180	0	1190	110	140	880	10
RTOR Reduction (vph)	0	0	0	0	108	0	0	9	0	0	1	0
Lane Group Flow (vph)	0	10	0	0	152	0	0	1291	0	140	889	0
Confl. Peds. (#/hr)	5					5			3	3		
Confl. Bikes (#/hr)									5			8
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		19.0			19.0			36.0		8.0	39.0	
Effective Green, g (s)		19.0			19.0			36.0		8.0	39.0	
Actuated g/C Ratio		0.25			0.25			0.48		0.11	0.52	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)		222			367			1609		181	1767	
v/s Ratio Prot								c0.38		c0.08	c0.26	
v/s Ratio Perm		0.01			c0.10							
v/c Ratio		0.05			0.41			0.80		0.77	0.50	
Uniform Delay, d1		21.1			23.4			16.5		32.6	11.7	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		0.4			3.4			4.3		26.9	1.0	
Delay (s)		21.5			26.8			20.8		59.5	12.7	
Level of Service		C			C			C		E	B	
Approach Delay (s)		21.5			26.8			20.8			19.1	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	120	50	50	220	160	120	1040	70	130	680	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.95		1.00	0.99		1.00	0.97	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1711			1681		1698	3367		1702	3286	
Flt Permitted		0.68			0.94		0.29	1.00		0.19	1.00	
Satd. Flow (perm)		1179			1590		518	3367		332	3286	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	120	50	50	220	160	120	1040	70	130	680	160
RTOR Reduction (vph)	0	17	0	0	37	0	0	7	0	0	31	0
Lane Group Flow (vph)	0	233	0	0	393	0	120	1103	0	130	809	0
Confl. Peds. (#/hr)	3		5	5		3	5		2	2		5
Confl. Bikes (#/hr)						5			6			5
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.6			18.6		31.4	31.4		31.4	31.4	
Effective Green, g (s)		18.6			18.6		31.4	31.4		31.4	31.4	
Actuated g/C Ratio		0.31			0.31		0.52	0.52		0.52	0.52	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		365			492		271	1762		173	1719	
v/s Ratio Prot								0.33			0.25	
v/s Ratio Perm		0.20			c0.25		0.23			c0.39		
v/c Ratio		0.64			0.80		0.44	0.63		0.75	0.47	
Uniform Delay, d1		17.8			19.0		8.9	10.1		11.2	9.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.7			8.8		5.2	1.7		25.6	0.9	
Delay (s)		21.5			27.8		14.0	11.8		36.8	10.0	
Level of Service		C			C		B	B		D	A	
Approach Delay (s)		21.5			27.8			12.0			13.6	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	470	140	70	840	160	240	640	110	120	440	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1559	1770	3439		1770	3461		1770	3539	1546
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1559	1770	3439		1770	3461		1770	3539	1546
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	470	140	70	840	160	240	640	110	120	440	280
RTOR Reduction (vph)	0	0	89	0	14	0	0	12	0	0	0	160
Lane Group Flow (vph)	150	470	51	70	986	0	240	738	0	120	440	120
Confl. Peds. (#/hr)			3			12						2
Confl. Bikes (#/hr)						3						12
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	10.9	37.7	37.7	7.0	33.8		16.6	35.1		12.2	30.7	30.7
Effective Green, g (s)	10.9	37.7	37.7	7.0	33.8		16.6	35.1		12.2	30.7	30.7
Actuated g/C Ratio	0.10	0.34	0.34	0.06	0.31		0.15	0.32		0.11	0.28	0.28
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	175	1212	534	112	1056		267	1104		196	987	431
v/s Ratio Prot	c0.08	c0.13		0.04	c0.29		c0.14	c0.21		0.07	0.12	
v/s Ratio Perm			0.03									0.08
v/c Ratio	0.86	0.39	0.09	0.62	0.93		0.90	0.67		0.61	0.45	0.28
Uniform Delay, d1	48.8	27.4	24.6	50.2	37.0		45.9	32.4		46.6	32.6	31.0
Progression Factor	0.84	0.74	1.04	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	27.9	0.2	0.1	10.4	14.4		29.8	3.2		5.6	1.5	1.6
Delay (s)	69.1	20.5	25.6	60.6	51.4		75.7	35.6		52.2	34.1	32.6
Level of Service	E	C	C	E	D		E	D		D	C	C
Approach Delay (s)		31.0			52.0			45.3			36.2	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	80	120	1020	40	60	520
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	80	120	1020	40	60	520
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1420	530			1060	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1420	530			1060	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	31	76			91	
cM capacity (veh/h)	116	493			653	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	200	680	380	233	347
Volume Left	80	0	0	60	0
Volume Right	120	0	40	0	0
cSH	214	1700	1700	653	1700
Volume to Capacity	0.93	0.40	0.22	0.09	0.20
Queue Length 95th (ft)	196	0	0	8	0
Control Delay (s)	92.5	0.0	0.0	3.7	0.0
Lane LOS	F			A	
Approach Delay (s)	92.5	0.0		1.5	
Approach LOS	F				

Intersection Summary				
Average Delay	10.5			
Intersection Capacity Utilization	67.4%	ICU Level of Service		C
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	260	80	960	140	140	460
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	260	80	960	140	140	460
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1540	550			1100	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1540	550			1100	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	83			78	
cM capacity (veh/h)	83	479			630	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	340	640	460	293	307
Volume Left	260	0	0	140	0
Volume Right	80	0	140	0	0
cSH	102	1700	1700	630	1700
Volume to Capacity	3.32	0.38	0.27	0.22	0.18
Queue Length 95th (ft)	Err	0	0	21	0
Control Delay (s)	Err	0.0	0.0	7.5	0.0
Lane LOS	F			A	
Approach Delay (s)	Err	0.0		3.6	
Approach LOS	F				

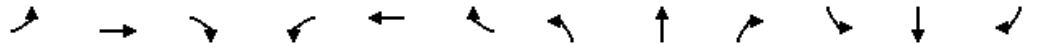
Intersection Summary				
Average Delay	1667.6			
Intersection Capacity Utilization	77.1%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	440	200	300	810	210	390	640	190	80	610	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1529	3433	3539	1547	3433	3386		3433	3358	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1529	3433	3539	1547	3433	3386		3433	3358	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	440	200	300	810	210	390	640	190	80	610	230
RTOR Reduction (vph)	0	0	135	0	0	139	0	22	0	0	34	0
Lane Group Flow (vph)	300	440	65	300	810	71	390	808	0	80	806	0
Confl. Peds. (#/hr)			21			11			24			17
Confl. Bikes (#/hr)			2						9			15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	11.2	31.5	31.5	11.2	31.5	31.5	11.2	36.7		6.4	31.9	
Effective Green, g (s)	11.2	31.5	31.5	11.2	31.5	31.5	11.2	36.7		6.4	31.9	
Actuated g/C Ratio	0.11	0.31	0.31	0.11	0.31	0.31	0.11	0.36		0.06	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	377	1095	473	377	1095	478	377	1220		215	1052	
v/s Ratio Prot	c0.09	0.12		0.09	c0.23		c0.11	0.24		0.02	c0.24	
v/s Ratio Perm			0.04			0.05						
v/c Ratio	0.80	0.40	0.14	0.80	0.74	0.15	1.03	0.66		0.37	0.77	
Uniform Delay, d1	44.2	27.7	25.3	44.2	31.5	25.4	45.3	27.3		45.8	31.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.1	0.2	0.1	11.1	2.7	0.1	55.5	1.4		1.1	3.4	
Delay (s)	55.2	28.0	25.5	55.2	34.1	25.6	100.8	28.7		46.9	35.0	
Level of Service	E	C	C	E	C	C	F	C		D	C	
Approach Delay (s)		36.1			37.6			51.8			36.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	40.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	101.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	90	100	20	110	10	120	1060	20	30	700	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	0.98	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.92			0.99		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1742	1693			1824		1770	3523		1770	3539	1520
Flt Permitted	0.65	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1199	1693			1741		1770	3523		1770	3539	1520
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	90	100	20	110	10	120	1060	20	30	700	340
RTOR Reduction (vph)	0	33	0	0	2	0	0	1	0	0	0	200
Lane Group Flow (vph)	190	157	0	0	138	0	120	1079	0	30	700	140
Confl. Peds. (#/hr)	30		14	14		30	5		35	35		5
Confl. Bikes (#/hr)			5			15			8			11
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	18.6	18.6			18.6		10.2	36.1		2.6	28.5	28.5
Effective Green, g (s)	18.6	18.6			18.6		10.2	36.1		2.6	28.5	28.5
Actuated g/C Ratio	0.27	0.27			0.27		0.15	0.52		0.04	0.41	0.41
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	321	454			467		260	1835		66	1455	625
v/s Ratio Prot		0.09					c0.07	c0.31		0.02	0.20	
v/s Ratio Perm	c0.16				0.08							0.09
v/c Ratio	0.59	0.35			0.30		0.46	0.59		0.45	0.48	0.22
Uniform Delay, d1	22.0	20.4			20.1		27.0	11.5		32.7	15.0	13.2
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.9	0.5			0.4		1.3	0.5		4.9	0.3	0.2
Delay (s)	25.0	20.9			20.5		28.3	12.0		37.6	15.2	13.4
Level of Service	C	C			C		C	B		D	B	B
Approach Delay (s)		22.9			20.5			13.6			15.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	320	310	370	10	420	70	370	780	10	70	620	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1861	1583	1770	3532		1770	3405	
Flt Permitted	0.95	1.00	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1842	1583	1770	3532		1770	3405	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	320	310	370	10	420	70	370	780	10	70	620	210
RTOR Reduction (vph)	0	0	211	0	0	54	0	1	0	0	28	0
Lane Group Flow (vph)	320	310	159	0	430	16	370	789	0	70	802	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	20.0	52.0	52.0		27.0	27.0	23.0	46.1		7.7	30.8	
Effective Green, g (s)	20.0	52.0	52.0		27.0	27.0	23.0	46.1		7.7	30.8	
Actuated g/C Ratio	0.17	0.43	0.43		0.22	0.22	0.19	0.38		0.06	0.25	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	801	681		411	353	337	1347		112	868	
v/s Ratio Prot	c0.18	0.17					c0.21	0.22		0.04	c0.24	
v/s Ratio Perm			0.10		c0.23	0.01						
v/c Ratio	1.09	0.39	0.23		1.05	0.04	1.10	0.59		0.62	0.92	
Uniform Delay, d1	50.4	23.5	21.8		46.9	36.8	48.9	29.7		55.1	43.9	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	79.5	0.3	0.2		57.0	0.1	77.9	0.7		10.4	15.3	
Delay (s)	129.9	23.8	22.0		103.9	36.8	126.8	30.4		65.5	59.1	
Level of Service	F	C	C		F	D	F	C		E	E	
Approach Delay (s)		57.1			94.5			61.2			59.6	
Approach LOS		E			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	64.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	470	330	210	80	230	30	10	90	600	70	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.94		1.00	0.98			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3311		1770	3472			1770	3474			1762
Flt Permitted	0.95	1.00		0.95	1.00			0.35	1.00			1.00
Satd. Flow (perm)	3433	3311		1770	3472			659	3474			1855
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	470	330	210	80	230	30	10	90	600	70	10	20
RTOR Reduction (vph)	0	112	0	0	12	0	0	0	8	0	0	0
Lane Group Flow (vph)	470	428	0	80	248	0	0	100	662	0	0	30
Confl. Peds. (#/hr)			3	3						15		15
Confl. Bikes (#/hr)			3			2				6		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	11.3	18.6		7.1	14.4			11.3	30.3			3.8
Effective Green, g (s)	11.3	18.6		7.1	14.4			11.3	30.3			3.8
Actuated g/C Ratio	0.15	0.25		0.09	0.19			0.15	0.40			0.05
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	511	812		165	659			98	1388			92
v/s Ratio Prot	c0.14	c0.13		0.05	0.07				0.19			
v/s Ratio Perm								c0.15				0.02
v/c Ratio	0.92	0.53		0.48	0.38			1.02	0.48			0.33
Uniform Delay, d1	31.8	24.8		32.6	26.8			32.2	16.9			34.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	21.6	0.6		2.2	0.4			96.5	0.3			2.1
Delay (s)	53.4	25.4		34.9	27.1			128.8	17.1			36.8
Level of Service	D	C		C	C			F	B			D
Approach Delay (s)		38.4			29.0				31.6			
Approach LOS		D			C				C			

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Volume (vph)	600	360
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1562
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1562
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	600	360
RTOR Reduction (vph)	0	252
Lane Group Flow (vph)	600	108
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		2
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	22.8	22.8
Effective Green, g (s)	22.8	22.8
Actuated g/C Ratio	0.30	0.30
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1064	469
v/s Ratio Prot	c0.17	
v/s Ratio Perm		0.07
v/c Ratio	0.56	0.23
Uniform Delay, d1	22.3	19.9
Progression Factor	1.00	1.00
Incremental Delay, d2	0.7	0.3
Delay (s)	23.0	20.2
Level of Service	C	C
Approach Delay (s)	22.4	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	10	300	10	80	10	210	120	60	190	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	10	10	300	10	80	10	210	120	60	190	10
Pedestrians					3							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					4.0							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	630	668	195	563	553	213	200			333		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	630	668	195	563	553	213	200			333		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	97	99	25	98	90	99			95		
cM capacity (veh/h)	331	354	841	400	412	820	1360			1212		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	30	390	220	120	260
Volume Left	10	300	10	0	60
Volume Right	10	80	0	120	10
cSH	427	447	1360	1700	1212
Volume to Capacity	0.07	0.87	0.01	0.07	0.05
Queue Length 95th (ft)	6	226	1	0	4
Control Delay (s)	14.1	47.5	0.4	0.0	2.2
Lane LOS	B	E	A		A
Approach Delay (s)	14.1	47.5	0.3		2.2
Approach LOS	B	E			

Intersection Summary				
Average Delay	19.2			
Intersection Capacity Utilization	64.2%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	470	70	20	660	150	10	0	10	120	10	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.89		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85		0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.99	
Satd. Flow (prot)	1687	3047	2563	1703	4737		1643	3285	1443		2656	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.99	
Satd. Flow (perm)	1687	3047	2563	1703	4737		1643	3285	1443		2656	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	470	70	20	660	150	10	0	10	120	10	300
RTOR Reduction (vph)	0	0	26	0	29	0	0	0	10	0	253	0
Lane Group Flow (vph)	310	477	37	20	781	0	5	5	0	0	177	0
Confl. Peds. (#/hr)	12					12			12	12		
Confl. Bikes (#/hr)			2			5			11			
Heavy Vehicles (%)	7%	7%	7%	6%	6%	6%	0%	0%	0%	20%	20%	20%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	19.0	38.3	38.3	2.2	21.5		1.8	1.8	1.8		10.2	
Effective Green, g (s)	19.0	38.3	38.3	2.2	21.5		1.8	1.8	1.8		10.2	
Actuated g/C Ratio	0.29	0.59	0.59	0.03	0.33		0.03	0.03	0.03		0.16	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	496	1809	1521	58	1579		45	91	40		420	
v/s Ratio Prot	c0.18	0.16		0.01	c0.16		c0.00	0.00			c0.07	
v/s Ratio Perm			0.01						0.00			
v/c Ratio	0.62	0.26	0.02	0.34	0.49		0.11	0.05	0.01		0.42	
Uniform Delay, d1	19.7	6.3	5.4	30.4	17.2		30.6	30.5	30.5		24.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.5	0.1	0.0	3.6	0.2		1.1	0.3	0.1		0.7	
Delay (s)	22.1	6.4	5.4	34.0	17.4		31.7	30.8	30.6		25.2	
Level of Service	C	A	A	C	B		C	C	C		C	
Approach Delay (s)		12.1			17.8			30.9			25.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	64.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	40	0	1090	90	130	1960	0	110	0	110	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Lane Util. Factor		1.00	0.86		1.00	0.86			1.00	1.00		
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00		
Flpb, ped/bikes		1.00	1.00		1.00	1.00			0.98	1.00		
Frt		1.00	0.99		1.00	1.00			1.00	0.85		
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1683	6029		1687	6108			1655	1509		
Flt Permitted		0.48	1.00		0.95	1.00			0.76	1.00		
Satd. Flow (perm)		854	6029		1687	6108			1320	1509		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	0	1090	90	130	1960	0	110	0	110	0	0
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	0	96	0	0
Lane Group Flow (vph)	0	40	1172	0	130	1960	0	0	110	14	0	0
Confl. Peds. (#/hr)		15					15	17				
Confl. Bikes (#/hr)				3			5					
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type	custom	Prot	NA		Prot	NA		Perm	NA	Perm		
Protected Phases		5	2		1	6			3			3
Permitted Phases	5							3	3	3	3	3
Actuated Green, G (s)		8.3	70.3		10.4	72.4			13.3	13.3		
Effective Green, g (s)		8.3	70.3		10.4	72.4			13.3	13.3		
Actuated g/C Ratio		0.08	0.66		0.10	0.68			0.13	0.13		
Clearance Time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Vehicle Extension (s)		2.0	2.0		2.0	2.0			2.0	2.0		
Lane Grp Cap (vph)		66	3998		165	4171			165	189		
v/s Ratio Prot			0.19		c0.08	c0.32						
v/s Ratio Perm		0.05							c0.08	0.01		
v/c Ratio		0.61	0.29		0.79	0.47			0.67	0.07		
Uniform Delay, d1		47.3	7.5		46.7	7.8			44.2	40.9		
Progression Factor		0.91	0.79		1.00	1.00			1.00	1.00		
Incremental Delay, d2		9.8	0.2		20.1	0.4			7.6	0.1		
Delay (s)		52.8	6.1		66.8	8.2			51.9	41.0		
Level of Service		D	A		E	A			D	D		
Approach Delay (s)			7.6			11.9			46.4			0.0
Approach LOS			A			B			D			A

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	17
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	7%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	830	180	120	1930	60	460	40	250	10	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.97		1.00	1.00		1.00	0.92			0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98			0.98	1.00
Satd. Flow (prot)	3433	4949		1770	6379		1610	3069			1707	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.98			0.98	1.00
Satd. Flow (perm)	3433	4949		1770	6379		1610	3069			1707	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	830	180	120	1930	60	460	40	250	10	10	20
RTOR Reduction (vph)	0	20	0	0	2	0	0	195	0	0	2	17
Lane Group Flow (vph)	40	990	0	120	1988	0	258	297	0	0	20	1
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	3.8	52.5		10.3	59.0		22.2	22.2			4.0	4.0
Effective Green, g (s)	3.8	52.5		10.3	59.0		22.2	22.2			4.0	4.0
Actuated g/C Ratio	0.04	0.50		0.10	0.56		0.21	0.21			0.04	0.04
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	123	2451		171	3550		337	642			64	56
v/s Ratio Prot	0.01	0.20		c0.07	c0.31		c0.16	0.10			c0.01	
v/s Ratio Perm												0.00
v/c Ratio	0.33	0.40		0.70	0.56		0.77	0.46			0.31	0.01
Uniform Delay, d1	49.8	16.9		46.4	15.1		39.5	36.7			49.7	49.1
Progression Factor	1.00	1.00		1.36	0.59		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.6	0.5		9.2	0.6		9.0	0.2			1.0	0.0
Delay (s)	50.4	17.4		72.4	9.5		48.5	36.9			50.7	49.1
Level of Service	D	B		E	A		D	D			D	D
Approach Delay (s)		18.6			13.1			40.9			50.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

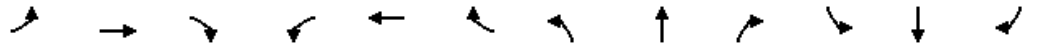
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	610	130	70	1350	150	230	220	120	100	80	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.95		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3286		1719	3374		1719	1693		1719	1642	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	3286		1719	3374		1719	1693		1719	1642	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	610	130	70	1350	150	230	220	120	100	80	100
RTOR Reduction (vph)	0	14	0	0	7	0	0	20	0	0	45	0
Lane Group Flow (vph)	80	726	0	70	1493	0	230	320	0	100	135	0
Confl. Peds. (#/hr)	5		27	27		5	3		21	21		3
Confl. Bikes (#/hr)			6			2						3
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	5.8	49.3		7.2	50.7		12.0	25.0		8.5	21.5	
Effective Green, g (s)	5.8	49.3		7.2	50.7		12.0	25.0		8.5	21.5	
Actuated g/C Ratio	0.05	0.45		0.07	0.46		0.11	0.23		0.08	0.20	
Clearance Time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	90	1472		112	1555		187	384		132	320	
v/s Ratio Prot	c0.05	0.22		0.04	c0.44		c0.13	c0.19		0.06	0.08	
v/s Ratio Perm												
v/c Ratio	0.89	0.49		0.62	0.96		1.23	0.83		0.76	0.42	
Uniform Delay, d1	51.8	21.5		50.1	28.7		49.0	40.5		49.7	38.8	
Progression Factor	1.00	1.00		1.09	0.51		1.00	1.00		1.00	1.00	
Incremental Delay, d2	58.0	0.1		5.1	11.4		141.2	13.7		19.5	0.3	
Delay (s)	109.8	21.6		59.7	26.0		190.2	54.2		69.3	39.1	
Level of Service	F	C		E	C		F	D		E	D	
Approach Delay (s)		30.2			27.5			109.1			49.9	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	44.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	500	0	0	1040	540	140	940	230	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95			0.95	1.00			
Frt	1.00	1.00			0.95			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (prot)	1770	3539			3358			3516	1583			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	1770	3539			3358			3516	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	500	0	0	1040	540	140	940	230	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	0	94	0	0	0
Lane Group Flow (vph)	300	500	0	0	1559	0	0	1080	136	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	14.0	56.0			38.0			26.0	26.0			
Effective Green, g (s)	14.0	56.0			38.0			26.0	26.0			
Actuated g/C Ratio	0.16	0.62			0.42			0.29	0.29			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	275	2202			1417			1015	457			
v/s Ratio Prot	c0.17	0.14			c0.46							
v/s Ratio Perm								0.31	0.09			
v/c Ratio	1.09	0.23			1.10			1.06	0.30			
Uniform Delay, d1	38.0	7.5			26.0			32.0	24.9			
Progression Factor	0.78	1.48			1.00			1.00	1.00			
Incremental Delay, d2	63.8	0.1			56.2			46.9	0.4			
Delay (s)	93.4	11.2			82.2			78.9	25.3			
Level of Service	F	B			F			E	C			
Approach Delay (s)		42.0			82.2			69.5			0.0	
Approach LOS		D			F			E			A	

Intersection Summary			
HCM 2000 Control Delay	69.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	128.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	350	350	500	680	0	0	0	0	450	750	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0						4.0	
Lane Util. Factor		0.95		0.95	0.95						0.91	
Frt		0.93		1.00	1.00						0.97	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3274		1681	1764						4853	
Flt Permitted		1.00		0.95	0.90						0.99	
Satd. Flow (perm)		3274		1681	1587						4853	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	350	350	500	680	0	0	0	0	450	750	320
RTOR Reduction (vph)	0	66	0	0	0	0	0	0	0	0	54	0
Lane Group Flow (vph)	0	634	0	450	730	0	0	0	0	0	1466	0
Turn Type		NA		Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases												
Actuated Green, G (s)		22.4		26.6	53.0						29.0	
Effective Green, g (s)		22.4		26.6	53.0						29.0	
Actuated g/C Ratio		0.25		0.30	0.59						0.32	
Clearance Time (s)		4.0		4.0	4.0						4.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		814		496	986						1563	
v/s Ratio Prot		0.19		c0.27	0.22						c0.30	
v/s Ratio Perm					c0.22							
v/c Ratio		0.78		0.91	0.74						0.94	
Uniform Delay, d1		31.5		30.5	13.5						29.6	
Progression Factor		1.00		1.55	1.53						1.00	
Incremental Delay, d2		7.3		2.5	0.3						11.1	
Delay (s)		38.7		49.8	20.9						40.7	
Level of Service		D		D	C						D	
Approach Delay (s)		38.7			31.9			0.0			40.7	
Approach LOS		D			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	128.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	380	440	100	480	550	210	480	530	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	1.00				
Frt	1.00	0.92		1.00	0.92		1.00	0.92				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	3433	3254		1770	3256		1770	1716				
Flt Permitted	0.95	1.00		0.34	1.00		0.95	1.00				
Satd. Flow (perm)	3433	3254		638	3256		1770	1716				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	380	440	100	480	550	210	480	530	0	0	0
RTOR Reduction (vph)	0	261	0	0	188	0	0	50	0	0	0	0
Lane Group Flow (vph)	280	559	0	100	842	0	210	960	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	7.0	32.5		21.0	21.0		38.5	38.5				
Effective Green, g (s)	7.0	32.5		21.0	21.0		38.5	38.5				
Actuated g/C Ratio	0.09	0.41		0.26	0.26		0.48	0.48				
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0		2.0	2.0		2.0	2.0				
Lane Grp Cap (vph)	300	1321		167	854		851	825				
v/s Ratio Prot	c0.08	0.17			c0.26			c0.56				
v/s Ratio Perm				0.16			0.12					
v/c Ratio	0.93	0.42		0.60	0.99		0.25	1.16				
Uniform Delay, d1	36.3	17.0		25.8	29.4		12.2	20.8				
Progression Factor	1.44	0.15		1.00	1.00		1.00	1.00				
Incremental Delay, d2	19.4	0.4		14.9	27.6		0.1	86.9				
Delay (s)	71.6	3.0		40.7	56.9		12.3	107.6				
Level of Service	E	A		D	E		B	F				
Approach Delay (s)		20.5			55.5			91.2			0.0	
Approach LOS		C			E			F			A	

Intersection Summary			
HCM 2000 Control Delay	57.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	107.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	830	900	350	340	0	50	0	120	150	1270	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Lane Util. Factor		0.91		0.97	0.95			1.00		0.91	0.91	1.00
Frt		0.92		1.00	1.00			0.90		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)		4688		3433	3539			1661		1610	3388	1583
Flt Permitted		1.00		0.95	1.00			0.32		0.65	0.95	1.00
Satd. Flow (perm)		4688		3433	3539			540		1100	3225	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	830	900	350	340	0	50	0	120	150	1270	180
RTOR Reduction (vph)	0	8	0	0	0	0	0	73	0	0	0	109
Lane Group Flow (vph)	0	1722	0	350	340	0	0	97	0	135	1285	71
Turn Type		NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases							8			4		4
Actuated Green, G (s)		28.5		7.5	39.5			31.5		31.5	31.5	31.5
Effective Green, g (s)		28.5		7.5	39.5			31.5		31.5	31.5	31.5
Actuated g/C Ratio		0.36		0.09	0.49			0.39		0.39	0.39	0.39
Clearance Time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0		2.0	2.0			2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		1670		321	1747			212		433	1269	623
v/s Ratio Prot		c0.37		c0.10	0.10							
v/s Ratio Perm								0.18		0.12	c0.40	0.04
v/c Ratio		1.55dr		1.09	0.19			0.46		0.31	1.01	0.11
Uniform Delay, d1		25.8		36.2	11.3			17.9		16.8	24.2	15.4
Progression Factor		1.00		0.81	0.92			1.00		1.00	1.00	1.00
Incremental Delay, d2		30.5		66.5	0.2			0.6		0.2	28.4	0.0
Delay (s)		56.2		95.7	10.6			18.5		16.9	52.7	15.4
Level of Service		E		F	B			B		B	D	B
Approach Delay (s)		56.2			53.8			18.5			45.5	
Approach LOS		E			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	50.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	500	0	0	680	170	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	500	0	0	680	170	350
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	500	0	0	680	170	350
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	14.7			14.7	13.2	13.2
Effective Green, g (s)	14.7			14.7	13.2	13.2
Actuated g/C Ratio	0.41			0.41	0.37	0.37
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2082			1449	650	582
v/s Ratio Prot	0.10			c0.19	0.10	c0.22
v/s Ratio Perm						
v/c Ratio	0.24			0.47	0.26	0.60
Uniform Delay, d1	6.9			7.7	7.9	9.2
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.2	0.2	1.8
Delay (s)	7.0			8.0	8.2	11.0
Level of Service	A			A	A	B
Approach Delay (s)	7.0			8.0	10.1	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	35.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	
Volume (vph)	0	250	400	0	350	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.93	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3539	3539		3278	
Flt Permitted		1.00	1.00		0.97	
Satd. Flow (perm)		3539	3539		3278	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	250	400	0	350	290
RTOR Reduction (vph)	0	0	0	0	190	0
Lane Group Flow (vph)	0	250	400	0	450	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		8.7	8.7		8.8	
Effective Green, g (s)		8.7	8.7		8.8	
Actuated g/C Ratio		0.34	0.34		0.35	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1207	1207		1131	
v/s Ratio Prot		0.07	c0.11		c0.14	
v/s Ratio Perm						
v/c Ratio		0.21	0.33		0.40	
Uniform Delay, d1		6.0	6.2		6.3	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.1	0.2		0.2	
Delay (s)		6.0	6.4		6.6	
Level of Service		A	A		A	
Approach Delay (s)		6.0	6.4		6.6	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	25.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	550	140	90	190	110	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		4.0			4.0
Lane Util. Factor	0.97		1.00			1.00
Frpb, ped/bikes	1.00		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.97		0.91			1.00
Flt Protected	0.96		1.00			0.98
Satd. Flow (prot)	3305		1554			1670
Flt Permitted	0.96		1.00			0.74
Satd. Flow (perm)	3305		1554			1259
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	550	140	90	190	110	110
RTOR Reduction (vph)	22	0	81	0	0	0
Lane Group Flow (vph)	668	0	199	0	0	220
Confl. Bikes (#/hr)				3		
Heavy Vehicles (%)	4%	4%	10%	10%	11%	11%
Turn Type	Prot		NA		Perm	NA
Protected Phases	6		8			4
Permitted Phases					4	
Actuated Green, G (s)	12.6		12.7			12.7
Effective Green, g (s)	12.6		12.7			12.7
Actuated g/C Ratio	0.38		0.39			0.39
Clearance Time (s)	3.5		4.0			4.0
Vehicle Extension (s)	2.2		2.0			2.0
Lane Grp Cap (vph)	1269		601			487
v/s Ratio Prot	c0.20		0.13			
v/s Ratio Perm						c0.17
v/c Ratio	0.53		0.33			0.45
Uniform Delay, d1	7.8		7.1			7.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.2		0.1			0.2
Delay (s)	8.0		7.2			7.7
Level of Service	A		A			A
Approach Delay (s)	8.0		7.2			7.7
Approach LOS	A		A			A

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	32.8	Sum of lost time (s)	11.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	770	0	120	0	0	0	170	180	0	0	220	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.98	
Flt Protected	0.95		1.00					0.98			1.00	
Satd. Flow (prot)	3273		1509					3204			1765	
Flt Permitted	0.95		1.00					0.98			1.00	
Satd. Flow (perm)	3273		1509					3204			1765	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	770	0	120	0	0	0	170	180	0	0	220	40
RTOR Reduction (vph)	0	0	80	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	770	0	40	0	0	0	0	350	0	0	256	0
Confl. Peds. (#/hr)	2						3					3
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	10%	10%	10%	5%	5%	5%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4						2	2			6	
Permitted Phases			4									
Actuated Green, G (s)	24.0		24.0					14.3			18.1	
Effective Green, g (s)	24.0		24.0					14.3			18.1	
Actuated g/C Ratio	0.33		0.33					0.20			0.25	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1084		500					632			441	
v/s Ratio Prot	c0.24							c0.11			c0.14	
v/s Ratio Perm			0.03									
v/c Ratio	0.71		0.08					0.55			0.58	
Uniform Delay, d1	21.2		16.6					26.2			23.8	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	2.2		0.1					1.1			1.8	
Delay (s)	23.4		16.7					27.2			25.7	
Level of Service	C		B					C			C	
Approach Delay (s)		22.5			0.0			27.2			25.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	72.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↑		↰↰	↱↱
Volume (vph)	0	1190	1400	0	380	1630
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5711	5711		3060	2484
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5711	5711		3060	2484
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1190	1400	0	380	1630
RTOR Reduction (vph)	0	0	0	0	0	1
Lane Group Flow (vph)	0	1190	1400	0	380	1629
Confl. Bikes (#/hr)				3		3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		27.0	18.0		25.0	34.0
Effective Green, g (s)		27.0	18.0		25.0	34.0
Actuated g/C Ratio		0.45	0.30		0.42	0.57
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		2569	1713		1275	1407
v/s Ratio Prot		0.21	c0.25		0.12	c0.66
v/s Ratio Perm						
v/c Ratio		0.46	0.82		0.30	1.16
Uniform Delay, d1		11.5	19.5		11.7	13.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1	3.2		0.1	79.3
Delay (s)		11.6	22.6		11.8	92.3
Level of Service		B	C		B	F
Approach Delay (s)		11.6	22.6		77.1	
Approach LOS		B	C		E	

Intersection Summary			
HCM 2000 Control Delay	43.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	540	400	0	1340	330	910	0	250	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frpb, ped/bikes		1.00	0.99		1.00		1.00		1.00			
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00			
Frt		0.97	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3142	1356		4704		3273		1509			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3142	1356		4704		3273		1509			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	540	400	0	1340	330	910	0	250	0	0	0
RTOR Reduction (vph)	0	15	0	0	40	0	0	0	152	0	0	0
Lane Group Flow (vph)	0	637	288	0	1630	0	910	0	98	0	0	0
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		56.0	105.0		56.0		41.0		41.0			
Effective Green, g (s)		56.0	105.0		56.0		41.0		41.0			
Actuated g/C Ratio		0.53	1.00		0.53		0.39		0.39			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1675	1356		2508		1278		589			
v/s Ratio Prot		0.20			c0.35		c0.28					
v/s Ratio Perm			0.21						0.06			
v/c Ratio		0.38	0.21		0.65		0.71		0.17			
Uniform Delay, d1		14.3	0.0		17.5		27.0		20.9			
Progression Factor		1.00	1.00		1.00		1.00		1.00			
Incremental Delay, d2		0.7	0.4		1.3		3.4		0.6			
Delay (s)		15.0	0.4		18.8		30.4		21.5			
Level of Service		B	A		B		C		C			
Approach Delay (s)		10.5			18.8			28.5			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	620	960	0	1760	0	0	0	0	320	0	700
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		0.99	1.00		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.93	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4297	1310		4893					3303		1493
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4297	1310		4893					3303		1493
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	620	960	0	1760	0	0	0	0	320	0	700
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	5
Lane Group Flow (vph)	0	1100	480	0	1760	0	0	0	0	320	0	695
Confl. Peds. (#/hr)							8					8
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		43.2	43.2		43.2					49.3		49.3
Effective Green, g (s)		43.2	43.2		43.2					49.3		49.3
Actuated g/C Ratio		0.43	0.43		0.43					0.49		0.49
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		1847	563		2103					1620		732
v/s Ratio Prot		0.26	c0.37		0.36							
v/s Ratio Perm										0.10		c0.47
v/c Ratio		0.60	0.85		0.84					0.20		0.95
Uniform Delay, d1		22.0	25.8		25.5					14.4		24.4
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.5	11.9		3.1					0.1		21.5
Delay (s)		22.5	37.7		28.6					14.5		45.9
Level of Service		C	D		C					B		D
Approach Delay (s)		27.1			28.6			0.0			36.0	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	710	370	0	1080	540	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.99	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3471	1516		3471	3360	1413
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3471	1516		3471	3360	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	710	370	0	1080	540	260
RTOR Reduction (vph)	0	0	0	0	3	149
Lane Group Flow (vph)	710	370	0	1080	563	85
Confl. Peds. (#/hr)		6	6			
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	24.9	47.3		24.9	14.4	14.4
Effective Green, g (s)	24.9	47.3		24.9	14.4	14.4
Actuated g/C Ratio	0.53	1.00		0.53	0.30	0.30
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1827	1516		1827	1022	430
v/s Ratio Prot	0.20			c0.31	c0.17	
v/s Ratio Perm		0.24				0.06
v/c Ratio	0.39	0.24		0.59	0.55	0.20
Uniform Delay, d1	6.7	0.0		7.7	13.7	12.2
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4		0.5	0.6	0.2
Delay (s)	6.8	0.4		8.2	14.4	12.4
Level of Service	A	A		A	B	B
Approach Delay (s)	4.6			8.2	13.8	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	47.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✥	↱
Volume (vph)	0	860	1090	0	1210	410	0	0	0	220	0	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.95	1.00				0.95	0.91	0.95
Frt		1.00	0.85		1.00	0.85				1.00	0.86	0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)		5085	1583		3539	1583				1681	1457	1504
Flt Permitted		1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)		5085	1583		3539	1583				1681	1457	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	860	1090	0	1210	410	0	0	0	220	0	480
RTOR Reduction (vph)	0	0	433	0	0	163	0	0	0	0	62	62
Lane Group Flow (vph)	0	860	657	0	1210	247	0	0	0	198	190	188
Turn Type		NA	Perm		NA	Perm				Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4			8				6		6
Actuated Green, G (s)		35.8	35.8		35.8	35.8				15.6	15.6	15.6
Effective Green, g (s)		35.8	35.8		35.8	35.8				15.6	15.6	15.6
Actuated g/C Ratio		0.60	0.60		0.60	0.60				0.26	0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)		3064	954		2132	954				441	382	394
v/s Ratio Prot		0.17			0.34							
v/s Ratio Perm			c0.41			0.16				0.12	0.13	0.13
v/c Ratio		0.28	0.69		0.57	0.26				0.45	0.50	0.48
Uniform Delay, d1		5.6	8.0		7.1	5.6				18.3	18.6	18.5
Progression Factor		1.00	1.00		1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2		0.1	2.1		0.3	0.1				0.7	1.0	0.9
Delay (s)		5.7	10.1		7.5	5.7				19.0	19.6	19.4
Level of Service		A	B		A	A				B	B	B
Approach Delay (s)		8.2			7.0			0.0			19.4	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	970	590	70	770	550	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.94		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3338		1770	3539	3387	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3338		1770	3539	3387	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	970	590	70	770	550	100
RTOR Reduction (vph)	74	0	0	0	17	0
Lane Group Flow (vph)	1486	0	70	770	633	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	43.7		6.3	54.0	19.8	
Effective Green, g (s)	43.7		6.3	54.0	19.8	
Actuated g/C Ratio	0.55		0.08	0.68	0.25	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1827		139	2394	840	
v/s Ratio Prot	c0.45		c0.04	0.22	c0.19	
v/s Ratio Perm						
v/c Ratio	0.81		0.50	0.32	0.75	
Uniform Delay, d1	14.7		35.3	5.3	27.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.7		1.0	0.0	3.4	
Delay (s)	17.5		36.3	5.4	31.2	
Level of Service	B		D	A	C	
Approach Delay (s)	17.5			7.9	31.2	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	1320	50	30	810	260	40	120	420	270	80	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.96			0.90			0.99	
Flt Protected		1.00			1.00			1.00			0.97	
Satd. Flow (prot)		3514			3409			1675			1780	
Flt Permitted		0.87			0.86			0.97			0.21	
Satd. Flow (perm)		3061			2943			1622			380	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	1320	50	30	810	260	40	120	420	270	80	30
RTOR Reduction (vph)	0	3	0	0	34	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	1417	0	0	1066	0	0	580	0	0	376	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		42.0			42.0			21.3			21.3	
Effective Green, g (s)		42.0			42.0			21.3			21.3	
Actuated g/C Ratio		0.55			0.55			0.28			0.28	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1684			1620			452			106	
v/s Ratio Prot												
v/s Ratio Perm		c0.46			0.36			0.36			c0.99	
v/c Ratio		0.84			0.66			1.28			3.55	
Uniform Delay, d1		14.4			12.1			27.5			27.5	
Progression Factor		1.00			1.00			0.18			1.00	
Incremental Delay, d2		4.0			1.0			129.0			1171.1	
Delay (s)		18.4			13.1			134.1			1198.6	
Level of Service		B			B			F			F	
Approach Delay (s)		18.4			13.1			134.1			1198.6	
Approach LOS		B			B			F			F	

Intersection Summary			
HCM 2000 Control Delay	164.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.72		
Actuated Cycle Length (s)	76.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	139.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	780	150	230	750	260	130	440	400	390	260	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (prot)	1770	3454		1770	3403			1842	1583		1808	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (perm)	1770	3454		1770	3403			1842	1583		1808	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	780	150	230	750	260	130	440	400	390	260	30
RTOR Reduction (vph)	0	18	0	0	33	0	0	0	113	0	0	24
Lane Group Flow (vph)	40	912	0	230	977	0	0	570	287	0	650	6
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	5.1	26.6		13.6	35.1			16.0	16.0		19.0	19.0
Effective Green, g (s)	5.1	26.6		13.6	35.1			16.0	16.0		19.0	19.0
Actuated g/C Ratio	0.06	0.29		0.15	0.38			0.18	0.18		0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	98	1007		263	1309			323	277		376	329
v/s Ratio Prot	0.02	c0.26		c0.13	0.29			c0.31			c0.36	
v/s Ratio Perm									0.18			0.00
v/c Ratio	0.41	0.91		0.87	0.75			1.76	1.04		1.73	0.02
Uniform Delay, d1	41.6	31.1		38.0	24.2			37.6	37.6		36.1	28.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	2.8	11.4		25.9	2.4			356.5	63.8		338.9	0.0
Delay (s)	44.4	42.5		63.9	26.6			394.1	101.4		375.0	28.7
Level of Service	D	D		E	C			F	F		F	C
Approach Delay (s)		42.6			33.5			273.4			359.7	
Approach LOS		D			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	153.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	140	770	10	220	400	0	250	10	500	270	280	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.95		1.00	0.97
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1846		1770	1863	1583			3353		1770	1809
Flt Permitted		0.86		0.95	1.00	1.00			0.95		0.22	1.00
Satd. Flow (perm)		1601		1770	1863	1583			3191		403	1809
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	770	10	220	400	0	250	10	500	270	280	210
RTOR Reduction (vph)	0	1	0	0	0	115	0	0	70	0	0	0
Lane Group Flow (vph)	0	919	0	220	400	135	0	0	710	0	280	260
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.0		13.1	40.1	40.1			26.0		26.0	26.0
Effective Green, g (s)		23.0		13.1	40.1	40.1			26.0		26.0	26.0
Actuated g/C Ratio		0.31		0.18	0.54	0.54			0.35		0.35	0.35
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		496		312	1008	856			1119		141	634
v/s Ratio Prot				c0.12	0.21							0.14
v/s Ratio Perm		c0.57				0.09			0.22		c0.69	
v/c Ratio		1.85		0.71	0.40	0.16			0.63		1.99	0.41
Uniform Delay, d1		25.5		28.7	9.9	8.5			20.1		24.0	18.2
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		391.8		7.1	0.3	0.1			1.2		468.0	0.4
Delay (s)		417.3		35.8	10.2	8.6			21.3		492.0	18.7
Level of Service		F		D	B	A			C		F	B
Approach Delay (s)		417.3			16.2				21.3			264.1
Approach LOS		F			B				C			F

Intersection Summary			
HCM 2000 Control Delay	179.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.78		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	50	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	50	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	590	30	240	650	20	20	450	320	60	90	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.98	1.00
Satd. Flow (prot)		3504		1770	3523			1859	1583		1826	1583
Flt Permitted		1.00		0.95	1.00			0.99	1.00		0.46	1.00
Satd. Flow (perm)		3504		1770	3523			1836	1583		850	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	590	30	240	650	20	20	450	320	60	90	50
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	143	0	0	34
Lane Group Flow (vph)	0	656	0	240	668	0	0	470	177	0	150	16
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		21.9		23.4	23.4			26.6	26.6		26.6	26.6
Effective Green, g (s)		21.9		23.4	23.4			26.6	26.6		26.6	26.6
Actuated g/C Ratio		0.26		0.28	0.28			0.32	0.32		0.32	0.32
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		914		493	982			582	501		269	501
v/s Ratio Prot		c0.19		0.14	c0.19							
v/s Ratio Perm								c0.26	0.11		0.18	0.01
v/c Ratio		0.72		0.49	0.68			0.81	0.35		0.56	0.03
Uniform Delay, d1		28.2		25.2	26.9			26.3	22.0		23.8	19.8
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		2.7		0.8	2.0			8.1	0.4		2.5	0.0
Delay (s)		30.9		26.0	28.9			34.4	22.5		26.3	19.8
Level of Service		C		C	C			C	C		C	B
Approach Delay (s)		30.9			28.1			29.5			24.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	83.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	860	150	40	580	120	120	550	70	180	360	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.98		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3444		1767	3434		1749	3462		1751	3539	1530
Flt Permitted		0.88		0.18	1.00		0.51	1.00		0.32	1.00	1.00
Satd. Flow (perm)		3024		339	3434		943	3462		599	3539	1530
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	860	150	40	580	120	120	550	70	180	360	30
RTOR Reduction (vph)	0	18	0	0	25	0	0	14	0	0	0	18
Lane Group Flow (vph)	0	1052	0	40	675	0	120	606	0	180	360	12
Confl. Peds. (#/hr)	12		11	11		12	23		33	33		23
Confl. Bikes (#/hr)			5			8			5			3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51		0.51	0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1555		174	1766		350	1285		222	1314	568
v/s Ratio Prot					0.20			0.18			0.10	
v/s Ratio Perm		c0.35		0.12			0.13			c0.30		0.01
v/c Ratio		0.68		0.23	0.38		0.34	0.47		0.81	0.27	0.02
Uniform Delay, d1		12.7		9.4	10.3		15.8	16.8		19.8	15.4	13.9
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		2.4		3.1	0.6		2.7	1.2		26.5	0.5	0.1
Delay (s)		15.0		12.4	10.9		18.5	18.0		46.3	15.9	14.0
Level of Service		B		B	B		B	B		D	B	B
Approach Delay (s)		15.0			11.0			18.1			25.4	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	210	60	140	200	130	140	560	150	270	610	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3522	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3522	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	210	60	140	200	130	140	560	150	270	610	20
RTOR Reduction (vph)	0	0	0	0	0	86	0	0	110	0	3	0
Lane Group Flow (vph)	10	210	60	140	200	44	140	560	40	270	627	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.1	16.2	16.2	7.2	22.3	22.3	8.9	17.6	17.6	9.2	17.9	
Effective Green, g (s)	1.1	16.2	16.2	7.2	22.3	22.3	8.9	17.6	17.6	9.2	17.9	
Actuated g/C Ratio	0.02	0.24	0.24	0.11	0.34	0.34	0.13	0.27	0.27	0.14	0.27	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	29	455	387	192	627	533	237	940	420	245	952	
v/s Ratio Prot	0.01	c0.11		c0.08	0.11		0.08	0.16		c0.15	c0.18	
v/s Ratio Perm			0.04			0.03			0.03			
v/c Ratio	0.34	0.46	0.16	0.73	0.32	0.08	0.59	0.60	0.09	1.10	0.66	
Uniform Delay, d1	32.2	21.3	19.6	28.6	16.3	15.0	26.9	21.2	18.3	28.5	21.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.0	0.7	0.2	13.0	0.3	0.1	3.9	1.0	0.1	87.5	1.7	
Delay (s)	39.2	22.0	19.8	41.5	16.6	15.0	30.8	22.2	18.4	116.0	23.1	
Level of Service	D	C	B	D	B	B	C	C	B	F	C	
Approach Delay (s)		22.2			23.6			23.0			51.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	130	180	300	100	100	100	690	560	90	750	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1720		1770	1723		1770	1863	1583	1770	3525	
Flt Permitted		0.98		0.47	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1688		867	1723		1770	1863	1583	1770	3525	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	130	180	300	100	100	100	690	560	90	750	20
RTOR Reduction (vph)	0	62	0	0	52	0	0	0	350	0	3	0
Lane Group Flow (vph)	0	268	0	300	148	0	100	690	210	90	767	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		24.9		24.9	24.9		5.3	25.3	25.3	5.3	25.3	
Effective Green, g (s)		24.9		24.9	24.9		5.3	25.3	25.3	5.3	25.3	
Actuated g/C Ratio		0.37		0.37	0.37		0.08	0.37	0.37	0.08	0.37	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		622		319	635		138	698	593	138	1321	
v/s Ratio Prot					0.09		c0.06	c0.37		0.05	0.22	
v/s Ratio Perm		0.16		c0.35					0.13			
v/c Ratio		0.43		0.94	0.23		0.72	0.99	0.35	0.65	0.58	
Uniform Delay, d1		16.0		20.6	14.7		30.4	21.0	15.2	30.2	16.9	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5		35.0	0.2		17.1	30.8	0.4	10.5	0.7	
Delay (s)		16.5		55.5	14.9		47.5	51.8	15.6	40.7	17.5	
Level of Service		B		E	B		D	D	B	D	B	
Approach Delay (s)		16.5			39.3			36.5			19.9	
Approach LOS		B			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	40	180	290	40	90	110	1160	190	100	1000	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.90			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667			1748		1770	3464		1770	3529	
Flt Permitted		0.96			0.58		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1612			1041		1770	3464		1770	3529	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	40	180	290	40	90	110	1160	190	100	1000	20
RTOR Reduction (vph)	0	126	0	0	14	0	0	19	0	0	2	0
Lane Group Flow (vph)	0	114	0	0	406	0	110	1331	0	100	1018	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		20.2			20.2		6.1	29.2		6.1	29.2	
Effective Green, g (s)		20.2			20.2		6.1	29.2		6.1	29.2	
Actuated g/C Ratio		0.30			0.30		0.09	0.43		0.09	0.43	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		482			311		159	1498		159	1526	
v/s Ratio Prot							c0.06	c0.38		0.06	0.29	
v/s Ratio Perm		0.07			c0.39							
v/c Ratio		0.24			1.31		0.69	0.89		0.63	0.67	
Uniform Delay, d1		17.8			23.6		29.8	17.7		29.6	15.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			158.8		12.2	6.8		7.6	1.1	
Delay (s)		18.1			182.5		42.0	24.5		37.2	16.4	
Level of Service		B			F		D	C		D	B	
Approach Delay (s)		18.1			182.5			25.8			18.2	
Approach LOS		B			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	42.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	630	80	1380	710	70	1400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.98		0.95		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3402		3359		1770	3539
Flt Permitted	0.96		1.00		0.95	1.00
Satd. Flow (perm)	3402		3359		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	630	80	1380	710	70	1400
RTOR Reduction (vph)	14	0	61	0	0	0
Lane Group Flow (vph)	696	0	2029	0	70	1400
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	20.1		36.5		4.6	45.1
Effective Green, g (s)	20.1		36.5		4.6	45.1
Actuated g/C Ratio	0.27		0.50		0.06	0.62
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	934		1674		111	2180
v/s Ratio Prot	c0.20		c0.60		0.04	c0.40
v/s Ratio Perm						
v/c Ratio	0.75		1.21		0.63	0.64
Uniform Delay, d1	24.2		18.4		33.5	8.9
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	3.3		101.3		11.1	0.7
Delay (s)	27.5		119.7		44.6	9.6
Level of Service	C		F		D	A
Approach Delay (s)	27.5		119.7			11.2
Approach LOS	C		F			B

Intersection Summary			
HCM 2000 Control Delay	67.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	73.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	10	50	0	130	40	0	440	140	20	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95		1.00	0.95
Frpb, ped/bikes		0.99		1.00	0.98			1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00		0.99	1.00
Frt		0.86		1.00	0.86			1.00	0.96		1.00	1.00
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)		1590		1618	1425			1703	3254		1693	3406
Flt Permitted		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)		1590		1618	1425			1703	3254		1693	3406
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	10	50	0	130	40	0	440	140	20	220
RTOR Reduction (vph)	0	10	0	0	111	0	0	0	30	0	0	0
Lane Group Flow (vph)	0	0	0	45	24	0	0	40	550	0	20	220
Confl. Peds. (#/hr)			2			2				11	11	
Confl. Bikes (#/hr)						3				3		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type		NA		Split	NA		Prot	Prot	NA		Prot	NA
Protected Phases	4	4		8	8		5	5	2		1	6
Permitted Phases												
Actuated Green, G (s)		0.6		6.0	6.0			1.0	17.6		0.8	17.4
Effective Green, g (s)		0.6		6.0	6.0			1.0	17.6		0.8	17.4
Actuated g/C Ratio		0.01		0.15	0.15			0.02	0.43		0.02	0.42
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		23		236	208			41	1396		33	1445
v/s Ratio Prot		c0.00		c0.03	0.02			c0.02	c0.17		0.01	0.06
v/s Ratio Perm												
v/c Ratio		0.01		0.19	0.12			0.98	0.39		0.61	0.15
Uniform Delay, d1		19.9		15.4	15.2			20.0	8.0		19.9	7.3
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1		0.4	0.2			130.1	0.2		27.6	0.0
Delay (s)		20.0		15.8	15.4			150.1	8.2		47.5	7.3
Level of Service		C		B	B			F	A		D	A
Approach Delay (s)		20.0			15.5				17.4			10.7
Approach LOS		C			B				B			B

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	41.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	5
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	30	320	1040	30	20	180	2040	790	30	80	160	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	0.99	0.95		1.00	0.98	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.98	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1719	6193			1752	5831	1205		1689	1432	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1719	6193			1752	5831	1205		1689	1432	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	320	1040	30	20	180	2040	790	30	80	160	10
RTOR Reduction (vph)	0	0	2	0	0	0	15	286	0	0	141	0
Lane Group Flow (vph)	0	350	1068	0	0	200	2309	220	0	110	19	0
Confl. Peds. (#/hr)		18		2		2		18	96			
Confl. Bikes (#/hr)				2							2	
Heavy Vehicles (%)	5%	5%	5%	5%	3%	3%	3%	3%	11%	11%	11%	3%
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		28.1	65.3			20.9	58.1	58.1		17.2	17.2	
Effective Green, g (s)		28.1	65.3			20.9	58.1	58.1		17.2	17.2	
Actuated g/C Ratio		0.19	0.44			0.14	0.39	0.39		0.12	0.12	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		327	2743			248	2298	474		197	167	
v/s Ratio Prot		c0.20	0.17			0.11	c0.40			c0.07		
v/s Ratio Perm								0.18			0.01	
v/c Ratio		1.07	0.39			0.81	1.00	0.46		0.56	0.11	
Uniform Delay, d1		59.7	27.6			61.3	44.7	33.1		61.5	58.3	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		69.7	0.0			16.3	20.0	0.3		1.9	0.1	
Delay (s)		129.3	27.7			77.6	64.6	33.4		63.5	58.4	
Level of Service		F	C			E	E	C		E	E	
Approach Delay (s)			52.7				60.3			60.4		
Approach LOS			D				E			E		

Intersection Summary			
HCM 2000 Control Delay	64.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	147.4	Sum of lost time (s)	21.0
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	340	180	120
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.92	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.94	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3400	1599	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3400	1599	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	340	180	120
RTOR Reduction (vph)	0	15	0
Lane Group Flow (vph)	350	285	0
Confl. Peds. (#/hr)	2		96
Confl. Bikes (#/hr)			2
Heavy Vehicles (%)	3%	3%	3%
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	23.0	23.0	
Effective Green, g (s)	23.0	23.0	
Actuated g/C Ratio	0.16	0.16	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	530	249	
v/s Ratio Prot	0.10	c0.18	
v/s Ratio Perm			
v/c Ratio	0.66	1.14	
Uniform Delay, d1	58.5	62.2	
Progression Factor	1.00	1.00	
Incremental Delay, d2	2.4	101.4	
Delay (s)	60.9	163.6	
Level of Service	E	F	
Approach Delay (s)		108.3	
Approach LOS		F	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	420	30	80	1650	190	200	190	300	350	170	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	0.88	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1377	2756	1210	1719	4940	1505	1651	1743	2572	1752	1786	
Flt Permitted	0.17	1.00	1.00	0.95	1.00	1.00	0.63	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	249	2756	1210	1719	4940	1505	1089	1743	2572	1752	1786	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	420	30	80	1650	190	200	190	300	350	170	40
RTOR Reduction (vph)	0	0	21	0	0	109	0	0	222	0	0	0
Lane Group Flow (vph)	30	420	9	80	1650	81	200	190	78	350	210	0
Confl. Peds. (#/hr)	9		6	6		9	6					6
Confl. Bikes (#/hr)									2			
Heavy Vehicles (%)	31%	31%	31%	5%	5%	5%	9%	9%	9%	3%	3%	3%
Turn Type	Perm	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		6		5	2			4		3	8	
Permitted Phases	6		6			2	4		4			
Actuated Green, G (s)	23.3	23.3	23.3	5.0	32.3	32.3	21.4	21.4	21.4	16.2	41.6	
Effective Green, g (s)	23.3	23.3	23.3	5.0	32.3	32.3	21.4	21.4	21.4	16.2	41.6	
Actuated g/C Ratio	0.28	0.28	0.28	0.06	0.39	0.39	0.26	0.26	0.26	0.20	0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	70	784	344	104	1948	593	284	455	672	346	907	
v/s Ratio Prot		0.15		0.05	c0.33			0.11		c0.20	0.12	
v/s Ratio Perm	0.12		0.01			0.05	c0.18		0.03			
v/c Ratio	0.43	0.54	0.02	0.77	0.85	0.14	0.70	0.42	0.12	1.01	0.23	
Uniform Delay, d1	23.9	24.7	21.1	37.9	22.6	15.9	27.4	25.1	23.0	32.9	11.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.2	0.7	0.0	28.3	3.6	0.1	7.7	0.6	0.1	51.3	0.1	
Delay (s)	28.1	25.4	21.1	66.2	26.2	16.0	35.1	25.7	23.1	84.2	11.4	
Level of Service	C	C	C	E	C	B	D	C	C	F	B	
Approach Delay (s)		25.3			26.8			27.3			56.9	
Approach LOS		C			C			C			E	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	81.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1160	20	100	1560	420	50	200	140	200	60	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.96	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		5057		1752	5036	1548	1671	4376	1286	1480	2959	1324
Flt Permitted		0.71		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3588		1752	5036	1548	1671	4376	1286	1480	2959	1324
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	1160	20	100	1560	420	50	200	140	200	60	20
RTOR Reduction (vph)	0	1	0	0	0	169	0	57	69	0	0	16
Lane Group Flow (vph)	0	1259	0	100	1560	251	50	206	8	200	60	4
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	8%	8%	8%	22%	22%	22%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		53.2		11.4	68.6	68.6	7.7	11.7	11.7	20.7	24.7	24.7
Effective Green, g (s)		53.2		11.4	68.6	68.6	7.7	11.7	11.7	20.7	24.7	24.7
Actuated g/C Ratio		0.46		0.10	0.60	0.60	0.07	0.10	0.10	0.18	0.21	0.21
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1659		173	3004	923	111	445	130	266	635	284
v/s Ratio Prot				0.06	c0.31		0.03	c0.05		c0.14	0.02	
v/s Ratio Perm		c0.35				0.16			0.01			0.00
v/c Ratio		0.76		0.58	0.52	0.27	0.45	0.46	0.06	0.75	0.09	0.02
Uniform Delay, d1		25.6		49.5	13.6	11.2	51.6	48.7	46.7	44.7	36.2	35.6
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		3.3		4.6	0.6	0.7	2.9	0.8	0.2	11.4	0.1	0.0
Delay (s)		28.9		54.1	14.2	11.9	54.5	49.5	46.9	56.1	36.3	35.6
Level of Service		C		D	B	B	D	D	D	E	D	D
Approach Delay (s)		28.9			15.7			49.6			50.4	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1200	830	340	750	1340	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3322		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3322		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1200	830	340	750	1340	310
RTOR Reduction (vph)	207	0	0	0	0	0
Lane Group Flow (vph)	1823	0	340	750	1340	310
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		11.0	38.0	14.0	60.0
Effective Green, g (s)	23.0		11.0	38.0	14.0	60.0
Actuated g/C Ratio	0.38		0.18	0.63	0.23	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1273		324	2241	801	1583
v/s Ratio Prot	c0.55		c0.19	0.21	c0.39	
v/s Ratio Perm						0.20
v/c Ratio	1.43		1.05	0.33	1.67	0.20
Uniform Delay, d1	18.5		24.5	5.1	23.0	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	198.9		63.5	0.1	308.3	0.3
Delay (s)	217.4		88.0	5.2	331.3	0.3
Level of Service	F		F	A	F	A
Approach Delay (s)	217.4			31.0	269.1	
Approach LOS	F			C	F	

Intersection Summary			
HCM 2000 Control Delay	192.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	126.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1120	390	190	800	270	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1120	390	190	800	270	100
RTOR Reduction (vph)	0	205	0	0	0	82
Lane Group Flow (vph)	1120	185	190	800	270	18
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	28.2	28.2	8.7	40.9	10.5	10.5
Effective Green, g (s)	28.2	28.2	8.7	40.9	10.5	10.5
Actuated g/C Ratio	0.47	0.47	0.15	0.69	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1680	751	502	2436	606	279
v/s Ratio Prot	c0.32		0.06	c0.23	c0.08	
v/s Ratio Perm		0.12				0.01
v/c Ratio	0.67	0.25	0.38	0.33	0.45	0.06
Uniform Delay, d1	12.0	9.3	22.9	3.7	21.8	20.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.2	0.5	0.1	0.5	0.1
Delay (s)	13.0	9.5	23.4	3.8	22.4	20.5
Level of Service	B	A	C	A	C	C
Approach Delay (s)	12.1			7.6	21.9	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	120	40	20	90	100	970	90	100	1260	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.88		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1649	1728	1553	1736	3045		3367	3422		1736	3467	
Flt Permitted	0.68	0.98	1.00	0.75	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1185	1698	1553	1370	3045		3367	3422		1736	3467	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	120	40	20	90	100	970	90	100	1260	10
RTOR Reduction (vph)	0	0	95	0	71	0	0	4	0	0	1	0
Lane Group Flow (vph)	9	11	25	40	39	0	100	1056	0	100	1269	0
Confl. Peds. (#/hr)									5	5		
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.2	10.2	10.2	10.2	10.2		4.8	21.7		6.0	22.9	
Effective Green, g (s)	10.2	10.2	10.2	10.2	10.2		4.8	21.7		6.0	22.9	
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.10	0.44		0.12	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	244	350	320	282	628		327	1503		210	1607	
v/s Ratio Prot					0.01		0.03	0.31		c0.06	c0.37	
v/s Ratio Perm	0.01	0.01	0.02	c0.03								
v/c Ratio	0.04	0.03	0.08	0.14	0.06		0.31	0.70		0.48	0.79	
Uniform Delay, d1	15.7	15.7	15.8	16.0	15.8		20.7	11.2		20.2	11.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.1	0.2	0.4	0.1		0.2	1.2		0.6	2.5	
Delay (s)	15.8	15.7	16.0	16.5	15.8		20.9	12.5		20.9	13.7	
Level of Service	B	B	B	B	B		C	B		C	B	
Approach Delay (s)		16.0			16.0			13.2			14.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	49.4	Sum of lost time (s)	11.5
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	0	10	160	1190	490	450	650	220	320	890
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91		0.97	0.95	1.00	0.97	0.95
Frpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt					1.00	0.96		1.00	1.00	0.85	1.00	1.00
Flt Protected					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)					1736	4749		3367	3471	1553	3367	3471
Flt Permitted					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)					1736	4749		3367	3471	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	10	160	1190	490	450	650	220	320	890
RTOR Reduction (vph)	0	0	0	0	0	75	0	0	0	143	0	0
Lane Group Flow (vph)	0	0	0	0	170	1605	0	450	650	77	320	890
Confl. Peds. (#/hr)	2						2					
Confl. Bikes (#/hr)			5									
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	Perm	NA		Prot	NA	Perm	Prot	NA
Protected Phases						8		5	2		1	6
Permitted Phases				8	8					2		
Actuated Green, G (s)					38.9	38.9		15.7	35.0	35.0	14.1	33.4
Effective Green, g (s)					38.9	38.9		15.7	35.0	35.0	14.1	33.4
Actuated g/C Ratio					0.39	0.39		0.16	0.35	0.35	0.14	0.33
Clearance Time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					675	1847		528	1214	543	474	1159
v/s Ratio Prot						c0.34		c0.13	0.19		0.10	c0.26
v/s Ratio Perm					0.10					0.05		
v/c Ratio					0.25	0.87		0.85	0.54	0.14	0.68	0.77
Uniform Delay, d1					20.7	28.2		41.0	26.0	22.2	40.8	29.8
Progression Factor					1.00	1.00		0.90	1.39	4.54	1.00	1.00
Incremental Delay, d2					0.2	4.7		11.0	1.5	0.5	3.8	4.9
Delay (s)					20.9	32.9		47.8	37.7	101.3	44.6	34.7
Level of Service					C	C		D	D	F	D	C
Approach Delay (s)		0.0				31.8			51.8			35.9
Approach LOS		A				C			D			D

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	160
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1529
Flt Permitted	1.00
Satd. Flow (perm)	1529
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	160
RTOR Reduction (vph)	37
Lane Group Flow (vph)	123
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	5
Heavy Vehicles (%)	4%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	33.4
Effective Green, g (s)	33.4
Actuated g/C Ratio	0.33
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	510
v/s Ratio Prot	
v/s Ratio Perm	0.08
v/c Ratio	0.24
Uniform Delay, d1	24.1
Progression Factor	1.00
Incremental Delay, d2	1.1
Delay (s)	25.2
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	40	290	100	0	70	0	1130	290	30	1020	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00		1.00		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5085	1551	3367		1553		3343	1459	1770	3539	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5085	1551	3367		1553		3343	1459	1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	40	290	100	0	70	0	1130	290	30	1020	0
RTOR Reduction (vph)	0	0	183	0	0	64	0	0	124	0	0	0
Lane Group Flow (vph)	120	40	107	100	0	6	0	1130	166	30	1020	0
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)			5						9			5
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	8%	8%	8%	2%	2%	2%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	13.6	13.6	13.6	8.3		8.3		57.2	57.2	4.9	66.1	
Effective Green, g (s)	13.6	13.6	13.6	8.3		8.3		57.2	57.2	4.9	66.1	
Actuated g/C Ratio	0.14	0.14	0.14	0.08		0.08		0.57	0.57	0.05	0.66	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	240	691	210	279		128		1912	834	86	2339	
v/s Ratio Prot	0.07	0.01		c0.03				c0.34		0.02	c0.29	
v/s Ratio Perm			c0.07			0.00			0.11			
v/c Ratio	0.50	0.06	0.51	0.36		0.05		0.59	0.20	0.35	0.44	
Uniform Delay, d1	40.0	37.6	40.1	43.3		42.2		13.8	10.3	46.0	8.1	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.22	0.29	
Incremental Delay, d2	1.6	0.0	1.9	0.8		0.1		1.4	0.5	1.8	0.4	
Delay (s)	41.7	37.7	42.0	44.1		42.4		15.2	10.9	58.0	2.8	
Level of Service	D	D	D	D		D		B	B	E	A	
Approach Delay (s)		41.6			43.4			14.3			4.4	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	170	40	320	140	850	60	770	330	660	520	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1299	2516		3242	1759	1485	1671	4803	1479	3335	3393	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1299	2516		3242	1759	1485	1671	4803	1479	3335	3393	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	170	40	320	140	850	60	770	330	660	520	50
RTOR Reduction (vph)	0	20	0	0	0	119	0	0	186	0	6	0
Lane Group Flow (vph)	70	190	0	320	140	731	60	770	144	660	564	0
Confl. Peds. (#/hr)			3	3					5	5		
Confl. Bikes (#/hr)						2			6			
Heavy Vehicles (%)	39%	39%	39%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	8.3	12.4		13.2	17.3	33.5	9.0	21.2	34.4	16.2	28.4	
Effective Green, g (s)	8.3	12.4		13.2	17.3	33.5	9.0	21.2	34.4	16.2	28.4	
Actuated g/C Ratio	0.11	0.16		0.17	0.22	0.42	0.11	0.27	0.44	0.21	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	136	394		541	385	704	190	1288	718	683	1219	
v/s Ratio Prot	0.05	0.08		c0.10	0.08	c0.21	0.04	c0.16	0.03	0.20	0.17	
v/s Ratio Perm						0.28			0.06			
v/c Ratio	0.51	0.48		0.59	0.36	1.04	0.32	0.60	0.20	0.97	0.46	
Uniform Delay, d1	33.4	30.4		30.4	26.2	22.8	32.2	25.2	13.8	31.1	19.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.3	0.9		1.7	0.6	44.2	1.0	0.8	0.1	26.0	0.3	
Delay (s)	36.7	31.3		32.1	26.8	66.9	33.1	25.9	13.9	57.2	19.7	
Level of Service	D	C		C	C	E	C	C	B	E	B	
Approach Delay (s)		32.7			54.1			22.9			39.8	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	79.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	420	20	20	830	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1851			1861	1695	
Flt Permitted	1.00			0.99	0.98	
Satd. Flow (perm)	1851			1837	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	420	20	20	830	20	20
RTOR Reduction (vph)	3	0	0	0	19	0
Lane Group Flow (vph)	437	0	0	850	21	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	36.3			36.3	5.0	
Effective Green, g (s)	36.3			36.3	5.0	
Actuated g/C Ratio	0.49			0.49	0.07	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	906			899	114	
v/s Ratio Prot	0.24				c0.01	
v/s Ratio Perm				c0.46		
v/c Ratio	0.48			0.95	0.19	
Uniform Delay, d1	12.6			18.0	32.6	
Progression Factor	1.00			0.68	1.00	
Incremental Delay, d2	0.1			9.5	0.3	
Delay (s)	12.8			21.7	32.9	
Level of Service	B			C	C	
Approach Delay (s)	12.8			21.7	32.9	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	580	10	0	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1858			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1858			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	580	10	0	160
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	590	0	0	160
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.0		21.3			21.3
Effective Green, g (s)	1.0		21.3			21.3
Actuated g/C Ratio	0.01		0.28			0.28
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	23		518			520
v/s Ratio Prot	c0.01		c0.32			0.09
v/s Ratio Perm						
v/c Ratio	0.43		1.14			0.31
Uniform Delay, d1	37.4		27.5			21.7
Progression Factor	1.00		1.00			0.86
Incremental Delay, d2	12.6		83.8			0.0
Delay (s)	50.0		111.3			18.7
Level of Service	D		F			B
Approach Delay (s)	50.0		111.3			18.7
Approach LOS	D		F			B

Intersection Summary			
HCM 2000 Control Delay	91.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	76.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	120	50	580	70	40	20	40	270	70	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	120	50	580	70	40	20	40	270	70	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	750	130	380
Volume Left (vph)	120	70	40
Volume Right (vph)	580	20	70
Hadj (s)	-0.40	0.05	-0.06
Departure Headway (s)	5.0	6.2	6.0
Degree Utilization, x	1.0	0.22	0.63
Capacity (veh/h)	711	555	585
Control Delay (s)	65.6	11.0	18.7
Approach Delay (s)	65.6	11.0	18.7
Approach LOS	F	B	C

Intersection Summary				
Delay	45.8			
Level of Service	E			
Intersection Capacity Utilization	73.4%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	20	760	10	20	640
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	20	760	10	20	640
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1447	770			772	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1447	770			772	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	95			98	
cM capacity (veh/h)	141	399			842	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	30	770	660
Volume Left	10	0	20
Volume Right	20	10	0
cSH	248	1700	842
Volume to Capacity	0.12	0.45	0.02
Queue Length 95th (ft)	10	0	2
Control Delay (s)	21.5	0.0	0.6
Lane LOS	C		A
Approach Delay (s)	21.5	0.0	0.6
Approach LOS	C		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	660	280	50	20	680	20	0	0	10	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	0	660	280	50	20	680	20	0	0	10	20
Pedestrians		2										
Lane Width (ft)		12.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1437	1402	22	2060	1412	10	32			20		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1437	1402	22	2060	1412	10	32			20		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	69	100	37	0	37	98	57			100		
cM capacity (veh/h)	32	80	1051	8	79	1075	1583			1609		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1
Volume Total	670	280	70	680	10	10	30
Volume Left	10	280	0	680	0	0	0
Volume Right	660	0	20	0	0	0	20
cSH	716	8	108	1583	1700	1700	1700
Volume to Capacity	0.94	35.23	0.65	0.43	0.01	0.01	0.02
Queue Length 95th (ft)	331	Err	82	55	0	0	0
Control Delay (s)	43.7	Err	85.8	9.0	0.0	0.0	0.0
Lane LOS	E	F	F	A			
Approach Delay (s)	43.7	8016.4		8.7			0.0
Approach LOS	E	F					

Intersection Summary				
Average Delay	1623.5			
Intersection Capacity Utilization	111.3%	ICU Level of Service	H	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	610	490	50	0	0	0	30	90	40	500	120	330
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	610	490	50	0	0	0	30	90	40	500	120	330

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	855	295	160	500	450
Volume Left (vph)	610	0	30	500	0
Volume Right (vph)	0	50	40	0	330
Hadj (s)	0.37	-0.10	0.01	0.50	-0.48
Departure Headway (s)	7.6	7.1	7.5	7.6	6.6
Degree Utilization, x	1.0	0.59	0.34	1.0	0.83
Capacity (veh/h)	478	490	472	469	537
Control Delay (s)	389.4	18.5	14.3	83.1	32.7
Approach Delay (s)	294.2		14.3	59.2	
Approach LOS	F		B	F	

Intersection Summary				
Delay	175.6			
Level of Service	F			
Intersection Capacity Utilization	80.7%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	910	20	20	340	0	20	0	20	220	110	740
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	910	20	20	340	0	20	0	20	220	110	740
Pedestrians								5				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	340			935			2100	1305	470	855	1315	340
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	340			935			2100	1305	470	855	1315	340
tC, single (s)	4.1			4.8			7.5	6.5	7.1	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.5			3.5	4.0	3.4	3.5	4.0	3.3
p0 queue free %	100			96			0	100	96	8	28	0
cM capacity (veh/h)	1230			562			0	155	522	238	152	659

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	607	323	20	340	40	330	740
Volume Left	0	0	20	0	20	220	0
Volume Right	0	20	0	0	20	0	740
cSH	1700	1700	562	1700	0	200	659
Volume to Capacity	0.36	0.19	0.04	0.20	Err	1.65	1.12
Queue Length 95th (ft)	0	0	3	0	Err	547	562
Control Delay (s)	0.0	0.0	11.6	0.0	Err	355.5	97.6
Lane LOS			B		F	F	F
Approach Delay (s)	0.0		0.6		Err	177.1	
Approach LOS					F	F	

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	77.0%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	560	90	260	20	10	40	190	30	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			5.0	5.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.89			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1805	1667			1692	1510	1787	1900	1500			
Flt Permitted	0.95	1.00			0.60	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1805	1667			1058	1510	1787	1900	1500			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	560	90	260	20	10	40	190	30	30	0	0	0
RTOR Reduction (vph)	0	93	0	0	0	35	0	0	24	0	0	0
Lane Group Flow (vph)	560	257	0	0	30	5	190	30	6	0	0	0
Confl. Peds. (#/hr)						2			2			
Heavy Vehicles (%)	0%	2%	1%	13%	0%	4%	1%	0%	5%	0%	0%	0%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	21.5	32.2			7.2	7.2	10.5	10.5	10.5			
Effective Green, g (s)	20.5	32.2			6.7	6.7	10.0	10.0	10.0			
Actuated g/C Ratio	0.41	0.64			0.13	0.13	0.20	0.20	0.20			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	737	1069			141	201	355	378	298			
v/s Ratio Prot	c0.31	c0.15						0.02				
v/s Ratio Perm					0.03	0.00	c0.11		0.00			
v/c Ratio	0.76	0.24			0.21	0.03	0.54	0.08	0.02			
Uniform Delay, d1	12.7	3.8			19.4	18.9	18.0	16.4	16.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	4.5	0.2			0.3	0.0	0.8	0.0	0.0			
Delay (s)	17.3	4.0			19.7	18.9	18.8	16.4	16.2			
Level of Service	B	A			B	B	B	B	B			
Approach Delay (s)		12.2			19.3			18.2			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	50.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	780	10	10	190	0	10	0	10	120	10	440
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.93
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			0.93			1.00	0.85
Flt Protected		1.00			1.00			0.98			0.96	1.00
Satd. Flow (prot)		1896			1877			1383			1631	1488
Flt Permitted		1.00			0.97			0.98			0.96	1.00
Satd. Flow (perm)		1896			1820			1383			1631	1488
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	780	10	10	190	0	10	0	10	120	10	440
RTOR Reduction (vph)	0	0	0	0	0	0	0	20	0	0	0	362
Lane Group Flow (vph)	0	790	0	0	200	0	0	0	0	0	130	78
Confl. Peds. (#/hr)	3					3						30
Confl. Bikes (#/hr)			2			2						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	50%	4%	100%	1%
Turn Type		NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		31.3			31.3			0.8			9.5	9.5
Effective Green, g (s)		31.3			31.3			0.8			9.5	9.5
Actuated g/C Ratio		0.58			0.58			0.01			0.18	0.18
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		1107			1062			20			289	263
v/s Ratio Prot		c0.42						c0.00			c0.08	
v/s Ratio Perm					0.11							0.05
v/c Ratio		0.71			0.19			0.01			0.45	0.30
Uniform Delay, d1		8.0			5.2			26.0			19.7	19.1
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.4			0.1			0.3			0.4	0.2
Delay (s)		10.3			5.3			26.3			20.1	19.4
Level of Service		B			A			C			C	B
Approach Delay (s)		10.3			5.3			26.3			19.5	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	53.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	110	210	620	240	0	70	0	780	160	740	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.98	1.00	1.00		1.00		1.00		0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		0.99	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1881	1553	3433	1881		1770		2814		3482	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1881	1553	3433	1881		1770		2814		3482	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	110	210	620	240	0	70	0	780	160	740	60
RTOR Reduction (vph)	0	0	138	0	0	0	0	0	439	0	5	0
Lane Group Flow (vph)	0	110	72	620	240	0	70	0	341	0	955	0
Confl. Peds. (#/hr)			3			30			30			30
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	2%	0%	1%	1%	1%	0%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		10.5	10.5	33.1	48.6		6.6		44.7		30.8	
Effective Green, g (s)		10.5	10.5	33.1	48.6		5.6		43.7		30.8	
Actuated g/C Ratio		0.10	0.10	0.33	0.49		0.06		0.44		0.31	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		197	163	1136	914		99		1229		1072	
v/s Ratio Prot		c0.06		c0.18	0.13		c0.04		0.12		c0.27	
v/s Ratio Perm			0.05									
v/c Ratio		0.56	0.44	0.55	0.26		0.71		0.28		0.89	
Uniform Delay, d1		42.5	42.0	27.3	15.1		46.4		18.0		33.0	
Progression Factor		1.00	1.00	1.00	0.77		1.00		1.00		1.00	
Incremental Delay, d2		1.9	0.7	1.2	0.4		17.1		0.0		9.3	
Delay (s)		44.5	42.7	28.4	12.0		63.5		18.1		42.3	
Level of Service		D	D	C	B		E		B		D	
Approach Delay (s)		43.3			23.9			21.8			42.3	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	720	330	0	0	330	160	530	10	290	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3467	1881			1810	1575		1811	1599			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3467	1881			1810	1575		1811	1599			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	720	330	0	0	330	160	530	10	290	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	124	0	0	169	0	0	0
Lane Group Flow (vph)	720	330	0	0	330	36	0	540	121	0	0	0
Confl. Peds. (#/hr)			5	5		2						
Heavy Vehicles (%)	1%	1%	0%	0%	5%	1%	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	25.0	51.9			22.4	22.4		39.1	39.1			
Effective Green, g (s)	25.0	51.9			22.4	22.4		39.1	39.1			
Actuated g/C Ratio	0.25	0.52			0.22	0.22		0.39	0.39			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	866	976			405	352		708	625			
v/s Ratio Prot	c0.21	0.18			c0.18							
v/s Ratio Perm						0.02		0.30	0.08			
v/c Ratio	0.83	0.34			0.81	0.10		0.76	0.19			
Uniform Delay, d1	35.5	14.0			36.8	30.8		26.4	20.1			
Progression Factor	0.97	1.22			1.00	1.00		1.00	1.00			
Incremental Delay, d2	6.7	0.4			13.3	0.3		7.6	0.7			
Delay (s)	41.0	17.6			50.2	31.1		34.1	20.7			
Level of Service	D	B			D	C		C	C			
Approach Delay (s)		33.6			43.9			29.4			0.0	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	850	430	290	1280
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	850	430	290	1280
Pedestrians	3					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.80					
vC, conflicting volume	2288	643			853	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2106	643			853	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			63	
cM capacity (veh/h)	23	421			788	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	567	713	290	640	640
Volume Left	0	0	290	0	0
Volume Right	0	430	0	0	0
cSH	1700	1700	788	1700	1700
Volume to Capacity	0.33	0.42	0.37	0.38	0.38
Queue Length 95th (ft)	0	0	42	0	0
Control Delay (s)	0.0	0.0	12.2	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.3		
Approach LOS					

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	60.1%	ICU Level of Service		B
Analysis Period (min)	15			

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	510	120	10	290	730	190	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.93	
Flt Protected	1.00	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3539	1583		1766	3539	1667	
Flt Permitted	1.00	1.00		0.33	1.00	0.98	
Satd. Flow (perm)	3539	1583		622	3539	1667	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	510	120	10	290	730	190	220
RTOR Reduction (vph)	0	24	0	0	0	44	0
Lane Group Flow (vph)	510	96	0	300	730	366	0
Confl. Peds. (#/hr)		8		8			15
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	15.2	39.3		29.8	29.8	18.6	
Effective Green, g (s)	15.2	39.3		29.8	29.8	18.6	
Actuated g/C Ratio	0.26	0.67		0.51	0.51	0.32	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	921	1065		544	1805	530	
v/s Ratio Prot	0.14	0.06		c0.11	0.21	c0.22	
v/s Ratio Perm				c0.17			
v/c Ratio	0.55	0.09		0.55	0.40	0.69	
Uniform Delay, d1	18.7	3.3		8.8	8.8	17.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.7	0.0		1.2	0.1	3.9	
Delay (s)	19.4	3.4		10.0	9.0	21.3	
Level of Service	B	A		A	A	C	
Approach Delay (s)	16.3				9.3	21.3	
Approach LOS	B				A	C	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	370	20	120	560	240	30	260	80	180	390	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.99			1.00	0.85		0.97		1.00	0.95	
Flt Protected		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1823			3508	1583		3399		1770	1750	
Flt Permitted		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1823			3508	1583		3399		1770	1750	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	370	20	120	560	240	30	260	80	180	390	180
RTOR Reduction (vph)	0	1	0	0	0	61	0	22	0	0	14	0
Lane Group Flow (vph)	0	539	0	0	680	179	0	348	0	180	556	0
Confl. Peds. (#/hr)	5		17	17		5	18		2	2		18
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		33.0			21.0	32.0		16.3		32.0	32.0	
Effective Green, g (s)		33.0			21.0	32.0		16.3		32.0	32.0	
Actuated g/C Ratio		0.29			0.18	0.28		0.14		0.28	0.28	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		526			644	443		484		495	489	
v/s Ratio Prot		c0.30			c0.19	0.11		c0.10		0.10	c0.32	
v/s Ratio Perm												
v/c Ratio		1.02			1.06	0.40		0.72		0.36	1.14	
Uniform Delay, d1		40.6			46.6	33.4		46.8		33.0	41.1	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		45.5			51.1	0.6		5.1		0.5	83.8	
Delay (s)		86.1			97.8	34.0		51.9		33.4	124.9	
Level of Service		F			F	C		D		C	F	
Approach Delay (s)		86.1			81.1			51.9			103.0	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	84.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	114.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	560	180	80	390	60	290	790	120	160	410	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			0.99			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1736	1881	1569	1805	1827			3387			3409	1447
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1736	1881	1569	1805	1827			3387			3409	1447
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	560	180	80	390	60	290	790	120	160	410	160
RTOR Reduction (vph)	0	0	84	0	4	0	0	5	0	0	0	0
Lane Group Flow (vph)	190	560	96	80	446	0	0	1195	0	0	570	160
Confl. Peds. (#/hr)			3						26			6
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	4%	1%	1%	0%	2%	0%	7%	1%	0%	3%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	16.0	48.3	48.3	7.3	39.6			52.1			25.0	152.2
Effective Green, g (s)	16.0	49.8	49.8	7.3	41.1			53.1			26.0	152.2
Actuated g/C Ratio	0.11	0.33	0.33	0.05	0.27			0.35			0.17	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	182	615	513	86	493			1181			582	1447
v/s Ratio Prot	c0.11	c0.30		0.04	c0.24			c0.35			c0.17	
v/s Ratio Perm			0.06									0.11
v/c Ratio	1.04	0.91	0.19	0.93	0.91			1.01			0.98	0.11
Uniform Delay, d1	68.1	49.1	36.7	72.2	53.7			49.5			62.8	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	78.8	17.7	0.2	73.9	20.0			29.1			31.7	0.2
Delay (s)	146.9	66.8	36.9	146.1	73.6			78.6			94.5	0.2
Level of Service	F	E	D	F	E			E			F	A
Approach Delay (s)		77.4			84.6			78.6			73.8	
Approach LOS		E			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	78.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	152.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	10	930	40	20	70	640	210	20	20	20	310	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0				4.0			4.0			4.0
Lane Util. Factor		0.95				0.95			1.00			0.95
Frpb, ped/bikes		1.00				0.99			1.00			0.99
Flpb, ped/bikes		1.00				1.00			0.99			1.00
Frt		0.99				0.97			0.95			0.98
Flt Protected		1.00				1.00			0.98			0.96
Satd. Flow (prot)		3502				3374			1727			3281
Flt Permitted		0.95				0.77			0.83			0.74
Satd. Flow (perm)		3314				2623			1452			2517
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	930	40	20	70	640	210	20	20	20	310	20
RTOR Reduction (vph)	0	4	0	0	0	36	0	0	16	0	0	24
Lane Group Flow (vph)	0	976	0	0	0	904	0	0	44	0	0	366
Confl. Peds. (#/hr)	42		86		86		42	63				
Confl. Bikes (#/hr)			14				2					
Turn Type	Perm	NA			Perm	NA		Perm	NA		Perm	NA
Protected Phases		1				1			2			2
Permitted Phases	1				1			2			2	
Actuated Green, G (s)		42.7				42.7			14.3			14.3
Effective Green, g (s)		42.7				42.7			14.3			14.3
Actuated g/C Ratio		0.66				0.66			0.22			0.22
Clearance Time (s)		4.0				4.0			4.0			4.0
Vehicle Extension (s)		3.0				3.0			3.0			3.0
Lane Grp Cap (vph)		2177				1723			319			553
v/s Ratio Prot												
v/s Ratio Perm		0.29				c0.34			0.03			c0.15
v/c Ratio		0.45				0.52			0.14			0.86dl
Uniform Delay, d1		5.4				5.8			20.4			23.1
Progression Factor		1.00				1.00			1.00			1.00
Incremental Delay, d2		0.7				1.1			0.2			3.0
Delay (s)		6.1				7.0			20.6			26.1
Level of Service		A				A			C			C
Approach Delay (s)		6.1				7.0			20.6			26.1
Approach LOS		A				A			C			C

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	60
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	60
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	63
Confl. Bikes (#/hr)	5
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	840	520	450	560	90	490	470	250	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			0.99				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.99			0.97				
Flt Protected		1.00	1.00		0.98			0.98				
Satd. Flow (prot)		3539	1566		3422			3313				
Flt Permitted		1.00	1.00		0.54			0.98				
Satd. Flow (perm)		3539	1566		1901			3313				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	840	520	450	560	90	490	470	250	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	840	520	0	1090	0	0	1175	0	0	0	0
Confl. Peds. (#/hr)	33								26			
Confl. Bikes (#/hr)			20			5			26			
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		36.0	57.5		36.0			21.5				
Effective Green, g (s)		36.0	57.5		36.0			21.5				
Actuated g/C Ratio		0.55	0.88		0.55			0.33				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		1960	1493		1052			1095				
v/s Ratio Prot		0.24	0.12									
v/s Ratio Perm			0.22		c0.57			0.35				
v/c Ratio		0.43	0.35		1.53dl			1.07				
Uniform Delay, d1		8.5	0.6		14.5			21.8				
Progression Factor		0.76	1.19		1.00			1.00				
Incremental Delay, d2		0.1	0.1		37.4			48.9				
Delay (s)		6.6	0.9		51.9			70.7				
Level of Service		A	A		D			E				
Approach Delay (s)		4.4			51.9			70.7			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	350	80	30	220	190	40	950	30	130	520	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.97			1.00			0.93	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.94			1.00			0.94	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1781			1697			3503			3062	
Flt Permitted		0.93			0.95			0.69			0.52	
Satd. Flow (perm)		1666			1621			2424			1598	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	350	80	30	220	190	40	950	30	130	520	430
RTOR Reduction (vph)	0	11	0	0	37	0	0	3	0	0	149	0
Lane Group Flow (vph)	0	469	0	0	403	0	0	1017	0	0	931	0
Confl. Peds. (#/hr)	44		63	63		44	59		39	39		59
Confl. Bikes (#/hr)			17			5			14			24
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		40.8			25.0			25.0			25.0	
Effective Green, g (s)		36.8			25.0			25.0			25.0	
Actuated g/C Ratio		0.49			0.33			0.33			0.33	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		819			541			810			534	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			c0.25			0.42			c0.58	
v/c Ratio		0.57			0.75			1.26			1.74	
Uniform Delay, d1		13.4			22.1			24.9			24.9	
Progression Factor		0.36			1.00			1.00			1.00	
Incremental Delay, d2		0.4			4.9			125.2			342.2	
Delay (s)		5.2			26.9			150.1			367.1	
Level of Service		A			C			F			F	
Approach Delay (s)		5.2			26.9			150.1			367.1	
Approach LOS		A			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	186.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1010	270	30	350	110	140	850	40	70	380	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.92			0.87		1.00	0.98		1.00	0.89	
Flpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.97		1.00	0.99		1.00	0.97	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3114			1574		1770	1819		1770	1600	
Flt Permitted		0.84			0.54		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2629			856		1770	1819		1770	1600	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	1010	270	30	350	110	140	850	40	70	380	100
RTOR Reduction (vph)	0	22	0	0	10	0	0	2	0	0	10	0
Lane Group Flow (vph)	0	1338	0	0	480	0	140	888	0	70	470	0
Confl. Peds. (#/hr)	230		128	128		230			324			204
Confl. Bikes (#/hr)			5			20			29			14
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		43.3			43.3		10.1	37.2		4.0	31.1	
Effective Green, g (s)		43.3			43.3		10.1	37.2		4.0	31.1	
Actuated g/C Ratio		0.43			0.43		0.10	0.37		0.04	0.31	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1138			370		178	676		70	497	
v/s Ratio Prot							c0.08	c0.49		0.04	0.29	
v/s Ratio Perm		0.51			c0.56							
v/c Ratio		1.18			1.30		0.79	1.31		1.00	0.95	
Uniform Delay, d1		28.4			28.4		43.9	31.4		48.0	33.6	
Progression Factor		1.00			1.00		0.82	0.52		1.00	1.00	
Incremental Delay, d2		88.7			152.2		2.0	142.2		107.6	26.9	
Delay (s)		117.1			180.5		38.2	158.6		155.6	60.6	
Level of Service		F			F		D	F		F	E	
Approach Delay (s)		117.1			180.5			142.2			72.7	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	126.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	119.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	110	610	920	220	260	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.96	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1770	1863	1760		1712	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1770	1863	1760		1712	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	610	920	220	260	110
RTOR Reduction (vph)	0	0	5	0	17	0
Lane Group Flow (vph)	110	610	1135	0	354	0
Confl. Peds. (#/hr)	149			149	44	
Confl. Bikes (#/hr)				9		6
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	5.5	66.5	56.5		25.0	
Effective Green, g (s)	5.5	66.5	56.5		25.0	
Actuated g/C Ratio	0.06	0.66	0.56		0.25	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	97	1238	994		428	
v/s Ratio Prot	c0.06	0.33	c0.64		c0.21	
v/s Ratio Perm						
v/c Ratio	1.13	0.49	1.14		0.83	
Uniform Delay, d1	47.2	8.3	21.8		35.4	
Progression Factor	0.76	0.49	0.92		1.00	
Incremental Delay, d2	91.4	0.4	65.0		12.3	
Delay (s)	127.5	4.5	85.1		47.7	
Level of Service	F	A	F		D	
Approach Delay (s)		23.3	85.1		47.7	
Approach LOS		C	F		D	

Intersection Summary			
HCM 2000 Control Delay	59.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	830	150	120	740	210	120	610	90	100	500	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.98			0.97			0.98		1.00	0.96	
Flt Protected		0.99			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1814			1803			3456		1770	3399	
Flt Permitted		0.54			0.73			0.64		0.22	1.00	
Satd. Flow (perm)		982			1319			2228		405	3399	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	830	150	120	740	210	120	610	90	100	500	180
RTOR Reduction (vph)	0	5	0	0	9	0	0	10	0	0	37	0
Lane Group Flow (vph)	0	1225	0	0	1061	0	0	810	0	100	643	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		51.0			51.0			39.0		39.0	39.0	
Effective Green, g (s)		51.0			51.0			39.0		39.0	39.0	
Actuated g/C Ratio		0.51			0.51			0.39		0.39	0.39	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		500			672			868		157	1325	
v/s Ratio Prot											0.19	
v/s Ratio Perm		c1.25			0.80			c0.36		0.25		
v/c Ratio		2.45			1.58			0.93		0.64	0.49	
Uniform Delay, d1		24.5			24.5			29.3		24.8	22.9	
Progression Factor		1.00			1.00			1.00		1.03	0.97	
Incremental Delay, d2		658.6			267.7			16.6		7.0	0.2	
Delay (s)		683.1			292.2			45.9		32.4	22.6	
Level of Service		F			F			D		C	C	
Approach Delay (s)		683.1			292.2			45.9			23.8	
Approach LOS		F			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	310.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	166.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	310	70	90	240	60	40	630	110	90	600	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99		0.95	1.00		0.98	1.00		0.99	1.00	
Frt		0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1744		1685	1767		1731	1802		1746	1798	
Flt Permitted		0.72		0.28	1.00		0.28	1.00		0.26	1.00	
Satd. Flow (perm)		1272		498	1767		510	1802		469	1798	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	310	70	90	240	60	40	630	110	90	600	100
RTOR Reduction (vph)	0	10	0	0	14	0	0	10	0	0	9	0
Lane Group Flow (vph)	0	440	0	90	286	0	40	730	0	90	691	0
Confl. Peds. (#/hr)	44		78	78		44	84		54	54		84
Confl. Bikes (#/hr)			17			6			11			15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		332		130	462		313	1108		288	1106	
v/s Ratio Prot					0.16			c0.41			0.38	
v/s Ratio Perm		c0.35		0.18			0.08			0.19		
v/c Ratio		1.32		0.69	0.62		0.13	0.66		0.31	0.62	
Uniform Delay, d1		24.0		21.6	21.1		5.2	8.1		6.0	7.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		165.5		14.8	2.5		0.8	3.1		2.8	2.7	
Delay (s)		189.5		36.4	23.6		6.1	11.2		8.8	10.5	
Level of Service		F		D	C		A	B		A	B	
Approach Delay (s)		189.5			26.6			10.9			10.3	
Approach LOS		F			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	46.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	270	90	10	160	70	270	590	30	90	480	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99			0.99		1.00	1.00		1.00	1.00	0.92
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96			0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1781			3344		1770	1845		1770	1863	1451
Flt Permitted	0.95	1.00			0.94		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1781			3137		1770	1845		1770	1863	1451
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	270	90	10	160	70	270	590	30	90	480	230
RTOR Reduction (vph)	0	13	0	0	48	0	0	2	0	0	0	164
Lane Group Flow (vph)	280	347	0	0	192	0	270	618	0	90	480	66
Confl. Peds. (#/hr)	6		9	9		6	59		29	29		59
Confl. Bikes (#/hr)			6						6			12
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	16.0	42.0			21.0		15.7	36.0		5.0	27.3	27.3
Effective Green, g (s)	16.0	42.0			21.0		15.7	36.0		5.0	27.3	27.3
Actuated g/C Ratio	0.17	0.44			0.22		0.17	0.38		0.05	0.29	0.29
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	298	787			693		292	699		93	535	416
v/s Ratio Prot	c0.16	c0.19					c0.15	c0.34		0.05	0.26	
v/s Ratio Perm					0.06							0.05
v/c Ratio	0.94	0.44			0.28		0.92	0.88		0.97	0.90	0.16
Uniform Delay, d1	39.0	18.4			30.7		39.1	27.6		44.9	32.5	25.3
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	35.6	1.8			1.0		32.9	15.2		81.5	20.4	0.8
Delay (s)	74.6	20.2			31.7		71.9	42.8		126.4	52.9	26.1
Level of Service	E	C			C		E	D		F	D	C
Approach Delay (s)		44.0			31.7			51.6			53.5	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	48.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	700	130	150	550	20	170	760	260	30	440	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			1.00			0.97			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3394			3464			3366			3418	
Flt Permitted		0.60			0.59			0.77			0.71	
Satd. Flow (perm)		2054			2061			2599			2417	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	700	130	150	550	20	170	760	260	30	440	90
RTOR Reduction (vph)	0	16	0	0	3	0	0	32	0	0	20	0
Lane Group Flow (vph)	0	944	0	0	717	0	0	1158	0	0	540	0
Confl. Peds. (#/hr)	77		68	68		77	27		14	14		27
Confl. Bikes (#/hr)			5			5			12			11
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		965			695			877			1107	
v/s Ratio Prot		c0.05									c0.02	
v/s Ratio Perm		c0.38			0.35			c0.45			0.19	
v/c Ratio		0.98			1.03			1.32			0.49	
Uniform Delay, d1		22.1			26.5			26.5			16.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		24.2			42.7			152.3			1.5	
Delay (s)		46.4			69.2			178.8			17.6	
Level of Service		D			E			F			B	
Approach Delay (s)		46.4			69.2			178.8			17.6	
Approach LOS		D			E			F			B	

Intersection Summary			
HCM 2000 Control Delay	92.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	117.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Volume (vph)	60	10	470	90	40	640	120	20	40	720	10	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0			4.0			4.0	4.0	4.0	
Lane Util. Factor			1.00			1.00			1.00	1.00	1.00	
Frpb, ped/bikes			0.99			0.98			1.00	1.00	0.91	
Flpb, ped/bikes			1.00			1.00			0.99	1.00	1.00	
Frt			0.98			0.98			1.00	1.00	0.85	
Flt Protected			0.99			1.00			0.95	1.00	1.00	
Satd. Flow (prot)			1791			1780			1746	1863	1442	
Flt Permitted			0.85			0.95			0.23	1.00	1.00	
Satd. Flow (perm)			1536			1703			424	1863	1442	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	10	470	90	40	640	120	20	40	720	10	60
RTOR Reduction (vph)	0	0	9	0	0	1	0	0	0	0	50	0
Lane Group Flow (vph)	0	0	621	0	0	819	0	0	40	720	20	0
Confl. Peds. (#/hr)	24	54		56	56		24	54	18			35
Confl. Bikes (#/hr)				2			2					3
Turn Type	Perm	Perm	NA		Perm	NA			Perm	NA	Perm	
Protected Phases			2			6				8		
Permitted Phases	2	2			6				8		8	
Actuated Green, G (s)			32.0			32.0			19.0	19.0	19.0	
Effective Green, g (s)			32.0			32.0			19.0	19.0	19.0	
Actuated g/C Ratio			0.49			0.49			0.29	0.29	0.29	
Clearance Time (s)			4.0			4.0			4.0	4.0	4.0	
Vehicle Extension (s)			3.0			3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)			756			838			123	544	421	
v/s Ratio Prot										c0.39		
v/s Ratio Perm			0.40			c0.48			0.09		0.01	
v/c Ratio			0.82			0.98			0.33	1.32	0.05	
Uniform Delay, d1			14.1			16.1			18.0	23.0	16.5	
Progression Factor			0.92			1.00			1.00	1.00	1.00	
Incremental Delay, d2			8.0			26.1			1.5	158.1	0.0	
Delay (s)			21.0			42.2			19.5	181.1	16.6	
Level of Service			C			D			B	F	B	
Approach Delay (s)			21.0			42.2				159.4		
Approach LOS			C			D				F		

Intersection Summary			
HCM 2000 Control Delay	70.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Volume (vph)	20	60	330	100	10	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0		
Lane Util. Factor		1.00	1.00			1.00		
Frpb, ped/bikes		1.00	0.99			1.00		
Flpb, ped/bikes		1.00	1.00			1.00		
Frt		1.00	0.97			0.93		
Flt Protected		0.95	1.00			0.98		
Satd. Flow (prot)		1770	1774			1695		
Flt Permitted		0.21	1.00			1.00		
Satd. Flow (perm)		392	1774			1737		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	60	330	100	10	10	10	10
RTOR Reduction (vph)	0	0	17	0	0	0	0	0
Lane Group Flow (vph)	0	80	413	0	0	40	0	0
Confl. Peds. (#/hr)		35		18				
Confl. Bikes (#/hr)				3				
Turn Type	Perm	Perm	NA		Perm	Prot		
Protected Phases			4			9		
Permitted Phases	4	4			9			
Actuated Green, G (s)		19.0	19.0			2.0		
Effective Green, g (s)		19.0	19.0			2.0		
Actuated g/C Ratio		0.29	0.29			0.03		
Clearance Time (s)		4.0	4.0			4.0		
Vehicle Extension (s)		3.0	3.0			3.0		
Lane Grp Cap (vph)		114	518			53		
v/s Ratio Prot			0.23					
v/s Ratio Perm		0.20				c0.02		
v/c Ratio		0.70	0.80			0.75		
Uniform Delay, d1		20.5	21.2			31.3		
Progression Factor		1.00	1.00			1.00		
Incremental Delay, d2		17.7	8.3			45.2		
Delay (s)		38.2	29.6			76.5		
Level of Service		D	C			E		
Approach Delay (s)			30.9			76.5		
Approach LOS			C			E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	210	50	170	340	20	90	750	160	20	360	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	0.99			0.99	
Flpb, ped/bikes	0.98	1.00			1.00		0.99	1.00			1.00	
Frt	1.00	0.97			0.99		1.00	0.97			0.97	
Flt Protected	0.95	1.00			0.98		0.95	1.00			1.00	
Satd. Flow (prot)	1736	1793			3439		1757	1804			1791	
Flt Permitted	0.37	1.00			0.71		0.44	1.00			0.71	
Satd. Flow (perm)	676	1793			2466		812	1804			1276	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	210	50	170	340	20	90	750	160	20	360	110
RTOR Reduction (vph)	0	10	0	0	3	0	0	9	0	0	12	0
Lane Group Flow (vph)	60	250	0	0	527	0	90	901	0	0	478	0
Confl. Peds. (#/hr)	30		15	15		30	27		11	11		27
Confl. Bikes (#/hr)			3			3						5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	28.6	28.6			28.6		46.4	46.4			46.4	
Effective Green, g (s)	28.6	28.6			28.6		46.4	46.4			46.4	
Actuated g/C Ratio	0.34	0.34			0.34		0.55	0.55			0.55	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	227	603			829		443	984			696	
v/s Ratio Prot		0.14						c0.50				
v/s Ratio Perm	0.09				c0.21		0.11				0.37	
v/c Ratio	0.26	0.41			0.64		0.20	0.92			0.69	
Uniform Delay, d1	20.5	21.7			23.8		9.9	17.5			14.0	
Progression Factor	0.52	0.50			1.00		1.00	1.00			1.00	
Incremental Delay, d2	1.3	1.0			3.7		0.2	12.7			2.8	
Delay (s)	12.1	11.8			27.5		10.1	30.2			16.8	
Level of Service	B	B			C		B	C			B	
Approach Delay (s)		11.9			27.5			28.4			16.8	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	110.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	470	0	0	670	120	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	3539			3539	3203	
Flt Permitted	1.00			1.00	0.98	
Satd. Flow (perm)	3539			3539	3203	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	470	0	0	670	120	140
RTOR Reduction (vph)	0	0	0	0	63	0
Lane Group Flow (vph)	470	0	0	670	197	0
Confl. Bikes (#/hr)		3				2
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	41.5			41.5	9.0	
Effective Green, g (s)	41.5			41.5	9.0	
Actuated g/C Ratio	0.69			0.69	0.15	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2447			2447	480	
v/s Ratio Prot	0.13			c0.19	c0.06	
v/s Ratio Perm						
v/c Ratio	0.19			0.27	0.41	
Uniform Delay, d1	3.3			3.5	23.1	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.2			0.3	0.6	
Delay (s)	3.5			3.8	23.7	
Level of Service	A			A	C	
Approach Delay (s)	3.5			3.8	23.7	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	890	0	0	790	20	90	190	90	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			0.99				
Frt		1.00			1.00			0.96				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3528			3523			3312				
Flt Permitted		0.88			1.00			0.99				
Satd. Flow (perm)		3098			3523			3312				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	890	0	0	790	20	90	190	90	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	58	0	0	0	0
Lane Group Flow (vph)	0	940	0	0	808	0	0	312	0	0	0	0
Confl. Peds. (#/hr)	47		92	92		47	23		33	33		23
Confl. Bikes (#/hr)			6			11			3			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		44.4			44.4			10.6				
Effective Green, g (s)		44.4			44.4			10.6				
Actuated g/C Ratio		0.68			0.68			0.16				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		2116			2406			540				
v/s Ratio Prot					0.23							
v/s Ratio Perm		c0.30						0.09				
v/c Ratio		0.44			0.34			0.58				
Uniform Delay, d1		4.7			4.2			25.1				
Progression Factor		1.02			1.00			1.00				
Incremental Delay, d2		0.6			0.4			0.9				
Delay (s)		5.4			4.6			26.1				
Level of Service		A			A			C				
Approach Delay (s)		5.4			4.6			26.1			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	470	230	120	670	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	0.99		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.95		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3348		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3348		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	470	230	120	670	0	0
RTOR Reduction (vph)	127	0	0	0	0	0
Lane Group Flow (vph)	574	0	120	670	0	0
Confl. Peds. (#/hr)		3	3			2
Confl. Bikes (#/hr)		3				
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1506		663	3539		
v/s Ratio Prot	c0.17		0.07	c0.19		
v/s Ratio Perm						
v/c Ratio	0.38		0.18	0.19		
Uniform Delay, d1	7.3		8.4	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.7		0.6	0.1		
Delay (s)	8.0		9.0	0.1		
Level of Service	A		A	A		
Approach Delay (s)	8.0			1.5	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	910	190	90	780	0	0	0	0	50	240	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		0.99			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.97			1.00						0.97	
Flt Protected		1.00			0.99						0.99	
Satd. Flow (prot)		3410			3517						3362	
Flt Permitted		1.00			0.74						0.99	
Satd. Flow (perm)		3410			2612						3362	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	910	190	90	780	0	0	0	0	50	240	60
RTOR Reduction (vph)	0	25	0	0	0	0	0	0	0	0	27	0
Lane Group Flow (vph)	0	1075	0	0	870	0	0	0	0	0	323	0
Confl. Peds. (#/hr)	54		107	107		54	27		38	38		27
Confl. Bikes (#/hr)			14			3			2			6
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		44.0			44.0						11.0	
Effective Green, g (s)		44.0			44.0						11.0	
Actuated g/C Ratio		0.68			0.68						0.17	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2308			1768						568	
v/s Ratio Prot		0.32										
v/s Ratio Perm					c0.33						0.10	
v/c Ratio		0.47			0.49						0.57	
Uniform Delay, d1		5.0			5.1						24.8	
Progression Factor		1.00			0.83						1.00	
Incremental Delay, d2		0.7			0.9						1.3	
Delay (s)		5.6			5.2						26.1	
Level of Service		A			A						C	
Approach Delay (s)		5.6			5.2			0.0			26.1	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	480	60	140	570	50	80	510	40	80	420	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.99			0.99		1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1817			1818		1747	1834		1770	1853	
Flt Permitted		0.94			0.81		0.23	1.00		0.21	1.00	
Satd. Flow (perm)		1720			1479		424	1834		392	1853	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	480	60	140	570	50	80	510	40	80	420	10
RTOR Reduction (vph)	0	7	0	0	4	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	563	0	0	756	0	80	546	0	80	429	0
Confl. Peds. (#/hr)	12		42	42		12	15		15	15		15
Confl. Bikes (#/hr)						2			3			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		36.5			36.5		19.0	19.0		19.0	19.0	
Effective Green, g (s)		36.5			36.5		19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.56			0.56		0.29	0.29		0.29	0.29	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		965			830		123	536		114	541	
v/s Ratio Prot								c0.30			0.23	
v/s Ratio Perm		0.33			c0.51		0.19			0.20		
v/c Ratio		0.58			0.91		0.65	1.02		0.70	0.79	
Uniform Delay, d1		9.3			12.8		20.1	23.0		20.5	21.2	
Progression Factor		1.00			1.27		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.6			8.8		11.7	43.5		17.7	7.8	
Delay (s)		11.9			25.0		31.8	66.5		38.2	29.0	
Level of Service		B			C		C	E		D	C	
Approach Delay (s)		11.9			25.0			62.1			30.4	
Approach LOS		B			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	121.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	170	110	210	210	80	60	580	100	20	590	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes		0.97		1.00	0.95			0.99			0.99	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.96		1.00	0.96			0.98			0.99	
Flt Protected		0.99		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		1713		1770	1699			1805			1821	
Flt Permitted		0.99		0.95	1.00			0.91			0.97	
Satd. Flow (perm)		1713		1770	1699			1642			1772	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	170	110	210	210	80	60	580	100	20	590	70
RTOR Reduction (vph)	0	19	0	0	16	0	0	7	0	0	5	0
Lane Group Flow (vph)	0	331	0	210	274	0	0	734	0	0	675	0
Confl. Peds. (#/hr)	60		27	27		60	44		78	78		44
Confl. Bikes (#/hr)			3						3			3
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)		16.0		15.5	15.5			42.5			42.5	
Effective Green, g (s)		16.0		15.5	15.5			42.5			42.5	
Actuated g/C Ratio		0.19		0.18	0.18			0.50			0.50	
Clearance Time (s)		3.0		3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		322		322	309			821			886	
v/s Ratio Prot		c0.19		0.12	c0.16							
v/s Ratio Perm								c0.45			0.38	
v/c Ratio		1.03		0.65	0.89			0.89			0.76	
Uniform Delay, d1		34.5		32.2	33.9			19.2			17.2	
Progression Factor		1.00		0.72	0.72			1.00			1.00	
Incremental Delay, d2		57.1		4.0	21.6			14.2			6.1	
Delay (s)		91.6		27.3	46.1			33.4			23.3	
Level of Service		F		C	D			C			C	
Approach Delay (s)		91.6			38.2			33.4			23.3	
Approach LOS		F			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	113.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	20	250	700	170	180	680	90	230	410	10	50	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes		1.00	1.00	0.93	1.00	1.00	0.91	1.00	1.00		1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.95
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)		1770	3539	1470	1770	3539	1436	1770	3521		1770	3282
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (perm)		1770	3539	1470	1770	3539	1436	1770	3521		1770	3282
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	250	700	170	180	680	90	230	410	10	50	580
RTOR Reduction (vph)	0	0	0	120	0	0	68	0	1	0	0	59
Lane Group Flow (vph)	0	270	700	50	180	680	22	230	419	0	50	831
Confl. Peds. (#/hr)		63		44	44		63	29		41	41	
Confl. Bikes (#/hr)				11			9			5		
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA
Protected Phases	5	5	2		1	6		7	4		3	8
Permitted Phases				2			6					
Actuated Green, G (s)		20.5	33.9	33.9	14.9	28.3	28.3	17.1	42.8		6.4	32.1
Effective Green, g (s)		20.5	33.9	33.9	14.9	28.3	28.3	17.1	42.8		6.4	32.1
Actuated g/C Ratio		0.18	0.29	0.29	0.13	0.24	0.24	0.15	0.37		0.06	0.28
Clearance Time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)		312	1034	429	227	863	350	260	1299		97	908
v/s Ratio Prot		c0.15	0.20		0.10	c0.19		c0.13	0.12		0.03	c0.25
v/s Ratio Perm				0.03			0.02					
v/c Ratio		0.87	0.68	0.12	0.79	0.79	0.06	0.88	0.32		0.52	0.92
Uniform Delay, d1		46.4	36.2	30.1	49.1	41.0	33.7	48.5	26.2		53.3	40.6
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2		20.7	1.4	0.0	16.1	7.2	0.3	27.3	0.1		1.9	13.3
Delay (s)		67.1	37.6	30.1	65.1	48.2	34.0	75.8	26.3		55.2	54.0
Level of Service		E	D	C	E	D	C	E	C		E	D
Approach Delay (s)			43.5			50.1			43.8			54.0
Approach LOS			D			D			D			D

Intersection Summary			
HCM 2000 Control Delay	47.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	310
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	310
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	29
Confl. Bikes (#/hr)	18
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	310	20	70	430	160	0	840	90	0	770	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.99			0.98	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1641			1601			3100			3089	
Flt Permitted		0.73			0.92			1.00			1.00	
Satd. Flow (perm)		1209			1477			3100			3089	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	310	20	70	430	160	0	840	90	0	770	100
RTOR Reduction (vph)	0	3	0	0	16	0	0	12	0	0	15	0
Lane Group Flow (vph)	0	437	0	0	644	0	0	918	0	0	855	0
Confl. Peds. (#/hr)	11		38	38		11	36		42	42		36
Confl. Bikes (#/hr)						3			17			15
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.6			31.6			25.4			25.4	
Effective Green, g (s)		31.6			31.6			25.4			25.4	
Actuated g/C Ratio		0.49			0.49			0.39			0.39	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		587			718			1211			1207	
v/s Ratio Prot								c0.30			0.28	
v/s Ratio Perm		0.36			c0.44							
v/c Ratio		0.74			0.90			0.76			0.71	
Uniform Delay, d1		13.4			15.2			17.1			16.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.1			13.8			4.5			3.5	
Delay (s)		18.5			29.0			21.6			20.2	
Level of Service		B			C			C			C	
Approach Delay (s)		18.5			29.0			21.6			20.2	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	1070	150	40	400	130	130	820	220	90	620	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.58		0.93		1.00	0.93		1.00	0.97	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	0.97		1.00	0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3514	917		3166		1770	1683		1770	1775	
Flt Permitted		0.90	1.00		0.71		0.20	1.00		0.09	1.00	
Satd. Flow (perm)		3162	917		2247		369	1683		165	1775	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	1070	150	40	400	130	130	820	220	90	620	70
RTOR Reduction (vph)	0	0	35	0	20	0	0	3	0	0	4	0
Lane Group Flow (vph)	0	1120	115	0	550	0	130	1037	0	90	686	0
Confl. Peds. (#/hr)	140		203	203		140	234		228	228		234
Confl. Bikes (#/hr)			20			12			6			14
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		35.4	35.4		35.4		45.1	45.1		45.1	45.1	
Effective Green, g (s)		35.4	35.4		35.4		45.1	45.1		45.1	45.1	
Actuated g/C Ratio		0.39	0.39		0.39		0.50	0.50		0.50	0.50	
Clearance Time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1243	360		883		184	843		82	889	
v/s Ratio Prot								c0.62			0.39	
v/s Ratio Perm		c0.35	0.13		0.24		0.35			0.54		
v/c Ratio		0.90	0.32		0.62		0.71	1.23		1.10	0.77	
Uniform Delay, d1		25.7	19.0		21.9		17.3	22.4		22.4	18.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		9.2	0.5		1.4		20.4	113.7		128.4	6.4	
Delay (s)		34.8	19.5		23.3		37.7	136.1		150.8	24.7	
Level of Service		C	B		C		D	F		F	C	
Approach Delay (s)		33.0			23.3			125.2			39.2	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	61.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	129.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	460	140	50	500	120	260	1040	50	190	920	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3415		1770	3436		1770	3515		1770	3473	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3415		1770	3436		1770	3515		1770	3473	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	460	140	50	500	120	260	1040	50	190	920	130
RTOR Reduction (vph)	0	29	0	0	23	0	0	3	0	0	11	0
Lane Group Flow (vph)	250	571	0	50	598	0	260	1087	0	190	1039	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.0	31.4		5.6	25.0		17.8	32.0		14.5	28.7	
Effective Green, g (s)	12.0	31.4		5.6	25.0		17.8	32.0		14.5	28.7	
Actuated g/C Ratio	0.12	0.31		0.06	0.25		0.18	0.32		0.14	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	212	1072		99	859		315	1124		256	996	
v/s Ratio Prot	c0.14	0.17		0.03	c0.17		c0.15	c0.31		0.11	0.30	
v/s Ratio Perm												
v/c Ratio	1.18	0.53		0.51	0.70		0.83	0.97		0.74	1.04	
Uniform Delay, d1	44.0	28.3		45.9	34.0		39.6	33.5		41.0	35.6	
Progression Factor	1.00	1.00		1.00	1.00		1.28	0.72		1.00	1.00	
Incremental Delay, d2	118.6	0.5		4.0	2.9		12.7	16.8		11.0	40.3	
Delay (s)	162.6	28.8		49.9	36.9		63.2	41.0		52.0	75.9	
Level of Service	F	C		D	D		E	D		D	E	
Approach Delay (s)		68.1			37.9			45.2			72.3	
Approach LOS		E			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	56.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	740	80	90	600	130	100	1040	140	260	730	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.98		1.00	0.98		1.00	0.98	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3477			3436		1770	3476		1770	3454	
Flt Permitted		0.66			0.60		0.26	1.00		0.16	1.00	
Satd. Flow (perm)		2317			2079		490	3476		294	3454	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	740	80	90	600	130	100	1040	140	260	730	140
RTOR Reduction (vph)	0	7	0	0	15	0	0	11	0	0	16	0
Lane Group Flow (vph)	0	893	0	0	805	0	100	1169	0	260	854	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		36.0			36.0		55.5	55.5		55.5	55.5	
Effective Green, g (s)		36.0			36.0		55.5	55.5		55.5	55.5	
Actuated g/C Ratio		0.36			0.36		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		834			748		271	1929		163	1916	
v/s Ratio Prot								0.34			0.25	
v/s Ratio Perm		0.39			c0.39		0.20			c0.88		
v/c Ratio		1.07			1.08		0.37	0.61		1.60	0.45	
Uniform Delay, d1		32.0			32.0		12.5	14.9		22.2	13.2	
Progression Factor		1.00			1.00		1.00	1.00		0.84	0.27	
Incremental Delay, d2		51.9			55.2		3.8	1.4		279.3	0.3	
Delay (s)		83.9			87.2		16.3	16.3		298.0	3.8	
Level of Service		F			F		B	B		F	A	
Approach Delay (s)		83.9			87.2			16.3			71.5	
Approach LOS		F			F			B			E	

Intersection Summary			
HCM 2000 Control Delay	60.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	116.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	260	30	150	390	130	80	940	180	90	830	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.96	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1750	1819		1705	1763		1770	1767		1770	1824	
Flt Permitted	0.15	1.00		0.37	1.00		0.16	1.00		0.06	1.00	
Satd. Flow (perm)	276	1819		662	1763		296	1767		116	1824	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	260	30	150	390	130	80	940	180	90	830	90
RTOR Reduction (vph)	0	4	0	0	12	0	0	7	0	0	4	0
Lane Group Flow (vph)	50	286	0	150	508	0	80	1113	0	90	916	0
Confl. Peds. (#/hr)	23		62	62		23	17		65	65		17
Confl. Bikes (#/hr)			3			5			17			15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.7	26.7		26.7	26.7		64.0	64.0		64.0	64.0	
Effective Green, g (s)	26.7	26.7		26.7	26.7		64.0	64.0		64.0	64.0	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.64	0.64		0.64	0.64	
Clearance Time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	73	485		176	470		189	1130		74	1167	
v/s Ratio Prot		0.16			c0.29			0.63			0.50	
v/s Ratio Perm	0.18			0.23			0.27			c0.77		
v/c Ratio	0.68	0.59		0.85	1.08		0.42	0.99		1.22	0.78	
Uniform Delay, d1	32.9	31.9		34.8	36.6		8.9	17.5		18.0	13.0	
Progression Factor	1.00	1.00		1.00	1.00		0.25	0.64		1.00	1.00	
Incremental Delay, d2	23.4	1.8		30.7	65.2		5.7	21.1		173.9	5.3	
Delay (s)	56.3	33.7		65.5	101.9		8.0	32.3		191.9	18.4	
Level of Service	E	C		E	F		A	C		F	B	
Approach Delay (s)		37.0			93.7			30.7			33.8	
Approach LOS		D			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	45.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.3
Intersection Capacity Utilization	120.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	310	260	260	780	710	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3288	
Flt Permitted	0.95	1.00	0.19	1.00	1.00	
Satd. Flow (perm)	1770	1583	354	3539	3288	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	260	260	780	710	160
RTOR Reduction (vph)	0	22	0	0	17	0
Lane Group Flow (vph)	310	238	260	780	853	0
Confl. Peds. (#/hr)	29					114
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	22.7	42.7	54.3	34.3	46.3	
Effective Green, g (s)	22.7	42.7	54.3	34.3	46.3	
Actuated g/C Ratio	0.23	0.43	0.54	0.34	0.46	
Clearance Time (s)	4.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.5	3.5	5.0	5.0	
Lane Grp Cap (vph)	401	723	475	1213	1522	
v/s Ratio Prot	c0.18	0.07	c0.11	c0.22	c0.26	
v/s Ratio Perm		0.08	0.19			
v/c Ratio	0.77	0.33	0.55	0.64	0.56	
Uniform Delay, d1	36.2	19.1	25.1	27.7	19.5	
Progression Factor	1.00	1.00	1.02	0.31	0.98	
Incremental Delay, d2	9.0	0.3	0.9	1.7	0.9	
Delay (s)	45.2	19.4	26.4	10.2	19.9	
Level of Service	D	B	C	B	B	
Approach Delay (s)	33.4			14.2	19.9	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	130	170	870	120	280	690
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		3.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3420		1770	3539
Flt Permitted	0.95	1.00	1.00		0.29	1.00
Satd. Flow (perm)	1770	1583	3420		539	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	170	870	120	280	690
RTOR Reduction (vph)	0	131	10	0	0	0
Lane Group Flow (vph)	130	39	980	0	280	690
Confl. Peds. (#/hr)	41			54		
Confl. Bikes (#/hr)				5		
Turn Type	Prot	Perm	NA		custom	NA
Protected Phases	8		2			6
Permitted Phases		8			1	
Actuated Green, G (s)	22.7	22.7	34.3		32.0	46.3
Effective Green, g (s)	22.7	22.7	34.3		32.0	46.3
Actuated g/C Ratio	0.23	0.23	0.34		0.32	0.46
Clearance Time (s)	4.0	4.0	4.0		3.0	4.0
Vehicle Extension (s)	3.0	3.0	5.0		3.5	5.0
Lane Grp Cap (vph)	401	359	1173		172	1638
v/s Ratio Prot	c0.07		c0.29			0.19
v/s Ratio Perm		0.02			c0.52	
v/c Ratio	0.32	0.11	0.84		1.63	0.42
Uniform Delay, d1	32.2	30.6	30.3		34.0	17.9
Progression Factor	1.00	1.00	1.00		0.92	0.56
Incremental Delay, d2	0.5	0.1	7.1		304.6	0.7
Delay (s)	32.7	30.8	37.4		335.8	10.7
Level of Service	C	C	D		F	B
Approach Delay (s)	31.6		37.4			104.5
Approach LOS	C		D			F

Intersection Summary			
HCM 2000 Control Delay	65.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	270	880	190	200	780	170	190	580	150	170	420	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.86	1.00	1.00	0.79	1.00	0.99		1.00	0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1356	1770	3539	1246	1770	3386		1770	3211	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1356	1770	3539	1246	1770	3386		1770	3211	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	880	190	200	780	170	190	580	150	170	420	250
RTOR Reduction (vph)	0	0	134	0	0	125	0	18	0	0	75	0
Lane Group Flow (vph)	270	880	56	200	780	45	190	712	0	170	595	0
Confl. Peds. (#/hr)			93			144			51			84
Confl. Bikes (#/hr)			11			14			3			18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4						
Actuated Green, G (s)	19.9	30.8	30.8	16.6	28.0	28.0	15.5	27.7		14.9	27.1	
Effective Green, g (s)	19.9	30.8	30.8	16.6	28.0	28.0	15.5	27.7		14.9	27.1	
Actuated g/C Ratio	0.19	0.29	0.29	0.16	0.27	0.27	0.15	0.26		0.14	0.26	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	335	1491	397	279	943	332	261	893		251	828	
v/s Ratio Prot	c0.15	c0.17		0.11	c0.22		c0.11	c0.21		0.10	0.19	
v/s Ratio Perm			0.04			0.04						
v/c Ratio	0.81	0.59	0.14	0.72	0.83	0.14	0.73	0.80		0.68	0.72	
Uniform Delay, d1	40.7	31.7	27.3	42.0	36.2	29.3	42.7	36.0		42.8	35.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.5	0.6	0.2	8.5	6.0	0.2	8.3	5.0		5.6	3.0	
Delay (s)	53.2	32.3	27.5	50.5	42.3	29.5	51.0	41.0		48.4	38.5	
Level of Service	D	C	C	D	D	C	D	D		D	D	
Approach Delay (s)		35.9			41.8			43.1			40.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	320	840	280	240	490	190	170	720	280	320	580	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.92	1.00	0.98		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3334		1770	3539	1461	1770	3325		1770	3302	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3334		1770	3539	1461	1770	3325		1770	3302	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	320	840	280	240	490	190	170	720	280	320	580	180
RTOR Reduction (vph)	0	25	0	0	0	128	0	32	0	0	22	0
Lane Group Flow (vph)	320	1095	0	240	490	62	170	968	0	320	738	0
Confl. Peds. (#/hr)			59			57			29			72
Confl. Bikes (#/hr)			9						12			12
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4						
Actuated Green, G (s)	24.4	40.8		19.2	35.6	35.6	16.4	32.0		20.0	35.6	
Effective Green, g (s)	24.4	40.8		19.2	35.6	35.6	16.4	32.0		20.0	35.6	
Actuated g/C Ratio	0.19	0.32		0.15	0.28	0.28	0.13	0.25		0.16	0.28	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.0	3.0	2.0	2.0		2.0	3.0	
Lane Grp Cap (vph)	337	1062		265	984	406	226	831		276	918	
v/s Ratio Prot	c0.18	c0.33		0.14	0.14		0.10	c0.29		c0.18	0.22	
v/s Ratio Perm						0.04						
v/c Ratio	0.95	1.03		0.91	0.50	0.15	0.75	1.16		1.16	0.80	
Uniform Delay, d1	51.2	43.6		53.5	38.7	34.8	53.8	48.0		54.0	43.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	35.2	35.8		30.9	0.4	0.2	11.8	87.1		104.3	7.4	
Delay (s)	86.4	79.4		84.4	39.1	35.0	65.6	135.1		158.3	50.4	
Level of Service	F	E		F	D	D	E	F		F	D	
Approach Delay (s)		81.0			50.1			125.0			82.4	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	86.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	128.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	108.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	640	510	40	310	50	530	860	120	70	600	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1759	3539	1484	1740	3455		1770	3451		1770	3474	
Flt Permitted	0.50	1.00	1.00	0.30	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	930	3539	1484	544	3455		1770	3451		1770	3474	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	640	510	40	310	50	530	860	120	70	600	60
RTOR Reduction (vph)	0	0	244	0	16	0	0	11	0	0	9	0
Lane Group Flow (vph)	170	640	266	40	344	0	530	969	0	70	651	0
Confl. Peds. (#/hr)	12		53	53		12			44			33
Confl. Bikes (#/hr)			8						8			18
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	25.7	25.7	25.7	25.7	25.7		15.4	29.2		6.7	20.5	
Effective Green, g (s)	25.7	25.7	25.7	25.7	25.7		15.4	29.2		6.7	20.5	
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.35		0.21	0.40		0.09	0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	324	1235	518	189	1206		370	1369		161	967	
v/s Ratio Prot		0.18			0.10		c0.30	0.28		0.04	c0.19	
v/s Ratio Perm	c0.18		0.18	0.07								
v/c Ratio	0.52	0.52	0.51	0.21	0.29		1.43	0.71		0.43	0.67	
Uniform Delay, d1	19.1	19.0	19.0	16.8	17.3		29.1	18.6		31.7	23.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.4	0.9	0.6	0.1		209.6	1.7		1.9	1.9	
Delay (s)	20.6	19.4	19.9	17.4	17.4		238.7	20.3		33.5	25.4	
Level of Service	C	B	B	B	B		F	C		C	C	
Approach Delay (s)		19.7			17.4			97.0			26.2	
Approach LOS		B			B			F			C	

Intersection Summary			
HCM 2000 Control Delay	50.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	190	50	200	100	200	110	1150	180	230	810	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.92		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.94	1.00		0.99	1.00		0.98	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.90		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	1792		1749	1537		1742	3434		1761	3438	
Flt Permitted	0.37	1.00		0.46	1.00		0.27	1.00		0.14	1.00	
Satd. Flow (perm)	646	1792		854	1537		488	3434		268	3438	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	190	50	200	100	200	110	1150	180	230	810	110
RTOR Reduction (vph)	0	11	0	0	60	0	0	14	0	0	11	0
Lane Group Flow (vph)	170	229	0	200	240	0	110	1316	0	230	909	0
Confl. Peds. (#/hr)	105		17	17		105	38		27	27		38
Confl. Bikes (#/hr)			3			5			6			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.5	24.5		24.5	24.5		56.1	56.1		56.1	56.1	
Effective Green, g (s)	24.5	24.5		24.5	24.5		56.1	56.1		56.1	56.1	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.63	0.63		0.63	0.63	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	495		236	425		308	2174		169	2176	
v/s Ratio Prot		0.13			0.16			0.38			0.26	
v/s Ratio Perm	c0.26			0.23			0.23			c0.86		
v/c Ratio	0.96	0.46		0.85	0.56		0.36	0.61		1.36	0.42	
Uniform Delay, d1	31.5	26.6		30.3	27.5		7.7	9.7		16.2	8.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	53.9	0.7		23.5	1.7		0.7	0.5		195.7	0.1	
Delay (s)	85.4	27.3		53.8	29.2		8.4	10.1		212.0	8.2	
Level of Service	F	C		D	C		A	B		F	A	
Approach Delay (s)		51.4			39.0			10.0			49.0	
Approach LOS		D			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	88.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	90	750	420	1250	900	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3489	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3489	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	750	420	1250	900	80
RTOR Reduction (vph)	0	68	0	0	6	0
Lane Group Flow (vph)	90	682	420	1250	974	0
Confl. Peds. (#/hr)	21					8
Confl. Bikes (#/hr)						6
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	15.2	48.6	29.4	68.6	35.2	
Effective Green, g (s)	15.2	48.6	29.4	68.6	35.2	
Actuated g/C Ratio	0.17	0.53	0.32	0.75	0.38	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	293	1475	566	2644	1337	
v/s Ratio Prot	0.05	c0.24	c0.24	0.35	c0.28	
v/s Ratio Perm						
v/c Ratio	0.31	0.46	0.74	0.47	0.73	
Uniform Delay, d1	33.7	13.5	27.8	4.5	24.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.2	5.2	0.1	2.0	
Delay (s)	34.3	13.7	33.0	4.7	26.2	
Level of Service	C	B	C	A	C	
Approach Delay (s)	15.9			11.8	26.2	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	91.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

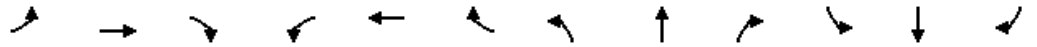
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	380	130	50	290	20	50	330	80	20	540	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	0.98	1.00		0.98	1.00		0.98	1.00		0.99	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	1757		1739	1838		1730	1794		1753	1766	
Flt Permitted	0.46	1.00		0.24	1.00		0.21	1.00		0.43	1.00	
Satd. Flow (perm)	843	1757		442	1838		383	1794		790	1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	380	130	50	290	20	50	330	80	20	540	140
RTOR Reduction (vph)	0	19	0	0	4	0	0	13	0	0	14	0
Lane Group Flow (vph)	110	491	0	50	306	0	50	397	0	20	666	0
Confl. Peds. (#/hr)	26		36	36		26	78		18	18		78
Confl. Bikes (#/hr)			11						3			15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Effective Green, g (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.51	0.51		0.51	0.51	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Grp Cap (vph)	324	675		170	706		194	910		401	896	
v/s Ratio Prot		c0.28			0.17			0.22			c0.38	
v/s Ratio Perm	0.13			0.11			0.13			0.03		
v/c Ratio	0.34	0.73		0.29	0.43		0.26	0.44		0.05	0.74	
Uniform Delay, d1	14.2	17.1		13.9	14.8		9.1	10.1		8.1	12.6	
Progression Factor	0.56	0.52		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	2.8		4.4	1.9		3.2	1.5		0.2	5.5	
Delay (s)	9.1	11.7		18.2	16.7		12.3	11.6		8.3	18.2	
Level of Service	A	B		B	B		B	B		A	B	
Approach Delay (s)		11.2			16.9			11.7			17.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↱		↰	↑↑↱				
Volume (vph)	0	700	0	0	990	90	640	350	270	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.95		1.00	0.95				
Frpb, ped/bikes		1.00			1.00		1.00	0.99				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.99		1.00	0.93				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5085			3495		1770	3268				
Flt Permitted		1.00			1.00		0.95	1.00				
Satd. Flow (perm)		5085			3495		1770	3268				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	700	0	0	990	90	640	350	270	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	63	0	0	0	0
Lane Group Flow (vph)	0	700	0	0	1069	0	640	557	0	0	0	0
Confl. Peds. (#/hr)									17			
Confl. Bikes (#/hr)									11			
Turn Type		NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases							8					
Actuated Green, G (s)		25.8			25.8		31.7	31.7				
Effective Green, g (s)		25.8			25.8		31.7	31.7				
Actuated g/C Ratio		0.40			0.40		0.49	0.49				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		2018			1387		863	1593				
v/s Ratio Prot		0.14			c0.31			0.17				
v/s Ratio Perm							c0.36					
v/c Ratio		0.35			0.77		0.74	0.35				
Uniform Delay, d1		13.7			17.0		13.4	10.3				
Progression Factor		0.58			0.99		1.00	1.00				
Incremental Delay, d2		0.1			0.3		5.7	0.6				
Delay (s)		8.0			17.2		19.1	10.9				
Level of Service		A			B		B	B				
Approach Delay (s)		8.0			17.2			15.0			0.0	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	450	50	90	410	20	210	860	220	0	1250	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.95	1.00
Frt	1.00	0.98			0.99		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1835			3489		1770	4930			3539	1583
Flt Permitted	0.24	1.00			0.76		0.95	1.00			1.00	1.00
Satd. Flow (perm)	448	1835			2684		1770	4930			3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	450	50	90	410	20	210	860	220	0	1250	510
RTOR Reduction (vph)	0	4	0	0	3	0	0	45	0	0	0	251
Lane Group Flow (vph)	340	496	0	0	517	0	210	1035	0	0	1250	259
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	39.0	39.0			22.5		12.0	50.0			34.0	34.0
Effective Green, g (s)	39.0	39.0			22.5		12.0	50.0			34.0	34.0
Actuated g/C Ratio	0.39	0.39			0.22		0.12	0.50			0.34	0.34
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	346	715			603		212	2465			1203	538
v/s Ratio Prot	c0.13	0.27					c0.12	0.21			c0.35	
v/s Ratio Perm	c0.26				0.19							0.16
v/c Ratio	0.98	0.69			0.86		0.99	0.42			1.04	0.48
Uniform Delay, d1	25.7	25.5			37.2		43.9	15.8			33.0	26.0
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	44.2	5.5			14.6		59.4	0.5			36.7	3.1
Delay (s)	69.9	31.0			51.8		103.4	16.3			69.7	29.1
Level of Service	E	C			D		F	B			E	C
Approach Delay (s)		46.7			51.8			30.5			57.9	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	47.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	104.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	10	10	10	400	10	130	10	10	1140	350	20	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		0.99			1.00				0.98			1.00
Flpb, ped/bikes		1.00			1.00				1.00			1.00
Frt		0.95			0.97				0.97			1.00
Flt Protected		0.98			0.96				1.00			0.95
Satd. Flow (prot)		1741			1728				4805			1770
Flt Permitted		0.86			0.76				0.90			0.10
Satd. Flow (perm)		1529			1367				4340			189
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	10	400	10	130	10	10	1140	350	20	170
RTOR Reduction (vph)	0	6	0	0	13	0	0	0	60	0	0	0
Lane Group Flow (vph)	0	24	0	0	527	0	0	0	1450	0	0	190
Confl. Peds. (#/hr)			2	2						20		5
Confl. Bikes (#/hr)						2						
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		35.5			35.5				35.0			46.0
Effective Green, g (s)		35.5			35.5				35.0			46.0
Actuated g/C Ratio		0.39			0.39				0.39			0.51
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		599			536				1678			209
v/s Ratio Prot												c0.07
v/s Ratio Perm		0.02			c0.39				0.33			c0.40
v/c Ratio		0.04			0.98				0.86			0.91
Uniform Delay, d1		17.0			27.2				25.6			17.8
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			34.4				6.2			37.1
Delay (s)		17.0			61.6				31.8			54.9
Level of Service		B			E				C			D
Approach Delay (s)		17.0			61.6				31.8			
Approach LOS		B			E				C			

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	1350	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	5085	
Flt Permitted	1.00	
Satd. Flow (perm)	5085	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	1350	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	1350	0
Confl. Peds. (#/hr)		2
Confl. Bikes (#/hr)		12
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	46.0	
Effective Green, g (s)	46.0	
Actuated g/C Ratio	0.51	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	2584	
v/s Ratio Prot	0.27	
v/s Ratio Perm		
v/c Ratio	0.52	
Uniform Delay, d1	14.9	
Progression Factor	1.00	
Incremental Delay, d2	0.8	
Delay (s)	15.7	
Level of Service	B	
Approach Delay (s)	20.5	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	230	360	260	100	270	120	170	780	150	120	1060	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.94		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1746		1770	3376		1770	3539	1583	1770	3539	1583
Flt Permitted	0.50	1.00		0.15	1.00		0.25	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	932	1746		276	3376		460	3539	1583	664	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	230	360	260	100	270	120	170	780	150	120	1060	490
RTOR Reduction (vph)	0	31	0	0	61	0	0	0	98	0	0	192
Lane Group Flow (vph)	230	589	0	100	329	0	170	780	52	120	1060	298
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	27.0	27.0		27.0	27.0		25.9	25.9	25.9	26.7	24.7	24.7
Effective Green, g (s)	27.0	27.0		27.0	27.0		25.9	25.9	25.9	26.7	24.7	24.7
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.35	0.35	0.35	0.36	0.33	0.33
Clearance Time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	338	633		100	1225		330	1231	551	364	1174	525
v/s Ratio Prot		0.34			0.10		0.07	c0.22		0.04	c0.30	
v/s Ratio Perm	0.25			c0.36			0.11		0.03	0.08		0.19
v/c Ratio	0.68	0.93		1.00	0.27		0.52	0.63	0.09	0.33	0.90	0.57
Uniform Delay, d1	20.1	22.8		23.7	16.7		18.6	20.3	16.3	18.7	23.7	20.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.6	22.2		90.0	0.5		0.6	2.5	0.3	0.2	11.3	4.4
Delay (s)	30.6	45.0		113.7	17.3		19.2	22.8	16.7	18.9	35.0	24.9
Level of Service	C	D		F	B		B	C	B	B	D	C
Approach Delay (s)		41.1			36.9			21.4			30.9	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	670	900	170	70	420	100	130	210	60	330	380	780
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	0.99			0.95		1.00	0.96		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.97		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3278			3269		1770	3279		1770	1863	2787
Flt Permitted	0.95	0.69			0.68		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	2284			2220		1770	3279		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	670	900	170	70	420	100	130	210	60	330	380	780
RTOR Reduction (vph)	0	11	0	0	16	0	0	25	0	0	0	582
Lane Group Flow (vph)	569	1160	0	0	574	0	130	245	0	330	380	198
Confl. Peds. (#/hr)			29			201			116			
Confl. Bikes (#/hr)			2			21			12			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	27.0	59.1			28.1		9.0	22.2		14.0	27.2	27.2
Effective Green, g (s)	27.0	59.1			28.1		9.0	22.2		14.0	27.2	27.2
Actuated g/C Ratio	0.25	0.55			0.26		0.08	0.21		0.13	0.25	0.25
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	405	1508			581		148	678		230	472	706
v/s Ratio Prot	c0.35	0.19					0.07	0.07		c0.19	c0.20	
v/s Ratio Perm		0.23			c0.26							0.07
v/c Ratio	1.40	0.77			0.99		0.88	0.36		1.43	0.81	0.28
Uniform Delay, d1	40.1	18.8			39.4		48.6	36.5		46.6	37.6	32.2
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	196.5	2.4			34.1		40.1	0.3		218.8	9.6	0.2
Delay (s)	236.7	21.2			73.5		88.7	36.8		265.4	47.2	32.4
Level of Service	F	C			E		F	D		F	D	C
Approach Delay (s)		91.7			73.5			53.7			87.8	
Approach LOS		F			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	84.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	107.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	710	80	20	780	130	160	20	20	100	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.98			1.00		0.99		0.87		0.85
Flt Protected	1.00			1.00		0.98		0.99		1.00
Satd. Flow (prot)	3485			3535		4933		1616		1504
Flt Permitted	1.00			0.92		0.98		0.99		1.00
Satd. Flow (perm)	3485			3274		4933		1616		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	710	80	20	780	130	160	20	20	100	20
RTOR Reduction (vph)	9	0	0	0	0	0	0	47	0	15
Lane Group Flow (vph)	781	0	0	800	0	310	0	75	0	3
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1394			1309		1505		289		269
v/s Ratio Prot	0.22							c0.05		
v/s Ratio Perm				c0.24		0.06				0.00
v/c Ratio	0.56			0.61		0.21		0.26		0.01
Uniform Delay, d1	22.0			22.6		24.5		33.6		32.1
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	1.6			2.1		0.3		2.2		0.1
Delay (s)	23.7			24.8		24.8		35.8		32.2
Level of Service	C			C		C		D		C
Approach Delay (s)	23.7			24.8		24.8		35.3		
Approach LOS	C			C		C		D		

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	420	30	20	320	50	30	120	30	180	280	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			0.99			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.96	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1827			1814			1795			1735	
Flt Permitted		0.84			0.97			0.87			0.85	
Satd. Flow (perm)		1540			1762			1582			1501	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	420	30	20	320	50	30	120	30	180	280	190
RTOR Reduction (vph)	0	3	0	0	8	0	0	11	0	0	23	0
Lane Group Flow (vph)	0	537	0	0	382	0	0	169	0	0	627	0
Confl. Peds. (#/hr)	11		5	5		11	15		6	6		15
Confl. Bikes (#/hr)			12			12			9			26
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		544			623			803			762	
v/s Ratio Prot												
v/s Ratio Perm		c0.35			0.22			0.11			c0.42	
v/c Ratio		0.99			0.61			0.21			0.82	
Uniform Delay, d1		20.8			17.3			8.8			13.5	
Progression Factor		1.06			1.16			1.00			1.00	
Incremental Delay, d2		18.8			3.9			0.6			9.8	
Delay (s)		40.8			24.0			9.4			23.3	
Level of Service		D			C			A			C	
Approach Delay (s)		40.8			24.0			9.4			23.3	
Approach LOS		D			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	121.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	350	120	50	370	180	90	1190	10	160	1950	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.91	1.00
Frt		0.97			0.96		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1794			1780		1770	3535		1770	5085	1583
Flt Permitted		0.81			0.93		0.15	1.00		0.15	1.00	1.00
Satd. Flow (perm)		1472			1662		287	3535		287	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	350	120	50	370	180	90	1190	10	160	1950	240
RTOR Reduction (vph)	0	1	0	0	10	0	0	1	0	0	0	130
Lane Group Flow (vph)	0	569	0	0	590	0	90	1199	0	160	1950	110
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	0.40
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		702			792		114	1414		114	2034	633
v/s Ratio Prot								0.34			0.38	
v/s Ratio Perm		c0.39			0.35		0.31			c0.56		0.07
v/c Ratio		0.81			0.75		0.79	0.85		1.40	0.96	0.17
Uniform Delay, d1		14.5			13.8		17.1	17.7		19.5	19.0	12.6
Progression Factor		1.00			0.95		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		9.9			5.1		41.2	6.5		225.8	12.3	0.6
Delay (s)		24.4			18.1		58.3	24.2		245.3	31.3	13.2
Level of Service		C			B		E	C		F	C	B
Approach Delay (s)		24.4			18.1			26.6			44.0	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	280	1350	560	1110	0	0	0	160	430	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frt	1.00	0.85	1.00	0.85				1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3516	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3516	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	1350	560	1110	0	0	0	160	430	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	280	1350	560	1110	0	0	0	160	445	0
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	14.8	33.9	14.1	65.0				21.1	21.1	
Effective Green, g (s)	14.8	33.9	14.1	65.0				21.1	21.1	
Actuated g/C Ratio	0.23	0.52	0.22	1.00				0.32	0.32	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	403	1882	744	1583				574	1141	
v/s Ratio Prot	0.16	0.37						0.09	0.13	
v/s Ratio Perm			0.16	c0.70						
v/c Ratio	0.69	0.72	0.75	0.70				0.28	0.39	
Uniform Delay, d1	23.0	11.9	23.8	0.0				16.3	17.0	
Progression Factor	1.26	0.75	1.00	1.00				1.00	1.00	
Incremental Delay, d2	3.4	0.9	4.3	2.6				1.2	1.0	
Delay (s)	32.5	9.8	28.1	2.6				17.5	18.0	
Level of Service	C	A	C	A				B	B	
Approach Delay (s)	13.7		11.2			0.0			17.9	
Approach LOS	B		B			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1050	380	580	690	10	420	0	690	0	30	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00		0.95	
Frt		0.96		1.00	1.00		1.00		0.85		0.93	
Flt Protected		1.00		0.95	1.00		0.95		1.00		1.00	
Satd. Flow (prot)		3398		1770	3532		1770		1583		3274	
Flt Permitted		1.00		0.95	1.00		0.72		1.00		1.00	
Satd. Flow (perm)		3398		1770	3532		1333		1583		3274	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1050	380	580	690	10	420	0	690	0	30	30
RTOR Reduction (vph)	0	37	0	0	1	0	0	0	335	0	23	0
Lane Group Flow (vph)	0	1393	0	580	699	0	420	0	355	0	37	0
Turn Type		NA		Prot	NA		Perm		Perm		NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		41.0		24.5	69.5		22.0		22.0		22.0	
Effective Green, g (s)		41.0		24.5	69.5		22.0		22.0		22.0	
Actuated g/C Ratio		0.41		0.24	0.70		0.22		0.22		0.22	
Clearance Time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)		1393		433	2454		293		348		720	
v/s Ratio Prot		c0.41		c0.33	0.20						0.01	
v/s Ratio Perm							c0.31		0.22			
v/c Ratio		1.00		1.34	0.28		1.43		1.02		0.05	
Uniform Delay, d1		29.5		37.8	5.8		39.0		39.0		30.8	
Progression Factor		1.00		1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		24.2		167.7	0.1		213.6		53.2		0.0	
Delay (s)		53.7		205.5	5.9		252.6		92.2		30.8	
Level of Service		D		F	A		F		F		C	
Approach Delay (s)		53.7			96.3			152.9			30.8	
Approach LOS		D			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	95.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	550	140	120	570	90	170	900	150	70	1000	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.97			0.98		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3421			3451		1770	3463		1770	3462	
Flt Permitted		0.62			0.62		0.12	1.00		0.16	1.00	
Satd. Flow (perm)		2132			2173		233	3463		306	3462	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	550	140	120	570	90	170	900	150	70	1000	170
RTOR Reduction (vph)	0	23	0	0	14	0	0	18	0	0	19	0
Lane Group Flow (vph)	0	807	0	0	766	0	170	1032	0	70	1151	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		30.0			30.0		32.0	32.0		32.0	32.0	
Actuated g/C Ratio		0.42			0.42		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		888			905		103	1539		136	1538	
v/s Ratio Prot								0.30			0.33	
v/s Ratio Perm		c0.38			0.35		c0.73			0.23		
v/c Ratio		0.91			0.85		1.65	0.67		0.51	0.75	
Uniform Delay, d1		19.7			18.9		20.0	15.8		14.4	16.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		14.8			9.6		331.8	2.3		13.2	3.4	
Delay (s)		34.5			28.5		351.8	18.2		27.6	20.0	
Level of Service		C			C		F	B		C	C	
Approach Delay (s)		34.5			28.5			64.7			20.5	
Approach LOS		C			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	38.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	320	60	80	100	50	30	920	90	100	1350	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.99			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1802			1821	1551	1768	3482		1767	3503	
Flt Permitted		0.78			0.65	1.00	0.10	1.00		0.21	1.00	
Satd. Flow (perm)		1434			1204	1551	182	3482		391	3503	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	320	60	80	100	50	30	920	90	100	1350	80
RTOR Reduction (vph)	0	6	0	0	0	32	0	10	0	0	6	0
Lane Group Flow (vph)	0	544	0	0	180	18	30	1000	0	100	1424	0
Confl. Peds. (#/hr)	5		3	3		5	11		6	6		11
Confl. Bikes (#/hr)			3			5			8			2
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		26.0			27.0	27.0	41.0	41.0		41.0	41.0	
Effective Green, g (s)		26.0			27.0	27.0	41.0	41.0		41.0	41.0	
Actuated g/C Ratio		0.34			0.36	0.36	0.54	0.54		0.54	0.54	
Clearance Time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		1.0			1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)		490			427	551	98	1878		210	1889	
v/s Ratio Prot								0.29			c0.41	
v/s Ratio Perm		c0.38			0.15	0.01	0.17			0.26		
v/c Ratio		1.11			0.42	0.03	0.31	0.53		0.48	0.75	
Uniform Delay, d1		25.0			18.6	16.0	9.7	11.3		10.8	13.6	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		74.4			0.2	0.0	7.9	1.1		7.6	2.8	
Delay (s)		99.4			18.8	16.0	17.6	12.4		18.4	16.4	
Level of Service		F			B	B	B	B		B	B	
Approach Delay (s)		99.4			18.2			12.5			16.6	
Approach LOS		F			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	76.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	10	310	10	200	10	900	280	130	1420	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.95		1.00	0.96		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1723			1688		1752	3380		1752	3501	
Flt Permitted		0.87			0.80		0.10	1.00		0.15	1.00	
Satd. Flow (perm)		1524			1391		184	3380		277	3501	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	10	310	10	200	10	900	280	130	1420	10
RTOR Reduction (vph)	0	6	0	0	30	0	0	38	0	0	0	0
Lane Group Flow (vph)	0	24	0	0	490	0	10	1142	0	130	1430	0
Confl. Peds. (#/hr)	3					3	3					3
Confl. Bikes (#/hr)			6									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.9			27.9		40.0	40.0		40.0	40.0	
Effective Green, g (s)		27.9			27.9		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.37			0.37		0.53	0.53		0.53	0.53	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		560			511		96	1781		145	1845	
v/s Ratio Prot								0.34			0.41	
v/s Ratio Perm		0.02			c0.35		0.05			c0.47		
v/c Ratio		0.04			0.96		0.10	0.64		0.90	0.77	
Uniform Delay, d1		15.4			23.4		9.0	12.8		16.1	14.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			29.2		2.2	1.8		51.2	3.3	
Delay (s)		15.4			52.6		11.2	14.6		67.3	17.6	
Level of Service		B			D		B	B		E	B	
Approach Delay (s)		15.4			52.6			14.6			21.7	
Approach LOS		B			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	75.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	400	320	100	440	110	250	840	200	180	1230	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frt		0.95			0.98		1.00	0.97		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3321			1806		1770	3437		1770	3441	
Flt Permitted		0.60			0.50		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2014			913		1770	3437		1770	3441	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	400	320	100	440	110	250	840	200	180	1230	280
RTOR Reduction (vph)	0	54	0	0	7	0	0	19	0	0	17	0
Lane Group Flow (vph)	0	916	0	0	643	0	250	1021	0	180	1493	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		51.0			51.0		10.0	35.0		10.0	35.0	
Effective Green, g (s)		51.0			51.0		10.0	35.0		10.0	35.0	
Actuated g/C Ratio		0.45			0.45		0.09	0.31		0.09	0.31	
Clearance Time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)		1.0			1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		913			413		157	1069		157	1070	
v/s Ratio Prot							c0.14	0.30		0.10	c0.43	
v/s Ratio Perm		0.45			c0.71							
v/c Ratio		1.00			1.56		1.59	0.96		1.15	1.40	
Uniform Delay, d1		30.8			30.8		51.2	38.0		51.2	38.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		30.7			262.7		294.5	17.5		116.6	183.6	
Delay (s)		61.4			293.5		345.7	55.5		167.9	222.3	
Level of Service		E			F		F	E		F	F	
Approach Delay (s)		61.4			293.5			111.8			216.5	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	165.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	112.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	139.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	50	0	40	40	1250	70	130	1520	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frt					0.94		1.00	0.99		1.00	1.00	
Flt Protected					0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1704		1770	3511		1770	3539	
Flt Permitted					0.83		0.95	1.00		0.95	1.00	
Satd. Flow (perm)					1448		1770	3511		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	50	0	40	40	1250	70	130	1520	0
RTOR Reduction (vph)	0	0	0	0	66	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	24	0	40	1316	0	130	1520	0
Turn Type				Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)					5.4		2.0	34.0		8.4	40.4	
Effective Green, g (s)					5.4		2.0	34.0		8.4	40.4	
Actuated g/C Ratio					0.09		0.03	0.56		0.14	0.66	
Clearance Time (s)					4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)					2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)					128		58	1963		244	2351	
v/s Ratio Prot							0.02	0.37		c0.07	c0.43	
v/s Ratio Perm					c0.02							
v/c Ratio					0.19		0.69	0.67		0.53	0.65	
Uniform Delay, d1					25.7		29.1	9.4		24.4	6.0	
Progression Factor					1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2					0.3		23.8	0.7		1.1	0.5	
Delay (s)					25.9		52.9	10.2		25.5	6.5	
Level of Service					C		D	B		C	A	
Approach Delay (s)		0.0			25.9			11.4			8.0	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	320	1310	1370	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.98	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3472	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3472	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	320	1310	1370	200
RTOR Reduction (vph)	0	0	0	0	21	0
Lane Group Flow (vph)	0	0	320	1310	1549	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			9.5	51.2	33.7	
Effective Green, g (s)			9.5	51.2	33.7	
Actuated g/C Ratio			0.19	1.00	0.66	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			636	3539	2285	
v/s Ratio Prot			0.09	c0.37	c0.45	
v/s Ratio Perm						
v/c Ratio			0.50	0.37	0.68	
Uniform Delay, d1			18.7	0.0	5.4	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			0.6	0.1	0.8	
Delay (s)			19.4	0.1	6.2	
Level of Service			B	A	A	
Approach Delay (s)	0.0			3.9	6.2	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	51.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	200	130	140	160	0	260	0	1170	350	240	1130	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.92			0.97		1.00	1.00	
Flt Protected	0.95	0.99	1.00		0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1750	1583		1675			3417		1770	3539	
Flt Permitted	0.95	0.99	1.00		0.98			1.00		0.11	1.00	
Satd. Flow (perm)	1681	1750	1583		1675			3417		206	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	130	140	160	0	260	0	1170	350	240	1130	0
RTOR Reduction (vph)	0	0	116	0	64	0	0	29	0	0	0	0
Lane Group Flow (vph)	162	168	24	0	356	0	0	1491	0	240	1130	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	14.0	14.0	14.0		20.1			36.2		36.2	36.2	
Effective Green, g (s)	14.0	14.0	14.0		20.1			36.2		36.2	36.2	
Actuated g/C Ratio	0.17	0.17	0.17		0.24			0.44		0.44	0.44	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	285	297	269		409			1502		90	1556	
v/s Ratio Prot	c0.10	0.10			c0.21			0.44			0.32	
v/s Ratio Perm			0.02							c1.17		
v/c Ratio	0.57	0.57	0.09		0.87			0.99		2.67	0.73	
Uniform Delay, d1	31.4	31.4	28.8		29.8			22.9		23.0	19.0	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	2.6	2.5	0.1		17.6			21.3		780.7	1.7	
Delay (s)	34.0	33.8	28.9		47.4			44.3		803.8	20.7	
Level of Service	C	C	C		D			D		F	C	
Approach Delay (s)		32.4			47.4			44.3			157.9	
Approach LOS		C			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	84.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.73		
Actuated Cycle Length (s)	82.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	80	0	170	0	1330	80	130	1290	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frpb, ped/bikes					1.00			1.00		1.00	1.00	
Flpb, ped/bikes					1.00			1.00		1.00	1.00	
Frt					0.91			0.99		1.00	1.00	
Flt Protected					0.98			1.00		0.95	1.00	
Satd. Flow (prot)					1664			3505		1770	3539	
Flt Permitted					0.90			1.00		0.95	1.00	
Satd. Flow (perm)					1526			3505		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	80	0	170	0	1330	80	130	1290	0
RTOR Reduction (vph)	0	0	0	0	102	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	148	0	0	1404	0	130	1290	0
Confl. Peds. (#/hr)			2	2						5		
Confl. Bikes (#/hr)									3			
Turn Type				Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)					19.0			37.0		7.0	39.0	
Effective Green, g (s)					19.0			37.0		7.0	39.0	
Actuated g/C Ratio					0.25			0.49		0.09	0.52	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)					386			1729		165	1840	
v/s Ratio Prot								c0.40		c0.07	0.36	
v/s Ratio Perm					c0.10							
v/c Ratio					0.38			0.81		0.79	0.70	
Uniform Delay, d1					23.2			16.1		33.3	13.6	
Progression Factor					1.00			1.22		1.00	1.00	
Incremental Delay, d2					2.9			2.9		30.7	2.3	
Delay (s)					26.0			22.4		63.9	15.9	
Level of Service					C			C		E	B	
Approach Delay (s)		0.0			26.0			22.4			20.3	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	270	160	60	160	190	90	1010	110	170	1120	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1743			1692		1752	3443		1752	3442	
Flt Permitted		0.70			0.85		0.11	1.00		0.15	1.00	
Satd. Flow (perm)		1237			1449		211	3443		275	3442	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	270	160	60	160	190	90	1010	110	170	1120	110
RTOR Reduction (vph)	0	17	0	0	35	0	0	11	0	0	10	0
Lane Group Flow (vph)	0	583	0	0	375	0	90	1109	0	170	1220	0
Confl. Peds. (#/hr)	17					17	8		3	3		8
Confl. Bikes (#/hr)			2			3			3			11
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)		30.0			30.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio		0.40			0.40		0.47	0.47		0.47	0.47	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		494			579		98	1606		128	1606	
v/s Ratio Prot								0.32			0.35	
v/s Ratio Perm		c0.47			0.26		0.43			c0.62		
v/c Ratio		1.18			0.65		0.92	0.69		1.33	0.76	
Uniform Delay, d1		22.5			18.2		18.7	15.7		20.0	16.5	
Progression Factor		1.00			1.00		1.00	1.00		1.25	1.16	
Incremental Delay, d2		100.0			2.5		70.7	2.5		181.4	2.5	
Delay (s)		122.5			20.7		89.3	18.2		206.4	21.7	
Level of Service		F			C		F	B		F	C	
Approach Delay (s)		122.5			20.7			23.5			44.1	
Approach LOS		F			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	112.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	200	780	240	110	810	150	270	650	200	210	970	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1543	1770	3456		1770	3403		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1543	1770	3456		1770	3403		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	780	240	110	810	150	270	650	200	210	970	150
RTOR Reduction (vph)	0	0	114	0	14	0	0	26	0	0	0	106
Lane Group Flow (vph)	200	780	126	110	946	0	270	824	0	210	970	44
Confl. Peds. (#/hr)			9						2			
Confl. Bikes (#/hr)			5									
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	12.0	31.0	31.0	12.0	31.0		17.0	32.0		17.0	32.0	32.0
Effective Green, g (s)	12.0	31.0	31.0	12.0	31.0		17.0	32.0		17.0	32.0	32.0
Actuated g/C Ratio	0.11	0.28	0.28	0.11	0.28		0.15	0.29		0.15	0.29	0.29
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	193	997	434	193	973		273	989		273	1029	460
v/s Ratio Prot	c0.11	0.22		0.06	c0.27		c0.15	0.24		0.12	c0.27	
v/s Ratio Perm			0.08									0.03
v/c Ratio	1.04	0.78	0.29	0.57	0.97		0.99	0.83		0.77	0.94	0.10
Uniform Delay, d1	49.0	36.4	30.9	46.5	39.1		46.4	36.5		44.6	38.1	28.5
Progression Factor	0.61	0.91	1.13	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	59.8	2.5	0.2	3.8	22.3		50.9	8.2		12.3	17.2	0.4
Delay (s)	89.7	35.7	35.1	50.4	61.4		97.3	44.7		56.9	55.3	28.9
Level of Service	F	D	D	D	E		F	D		E	E	C
Approach Delay (s)		44.4			60.2			57.4			52.6	
Approach LOS		D			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	53.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	170	1180	120	60	900
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	70	170	1180	120	60	900
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1810	650			1300	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1810	650			1300	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	59			89	
cM capacity (veh/h)	62	412			529	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	240	787	513	360	600
Volume Left	70	0	0	60	0
Volume Right	170	0	120	0	0
cSH	156	1700	1700	529	1700
Volume to Capacity	1.54	0.46	0.30	0.11	0.35
Queue Length 95th (ft)	403	0	0	10	0
Control Delay (s)	325.2	0.0	0.0	3.6	0.0
Lane LOS	F			A	
Approach Delay (s)	325.2	0.0		1.3	
Approach LOS	F				

Intersection Summary			
Average Delay	31.7		
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	150	230	990	320	180	740
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	150	230	990	320	180	740
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1880	655			1310	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1880	655			1310	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	44			66	
cM capacity (veh/h)	41	409			524	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	380	660	650	427	493
Volume Left	150	0	0	180	0
Volume Right	230	0	320	0	0
cSH	90	1700	1700	524	1700
Volume to Capacity	4.20	0.39	0.38	0.34	0.29
Queue Length 95th (ft)	Err	0	0	38	0
Control Delay (s)	Err	0.0	0.0	10.1	0.0
Lane LOS	F			B	
Approach Delay (s)	Err	0.0		4.7	
Approach LOS	F				

Intersection Summary			
Average Delay	1457.4		
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	500	920	190	270	1200	110	260	760	200	310	620	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.96	1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1491	3433	3539	1520	3433	3387		3433	3289	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1491	3433	3539	1520	3433	3387		3433	3289	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	500	920	190	270	1200	110	260	760	200	310	620	310
RTOR Reduction (vph)	0	0	58	0	0	54	0	19	0	0	52	0
Lane Group Flow (vph)	500	920	132	270	1200	56	260	941	0	310	878	0
Confl. Peds. (#/hr)			35			23			39			42
Confl. Bikes (#/hr)			9			2			3			8
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	18.0	45.3	45.3	13.7	41.0	41.0	10.0	34.0		11.0	35.0	
Effective Green, g (s)	18.0	45.3	45.3	13.7	41.0	41.0	10.0	34.0		11.0	35.0	
Actuated g/C Ratio	0.15	0.38	0.38	0.11	0.34	0.34	0.08	0.28		0.09	0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	514	1335	562	391	1209	519	286	959		314	959	
v/s Ratio Prot	c0.15	0.26		0.08	c0.34		0.08	c0.28		c0.09	0.27	
v/s Ratio Perm			0.09			0.04						
v/c Ratio	0.97	0.69	0.24	0.69	0.99	0.11	0.91	0.98		0.99	0.92	
Uniform Delay, d1	50.8	31.4	25.5	51.1	39.3	27.0	54.5	42.7		54.4	41.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	32.6	1.5	0.2	5.2	24.0	0.1	30.4	24.3		46.9	13.0	
Delay (s)	83.3	32.9	25.7	56.3	63.3	27.1	84.9	67.0		101.3	54.1	
Level of Service	F	C	C	E	E	C	F	E		F	D	
Approach Delay (s)		47.7			59.6			70.8			65.9	
Approach LOS		D			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	60.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	200	190	20	120	30	140	720	30	20	770	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98			0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	0.98	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1729	1700			1791		1770	3506		1770	3539	1502
Flt Permitted	0.62	1.00			0.94		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1125	1700			1693		1770	3506		1770	3539	1502
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	200	190	20	120	30	140	720	30	20	770	360
RTOR Reduction (vph)	0	30	0	0	6	0	0	2	0	0	0	229
Lane Group Flow (vph)	310	360	0	0	164	0	140	748	0	20	770	131
Confl. Peds. (#/hr)	39		14	14		39	11		27	27		11
Confl. Bikes (#/hr)			14			8			3			5
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	30.0	30.0			30.0		11.2	39.3		2.5	30.6	30.6
Effective Green, g (s)	30.0	30.0			30.0		11.2	39.3		2.5	30.6	30.6
Actuated g/C Ratio	0.36	0.36			0.36		0.13	0.47		0.03	0.37	0.37
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	402	608			606		236	1644		52	1292	548
v/s Ratio Prot		0.21					c0.08	0.21		0.01	c0.22	
v/s Ratio Perm	c0.28				0.10							0.09
v/c Ratio	0.77	0.59			0.27		0.59	0.45		0.38	0.60	0.24
Uniform Delay, d1	23.9	21.9			19.1		34.2	15.0		39.9	21.6	18.5
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.9	1.6			0.2		4.0	0.2		4.7	0.7	0.2
Delay (s)	32.7	23.5			19.4		38.1	15.2		44.6	22.3	18.7
Level of Service	C	C			B		D	B		D	C	B
Approach Delay (s)		27.6			19.4			18.8			21.6	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	440	560	430	10	230	50	240	400	30	90	740	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1859	1583	1770	3502		1770	3440	
Flt Permitted	0.95	1.00	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1800	1583	1770	3502		1770	3440	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	440	560	430	10	230	50	240	400	30	90	740	170
RTOR Reduction (vph)	0	0	173	0	0	42	0	4	0	0	16	0
Lane Group Flow (vph)	440	560	257	0	240	8	240	426	0	90	894	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	29.0	53.7	53.7		19.7	19.7	16.0	39.3		8.8	32.1	
Effective Green, g (s)	29.0	53.7	53.7		19.7	19.7	16.0	39.3		8.8	32.1	
Actuated g/C Ratio	0.25	0.46	0.46		0.17	0.17	0.14	0.34		0.08	0.27	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	439	856	727		303	266	242	1178		133	945	
v/s Ratio Prot	c0.25	0.30					c0.14	0.12		0.05	c0.26	
v/s Ratio Perm			0.16		c0.13	0.01						
v/c Ratio	1.00	0.65	0.35		0.79	0.03	0.99	0.36		0.68	0.95	
Uniform Delay, d1	43.9	24.4	20.4		46.6	40.6	50.3	29.3		52.6	41.5	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	43.5	1.8	0.3		13.2	0.0	55.3	0.2		12.8	17.5	
Delay (s)	87.4	26.2	20.7		59.8	40.6	105.7	29.5		65.4	59.0	
Level of Service	F	C	C		E	D	F	C		E	E	
Approach Delay (s)		43.4			56.5			56.8			59.6	
Approach LOS		D			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	51.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	116.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	320	280	210	100	360	20	10	150	310	70	20	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.94		1.00	0.99			1.00	0.97			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3283		1770	3508			1767	3425			1761
Flt Permitted	0.95	1.00		0.95	1.00			0.35	1.00			0.35
Satd. Flow (perm)	3433	3283		1770	3508			653	3425			650
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	320	280	210	100	360	20	10	150	310	70	20	50
RTOR Reduction (vph)	0	121	0	0	4	0	0	0	20	0	0	0
Lane Group Flow (vph)	320	369	0	100	376	0	0	160	360	0	0	70
Confl. Peds. (#/hr)	3		11	11		3		5		14		14
Confl. Bikes (#/hr)						3				5		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	12.4	19.2		8.4	15.2			11.4	21.6			11.4
Effective Green, g (s)	12.4	19.2		8.4	15.2			11.4	21.6			11.4
Actuated g/C Ratio	0.16	0.25		0.11	0.20			0.15	0.28			0.15
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	555	822		194	696			97	965			96
v/s Ratio Prot	c0.09	c0.11		0.06	c0.11				0.11			
v/s Ratio Perm								c0.25				0.11
v/c Ratio	0.58	0.45		0.52	0.54			1.65	0.37			0.73
Uniform Delay, d1	29.7	24.2		32.2	27.6			32.6	22.1			31.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	1.5	0.4		2.3	0.9			333.6	0.2			24.0
Delay (s)	31.1	24.6		34.5	28.4			366.2	22.3			55.1
Level of Service	C	C		C	C			F	C			E
Approach Delay (s)		27.2			29.7				124.2			
Approach LOS		C			C				F			

Intersection Summary			
HCM 2000 Control Delay	44.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	76.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	550	530
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.98
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1555
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1555
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	550	530
RTOR Reduction (vph)	0	309
Lane Group Flow (vph)	550	221
Confl. Peds. (#/hr)		5
Confl. Bikes (#/hr)		3
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	21.6	21.6
Effective Green, g (s)	21.6	21.6
Actuated g/C Ratio	0.28	0.28
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	997	438
v/s Ratio Prot	c0.16	
v/s Ratio Perm		0.14
v/c Ratio	0.55	0.51
Uniform Delay, d1	23.4	23.0
Progression Factor	1.00	1.00
Incremental Delay, d2	0.7	0.9
Delay (s)	24.0	23.9
Level of Service	C	C
Approach Delay (s)	25.9	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	10	100	10	70	10	140	280	200	150	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	10	10	100	10	70	10	140	280	200	150	0
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	785	990	153	728	710	140	150			420		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	785	990	153	728	710	140	150			420		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	95	99	63	97	92	99			82		
cM capacity (veh/h)	237	199	883	273	290	900	1413			1123		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	30	180	150	280	350
Volume Left	10	100	10	0	200
Volume Right	10	70	0	280	0
cSH	289	376	1413	1700	1123
Volume to Capacity	0.10	0.48	0.01	0.16	0.18
Queue Length 95th (ft)	9	62	1	0	16
Control Delay (s)	18.9	23.0	0.6	0.0	5.8
Lane LOS	C	C	A		A
Approach Delay (s)	18.9	23.0	0.2		5.8
Approach LOS	C	C			

Intersection Summary				
Average Delay	6.9			
Intersection Capacity Utilization	53.9%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	770	40	10	800	150	90	10	30	110	20	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98		0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.99	
Satd. Flow (prot)	1736	3140	2633	1736	4855		1579	3194	1528		3017	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.99	
Satd. Flow (perm)	1736	3140	2633	1736	4855		1579	3194	1528		3017	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	240	770	40	10	800	150	90	10	30	110	20	320
RTOR Reduction (vph)	0	0	15	0	20	0	0	0	27	0	274	0
Lane Group Flow (vph)	240	774	21	10	930	0	45	55	3	0	176	0
Confl. Peds. (#/hr)	6					6			6	6		
Confl. Bikes (#/hr)			6			3						6
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	16.3	41.0	41.0	1.0	25.7		6.2	6.2	6.2		10.1	
Effective Green, g (s)	16.3	41.0	41.0	1.0	25.7		6.2	6.2	6.2		10.1	
Actuated g/C Ratio	0.23	0.58	0.58	0.01	0.37		0.09	0.09	0.09		0.14	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	402	1831	1535	24	1774		139	281	134		433	
v/s Ratio Prot	c0.14	0.25		0.01	c0.19		c0.03	0.02			c0.06	
v/s Ratio Perm			0.01						0.00			
v/c Ratio	0.60	0.42	0.01	0.42	0.52		0.32	0.20	0.02		0.41	
Uniform Delay, d1	24.1	8.1	6.2	34.4	17.5		30.1	29.7	29.3		27.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.4	0.2	0.0	11.3	0.3		1.4	0.3	0.1		0.6	
Delay (s)	26.5	8.3	6.2	45.7	17.8		31.4	30.1	29.3		28.0	
Level of Service	C	A	A	D	B		C	C	C		C	
Approach Delay (s)		12.3			18.1			30.4			28.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	70.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	40	0	1650	110	170	1860	0	120	0	140	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Lane Util. Factor		1.00	0.86		1.00	0.86			1.00	1.00		
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	0.98		
Flpb, ped/bikes		1.00	1.00		1.00	1.00			0.99	1.00		
Frt		1.00	0.99		1.00	1.00			1.00	0.85		
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1763	6338		1770	6408			1746	1559		
Flt Permitted		0.37	1.00		0.95	1.00			0.76	1.00		
Satd. Flow (perm)		694	6338		1770	6408			1392	1559		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	0	1650	110	170	1860	0	120	0	140	0	0
RTOR Reduction (vph)	0	0	7	0	0	0	0	0	0	122	0	0
Lane Group Flow (vph)	0	40	1753	0	170	1860	0	0	120	18	0	0
Confl. Peds. (#/hr)		23		6	6		23	12				
Confl. Bikes (#/hr)				2			5			2		
Turn Type	custom	Prot	NA		Prot	NA		Perm	NA	Perm		
Protected Phases		5	2		1	6			3			3
Permitted Phases	5							3	3	3	3	3
Actuated Green, G (s)		10.7	67.2		13.2	69.7			13.6	13.6		
Effective Green, g (s)		10.7	67.2		13.2	69.7			13.6	13.6		
Actuated g/C Ratio		0.10	0.63		0.12	0.66			0.13	0.13		
Clearance Time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Vehicle Extension (s)		2.0	2.0		2.0	2.0			2.0	2.0		
Lane Grp Cap (vph)		70	4018		220	4213			178	200		
v/s Ratio Prot			0.28		c0.10	c0.29						
v/s Ratio Perm		0.06							c0.09	0.01		
v/c Ratio		0.57	0.44		0.77	0.44			0.67	0.09		
Uniform Delay, d1		45.5	9.8		44.9	8.8			44.1	40.7		
Progression Factor		1.05	0.67		1.00	1.00			1.00	1.00		
Incremental Delay, d2		5.6	0.3		14.2	0.3			7.7	0.1		
Delay (s)		53.4	6.8		59.1	9.1			51.8	40.8		
Level of Service		D	A		E	A			D	D		
Approach Delay (s)			7.9			13.3			45.9			0.0
Approach LOS			A			B			D			A

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	12
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	230	1390	160	140	1800	80	440	80	420	20	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.98		1.00	0.99		1.00	0.90			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99			0.97	1.00
Satd. Flow (prot)	3433	5007		1770	6367		1610	3013			1706	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.99			0.97	1.00
Satd. Flow (perm)	3433	5007		1770	6367		1610	3013			1706	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	230	1390	160	140	1800	80	440	80	420	20	10	10
RTOR Reduction (vph)	0	9	0	0	4	0	0	341	0	0	1	9
Lane Group Flow (vph)	230	1541	0	140	1876	0	330	269	0	0	30	0
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	7.0	56.5		8.0	57.5		20.0	20.0			4.5	4.5
Effective Green, g (s)	7.0	56.5		8.0	57.5		20.0	20.0			4.5	4.5
Actuated g/C Ratio	0.07	0.53		0.08	0.54		0.19	0.19			0.04	0.04
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	226	2668		133	3453		303	568			72	63
v/s Ratio Prot	0.07	c0.31		c0.08	0.29		c0.20	0.09			c0.02	
v/s Ratio Perm												0.00
v/c Ratio	1.02	0.58		1.05	0.54		1.09	0.47			0.42	0.01
Uniform Delay, d1	49.5	16.7		49.0	15.7		43.0	38.3			49.5	48.6
Progression Factor	1.00	1.00		1.16	0.64		1.00	1.00			1.00	1.00
Incremental Delay, d2	64.5	0.9		89.5	0.6		77.6	0.2			1.4	0.0
Delay (s)	114.0	17.6		146.3	10.6		120.6	38.5			50.9	48.6
Level of Service	F	B		F	B		F	D			D	D
Approach Delay (s)		30.1			20.1			67.4			50.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	110	1180	180	60	1050	100	10	200	190	110	10	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00			1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99			1.00	0.99			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.98		1.00	0.99			1.00	0.94			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	1752	3413		1752	3428			1752	1719			1719
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (perm)	1752	3413		1752	3428			1752	1719			1719
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	1180	180	60	1050	100	10	200	190	110	10	100
RTOR Reduction (vph)	0	9	0	0	5	0	0	0	22	0	0	0
Lane Group Flow (vph)	110	1351	0	60	1145	0	0	210	278	0	0	110
Confl. Peds. (#/hr)	27		9	9		27		29		24		24
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA		Prot	Prot
Protected Phases	5	2		1	6		3	3	8		7	7
Permitted Phases												
Actuated Green, G (s)	9.3	52.5		6.4	49.6			14.0	22.3			8.8
Effective Green, g (s)	9.3	52.5		6.4	49.6			14.0	22.3			8.8
Actuated g/C Ratio	0.08	0.48		0.06	0.45			0.13	0.20			0.08
Clearance Time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)	148	1628		101	1545			222	348			137
v/s Ratio Prot	0.06	c0.40		0.03	c0.33			0.12	c0.16			0.06
v/s Ratio Perm												
v/c Ratio	0.74	0.83		0.59	0.74			0.95	0.80			0.80
Uniform Delay, d1	49.2	24.9		50.5	24.9			47.6	41.7			49.7
Progression Factor	1.09	1.07		0.63	0.28			1.00	1.00			1.00
Incremental Delay, d2	10.0	2.1		2.7	1.4			44.6	11.7			26.4
Delay (s)	63.8	28.8		34.7	8.5			92.3	53.5			76.1
Level of Service	E	C		C	A			F	D			E
Approach Delay (s)		31.4			9.8				69.4			
Approach LOS		C			A				E			

Intersection Summary			
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	90	140
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.97	
Flpb, ped/bikes	1.00	
Frt	0.91	
Flt Protected	1.00	
Satd. Flow (prot)	1597	
Flt Permitted	1.00	
Satd. Flow (perm)	1597	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	90	140
RTOR Reduction (vph)	60	0
Lane Group Flow (vph)	170	0
Confl. Peds. (#/hr)		29
Confl. Bikes (#/hr)		3
Heavy Vehicles (%)	5%	5%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	17.1	
Effective Green, g (s)	17.1	
Actuated g/C Ratio	0.16	
Clearance Time (s)	5.0	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	248	
v/s Ratio Prot	c0.11	
v/s Ratio Perm		
v/c Ratio	0.69	
Uniform Delay, d1	43.9	
Progression Factor	1.00	
Incremental Delay, d2	6.1	
Delay (s)	50.0	
Level of Service	D	
Approach Delay (s)	58.5	
Approach LOS	E	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	730	0	0	950	450	30	1120	600	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95			0.95	1.00			
Frt	1.00	1.00			0.95			1.00	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	1770	3539			3369			3535	1583			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	1770	3539			3369			3535	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	730	0	0	950	450	30	1120	600	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	0	126	0	0	0
Lane Group Flow (vph)	130	730	0	0	1381	0	0	1150	474	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	7.0	50.0			39.0			32.0	32.0			
Effective Green, g (s)	7.0	50.0			39.0			32.0	32.0			
Actuated g/C Ratio	0.08	0.56			0.43			0.36	0.36			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	137	1966			1459			1256	562			
v/s Ratio Prot	c0.07	0.21			c0.41							
v/s Ratio Perm								0.33	0.30			
v/c Ratio	0.95	0.37			0.95			0.92	0.84			
Uniform Delay, d1	41.3	11.2			24.5			27.7	26.7			
Progression Factor	1.48	0.20			1.00			1.00	1.00			
Incremental Delay, d2	41.9	0.3			13.9			10.4	11.1			
Delay (s)	103.1	2.5			38.4			38.1	37.8			
Level of Service	F	A			D			D	D			
Approach Delay (s)		17.7			38.4			38.0			0.0	
Approach LOS		B			D			D			A	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	710	50	560	420	0	0	0	0	150	720	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0						4.0	
Lane Util. Factor		0.95		0.95	0.95						0.91	
Frt		0.99		1.00	1.00						0.96	
Flt Protected		1.00		0.95	0.99						0.99	
Satd. Flow (prot)		3504		1681	1756						4850	
Flt Permitted		1.00		0.95	0.78						0.99	
Satd. Flow (perm)		3504		1681	1381						4850	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	710	50	560	420	0	0	0	0	150	720	320
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	74	0
Lane Group Flow (vph)	0	754	0	482	498	0	0	0	0	0	1116	0
Turn Type		NA		Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases												
Actuated Green, G (s)		24.0		31.0	59.0						23.0	
Effective Green, g (s)		24.0		31.0	59.0						23.0	
Actuated g/C Ratio		0.27		0.34	0.66						0.26	
Clearance Time (s)		4.0		4.0	4.0						4.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		934		579	1034						1239	
v/s Ratio Prot		c0.22		c0.29	0.17						c0.23	
v/s Ratio Perm					0.15							
v/c Ratio		0.81		0.83	0.48						0.90	
Uniform Delay, d1		30.8		27.1	7.8						32.4	
Progression Factor		1.00		0.20	0.20						1.00	
Incremental Delay, d2		7.4		3.6	0.1						9.2	
Delay (s)		38.3		9.1	1.7						41.6	
Level of Service		D		A	A						D	
Approach Delay (s)		38.3			5.3			0.0			41.6	
Approach LOS		D			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	640	250	310	20	500	410	250	700	680	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	1.00				
Frt	1.00	0.92		1.00	0.93		1.00	0.93				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	3433	3245		1770	3300		1770	1725				
Flt Permitted	0.95	1.00		0.44	1.00		0.95	1.00				
Satd. Flow (perm)	3433	3245		823	3300		1770	1725				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	640	250	310	20	500	410	250	700	680	0	0	0
RTOR Reduction (vph)	0	194	0	0	126	0	0	37	0	0	0	0
Lane Group Flow (vph)	640	366	0	20	784	0	250	1343	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	13.5	35.5		17.5	17.5		50.5	50.5				
Effective Green, g (s)	13.5	35.5		17.5	17.5		50.5	50.5				
Actuated g/C Ratio	0.14	0.37		0.18	0.18		0.53	0.53				
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0		2.0	2.0		2.0	2.0				
Lane Grp Cap (vph)	487	1212		151	607		940	916				
v/s Ratio Prot	c0.19	0.11			c0.24			c0.78				
v/s Ratio Perm				0.02			0.14					
v/c Ratio	1.31	0.30		0.13	1.29		0.27	1.47				
Uniform Delay, d1	40.8	21.0		32.4	38.8		12.1	22.2				
Progression Factor	1.26	2.58		1.00	1.00		1.00	1.00				
Incremental Delay, d2	146.2	0.2		1.8	143.5		0.1	215.8				
Delay (s)	197.6	54.5		34.2	182.3		12.2	238.0				
Level of Service	F	D		C	F		B	F				
Approach Delay (s)		130.8			179.1			203.4			0.0	
Approach LOS		F			F			F			A	

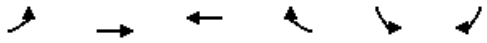
Intersection Summary			
HCM 2000 Control Delay	174.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	134.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	910	480	320	430	0	140	0	200	90	1080	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Lane Util. Factor		0.91		0.97	0.95			1.00		0.91	0.91	1.00
Frt		0.95		1.00	1.00			0.92		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00			0.98		0.95	1.00	1.00
Satd. Flow (prot)		4822		3433	3539			1680		1610	3389	1583
Flt Permitted		1.00		0.95	1.00			0.30		0.54	0.95	1.00
Satd. Flow (perm)		4822		3433	3539			516		920	3228	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	910	480	320	430	0	140	0	200	90	1080	160
RTOR Reduction (vph)	0	40	0	0	0	0	0	54	0	0	0	78
Lane Group Flow (vph)	0	1350	0	320	430	0	0	286	0	81	1089	82
Turn Type		NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases							8			4		4
Actuated Green, G (s)		26.5		7.5	37.5			48.5		48.5	48.5	48.5
Effective Green, g (s)		26.5		7.5	37.5			48.5		48.5	48.5	48.5
Actuated g/C Ratio		0.28		0.08	0.39			0.51		0.51	0.51	0.51
Clearance Time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0		2.0	2.0			2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		1345		271	1396			263		469	1647	808
v/s Ratio Prot		c0.28		c0.09	0.12							
v/s Ratio Perm								c0.55		0.09	0.34	0.05
v/c Ratio		1.00		1.18	0.31			1.09		0.17	0.66	0.10
Uniform Delay, d1		34.2		43.8	19.8			23.2		12.5	17.2	12.0
Progression Factor		1.00		1.45	0.71			1.00		1.00	1.00	1.00
Incremental Delay, d2		25.4		95.6	0.2			80.4		0.1	0.8	0.0
Delay (s)		59.6		158.8	14.2			103.6		12.5	18.0	12.0
Level of Service		E		F	B			F		B	B	B
Approach Delay (s)		59.6			75.9			103.6			16.9	
Approach LOS		E			E			F			B	

Intersection Summary			
HCM 2000 Control Delay	51.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑	↰	↱
Volume (vph)	470	0	0	860	80	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	470	0	0	860	80	580
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	470	0	0	860	80	580
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	17.6			17.6	22.5	22.5
Effective Green, g (s)	17.6			17.6	22.5	22.5
Actuated g/C Ratio	0.37			0.37	0.47	0.47
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1860			1294	827	740
v/s Ratio Prot	0.09			c0.24	0.05	c0.37
v/s Ratio Perm						
v/c Ratio	0.25			0.66	0.10	0.78
Uniform Delay, d1	10.7			12.8	7.1	10.8
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			1.3	0.1	5.4
Delay (s)	10.7			14.1	7.2	16.2
Level of Service	B			B	A	B
Approach Delay (s)	10.7			14.1	15.1	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	48.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	
Volume (vph)	0	630	430	0	240	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.94	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3539	3539		3298	
Flt Permitted		1.00	1.00		0.97	
Satd. Flow (perm)		3539	3539		3298	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	630	430	0	240	160
RTOR Reduction (vph)	0	0	0	0	115	0
Lane Group Flow (vph)	0	630	430	0	285	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		11.7	11.7		7.8	
Effective Green, g (s)		11.7	11.7		7.8	
Actuated g/C Ratio		0.43	0.43		0.28	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1505	1505		935	
v/s Ratio Prot		c0.18	0.12		c0.09	
v/s Ratio Perm						
v/c Ratio		0.42	0.29		0.31	
Uniform Delay, d1		5.5	5.2		7.7	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.2	0.1		0.2	
Delay (s)		5.7	5.3		7.9	
Level of Service		A	A		A	
Approach Delay (s)		5.7	5.3		7.9	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	27.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	440	150	140	620	160	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		4.0			4.0
Lane Util. Factor	0.97		1.00			1.00
Frpb, ped/bikes	1.00		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.96		0.89			1.00
Flt Protected	0.96		1.00			0.98
Satd. Flow (prot)	3318		1642			1811
Flt Permitted	0.96		1.00			0.54
Satd. Flow (perm)	3318		1642			997
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	440	150	140	620	160	270
RTOR Reduction (vph)	36	0	107	0	0	0
Lane Group Flow (vph)	554	0	653	0	0	430
Confl. Peds. (#/hr)	3					
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot		NA		Perm	NA
Protected Phases	6		8			4
Permitted Phases					4	
Actuated Green, G (s)	13.0		49.0			49.0
Effective Green, g (s)	13.0		49.0			49.0
Actuated g/C Ratio	0.19		0.71			0.71
Clearance Time (s)	3.5		4.0			4.0
Vehicle Extension (s)	2.2		2.0			2.0
Lane Grp Cap (vph)	620		1157			702
v/s Ratio Prot	c0.17		0.40			
v/s Ratio Perm						c0.43
v/c Ratio	0.89		0.56			0.61
Uniform Delay, d1	27.6		5.0			5.3
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	15.1		0.4			1.1
Delay (s)	42.6		5.4			6.4
Level of Service	D		A			A
Approach Delay (s)	42.6		5.4			6.4
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	11.0
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	630	0	170	0	0	0	250	150	0	0	210	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.99	
Flt Protected	0.95		1.00					0.97			1.00	
Satd. Flow (prot)	3367		1553					3366			1805	
Flt Permitted	0.95		1.00					0.97			1.00	
Satd. Flow (perm)	3367		1553					3366			1805	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	630	0	170	0	0	0	250	150	0	0	210	20
RTOR Reduction (vph)	0	0	120	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	630	0	50	0	0	0	0	400	0	0	228	0
Confl. Peds. (#/hr)									2	2		
Confl. Bikes (#/hr)									2			
Heavy Vehicles (%)	4%	2%	4%	2%	2%	2%	4%	4%	2%	2%	4%	4%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4				8		2	2			6	
Permitted Phases			4	8						6		
Actuated Green, G (s)	19.1		19.1					14.2			15.1	
Effective Green, g (s)	19.1		19.1					14.2			15.1	
Actuated g/C Ratio	0.30		0.30					0.22			0.23	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	998		460					742			423	
v/s Ratio Prot	c0.19							c0.12			c0.13	
v/s Ratio Perm			0.03									
v/c Ratio	0.63		0.11					0.54			0.54	
Uniform Delay, d1	19.6		16.5					22.2			21.6	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	1.3		0.1					0.8			1.3	
Delay (s)	20.9		16.6					23.0			22.9	
Level of Service	C		B					C			C	
Approach Delay (s)		20.0			0.0			23.0			22.9	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	64.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↑		↰↰	↱↱
Volume (vph)	0	1770	1260	0	340	1290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5767	5767		3090	2508
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5767	5767		3090	2508
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1770	1260	0	340	1290
RTOR Reduction (vph)	0	0	0	0	0	1
Lane Group Flow (vph)	0	1770	1260	0	340	1289
Confl. Peds. (#/hr)	12			12		12
Confl. Bikes (#/hr)				5		
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		32.1	23.0		41.6	50.7
Effective Green, g (s)		32.1	23.0		41.6	50.7
Actuated g/C Ratio		0.39	0.28		0.51	0.62
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		2265	1623		1573	1556
v/s Ratio Prot		c0.31	0.22		0.11	c0.51
v/s Ratio Perm						
v/c Ratio		0.78	0.78		0.22	0.83
Uniform Delay, d1		21.7	27.0		11.1	12.1
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.8	2.4		0.1	3.8
Delay (s)		23.5	29.4		11.1	15.9
Level of Service		C	C		B	B
Approach Delay (s)		23.5	29.4		14.9	
Approach LOS		C	C		B	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	81.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1000	750	0	1110	330	810	0	620	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frt		0.97	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3236	1413		4816		3367		1553			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3236	1413		4816		3367		1553			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1000	750	0	1110	330	810	0	620	0	0	0
RTOR Reduction (vph)	0	16	0	0	49	0	0	0	81	0	0	0
Lane Group Flow (vph)	0	1202	532	0	1391	0	810	0	539	0	0	0
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		66.0	110.0		66.0		36.0		36.0			
Effective Green, g (s)		66.0	110.0		66.0		36.0		36.0			
Actuated g/C Ratio		0.60	1.00		0.60		0.33		0.33			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1941	1413		2889		1101		508			
v/s Ratio Prot		c0.37			0.29		0.24					
v/s Ratio Perm			0.38						c0.35			
v/c Ratio		0.62	0.38		0.48		0.74		1.06			
Uniform Delay, d1		14.0	0.0		12.4		32.8		37.0			
Progression Factor		1.00	1.00		1.66		1.00		1.00			
Incremental Delay, d2		1.5	0.8		0.4		4.4		56.8			
Delay (s)		15.5	0.8		21.0		37.2		93.8			
Level of Service		B	A		C		D		F			
Approach Delay (s)		11.0			21.0			61.7			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1400	1230	0	1630	0	0	0	0	350	0	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		0.99
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.95	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4498	1335		4988					3367		1530
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4498	1335		4988					3367		1530
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1400	1230	0	1630	0	0	0	0	350	0	240
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	30
Lane Group Flow (vph)	0	2015	615	0	1630	0	0	0	0	350	0	210
Confl. Peds. (#/hr)							8					3
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	4%	4%	4%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		62.1	62.1		62.1					17.8		17.8
Effective Green, g (s)		62.1	62.1		62.1					17.8		17.8
Actuated g/C Ratio		0.71	0.71		0.71					0.20		0.20
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3177	943		3523					681		309
v/s Ratio Prot		0.45	c0.46		0.33							
v/s Ratio Perm										0.10		c0.14
v/c Ratio		0.63	0.65		0.46					0.51		0.68
Uniform Delay, d1		6.9	7.0		5.6					31.2		32.4
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.4	1.6		0.1					0.7		6.1
Delay (s)		7.3	8.7		5.7					31.9		38.5
Level of Service		A	A		A					C		D
Approach Delay (s)		7.6			5.7			0.0			34.6	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	87.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1300	630	0	1120	520	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.96	0.85
Flt Protected	1.00	1.00		1.00	0.97	1.00
Satd. Flow (prot)	3471	1517		3471	3273	1413
Flt Permitted	1.00	1.00		1.00	0.97	1.00
Satd. Flow (perm)	3471	1517		3471	3273	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1300	630	0	1120	520	550
RTOR Reduction (vph)	0	0	0	0	44	46
Lane Group Flow (vph)	1300	630	0	1120	691	289
Confl. Peds. (#/hr)		6	6			
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	35.5	63.8		35.5	20.3	20.3
Effective Green, g (s)	35.5	63.8		35.5	20.3	20.3
Actuated g/C Ratio	0.56	1.00		0.56	0.32	0.32
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1931	1517		1931	1041	449
v/s Ratio Prot	c0.37			0.32	c0.21	
v/s Ratio Perm		0.42				0.20
v/c Ratio	0.67	0.42		0.58	0.66	0.64
Uniform Delay, d1	10.0	0.0		9.3	18.8	18.7
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.8		0.4	1.6	3.2
Delay (s)	11.0	0.8		9.7	20.4	21.8
Level of Service	B	A		A	C	C
Approach Delay (s)	7.7			9.7	20.9	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	63.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Volume (vph)	0	1530	470	0	1220	420	0	0	0	400	0	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.95	1.00				0.95	0.91	0.95
Frt		1.00	0.85		1.00	0.85				1.00	0.90	0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95	0.98	1.00
Satd. Flow (prot)		5085	1583		3539	1583				1681	1500	1504
Flt Permitted		1.00	1.00		1.00	1.00				0.95	0.98	1.00
Satd. Flow (perm)		5085	1583		3539	1583				1681	1500	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1530	470	0	1220	420	0	0	0	400	0	470
RTOR Reduction (vph)	0	0	187	0	0	167	0	0	0	0	59	59
Lane Group Flow (vph)	0	1530	283	0	1220	253	0	0	0	304	230	218
Turn Type		NA	Perm		NA	Perm				Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4			8				6		6
Actuated Green, G (s)		43.1	43.1		43.1	43.1				20.4	20.4	20.4
Effective Green, g (s)		43.1	43.1		43.1	43.1				20.4	20.4	20.4
Actuated g/C Ratio		0.60	0.60		0.60	0.60				0.29	0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)		3065	954		2133	954				479	427	429
v/s Ratio Prot		0.30			c0.34							
v/s Ratio Perm			0.18			0.16				c0.18	0.15	0.14
v/c Ratio		0.50	0.30		0.57	0.27				0.63	0.54	0.51
Uniform Delay, d1		8.1	6.9		8.6	6.7				22.3	21.6	21.4
Progression Factor		1.00	1.00		1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2		0.1	0.2		0.4	0.1				2.7	1.3	0.9
Delay (s)		8.2	7.0		9.0	6.9				25.0	22.9	22.3
Level of Service		A	A		A	A				C	C	C
Approach Delay (s)		7.9			8.4			0.0			23.5	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	960	320	120	1060	540	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.96		1.00	1.00	0.96	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3406		1770	3539	3352	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3406		1770	3539	3352	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	960	320	120	1060	540	180
RTOR Reduction (vph)	30	0	0	0	34	0
Lane Group Flow (vph)	1250	0	120	1060	686	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	36.4		8.0	48.4	21.7	
Effective Green, g (s)	36.4		8.0	48.4	21.7	
Actuated g/C Ratio	0.48		0.11	0.64	0.29	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1629		186	2250	955	
v/s Ratio Prot	c0.37		c0.07	0.30	c0.20	
v/s Ratio Perm						
v/c Ratio	0.77		0.65	0.47	0.72	
Uniform Delay, d1	16.4		32.7	7.2	24.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.0		5.6	0.1	2.2	
Delay (s)	18.4		38.3	7.3	26.6	
Level of Service	B		D	A	C	
Approach Delay (s)	18.4			10.4	26.6	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	76.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	1250	40	20	1470	360	30	70	150	190	50	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.97			0.92			0.98	
Flt Protected		1.00			1.00			0.99			0.97	
Satd. Flow (prot)		3520			3413			1659			1727	
Flt Permitted		0.80			0.93			0.95			0.51	
Satd. Flow (perm)		2808			3178			1583			915	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	1250	40	20	1470	360	30	70	150	190	50	30
RTOR Reduction (vph)	0	3	0	0	23	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	1307	0	0	1827	0	0	250	0	0	265	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	5%	5%	5%	5%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		46.1			46.1			21.1			21.1	
Effective Green, g (s)		46.1			46.1			21.1			21.1	
Actuated g/C Ratio		0.57			0.57			0.26			0.26	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1612			1824			415			240	
v/s Ratio Prot												
v/s Ratio Perm		0.47			c0.57			0.16			c0.29	
v/c Ratio		0.81			1.00			0.60			1.10	
Uniform Delay, d1		13.6			17.1			25.9			29.6	
Progression Factor		1.00			1.00			0.12			1.00	
Incremental Delay, d2		3.2			21.5			2.1			88.6	
Delay (s)		16.8			38.6			5.2			118.2	
Level of Service		B			D			A			F	
Approach Delay (s)		16.8			38.6			5.2			118.2	
Approach LOS		B			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	600	180	380	840	350	120	450	220	320	480	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.97		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1770	3417		1770	3383			1843	1583		1826	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (perm)	1770	3417		1770	3383			1843	1583		1826	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	600	180	380	840	350	120	450	220	320	480	100
RTOR Reduction (vph)	0	31	0	0	44	0	0	0	90	0	0	79
Lane Group Flow (vph)	50	749	0	380	1146	0	0	570	130	0	800	21
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	5.4	24.8		14.0	33.4			16.0	16.0		19.0	19.0
Effective Green, g (s)	5.4	24.8		14.0	33.4			16.0	16.0		19.0	19.0
Actuated g/C Ratio	0.06	0.28		0.16	0.37			0.18	0.18		0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	106	943		275	1258			328	282		386	334
v/s Ratio Prot	0.03	0.22		c0.21	c0.34			c0.31			c0.44	
v/s Ratio Perm									0.08			0.01
v/c Ratio	0.47	0.79		1.38	0.91			1.74	0.46		2.07	0.06
Uniform Delay, d1	40.8	30.1		37.9	26.8			36.9	33.0		35.4	28.3
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.3	4.7		192.9	10.0			344.5	1.2		491.5	0.1
Delay (s)	44.1	34.8		230.8	36.8			381.4	34.3		526.9	28.4
Level of Service	D	C		F	D			F	C		F	C
Approach Delay (s)		35.4			83.8			284.7			471.5	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	198.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	130.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	100	380	20	270	560	0	270	10	380	240	330	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.96			1.00		1.00	0.99
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Frt		0.99		1.00	1.00	0.85			0.94		1.00	0.97
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1831		1770	1863	1523			3334		1764	1793
Flt Permitted		0.79		0.95	1.00	1.00			0.89		0.30	1.00
Satd. Flow (perm)		1469		1770	1863	1523			2960		558	1793
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	380	20	270	560	0	270	10	380	240	330	450
RTOR Reduction (vph)	0	1	0	0	0	122	0	0	96	0	0	0
Lane Group Flow (vph)	0	499	0	270	560	148	0	0	534	0	330	570
Confl. Peds. (#/hr)	9		3	3		9					6	
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.0		14.0	41.0	41.0			26.0		26.0	26.0
Effective Green, g (s)		23.0		14.0	41.0	41.0			26.0		26.0	26.0
Actuated g/C Ratio		0.31		0.19	0.55	0.55			0.35		0.35	0.35
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		450		330	1018	832			1026		193	621
v/s Ratio Prot				c0.15	0.30							0.32
v/s Ratio Perm		c0.34				0.10			0.18		c0.59	
v/c Ratio		1.11		0.82	0.55	0.18			0.52		1.71	0.92
Uniform Delay, d1		26.0		29.3	11.0	8.5			19.5		24.5	23.5
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		75.2		14.5	0.6	0.1			0.5		340.5	18.5
Delay (s)		101.2		43.8	11.7	8.6			20.0		365.0	42.0
Level of Service		F		D	B	A			C		F	D
Approach Delay (s)		101.2			18.8				20.0			160.4
Approach LOS		F			B				C			F

Intersection Summary			
HCM 2000 Control Delay	72.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	120	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frpb, ped/bikes			
Flpb, ped/bikes			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	120	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Confl. Peds. (#/hr)	6		
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	530	10	390	650	20	10	200	240	60	250	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3513		1770	3523			1858	1583		1845	1583
Flt Permitted		1.00		0.95	1.00			0.98	1.00		0.90	1.00
Satd. Flow (perm)		3513		1770	3523			1826	1583		1675	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	530	10	390	650	20	10	200	240	60	250	60
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	176	0	0	40
Lane Group Flow (vph)	0	599	0	390	668	0	0	210	64	0	310	20
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		19.7		24.1	24.1			20.2	20.2		20.2	20.2
Effective Green, g (s)		19.7		24.1	24.1			20.2	20.2		20.2	20.2
Actuated g/C Ratio		0.26		0.32	0.32			0.27	0.27		0.27	0.27
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		910		561	1117			485	420		445	420
v/s Ratio Prot		c0.17		c0.22	0.19							
v/s Ratio Perm								0.11	0.04		c0.19	0.01
v/c Ratio		0.66		0.70	0.60			0.43	0.15		0.70	0.05
Uniform Delay, d1		25.1		22.7	21.9			23.1	21.3		25.1	20.7
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		1.7		3.7	0.9			0.6	0.2		4.7	0.0
Delay (s)		26.9		26.5	22.7			23.8	21.5		29.8	20.8
Level of Service		C		C	C			C	C		C	C
Approach Delay (s)		26.9			24.1			22.6			28.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	76.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	730	110	60	890	90	180	380	90	170	330	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.98		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3429		1766	3484		1747	3411		1745	3539	1533
Flt Permitted		0.76		0.24	1.00		0.54	1.00		0.43	1.00	1.00
Satd. Flow (perm)		2610		440	3484		989	3411		784	3539	1533
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	730	110	60	890	90	180	380	90	170	330	120
RTOR Reduction (vph)	0	15	0	0	11	0	0	30	0	0	0	65
Lane Group Flow (vph)	0	905	0	60	969	0	180	440	0	170	330	55
Confl. Peds. (#/hr)	75		66	11		12	23		33	33		23
Confl. Bikes (#/hr)			21									
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51		0.51	0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1342		226	1791		367	1266		291	1314	569
v/s Ratio Prot					0.28			0.13			0.09	
v/s Ratio Perm		c0.35		0.14			0.18			c0.22		0.04
v/c Ratio		0.67		0.27	0.54		0.49	0.35		0.58	0.25	0.10
Uniform Delay, d1		12.6		9.6	11.4		16.9	15.9		17.7	15.3	14.3
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		2.7		2.9	1.2		4.6	0.8		8.3	0.5	0.3
Delay (s)		15.4		12.4	12.6		21.5	16.6		26.0	15.7	14.7
Level of Service		B		B	B		C	B		C	B	B
Approach Delay (s)		15.4			12.6			18.0			18.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	240	160	150	390	160	210	650	150	300	770	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3513	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3513	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	240	160	150	390	160	210	650	150	300	770	40
RTOR Reduction (vph)	0	0	0	0	0	101	0	0	66	0	3	0
Lane Group Flow (vph)	30	240	160	150	390	59	210	650	84	300	807	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	4.5	22.7	22.7	14.5	32.7	32.7	17.6	28.8	28.8	21.9	33.1	
Effective Green, g (s)	4.5	22.7	22.7	14.5	32.7	32.7	17.6	28.8	28.8	21.9	33.1	
Actuated g/C Ratio	0.04	0.22	0.22	0.14	0.31	0.31	0.17	0.28	0.28	0.21	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	76	407	345	247	586	498	299	980	438	373	1119	
v/s Ratio Prot	0.02	0.13		c0.08	c0.21		0.12	0.18		c0.17	c0.23	
v/s Ratio Perm			0.10			0.04			0.05			
v/c Ratio	0.39	0.59	0.46	0.61	0.67	0.12	0.70	0.66	0.19	0.80	0.72	
Uniform Delay, d1	48.4	36.4	35.3	42.0	30.9	25.3	40.7	33.3	28.7	39.0	31.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.4	2.2	1.0	4.2	2.9	0.1	7.3	1.7	0.2	11.9	2.3	
Delay (s)	51.7	38.6	36.3	46.2	33.7	25.4	48.0	35.0	28.9	50.8	33.6	
Level of Service	D	D	D	D	C	C	D	C	C	D	C	
Approach Delay (s)		38.7			34.5			36.8			38.3	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	103.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	100	120	340	170	140	150	760	440	190	850	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1730		1770	1737		1770	1863	1583	1770	3527	
Flt Permitted		0.96		0.55	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1672		1030	1737		1770	1863	1583	1770	3527	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	100	120	340	170	140	150	760	440	190	850	20
RTOR Reduction (vph)	0	53	0	0	43	0	0	0	279	0	3	0
Lane Group Flow (vph)	0	187	0	340	267	0	150	760	161	190	867	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		24.5		24.5	24.5		7.0	25.0	25.0	7.0	25.0	
Effective Green, g (s)		24.5		24.5	24.5		7.0	25.0	25.0	7.0	25.0	
Actuated g/C Ratio		0.36		0.36	0.36		0.10	0.36	0.36	0.10	0.36	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		598		368	621		180	679	577	180	1287	
v/s Ratio Prot					0.15		0.08	c0.41		c0.11	0.25	
v/s Ratio Perm		0.11		c0.33					0.10			
v/c Ratio		0.31		0.92	0.43		0.83	1.12	0.28	1.06	0.67	
Uniform Delay, d1		15.9		21.1	16.7		30.2	21.8	15.4	30.8	18.3	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3		28.3	0.5		26.8	72.2	0.3	82.5	1.4	
Delay (s)		16.2		49.4	17.2		57.0	93.9	15.6	113.3	19.7	
Level of Service		B		D	B		E	F	B	F	B	
Approach Delay (s)		16.2			34.1			64.3			36.5	
Approach LOS		B			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	45.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	30	190	210	70	120	150	1270	110	120	1100	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.89			0.96		1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1651			1742		1770	3497		1770	3525	
Flt Permitted		0.98			0.64		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1627			1136		1770	3497		1770	3525	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	30	190	210	70	120	150	1270	110	120	1100	30
RTOR Reduction (vph)	0	135	0	0	22	0	0	9	0	0	3	0
Lane Group Flow (vph)	0	95	0	0	378	0	150	1371	0	120	1127	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		20.1			20.1		7.9	30.7		6.2	29.0	
Effective Green, g (s)		20.1			20.1		7.9	30.7		6.2	29.0	
Actuated g/C Ratio		0.29			0.29		0.11	0.44		0.09	0.42	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		473			330		202	1555		159	1481	
v/s Ratio Prot							c0.08	c0.39		0.07	0.32	
v/s Ratio Perm		0.06			c0.33							
v/c Ratio		0.20			1.15		0.74	0.88		0.75	0.76	
Uniform Delay, d1		18.4			24.4		29.6	17.5		30.7	17.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			95.1		13.7	6.2		18.2	2.4	
Delay (s)		18.6			119.5		43.3	23.7		48.9	19.4	
Level of Service		B			F		D	C		D	B	
Approach Delay (s)		18.6			119.5			25.6			22.2	
Approach LOS		B			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	69.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	990	30	1500	940	50	1450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frpb, ped/bikes	1.00		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		1.00	1.00
Frt	1.00		0.94		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	3428		3317		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	3428		3317		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	990	30	1500	940	50	1450
RTOR Reduction (vph)	3	0	99	0	0	0
Lane Group Flow (vph)	1017	0	2341	0	50	1450
Confl. Peds. (#/hr)		2				
Confl. Bikes (#/hr)		5		3		
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	29.0		36.7		3.2	43.9
Effective Green, g (s)	29.0		36.7		3.2	43.9
Actuated g/C Ratio	0.36		0.45		0.04	0.54
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1228		1504		70	1920
v/s Ratio Prot	c0.30		c0.71		0.03	c0.41
v/s Ratio Perm						
v/c Ratio	0.83		1.56		0.71	0.76
Uniform Delay, d1	23.7		22.1		38.4	14.3
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	4.8		253.6		29.1	1.7
Delay (s)	28.4		275.7		67.4	16.1
Level of Service	C		F		E	B
Approach Delay (s)	28.4		275.7			17.8
Approach LOS	C		F			B

Intersection Summary			
HCM 2000 Control Delay	146.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	80.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	10	10	30	500	0	30	50	0	140	170	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95			1.00
Frpb, ped/bikes		0.99		1.00	1.00			1.00	0.97			1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00			0.99
Frt		0.92		1.00	0.98			1.00	0.92			1.00
Flt Protected		0.99		0.95	0.96			0.95	1.00			0.95
Satd. Flow (prot)		1681		1618	1600			1703	3039			1687
Flt Permitted		0.99		0.95	0.96			0.95	1.00			0.30
Satd. Flow (perm)		1681		1618	1600			1703	3039			534
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	30	500	0	30	50	0	140	170	10	20
RTOR Reduction (vph)	0	28	0	0	84	0	0	0	138	0	0	0
Lane Group Flow (vph)	0	22	0	265	181	0	0	50	172	0	0	30
Confl. Peds. (#/hr)			2	2						14		14
Confl. Bikes (#/hr)						2				3		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA			Prot
Protected Phases	4	4		8	8		5	5	2			1
Permitted Phases												
Actuated Green, G (s)		3.8		13.3	13.3			3.0	10.9			13.3
Effective Green, g (s)		3.8		13.3	13.3			3.0	10.9			13.3
Actuated g/C Ratio		0.07		0.23	0.23			0.05	0.19			0.23
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		111		375	371			89	578			123
v/s Ratio Prot		c0.01		c0.16	0.11			c0.03	0.06			
v/s Ratio Perm												0.06
v/c Ratio		0.20		0.71	0.49			0.56	0.30			0.24
Uniform Delay, d1		25.3		20.2	19.1			26.5	19.9			17.9
Progression Factor		1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2		0.9		6.0	1.0			7.9	0.3			1.0
Delay (s)		26.2		26.2	20.1			34.4	20.2			18.9
Level of Service		C		C	C			C	C			B
Approach Delay (s)		26.2			23.1				22.2			
Approach LOS		C			C				C			

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	380	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3406	
Flt Permitted	1.00	
Satd. Flow (perm)	3406	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	380	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	380	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		2
Heavy Vehicles (%)	6%	2%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	21.2	
Effective Green, g (s)	21.2	
Actuated g/C Ratio	0.37	
Clearance Time (s)	4.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1260	
v/s Ratio Prot	c0.11	
v/s Ratio Perm		
v/c Ratio	0.30	
Uniform Delay, d1	12.8	
Progression Factor	1.00	
Incremental Delay, d2	0.1	
Delay (s)	12.9	
Level of Service	B	
Approach Delay (s)	13.4	
Approach LOS	B	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	10	160	1460	20	50	140	1880	480	30	70	200	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00	0.88		1.00	0.98	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1770	6395			1770	5982	1122		1835	1557	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1770	6395			1770	5982	1122		1835	1557	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	160	1460	20	50	140	1880	480	30	70	200	10
RTOR Reduction (vph)	0	0	1	0	0	0	3	190	0	0	98	0
Lane Group Flow (vph)	0	170	1479	0	0	190	1939	228	0	100	102	0
Confl. Peds. (#/hr)		53						53	44			
Confl. Bikes (#/hr)								3			2	
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		15.8	50.4			18.5	53.1	53.1		13.9	13.9	
Effective Green, g (s)		15.8	50.4			18.5	53.1	53.1		13.9	13.9	
Actuated g/C Ratio		0.11	0.35			0.13	0.37	0.37		0.10	0.10	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		195	2255			229	2222	416		178	151	
v/s Ratio Prot		0.10	0.23			c0.11	c0.32			0.05		
v/s Ratio Perm								0.20			c0.07	
v/c Ratio		0.87	0.66			0.83	0.87	0.55		0.56	0.67	
Uniform Delay, d1		62.6	38.9			60.7	41.8	35.4		61.6	62.3	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		31.2	0.5			20.4	4.0	0.8		2.4	8.9	
Delay (s)		93.8	39.5			81.1	45.7	36.2		64.0	71.2	
Level of Service		F	D			F	D	D		E	E	
Approach Delay (s)			45.1				46.8			68.8		
Approach LOS			D				D			E		

Intersection Summary			
HCM 2000 Control Delay	49.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	142.9	Sum of lost time (s)	21.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	840	140	180
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.97	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.92	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3433	1647	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3433	1647	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	840	140	180
RTOR Reduction (vph)	0	29	0
Lane Group Flow (vph)	850	291	0
Confl. Peds. (#/hr)			44
Confl. Bikes (#/hr)			2
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	39.1	39.1	
Effective Green, g (s)	39.1	39.1	
Actuated g/C Ratio	0.27	0.27	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	939	450	
v/s Ratio Prot	c0.25	0.18	
v/s Ratio Perm			
v/c Ratio	0.91	0.65	
Uniform Delay, d1	50.1	45.8	
Progression Factor	1.00	1.00	
Incremental Delay, d2	11.8	2.4	
Delay (s)	61.9	48.2	
Level of Service	E	D	
Approach Delay (s)		58.1	
Approach LOS		E	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	900	90	270	1970	220	220	120	310	270	80	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	0.88	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1717	3438	1512	1719	4940	1487	1714	1810	2707	1719	1710	
Flt Permitted	0.10	1.00	1.00	0.95	1.00	1.00	0.68	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	184	3438	1512	1719	4940	1487	1227	1810	2707	1719	1710	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	900	90	270	1970	220	220	120	310	270	80	40
RTOR Reduction (vph)	0	0	51	0	0	74	0	0	243	0	2	0
Lane Group Flow (vph)	20	900	39	270	1970	146	220	120	67	270	118	0
Confl. Peds. (#/hr)	12		3	3		12	3					3
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		6		5	2			4		3	8	
Permitted Phases	6		6			2	4		4			
Actuated Green, G (s)	39.3	39.3	39.3	24.1	67.4	67.4	28.8	28.8	28.8	24.1	56.9	
Effective Green, g (s)	39.3	39.3	39.3	24.1	67.4	67.4	28.8	28.8	28.8	24.1	56.9	
Actuated g/C Ratio	0.30	0.30	0.30	0.18	0.51	0.51	0.22	0.22	0.22	0.18	0.43	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	54	1021	449	313	2516	757	267	394	589	313	735	
v/s Ratio Prot		c0.26		c0.16	0.40			0.07		c0.16	0.07	
v/s Ratio Perm	0.11		0.03			0.10	c0.18		0.02			
v/c Ratio	0.37	0.88	0.09	0.86	0.78	0.19	0.82	0.30	0.11	0.86	0.16	
Uniform Delay, d1	36.7	44.3	33.5	52.5	26.5	17.7	49.3	43.4	41.5	52.5	23.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.2	9.1	0.1	20.9	1.7	0.1	18.3	0.4	0.1	20.9	0.1	
Delay (s)	41.0	53.3	33.6	73.4	28.1	17.8	67.6	43.8	41.6	73.4	23.2	
Level of Service	D	D	C	E	C	B	E	D	D	E	C	
Approach Delay (s)		51.3			32.2			50.8			58.0	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	132.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	1750	10	180	1110	460	30	140	330	150	120	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.92	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		4965		1736	4988	1531	1736	4331	1335	1736	3471	1553
Flt Permitted		0.71		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3541		1736	4988	1531	1736	4331	1335	1736	3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	1750	10	180	1110	460	30	140	330	150	120	60
RTOR Reduction (vph)	0	0	0	0	0	126	0	121	121	0	0	52
Lane Group Flow (vph)	0	1900	0	180	1110	334	30	184	44	150	120	8
Confl. Peds. (#/hr)	2					2						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		77.8		9.0	90.8	90.8	3.6	13.2	13.2	7.0	16.6	16.6
Effective Green, g (s)		77.8		9.0	90.8	90.8	3.6	13.2	13.2	7.0	16.6	16.6
Actuated g/C Ratio		0.62		0.07	0.73	0.73	0.03	0.11	0.11	0.06	0.13	0.13
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		2203		124	3623	1112	49	457	140	97	460	206
v/s Ratio Prot				c0.10	0.22		0.02	c0.04		c0.09	c0.03	
v/s Ratio Perm		c0.54				0.22			0.03			0.01
v/c Ratio		0.86		1.45	0.31	0.30	0.61	0.40	0.32	1.55	0.26	0.04
Uniform Delay, d1		19.2		58.0	6.0	6.0	60.0	52.2	51.7	59.0	48.7	47.2
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		4.8		242.4	0.2	0.7	20.5	0.6	1.3	290.4	0.3	0.1
Delay (s)		24.0		300.4	6.2	6.7	80.6	52.8	53.0	349.4	49.0	47.3
Level of Service		C		F	A	A	F	D	D	F	D	D
Approach Delay (s)		24.0			36.6			54.5			185.2	
Approach LOS		C			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	44.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	940	1500	340	1550	890	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.91		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3213		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3213		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	940	1500	340	1550	890	330
RTOR Reduction (vph)	402	0	0	0	0	0
Lane Group Flow (vph)	2038	0	340	1550	890	330
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		11.0	38.0	14.0	60.0
Effective Green, g (s)	23.0		11.0	38.0	14.0	60.0
Actuated g/C Ratio	0.38		0.18	0.63	0.23	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1231		324	2241	801	1583
v/s Ratio Prot	c0.63		c0.19	0.44	c0.26	
v/s Ratio Perm						0.21
v/c Ratio	1.66		1.05	0.69	1.11	0.21
Uniform Delay, d1	18.5		24.5	7.2	23.0	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	298.6		63.5	0.9	66.8	0.3
Delay (s)	317.1		88.0	8.1	89.8	0.3
Level of Service	F		F	A	F	A
Approach Delay (s)	317.1			22.5	65.6	
Approach LOS	F			C	E	

Intersection Summary			
HCM 2000 Control Delay	161.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	128.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1140	130	140	1210	640	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1140	130	140	1210	640	140
RTOR Reduction (vph)	0	73	0	0	0	99
Lane Group Flow (vph)	1140	57	140	1210	640	41
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	29.8	29.8	6.4	40.2	19.7	19.7
Effective Green, g (s)	29.8	29.8	6.4	40.2	19.7	19.7
Actuated g/C Ratio	0.44	0.44	0.09	0.59	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1553	694	323	2095	996	459
v/s Ratio Prot	c0.32		0.04	c0.34	c0.19	
v/s Ratio Perm		0.04				0.03
v/c Ratio	0.73	0.08	0.43	0.58	0.64	0.09
Uniform Delay, d1	15.8	11.1	29.0	8.6	21.0	17.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	0.1	0.9	0.4	1.4	0.1
Delay (s)	17.6	11.1	30.0	9.0	22.5	17.6
Level of Service	B	B	C	A	C	B
Approach Delay (s)	16.9			11.2	21.6	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	67.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	30	140	40	20	150	90	1270	30	80	1550	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1661	1749	1568	1752	3003		3400	3492		1752	3501	
Flt Permitted	0.64	0.99	1.00	0.74	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1127	1736	1568	1357	3003		3400	3492		1752	3501	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	30	140	40	20	150	90	1270	30	80	1550	10
RTOR Reduction (vph)	0	0	111	0	119	0	0	1	0	0	1	0
Lane Group Flow (vph)	9	31	29	40	51	0	90	1299	0	80	1559	0
Confl. Peds. (#/hr)	5											
Confl. Bikes (#/hr)						2			5			6
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.2	10.2	10.2	10.2	10.2		4.6	22.7		4.2	22.3	
Effective Green, g (s)	10.2	10.2	10.2	10.2	10.2		4.6	22.7		4.2	22.3	
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.09	0.47		0.09	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	236	364	329	284	630		321	1631		151	1606	
v/s Ratio Prot					0.02		0.03	0.37		c0.05	c0.45	
v/s Ratio Perm	0.01	0.02	0.02	c0.03								
v/c Ratio	0.04	0.09	0.09	0.14	0.08		0.28	0.80		0.53	0.97	
Uniform Delay, d1	15.3	15.4	15.5	15.6	15.4		20.5	11.0		21.3	12.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2	0.2	0.4	0.1		0.2	2.6		1.5	16.0	
Delay (s)	15.4	15.6	15.7	16.1	15.5		20.6	13.6		22.8	28.8	
Level of Service	B	B	B	B	B		C	B		C	C	
Approach Delay (s)		15.6			15.6			14.0			28.5	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	48.6	Sum of lost time (s)	11.5
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	0	0	0	10	330	1170	620	10	220	680	200	620
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91			0.97	0.95	1.00	0.97
Frpb, ped/bikes					1.00	0.99			1.00	1.00	0.99	1.00
Flpb, ped/bikes					1.00	1.00			1.00	1.00	1.00	1.00
Frt					1.00	0.95			1.00	1.00	0.85	1.00
Flt Protected					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (prot)					1752	4745			3400	3505	1546	3400
Flt Permitted					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (perm)					1752	4745			3400	3505	1546	3400
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	10	330	1170	620	10	220	680	200	620
RTOR Reduction (vph)	0	0	0	0	0	95	0	0	0	0	134	0
Lane Group Flow (vph)	0	0	0	0	340	1695	0	0	230	680	66	620
Confl. Peds. (#/hr)							3					
Confl. Bikes (#/hr)							3				3	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm	Perm	NA		Prot	Prot	NA	Perm	Prot
Protected Phases						8		5	5	2		1
Permitted Phases				8	8						2	
Actuated Green, G (s)					39.0	39.0			12.0	33.0	33.0	16.0
Effective Green, g (s)					39.0	39.0			12.0	33.0	33.0	16.0
Actuated g/C Ratio					0.39	0.39			0.12	0.33	0.33	0.16
Clearance Time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					683	1850			408	1156	510	544
v/s Ratio Prot						c0.36			0.07	0.19		c0.18
v/s Ratio Perm					0.19						0.04	
v/c Ratio					0.50	0.92			0.56	0.59	0.13	1.14
Uniform Delay, d1					23.1	28.9			41.5	27.9	23.4	42.0
Progression Factor					1.00	1.00			0.77	1.31	4.49	1.00
Incremental Delay, d2					0.6	7.6			1.6	1.9	0.5	83.3
Delay (s)					23.7	36.5			33.7	38.4	105.8	125.3
Level of Service					C	D			C	D	F	F
Approach Delay (s)		0.0				34.5				49.6		
Approach LOS		A				C				D		

Intersection Summary			
HCM 2000 Control Delay	47.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	930	200
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.98
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3505	1543
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3505	1543
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	930	200
RTOR Reduction (vph)	0	41
Lane Group Flow (vph)	930	159
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		6
Heavy Vehicles (%)	3%	3%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	37.0	37.0
Effective Green, g (s)	37.0	37.0
Actuated g/C Ratio	0.37	0.37
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1296	570
v/s Ratio Prot	c0.27	
v/s Ratio Perm		0.10
v/c Ratio	0.72	0.28
Uniform Delay, d1	27.0	22.1
Progression Factor	1.00	1.00
Incremental Delay, d2	3.4	1.2
Delay (s)	30.5	23.3
Level of Service	C	C
Approach Delay (s)	63.2	
Approach LOS	E	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	250	410	220	0	90	0	850	200	30	1240	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.97		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	5036	1568	3400		1518		3505	1539	1752	3505	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	5036	1568	3400		1518		3505	1539	1752	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	250	410	220	0	90	0	850	200	30	1240	0
RTOR Reduction (vph)	0	0	74	0	0	79	0	0	114	0	0	0
Lane Group Flow (vph)	170	250	336	220	0	11	0	850	86	30	1240	0
Confl. Peds. (#/hr)						8			3	3		
Confl. Bikes (#/hr)									6			5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	24.2	24.2	24.2	11.8		11.8		43.1	43.1	4.9	52.0	
Effective Green, g (s)	24.2	24.2	24.2	11.8		11.8		43.1	43.1	4.9	52.0	
Actuated g/C Ratio	0.24	0.24	0.24	0.12		0.12		0.43	0.43	0.05	0.52	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	423	1218	379	401		179		1510	663	85	1822	
v/s Ratio Prot	0.10	0.05		c0.06				0.24		0.02	c0.35	
v/s Ratio Perm			c0.21			0.01			0.06			
v/c Ratio	0.40	0.21	0.89	0.55		0.06		0.56	0.13	0.35	0.68	
Uniform Delay, d1	31.8	30.2	36.6	41.6		39.2		21.4	17.1	46.0	17.8	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.75	0.73	
Incremental Delay, d2	0.6	0.1	21.1	1.5		0.1		1.5	0.4	1.9	1.6	
Delay (s)	32.5	30.3	57.7	43.1		39.3		22.9	17.6	36.2	14.6	
Level of Service	C	C	E	D		D		C	B	D	B	
Approach Delay (s)		44.3			42.0			21.9			15.2	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	110	50	360	120	560	40	430	330	750	1150	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1504	2851		3242	1759	1495	1671	4803	1483	3335	3399	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1504	2851		3242	1759	1495	1671	4803	1483	3335	3399	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	110	50	360	120	560	40	430	330	750	1150	80
RTOR Reduction (vph)	0	44	0	0	0	152	0	0	172	0	3	0
Lane Group Flow (vph)	100	116	0	360	120	408	40	430	158	750	1227	0
Confl. Peds. (#/hr)			2	2			3		2	2		3
Confl. Bikes (#/hr)			3									2
Heavy Vehicles (%)	20%	20%	20%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	9.1	10.3		13.8	15.0	31.3	4.6	25.1	38.9	16.3	36.8	
Effective Green, g (s)	9.1	10.3		13.8	15.0	31.3	4.6	25.1	38.9	16.3	36.8	
Actuated g/C Ratio	0.11	0.13		0.17	0.18	0.38	0.06	0.31	0.48	0.20	0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	167	360		548	323	647	94	1479	780	667	1534	
v/s Ratio Prot	0.07	0.04		c0.11	0.07	c0.13	0.02	c0.09	0.03	c0.22	c0.36	
v/s Ratio Perm						0.15			0.07			
v/c Ratio	0.60	0.32		0.66	0.37	0.63	0.43	0.29	0.20	1.12	0.80	
Uniform Delay, d1	34.5	32.4		31.6	29.1	20.4	37.2	21.4	12.3	32.6	19.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	5.7	0.5		2.8	0.7	2.0	3.1	0.1	0.1	74.4	3.0	
Delay (s)	40.1	32.9		34.5	29.8	22.4	40.3	21.5	12.4	107.0	22.2	
Level of Service	D	C		C	C	C	D	C	B	F	C	
Approach Delay (s)		35.7			27.5			18.7			54.3	
Approach LOS		D			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	39.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	81.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	460	20	20	670	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1852			1860	1695	
Flt Permitted	1.00			0.87	0.98	
Satd. Flow (perm)	1852			1619	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	460	20	20	670	20	20
RTOR Reduction (vph)	2	0	0	0	17	0
Lane Group Flow (vph)	478	0	0	690	23	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	25.0			25.0	11.8	
Effective Green, g (s)	25.0			25.0	11.8	
Actuated g/C Ratio	0.33			0.33	0.16	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	618			541	267	
v/s Ratio Prot	0.26				c0.01	
v/s Ratio Perm				c0.43		
v/c Ratio	0.77			1.28	0.09	
Uniform Delay, d1	22.4			24.9	26.9	
Progression Factor	1.00			1.12	1.00	
Incremental Delay, d2	5.5			125.3	0.1	
Delay (s)	27.8			153.1	26.9	
Level of Service	C			F	C	
Approach Delay (s)	27.8			153.1	26.9	
Approach LOS	C			F	C	

Intersection Summary			
HCM 2000 Control Delay	99.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	250	10	0	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1853			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1853			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	250	10	0	110
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	260	0	0	110
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.1		21.1			21.1
Effective Green, g (s)	1.1		21.1			21.1
Actuated g/C Ratio	0.01		0.26			0.26
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	24		486			489
v/s Ratio Prot	c0.01		c0.14			0.06
v/s Ratio Perm						
v/c Ratio	0.42		0.53			0.22
Uniform Delay, d1	39.3		25.4			23.2
Progression Factor	1.00		1.00			0.88
Incremental Delay, d2	11.3		1.1			0.1
Delay (s)	50.6		26.5			20.4
Level of Service	D		C			C
Approach Delay (s)	50.6		26.5			20.4
Approach LOS	D		C			C

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix L

LOS Calculation Worksheets
2035 Plus Coliseum Site Conditions

FEHR PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	240	30	50	40	20	30	20	540	50	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	240	30	50	40	20	30	20	540	50	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	320	90	610
Volume Left (vph)	240	40	20
Volume Right (vph)	50	30	50
Hadj (s)	0.09	-0.08	-0.01
Departure Headway (s)	5.9	6.1	5.1
Degree Utilization, x	0.52	0.15	0.87
Capacity (veh/h)	587	549	692
Control Delay (s)	15.1	10.3	32.3
Approach Delay (s)	15.1	10.3	32.3
Approach LOS	C	B	D

Intersection Summary				
Delay	25.0			
Level of Service	C			
Intersection Capacity Utilization	63.9%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	20	30	870	20	10	80
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	30	870	20	10	80
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	982	885			892	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	982	885			892	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	91			99	
cM capacity (veh/h)	272	343			759	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	50	890	90
Volume Left	20	0	10
Volume Right	30	20	0
cSH	310	1700	759
Volume to Capacity	0.16	0.52	0.01
Queue Length 95th (ft)	14	0	1
Control Delay (s)	18.8	0.0	1.2
Lane LOS	C		A
Approach Delay (s)	18.8	0.0	1.2
Approach LOS	C		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	110	200	50	20	810	20	0	0	10	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	0	110	200	50	20	810	20	0	0	10	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1690	1655	15	1765	1660	10	20			20		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1690	1655	15	1765	1660	10	20			20		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	0	100	90	0	0	98	49			100		
cM capacity (veh/h)	0	49	1064	29	45	1075	1595			1609		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1
Volume Total	120	200	70	810	10	10	20
Volume Left	10	200	0	810	0	0	0
Volume Right	110	0	20	0	0	0	10
cSH	0	29	62	1595	1700	1700	1700
Volume to Capacity	Err	6.98	1.14	0.51	0.01	0.01	0.01
Queue Length 95th (ft)	Err	Err	142	75	0	0	0
Control Delay (s)	Err	Err	270.2	9.6	0.0	0.0	0.0
Lane LOS	F	F	F	A			
Approach Delay (s)	Err	7476.7		9.3			0.0
Approach LOS	F	F					

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	76.0%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	660	380	40	0	0	0	40	170	50	90	30	200
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	660	380	40	0	0	0	40	170	50	90	30	200

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	850	230	260	90	230
Volume Left (vph)	660	0	40	90	0
Volume Right (vph)	0	40	50	0	200
Hadj (s)	0.42	-0.11	-0.06	0.52	-0.58
Departure Headway (s)	6.7	6.2	6.9	7.7	6.6
Degree Utilization, x	1.0	0.40	0.50	0.19	0.42
Capacity (veh/h)	542	571	515	458	537
Control Delay (s)	292.3	12.0	16.6	11.3	13.1
Approach Delay (s)	232.6		16.6	12.6	
Approach LOS	F		C	B	

Intersection Summary				
Delay	156.4			
Level of Service	F			
Intersection Capacity Utilization	75.0%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1010	50	10	230	0	30	0	30	40	50	700
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1010	50	10	230	0	30	0	30	40	50	700
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	230			1063			2013	1288	533	785	1313	230
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	230			1063			2013	1288	533	785	1313	230
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			98			0	100	94	85	67	8
cM capacity (veh/h)	1350			661			2	163	495	261	153	760

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	673	387	10	230	60	90	700
Volume Left	0	0	10	0	30	40	0
Volume Right	0	50	0	0	30	0	700
cSH	1700	1700	661	1700	4	187	760
Volume to Capacity	0.40	0.23	0.02	0.14	14.61	0.48	0.92
Queue Length 95th (ft)	0	0	1	0	Err	58	322
Control Delay (s)	0.0	0.0	10.5	0.0	Err	40.8	39.7
Lane LOS			B		F	E	E
Approach Delay (s)	0.0		0.4		Err	39.8	
Approach LOS					F	E	

Intersection Summary				
Average Delay	293.7			
Intersection Capacity Utilization	69.0%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	600	40	150	30	20	70	280	390	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			5.0	5.0	4.0	4.0	3.5			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.88			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1752	1514			1783	1568	1752	1863	1383			
Flt Permitted	0.95	1.00			0.71	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1752	1514			1304	1568	1752	1863	1383			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	600	40	150	30	20	70	280	390	20	0	0	0
RTOR Reduction (vph)	0	61	0	0	0	62	0	0	14	0	0	0
Lane Group Flow (vph)	600	129	0	0	50	8	280	390	6	0	0	0
Confl. Peds. (#/hr)			6	6								
Confl. Bikes (#/hr)			2						3			
Heavy Vehicles (%)	3%	0%	10%	5%	0%	3%	3%	2%	14%	2%	2%	2%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	27.1	38.2			7.6	7.6	18.4	18.4	18.4			
Effective Green, g (s)	26.1	38.2			7.1	7.1	17.9	17.9	18.4			
Actuated g/C Ratio	0.41	0.60			0.11	0.11	0.28	0.28	0.29			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	713	902			144	173	489	520	396			
v/s Ratio Prot	c0.34	0.09						c0.21				
v/s Ratio Perm					c0.04	0.00	0.16		0.00			
v/c Ratio	0.84	0.14			0.35	0.04	0.57	0.75	0.01			
Uniform Delay, d1	17.1	5.7			26.4	25.5	19.8	21.1	16.4			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	8.9	0.1			0.5	0.0	1.0	5.4	0.0			
Delay (s)	26.0	5.8			26.9	25.5	20.8	26.4	16.4			
Level of Service	C	A			C	C	C	C	B			
Approach Delay (s)		21.2			26.1			23.9			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	64.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	750	10	0	300	0	10	0	0	40	0	650
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			1.00			1.00	0.85
Flt Protected		1.00			1.00			0.95			0.95	1.00
Satd. Flow (prot)		1824			1863			1805			1656	1562
Flt Permitted		1.00			1.00			0.95			0.95	1.00
Satd. Flow (perm)		1824			1863			1805			1656	1562
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	750	10	0	300	0	10	0	0	40	0	650
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	514
Lane Group Flow (vph)	0	760	0	0	300	0	0	10	0	0	40	136
Confl. Peds. (#/hr)			5	5								2
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	0%	4%	0%	0%	2%	0%	0%	0%	2%	9%	0%	1%
Turn Type		NA			NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		30.7			30.7			2.0			9.5	9.5
Effective Green, g (s)		30.7			30.7			2.0			9.5	9.5
Actuated g/C Ratio		0.57			0.57			0.04			0.18	0.18
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		1033			1055			66			290	273
v/s Ratio Prot		c0.42			0.16			c0.01			0.02	
v/s Ratio Perm												c0.09
v/c Ratio		0.74			0.28			0.15			0.14	0.50
Uniform Delay, d1		8.7			6.1			25.3			18.9	20.2
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.9			0.2			1.1			0.1	0.5
Delay (s)		11.7			6.3			26.3			19.0	20.7
Level of Service		B			A			C			B	C
Approach Delay (s)		11.7			6.3			26.3			20.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	110	240	630	220	0	80	0	840	160	850	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.98	1.00	1.00		1.00		1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		1.00	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1900	1571	3433	1881		1736		2760		3488	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1900	1571	3433	1881		1736		2760		3488	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	110	240	630	220	0	80	0	840	160	850	30
RTOR Reduction (vph)	0	0	171	0	0	0	0	0	511	0	2	0
Lane Group Flow (vph)	0	110	69	630	220	0	80	0	329	0	1038	0
Confl. Peds. (#/hr)	3		2			3						5
Heavy Vehicles (%)	0%	0%	1%	2%	1%	0%	4%	0%	2%	2%	2%	7%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		11.9	11.9	36.0	52.9		7.0		48.0		46.1	
Effective Green, g (s)		11.9	11.9	36.0	52.9		6.0		47.0		46.1	
Actuated g/C Ratio		0.10	0.10	0.30	0.44		0.05		0.39		0.38	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		188	155	1029	829		86		1081		1339	
v/s Ratio Prot		c0.06		c0.18	0.12		c0.05		0.12		c0.30	
v/s Ratio Perm			0.04									
v/c Ratio		0.59	0.44	0.61	0.27		0.93		0.30		0.77	
Uniform Delay, d1		51.7	50.9	36.0	21.2		56.8		25.2		32.4	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		3.0	0.7	2.7	0.8		73.2		0.1		2.6	
Delay (s)		54.7	51.7	38.7	22.0		130.0		25.3		35.0	
Level of Service		D	D	D	C		F		C		D	
Approach Delay (s)		52.6			34.4			34.4			35.0	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	560	550	0	0	430	180	420	10	380	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3433	1827			1845	1549		1794	1542			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3433	1827			1845	1549		1794	1542			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	560	550	0	0	430	180	420	10	380	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	106	0	0	161	0	0	0
Lane Group Flow (vph)	560	550	0	0	430	74	0	430	219	0	0	0
Confl. Peds. (#/hr)			12			8			3			
Heavy Vehicles (%)	2%	4%	0%	0%	3%	2%	1%	0%	2%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	22.1	51.6			25.0	25.0		39.4	39.4			
Effective Green, g (s)	22.1	51.6			25.0	25.0		39.4	39.4			
Actuated g/C Ratio	0.22	0.52			0.25	0.25		0.39	0.39			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	758	942			461	387		706	607			
v/s Ratio Prot	c0.16	0.30			c0.23							
v/s Ratio Perm						0.05		0.24	0.14			
v/c Ratio	0.74	0.58			0.93	0.19		0.61	0.36			
Uniform Delay, d1	36.3	16.8			36.7	29.5		24.2	21.4			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	4.6	1.4			26.7	0.5		3.9	1.7			
Delay (s)	40.9	18.2			63.4	30.0		28.0	23.1			
Level of Service	D	B			E	C		C	C			
Approach Delay (s)		29.6			53.6			25.7			0.0	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	920	520	370	1350
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	920	520	370	1350
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.78					
vC, conflicting volume	2595	720			920	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2483	720			920	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			50	
cM capacity (veh/h)	10	375			744	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	613	827	370	675	675
Volume Left	0	0	370	0	0
Volume Right	0	520	0	0	0
cSH	1700	1700	744	1700	1700
Volume to Capacity	0.36	0.49	0.50	0.40	0.40
Queue Length 95th (ft)	0	0	70	0	0
Control Delay (s)	0.0	0.0	14.5	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		3.1		
Approach LOS					

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	69.3%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	530	70	10	230	640	160	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.93	
Flt Protected	1.00	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3539	1583		1770	3539	1671	
Flt Permitted	1.00	1.00		0.34	1.00	0.98	
Satd. Flow (perm)	3539	1583		635	3539	1671	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	530	70	10	230	640	160	190
RTOR Reduction (vph)	0	13	0	0	0	47	0
Lane Group Flow (vph)	530	57	0	240	640	303	0
Confl. Peds. (#/hr)							9
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	14.9	35.6		27.8	27.8	15.2	
Effective Green, g (s)	14.9	35.6		27.8	27.8	15.2	
Actuated g/C Ratio	0.28	0.67		0.52	0.52	0.29	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	994	1063		545	1856	479	
v/s Ratio Prot	c0.15	0.04		c0.08	0.18	c0.18	
v/s Ratio Perm				0.15			
v/c Ratio	0.53	0.05		0.44	0.34	0.63	
Uniform Delay, d1	16.1	3.0		7.2	7.3	16.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.0		0.6	0.1	2.7	
Delay (s)	16.7	3.0		7.8	7.4	19.2	
Level of Service	B	A		A	A	B	
Approach Delay (s)	15.1				7.5	19.2	
Approach LOS	B				A	B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	53.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	350	20	110	390	300	20	240	80	170	340	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.99			1.00	0.85		0.96		1.00	0.95	
Flt Protected		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1825			3501	1583		3338		1770	1742	
Flt Permitted		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1825			3501	1583		3338		1770	1742	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	350	20	110	390	300	20	240	80	170	340	190
RTOR Reduction (vph)	0	1	0	0	0	104	0	26	0	0	17	0
Lane Group Flow (vph)	0	479	0	0	500	196	0	314	0	170	513	0
Confl. Peds. (#/hr)	20		21	21		20	12		41	41		12
Confl. Bikes (#/hr)			2			2						
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		31.1			18.5	35.1		15.4		35.1	35.1	
Effective Green, g (s)		31.1			18.5	35.1		15.4		35.1	35.1	
Actuated g/C Ratio		0.28			0.17	0.31		0.14		0.31	0.31	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		506			577	495		458		554	545	
v/s Ratio Prot		c0.26			c0.14	0.12		c0.09		0.10	c0.29	
v/s Ratio Perm												
v/c Ratio		0.95			0.87	0.40		0.69		0.31	0.94	
Uniform Delay, d1		39.7			45.6	30.2		46.0		29.3	37.5	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		26.8			12.9	0.5		4.2		0.3	24.7	
Delay (s)		66.4			58.5	30.7		50.3		29.6	62.2	
Level of Service		E			E	C		D		C	E	
Approach Delay (s)		66.4			48.1			50.3			54.2	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	54.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	112.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	460	90	40	580	50	180	480	50	90	570	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			0.99			1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1687	1845	1576	1719	1841			3423			3384	1429
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1687	1845	1576	1719	1841			3423			3384	1429
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	460	90	40	580	50	180	480	50	90	570	150
RTOR Reduction (vph)	0	0	57	0	2	0	0	4	0	0	0	0
Lane Group Flow (vph)	160	460	33	40	628	0	0	706	0	0	660	150
Confl. Peds. (#/hr)			5						15			48
Confl. Bikes (#/hr)						3			2			2
Heavy Vehicles (%)	7%	3%	0%	5%	2%	0%	3%	2%	4%	12%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	16.4	52.3	52.3	18.7	54.6			32.1			30.7	153.3
Effective Green, g (s)	16.4	53.8	53.8	18.7	56.1			33.1			31.7	153.3
Actuated g/C Ratio	0.11	0.35	0.35	0.12	0.37			0.22			0.21	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	180	647	553	209	673			739			699	1429
v/s Ratio Prot	c0.09	0.25		0.02	c0.34			c0.21			c0.20	
v/s Ratio Perm			0.02									0.10
v/c Ratio	0.89	0.71	0.06	0.19	0.93			0.96			0.94	0.10
Uniform Delay, d1	67.6	43.0	33.0	60.5	46.8			59.4			59.9	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	37.1	3.7	0.0	0.4	20.0			22.6			21.3	0.1
Delay (s)	104.7	46.7	33.0	61.0	66.8			82.0			81.2	0.1
Level of Service	F	D	C	E	E			F			F	A
Approach Delay (s)		58.0			66.4			82.0			66.2	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	68.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	153.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	470	20	50	810	390	10	50	20	200	40	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			0.95	
Frpb, ped/bikes		1.00			1.00			0.98			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			0.96	
Frt		0.99			0.95			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.97	
Satd. Flow (prot)		3497			3360			1747			3127	
Flt Permitted		0.93			0.92			0.94			0.82	
Satd. Flow (perm)		3260			3090			1645			2657	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	470	20	50	810	390	10	50	20	200	40	90
RTOR Reduction (vph)	0	4	0	0	64	0	0	16	0	0	65	0
Lane Group Flow (vph)	0	496	0	0	1186	0	0	64	0	0	265	0
Confl. Peds. (#/hr)			122	122			32		60	60		32
Confl. Bikes (#/hr)			9						2			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)		45.2			45.2			11.8			11.8	
Effective Green, g (s)		45.2			45.2			11.8			11.8	
Actuated g/C Ratio		0.70			0.70			0.18			0.18	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		2266			2148			298			482	
v/s Ratio Prot												
v/s Ratio Perm		0.15			c0.38			0.04			c0.10	
v/c Ratio		0.22			0.55			0.21			0.55	
Uniform Delay, d1		3.6			4.9			22.6			24.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			1.0			0.4			1.3	
Delay (s)		3.8			5.9			23.0			25.5	
Level of Service		A			A			C			C	
Approach Delay (s)		3.8			5.9			23.0			25.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	460	190	260	1230	170	240	640	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			1.00				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.98			0.99				
Flt Protected		1.00	1.00		0.99			0.99				
Satd. Flow (prot)		3539	1570		3453			3452				
Flt Permitted		1.00	1.00		0.77			0.99				
Satd. Flow (perm)		3539	1570		2665			3452				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	460	190	260	1230	170	240	640	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	460	190	0	1647	0	0	924	0	0	0	0
Confl. Peds. (#/hr)									33	33		
Confl. Bikes (#/hr)			3			5			18			2
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		39.0	57.5		39.0			18.5				
Effective Green, g (s)		39.0	57.5		39.0			18.5				
Actuated g/C Ratio		0.60	0.88		0.60			0.28				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		2123	1497		1599			982				
v/s Ratio Prot		0.13	0.04									
v/s Ratio Perm			0.08		c0.62			0.27				
v/c Ratio		0.22	0.13		1.03			0.94				
Uniform Delay, d1		6.0	0.5		13.0			22.7				
Progression Factor		0.76	0.58		1.00			1.00				
Incremental Delay, d2		0.1	0.0		30.5			17.5				
Delay (s)		4.6	0.3		43.5			40.2				
Level of Service		A	A		D			D				
Approach Delay (s)		3.3			43.5			40.2			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	260	100	50	610	140	60	560	30	30	400	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.98			0.98			0.99			0.93	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.97			0.98			0.99			0.95	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1750			1770			3441			3122	
Flt Permitted		0.79			0.95			0.74			0.85	
Satd. Flow (perm)		1394			1690			2547			2661	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	260	100	50	610	140	60	560	30	30	400	190
RTOR Reduction (vph)	0	16	0	0	10	0	0	4	0	0	67	0
Lane Group Flow (vph)	0	424	0	0	790	0	0	646	0	0	553	0
Confl. Peds. (#/hr)	95		60	60		95	81		83	83		81
Confl. Bikes (#/hr)			5			26			6			11
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		45.8			36.8			19.9			19.9	
Effective Green, g (s)		41.8			36.8			19.9			19.9	
Actuated g/C Ratio		0.56			0.49			0.27			0.27	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		780			832			678			708	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			c0.47			c0.25			0.21	
v/c Ratio		0.54			0.95			0.95			0.78	
Uniform Delay, d1		10.4			18.1			26.9			25.4	
Progression Factor		0.25			1.00			1.00			1.00	
Incremental Delay, d2		0.4			19.5			24.6			8.4	
Delay (s)		3.0			37.6			51.6			33.8	
Level of Service		A			D			D			C	
Approach Delay (s)		3.0			37.6			51.6			33.8	
Approach LOS		A			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	530	140	90	620	80	170	800	130	60	510	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.91			0.94		1.00	0.95		1.00	0.97	
Flpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.97			0.99		1.00	0.98		1.00	0.98	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3131			1704		1770	1739		1770	1776	
Flt Permitted		0.92			0.73		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2886			1253		1770	1739		1770	1776	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	530	140	90	620	80	170	800	130	60	510	60
RTOR Reduction (vph)	0	23	0	0	4	0	0	6	0	0	4	0
Lane Group Flow (vph)	0	667	0	0	786	0	170	924	0	60	566	0
Confl. Peds. (#/hr)	215		132	132		215			234			90
Confl. Bikes (#/hr)			2									
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		42.1			42.1		10.9	38.4		4.0	31.5	
Effective Green, g (s)		42.1			42.1		10.9	38.4		4.0	31.5	
Actuated g/C Ratio		0.42			0.42		0.11	0.38		0.04	0.32	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1215			527		192	667		70	559	
v/s Ratio Prot							c0.10	c0.53		0.03	0.32	
v/s Ratio Perm		0.23			c0.63							
v/c Ratio		0.55			1.49		0.89	1.39		0.86	1.01	
Uniform Delay, d1		21.8			28.9		43.9	30.8		47.7	34.2	
Progression Factor		1.00			1.00		1.05	0.96		1.00	1.00	
Incremental Delay, d2		1.8			231.0		4.7	174.6		58.8	41.2	
Delay (s)		23.6			260.0		50.9	204.1		106.5	75.4	
Level of Service		C			F		D	F		F	E	
Approach Delay (s)		23.6			260.0			180.4			78.4	
Approach LOS		C			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	146.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	137.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	80	680	870	140	340	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.98		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1770	1863	1795		1692	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1770	1863	1795		1692	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	680	870	140	340	200
RTOR Reduction (vph)	0	0	4	0	21	0
Lane Group Flow (vph)	80	680	1006	0	519	0
Confl. Peds. (#/hr)	101			101		
Confl. Bikes (#/hr)				21		14
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	5.2	61.0	51.3		30.5	
Effective Green, g (s)	5.2	61.0	51.3		30.5	
Actuated g/C Ratio	0.05	0.61	0.51		0.30	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	92	1136	920		516	
v/s Ratio Prot	c0.05	0.37	c0.56		c0.31	
v/s Ratio Perm						
v/c Ratio	0.87	0.60	1.09		1.01	
Uniform Delay, d1	47.1	12.0	24.4		34.8	
Progression Factor	0.70	1.67	0.72		1.00	
Incremental Delay, d2	23.2	0.8	44.1		41.1	
Delay (s)	56.0	20.7	61.7		75.9	
Level of Service	E	C	E		E	
Approach Delay (s)		24.4	61.7		75.9	
Approach LOS		C	E		E	

Intersection Summary			
HCM 2000 Control Delay	52.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	550	170	170	610	230	90	850	120	110	720	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.97			0.97			0.98		1.00	0.99	
Flt Protected		1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1800			1790			3464		1770	3511	
Flt Permitted		0.79			0.65			0.70		0.12	1.00	
Satd. Flow (perm)		1434			1177			2426		227	3511	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	550	170	170	610	230	90	850	120	110	720	40
RTOR Reduction (vph)	0	10	0	0	11	0	0	10	0	0	4	0
Lane Group Flow (vph)	0	791	0	0	1000	0	0	1050	0	110	756	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		50.0			50.0			40.0		40.0	40.0	
Effective Green, g (s)		50.0			50.0			40.0		40.0	40.0	
Actuated g/C Ratio		0.50			0.50			0.40		0.40	0.40	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		717			588			970		90	1404	
v/s Ratio Prot											0.22	
v/s Ratio Perm		0.55			c0.85			0.43		c0.48		
v/c Ratio		1.10			1.70			1.08		1.22	0.54	
Uniform Delay, d1		25.0			25.0			30.0		30.0	22.9	
Progression Factor		1.00			1.00			1.00		0.64	0.58	
Incremental Delay, d2		65.2			322.2			54.0		148.8	0.3	
Delay (s)		90.2			347.2			84.0		168.2	13.6	
Level of Service		F			F			F		F	B	
Approach Delay (s)		90.2			347.2			84.0			33.1	
Approach LOS		F			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	144.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	151.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	140	60	90	300	110	50	780	90	60	920	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99		0.89	1.00		0.99	1.00		0.98	1.00	
Frt		0.97		1.00	0.96		1.00	0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1676		1573	1718		1746	1815		1740	1830	
Flt Permitted		0.60		0.51	1.00		0.10	1.00		0.18	1.00	
Satd. Flow (perm)		1015		837	1718		188	1815		321	1830	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	140	60	90	300	110	50	780	90	60	920	70
RTOR Reduction (vph)	0	18	0	0	21	0	0	7	0	0	4	0
Lane Group Flow (vph)	0	222	0	90	389	0	50	863	0	60	986	0
Confl. Peds. (#/hr)	57		102	102		57	98		92	92		98
Confl. Bikes (#/hr)			6			15			14			9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		265		218	449		115	1116		197	1126	
v/s Ratio Prot					c0.23			0.48			c0.54	
v/s Ratio Perm		0.22		0.11			0.27			0.19		
v/c Ratio		0.84		0.41	0.87		0.43	0.77		0.30	0.88	
Uniform Delay, d1		22.7		19.9	22.9		6.6	9.2		5.9	10.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		25.7		1.3	16.0		11.5	5.2		4.0	9.6	
Delay (s)		48.4		21.1	38.9		18.1	14.4		9.9	20.0	
Level of Service		D		C	D		B	B		A	C	
Approach Delay (s)		48.4			35.7			14.6			19.4	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	210	60	20	340	90	240	530	30	70	520	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98			0.95		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1763			3256		1770	1845		1770	1863	1536
Flt Permitted	0.95	1.00			0.93		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1763			3047		1770	1845		1770	1863	1536
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	330	210	60	20	340	90	240	530	30	70	520	580
RTOR Reduction (vph)	0	12	0	0	26	0	0	2	0	0	0	299
Lane Group Flow (vph)	330	258	0	0	424	0	240	558	0	70	520	281
Confl. Peds. (#/hr)	101		63	63		101	14		12	12		14
Confl. Bikes (#/hr)			15			12			2			6
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	15.5	41.5			21.0		7.0	28.3		4.0	27.3	27.3
Effective Green, g (s)	15.5	41.5			21.0		7.0	28.3		4.0	27.3	27.3
Actuated g/C Ratio	0.18	0.48			0.24		0.08	0.33		0.05	0.32	0.32
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	319	852			745		144	608		82	592	488
v/s Ratio Prot	c0.19	0.15					c0.14	c0.30		0.04	0.28	
v/s Ratio Perm					c0.14							0.18
v/c Ratio	1.03	0.30			0.57		1.67	0.92		0.85	0.88	0.58
Uniform Delay, d1	35.1	13.4			28.4		39.4	27.6		40.6	27.7	24.4
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	59.6	0.9			3.1		328.5	21.1		52.2	16.8	4.9
Delay (s)	94.7	14.3			31.6		367.9	48.7		92.8	44.5	29.3
Level of Service	F	B			C		F	D		F	D	C
Approach Delay (s)		58.5			31.6			144.5			39.8	
Approach LOS		E			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	70.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	17.0
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	330	60	80	790	40	150	620	110	20	500	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		3416			3480			3399			3419	
Flt Permitted		0.58			0.85			0.73			0.90	
Satd. Flow (perm)		1997			2969			2519			3098	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	330	60	80	790	40	150	620	110	20	500	80
RTOR Reduction (vph)	0	14	0	0	4	0	0	14	0	0	15	0
Lane Group Flow (vph)	0	466	0	0	906	0	0	866	0	0	585	0
Confl. Peds. (#/hr)	77		24	24		77	17		69	69		66
Confl. Bikes (#/hr)			9			6			5			11
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		944			1002			850			1371	
v/s Ratio Prot		c0.02									c0.02	
v/s Ratio Perm		0.19			c0.31			c0.34			0.17	
v/c Ratio		0.49			0.90			1.02			0.43	
Uniform Delay, d1		16.1			25.3			26.5			15.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.8			13.0			35.7			1.0	
Delay (s)		18.0			38.3			62.2			16.5	
Level of Service		B			D			E			B	
Approach Delay (s)		18.0			38.3			62.2			16.5	
Approach LOS		B			D			E			B	

Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	30	400	120	70	520	50	10	30	460	10	50	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	4.0	4.0		
Lane Util. Factor		1.00			1.00			1.00	1.00	1.00		
Frpb, ped/bikes		0.99			1.00			1.00	1.00	0.91		
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00		
Frt		0.97			0.99			1.00	1.00	0.85		
Flt Protected		1.00			0.99			0.95	1.00	1.00		
Satd. Flow (prot)		1780			1820			1770	1863	1448		
Flt Permitted		0.95			0.91			0.21	1.00	1.00		
Satd. Flow (perm)		1700			1662			392	1863	1448		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	400	120	70	520	50	10	30	460	10	50	10
RTOR Reduction (vph)	0	14	0	0	1	0	0	0	0	42	0	0
Lane Group Flow (vph)	0	536	0	0	649	0	0	30	460	18	0	0
Confl. Peds. (#/hr)			35	35		15		20		35		
Confl. Bikes (#/hr)						6						
Turn Type	Perm	NA		Perm	NA			Perm	NA	Perm		Perm
Protected Phases		2			6				8			
Permitted Phases	2			6				8		8		4
Actuated Green, G (s)		32.0			32.0			19.0	19.0	19.0		
Effective Green, g (s)		32.0			32.0			19.0	19.0	19.0		
Actuated g/C Ratio		0.49			0.49			0.29	0.29	0.29		
Clearance Time (s)		4.0			4.0			4.0	4.0	4.0		
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0		
Lane Grp Cap (vph)		836			818			114	544	423		
v/s Ratio Prot									0.25			
v/s Ratio Perm		0.32			c0.39			0.08		0.01		
v/c Ratio		0.64			0.79			0.26	0.85	0.04		
Uniform Delay, d1		12.2			13.7			17.6	21.6	16.5		
Progression Factor		1.14			1.00			1.00	1.00	1.00		
Incremental Delay, d2		3.5			7.8			1.2	11.6	0.0		
Delay (s)		17.5			21.5			18.9	33.2	16.5		
Level of Service		B			C			B	C	B		
Approach Delay (s)		17.5			21.5				30.6			
Approach LOS		B			C				C			

Intersection Summary			
HCM 2000 Control Delay	40.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations							
Volume (vph)	40	540	50	10	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		
Lane Util. Factor	1.00	1.00			1.00		
Frpb, ped/bikes	1.00	0.99			1.00		
Flpb, ped/bikes	0.98	1.00			1.00		
Frt	1.00	0.99			0.93		
Flt Protected	0.95	1.00			0.98		
Satd. Flow (prot)	1729	1830			1695		
Flt Permitted	0.21	1.00			1.00		
Satd. Flow (perm)	383	1830			1737		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	540	50	10	10	10	10
RTOR Reduction (vph)	0	5	0	0	0	0	0
Lane Group Flow (vph)	50	585	0	0	40	0	0
Confl. Peds. (#/hr)	35		20				
Confl. Bikes (#/hr)			3				
Turn Type	Perm	NA		Perm	Prot		
Protected Phases		4			9		
Permitted Phases	4			9			
Actuated Green, G (s)	19.0	19.0			2.0		
Effective Green, g (s)	19.0	19.0			2.0		
Actuated g/C Ratio	0.29	0.29			0.03		
Clearance Time (s)	4.0	4.0			4.0		
Vehicle Extension (s)	3.0	3.0			3.0		
Lane Grp Cap (vph)	111	534			53		
v/s Ratio Prot		c0.32					
v/s Ratio Perm	0.13				c0.02		
v/c Ratio	0.45	1.10			0.75		
Uniform Delay, d1	18.7	23.0			31.3		
Progression Factor	1.00	1.00			1.00		
Incremental Delay, d2	2.9	67.6			45.2		
Delay (s)	21.6	90.6			76.5		
Level of Service	C	F			E		
Approach Delay (s)		85.2			76.5		
Approach LOS		F			E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	290	40	140	320	30	50	450	130	10	640	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00			0.99		0.99	1.00			1.00	
Frt	1.00	0.98			0.99		1.00	0.97			0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1816			3421		1757	1768			1819	
Flt Permitted	0.44	1.00			0.70		0.28	1.00			0.99	
Satd. Flow (perm)	818	1816			2422		521	1768			1805	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	290	40	140	320	30	50	450	130	10	640	100
RTOR Reduction (vph)	0	7	0	0	7	0	0	16	0	0	8	0
Lane Group Flow (vph)	60	323	0	0	483	0	50	564	0	0	742	0
Confl. Peds. (#/hr)			27	27		39	42		56			42
Confl. Bikes (#/hr)			2			2			3			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	24.5	24.5			24.5		30.5	30.5			30.5	
Effective Green, g (s)	24.5	24.5			24.5		30.5	30.5			30.5	
Actuated g/C Ratio	0.38	0.38			0.38		0.47	0.47			0.47	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	308	684			912		244	829			846	
v/s Ratio Prot		0.18						0.32				
v/s Ratio Perm	0.07				c0.20		0.10				c0.41	
v/c Ratio	0.19	0.47			0.53		0.20	0.68			0.88	
Uniform Delay, d1	13.6	15.3			15.8		10.1	13.4			15.6	
Progression Factor	0.34	0.35			1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.6	1.1			2.2		0.4	2.2			10.1	
Delay (s)	5.3	6.5			18.0		10.5	15.7			25.7	
Level of Service	A	A			B		B	B			C	
Approach Delay (s)		6.3			18.0			15.3			25.7	
Approach LOS		A			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	460	0	0	1150	180	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.93	
Flt Protected	1.00			1.00	0.97	
Satd. Flow (prot)	3539			3539	3232	
Flt Permitted	1.00			1.00	0.97	
Satd. Flow (perm)	3539			3539	3232	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	460	0	0	1150	180	160
RTOR Reduction (vph)	0	0	0	0	65	0
Lane Group Flow (vph)	460	0	0	1150	275	0
Confl. Peds. (#/hr)						2
Confl. Bikes (#/hr)						2
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	40.1			40.1	10.4	
Effective Green, g (s)	40.1			40.1	10.4	
Actuated g/C Ratio	0.67			0.67	0.17	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2365			2365	560	
v/s Ratio Prot	0.13			c0.32	c0.08	
v/s Ratio Perm						
v/c Ratio	0.19			0.49	0.49	
Uniform Delay, d1	3.8			4.9	22.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.2			0.7	0.7	
Delay (s)	4.0			5.6	23.1	
Level of Service	A			A	C	
Approach Delay (s)	4.0			5.6	23.1	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	420	0	0	1010	20	110	300	80	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			0.99				
Frt		1.00			1.00			0.98				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3523			3527			3331				
Flt Permitted		0.83			1.00			0.99				
Satd. Flow (perm)		2932			3527			3331				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	420	0	0	1010	20	110	300	80	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	460	0	0	1028	0	0	462	0	0	0	0
Confl. Peds. (#/hr)	23		11	11		23	54		66	66		54
Confl. Bikes (#/hr)						3			3			11
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		41.4			41.4			13.6				
Effective Green, g (s)		41.4			41.4			13.6				
Actuated g/C Ratio		0.64			0.64			0.21				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		1867			2246			696				
v/s Ratio Prot					c0.29							
v/s Ratio Perm		0.16						0.14				
v/c Ratio		0.25			0.46			0.66				
Uniform Delay, d1		5.1			6.0			23.6				
Progression Factor		0.93			1.00			1.00				
Incremental Delay, d2		0.3			0.7			1.9				
Delay (s)		5.0			6.7			25.4				
Level of Service		A			A			C				
Approach Delay (s)		5.0			6.7			25.4			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	440	80	70	1250	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.98		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3458		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3458		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	440	80	70	1250	0	0
RTOR Reduction (vph)	37	0	0	0	0	0
Lane Group Flow (vph)	483	0	70	1250	0	0
Confl. Peds. (#/hr)						2
Confl. Bikes (#/hr)						2
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1556		663	3539		
v/s Ratio Prot	0.14		0.04	c0.35		
v/s Ratio Perm						
v/c Ratio	0.31		0.11	0.35		
Uniform Delay, d1	7.0		8.1	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.5		0.3	0.3		
Delay (s)	7.6		8.5	0.3		
Level of Service	A		A	A		
Approach Delay (s)	7.6			0.7	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	2.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	460	150	90	1040	0	0	0	0	30	80	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		0.99			1.00						0.97	
Flpb, ped/bikes		1.00			1.00						0.98	
Frt		0.96			1.00						0.95	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		3391			3524						3183	
Flt Permitted		1.00			0.85						0.99	
Satd. Flow (perm)		3391			2999						3183	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	460	150	90	1040	0	0	0	0	30	80	50
RTOR Reduction (vph)	0	35	0	0	0	0	0	0	0	0	45	0
Lane Group Flow (vph)	0	575	0	0	1130	0	0	0	0	0	115	0
Confl. Peds. (#/hr)	9		20	20		9	50		59	59		50
Confl. Bikes (#/hr)			2			5			5			8
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		48.4			48.4						6.6	
Effective Green, g (s)		48.4			48.4						6.6	
Actuated g/C Ratio		0.74			0.74						0.10	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2524			2233						323	
v/s Ratio Prot		0.17										
v/s Ratio Perm					c0.38						0.04	
v/c Ratio		0.23			0.51						0.36	
Uniform Delay, d1		2.6			3.4						27.2	
Progression Factor		1.00			0.75						1.00	
Incremental Delay, d2		0.2			0.7						0.7	
Delay (s)		2.8			3.3						27.9	
Level of Service		A			A						C	
Approach Delay (s)		2.8			3.3			0.0			27.9	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	5.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	390	60	20	550	50	60	310	20	100	260	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		0.97	1.00		0.99	1.00	
Frt		0.98			0.99		1.00	0.99		1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1815			1832		1719	1842		1759	1806	
Flt Permitted		0.97			0.98		0.39	1.00		0.35	1.00	
Satd. Flow (perm)		1760			1800		713	1842		640	1806	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	390	60	20	550	50	60	310	20	100	260	40
RTOR Reduction (vph)	0	6	0	0	3	0	0	4	0	0	11	0
Lane Group Flow (vph)	0	464	0	0	617	0	60	326	0	100	289	0
Confl. Peds. (#/hr)	17		21	21		17	21		5	5		21
Confl. Bikes (#/hr)			3			3			3			3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		38.1			38.1		17.4	17.4		17.4	17.4	
Effective Green, g (s)		38.1			38.1		17.4	17.4		17.4	17.4	
Actuated g/C Ratio		0.59			0.59		0.27	0.27		0.27	0.27	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1031			1055		190	493		171	483	
v/s Ratio Prot								c0.18			0.16	
v/s Ratio Perm		0.26			c0.34		0.08			0.16		
v/c Ratio		0.45			0.58		0.32	0.66		0.58	0.60	
Uniform Delay, d1		7.6			8.5		19.0	21.2		20.7	20.8	
Progression Factor		1.00			1.87		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.4			1.6		1.0	3.3		5.0	2.0	
Delay (s)		9.0			17.4		20.0	24.5		25.7	22.8	
Level of Service		A			B		B	C		C	C	
Approach Delay (s)		9.0			17.4			23.8			23.5	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	290	100	200	250	20	60	330	90	20	320	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes		0.99		1.00	0.99			0.99			0.99	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.97		1.00	0.99			0.97			0.98	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1774		1770	1825			1785			1802	
Flt Permitted		1.00		0.95	1.00			0.91			0.97	
Satd. Flow (perm)		1774		1770	1825			1632			1747	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	290	100	200	250	20	60	330	90	20	320	60
RTOR Reduction (vph)	0	17	0	0	5	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	403	0	200	265	0	0	468	0	0	391	0
Confl. Peds. (#/hr)	45		12	12		45	21		38	38		21
Confl. Bikes (#/hr)			6			8			2			
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)		16.0		13.7	13.7			24.3			24.3	
Effective Green, g (s)		16.0		13.7	13.7			24.3			24.3	
Actuated g/C Ratio		0.25		0.21	0.21			0.37			0.37	
Clearance Time (s)		3.0		3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		436		373	384			610			653	
v/s Ratio Prot		c0.23		0.11	c0.15							
v/s Ratio Perm								c0.29			0.22	
v/c Ratio		0.92		0.54	0.69			0.77			0.60	
Uniform Delay, d1		23.9		22.8	23.7			17.9			16.4	
Progression Factor		1.00		0.66	0.67			1.00			1.00	
Incremental Delay, d2		25.1		1.3	4.5			9.0			4.0	
Delay (s)		49.0		16.2	20.4			26.8			20.4	
Level of Service		D		B	C			C			C	
Approach Delay (s)		49.0			18.6			26.8			20.4	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	10	190	610	150	90	740	70	240	480	150	60	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes		1.00	1.00	0.97	1.00	1.00	0.87	1.00	1.00		1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.94
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)		1770	3539	1535	1770	3539	1385	1770	3396		1770	3254
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (perm)		1770	3539	1535	1770	3539	1385	1770	3396		1770	3254
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	190	610	150	90	740	70	240	480	150	60	340
RTOR Reduction (vph)	0	0	0	93	0	0	50	0	23	0	0	54
Lane Group Flow (vph)	0	200	610	57	90	740	20	240	607	0	60	536
Confl. Peds. (#/hr)		99		15	15		99	26		6	6	
Confl. Bikes (#/hr)				3			5			2		
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA
Protected Phases	5	5	2		1	6		7	4		3	8
Permitted Phases				2			6					
Actuated Green, G (s)		18.6	42.0	42.0	8.0	31.4	31.4	21.0	34.8		7.2	21.0
Effective Green, g (s)		18.6	42.0	42.0	8.0	31.4	31.4	21.0	34.8		7.2	21.0
Actuated g/C Ratio		0.17	0.38	0.38	0.07	0.29	0.29	0.19	0.32		0.07	0.19
Clearance Time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)		299	1351	586	128	1010	395	337	1074		115	621
v/s Ratio Prot		c0.11	0.17		0.05	c0.21		c0.14	0.18		0.03	c0.16
v/s Ratio Perm				0.04			0.01					
v/c Ratio		0.67	0.45	0.10	0.70	0.73	0.05	0.71	0.57		0.52	0.86
Uniform Delay, d1		42.8	25.4	21.8	49.8	35.5	28.5	41.7	31.3		49.7	43.1
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2		4.3	0.1	0.0	13.3	4.7	0.2	5.8	0.4		2.0	11.5
Delay (s)		47.2	25.5	21.9	63.2	40.2	28.7	47.5	31.7		51.7	54.6
Level of Service		D	C	C	E	D	C	D	C		D	D
Approach Delay (s)			29.4			41.6			36.1			54.3
Approach LOS			C			D			D			D

Intersection Summary			
HCM 2000 Control Delay	39.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	250
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	250
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	26
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	250	130	50	410	70	0	750	60	0	770	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.96			0.98			0.99			0.98	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1599			1639			3150			3135	
Flt Permitted		0.80			0.93			1.00			1.00	
Satd. Flow (perm)		1287			1529			3150			3135	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	250	130	50	410	70	0	750	60	0	770	90
RTOR Reduction (vph)	0	19	0	0	8	0	0	6	0	0	8	0
Lane Group Flow (vph)	0	441	0	0	522	0	0	804	0	0	852	0
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.9			37.9			44.1			44.1	
Effective Green, g (s)		37.9			37.9			44.1			44.1	
Actuated g/C Ratio		0.42			0.42			0.49			0.49	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		541			643			1543			1536	
v/s Ratio Prot								0.26			c0.27	
v/s Ratio Perm		c0.34			0.34							
v/c Ratio		0.81			0.81			0.52			0.55	
Uniform Delay, d1		23.0			22.9			15.7			16.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		9.2			7.7			1.3			1.4	
Delay (s)		32.1			30.7			17.0			17.5	
Level of Service		C			C			B			B	
Approach Delay (s)		32.1			30.7			17.0			17.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	480	130	70	620	80	220	410	130	80	730	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.70		0.98		1.00	0.92		1.00	0.97	
Flpb, ped/bikes		1.00	1.00		0.99		1.00	1.00		0.89	1.00	
Frt		1.00	0.85		0.98		1.00	0.96		1.00	0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3510	1101		3364		1770	1654		1578	1774	
Flt Permitted		0.68	1.00		0.76		0.18	1.00		0.38	1.00	
Satd. Flow (perm)		2383	1101		2557		343	1654		632	1774	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	480	130	70	620	80	220	410	130	80	730	120
RTOR Reduction (vph)	0	0	94	0	10	0	0	10	0	0	7	0
Lane Group Flow (vph)	0	530	36	0	760	0	220	530	0	80	843	0
Confl. Peds. (#/hr)	83		140	140		83	116		257	257		116
Confl. Bikes (#/hr)			17			15			9			12
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		25.1	25.1		25.1		55.4	55.4		55.4	55.4	
Effective Green, g (s)		25.1	25.1		25.1		55.4	55.4		55.4	55.4	
Actuated g/C Ratio		0.28	0.28		0.28		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		664	307		713		211	1018		389	1091	
v/s Ratio Prot								0.32			0.48	
v/s Ratio Perm		0.22	0.03		c0.30		c0.64			0.13		
v/c Ratio		0.80	0.12		1.07		1.04	0.52		0.21	0.77	
Uniform Delay, d1		30.1	24.2		32.5		17.3	9.8		7.6	12.7	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		6.7	0.2		52.6		73.6	1.9		1.2	5.3	
Delay (s)		36.8	24.4		85.1		90.9	11.7		8.8	18.0	
Level of Service		D	C		F		F	B		A	B	
Approach Delay (s)		34.3			85.1			34.6			17.2	
Approach LOS		C			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	41.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	290	120	270	630	350	230	560	100	140	900	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3384		1770	3350		1770	3459		1770	3491	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3384		1770	3350		1770	3459		1770	3491	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	290	120	270	630	350	230	560	100	140	900	90
RTOR Reduction (vph)	0	52	0	0	76	0	0	14	0	0	8	0
Lane Group Flow (vph)	140	358	0	270	904	0	230	646	0	140	982	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	10.3	14.9		25.0	29.6		13.0	28.6		15.0	30.6	
Effective Green, g (s)	10.3	14.9		25.0	29.6		13.0	28.6		15.0	30.6	
Actuated g/C Ratio	0.10	0.15		0.25	0.30		0.13	0.29		0.15	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.5		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	182	504		442	991		230	989		265	1068	
v/s Ratio Prot	0.08	c0.11		0.15	c0.27		c0.13	0.19		0.08	c0.28	
v/s Ratio Perm												
v/c Ratio	0.77	0.71		0.61	0.91		1.00	0.65		0.53	0.92	
Uniform Delay, d1	43.7	40.5		33.2	33.9		43.5	31.3		39.2	33.5	
Progression Factor	1.00	1.00		1.00	1.00		0.93	0.64		1.00	1.00	
Incremental Delay, d2	16.0	3.9		1.8	12.5		52.1	2.6		0.9	13.9	
Delay (s)	59.7	44.4		35.0	46.5		92.6	22.7		40.1	47.5	
Level of Service	E	D		C	D		F	C		D	D	
Approach Delay (s)		48.3			44.0			40.8			46.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	480	40	70	770	280	110	450	90	140	1020	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.96		1.00	0.97		1.00	0.98	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3463			3396		1770	3451		1770	3467	
Flt Permitted		0.52			0.80		0.13	1.00		0.41	1.00	
Satd. Flow (perm)		1818			2712		249	3451		756	3467	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	480	40	70	770	280	110	450	90	140	1020	160
RTOR Reduction (vph)	0	4	0	0	32	0	0	17	0	0	13	0
Lane Group Flow (vph)	0	706	0	0	1088	0	110	523	0	140	1167	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		41.8			41.8		49.7	49.7		49.7	49.7	
Effective Green, g (s)		41.8			41.8		49.7	49.7		49.7	49.7	
Actuated g/C Ratio		0.42			0.42		0.50	0.50		0.50	0.50	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		759			1133		123	1715		375	1723	
v/s Ratio Prot								0.15			0.34	
v/s Ratio Perm		0.39			c0.40		c0.44			0.19		
v/c Ratio		2.21dl			0.96		0.89	0.30		0.37	0.68	
Uniform Delay, d1		27.7			28.3		22.8	14.9		15.5	19.1	
Progression Factor		1.00			1.00		1.00	1.00		0.44	0.48	
Incremental Delay, d2		17.9			17.9		56.6	0.5		1.7	1.3	
Delay (s)		45.6			46.2		79.3	15.4		8.5	10.4	
Level of Service		D			D		E	B		A	B	
Approach Delay (s)		45.6			46.2			26.2			10.2	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	120.6%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	180	20	200	350	90	40	450	150	60	880	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1835		1770	1806		1770	1793		1770	1842	
Flt Permitted	0.16	1.00		0.51	1.00		0.15	1.00		0.35	1.00	
Satd. Flow (perm)	290	1835		949	1806		279	1793		659	1842	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	180	20	200	350	90	40	450	150	60	880	70
RTOR Reduction (vph)	0	4	0	0	9	0	0	12	0	0	3	0
Lane Group Flow (vph)	90	196	0	200	431	0	40	588	0	60	947	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.7	25.7		25.7	25.7		65.0	65.0		65.0	65.0	
Effective Green, g (s)	25.7	25.7		25.7	25.7		65.0	65.0		65.0	65.0	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.65	0.65		0.65	0.65	
Clearance Time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	74	471		243	464		181	1165		428	1197	
v/s Ratio Prot		0.11			0.24			0.33			c0.51	
v/s Ratio Perm	c0.31			0.21			0.14			0.09		
v/c Ratio	1.22	0.42		0.82	0.93		0.22	0.50		0.14	0.79	
Uniform Delay, d1	37.1	30.9		35.0	36.3		7.2	9.1		6.7	12.6	
Progression Factor	1.00	1.00		1.00	1.00		0.70	0.81		1.00	1.00	
Incremental Delay, d2	173.9	0.6		19.7	24.9		2.7	1.5		0.7	5.4	
Delay (s)	211.0	31.5		54.7	61.2		7.7	8.9		7.4	18.0	
Level of Service	F	C		D	E		A	A		A	B	
Approach Delay (s)		87.2			59.1			8.8			17.4	
Approach LOS		F			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.3
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	180	260	340	550	920	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3270	
Flt Permitted	0.95	1.00	0.19	1.00	1.00	
Satd. Flow (perm)	1770	1583	360	3539	3270	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	260	340	550	920	180
RTOR Reduction (vph)	0	30	0	0	13	0
Lane Group Flow (vph)	180	230	340	550	1087	0
Confl. Peds. (#/hr)	50					152
Confl. Bikes (#/hr)						12
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	15.4	29.4	73.6	59.6	59.6	
Effective Green, g (s)	15.4	29.4	73.6	59.6	59.6	
Actuated g/C Ratio	0.15	0.29	0.74	0.60	0.60	
Clearance Time (s)	4.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.5	3.5	5.0	5.0	
Lane Grp Cap (vph)	272	512	462	2109	1948	
v/s Ratio Prot	c0.10	0.06	c0.10	0.16	0.33	
v/s Ratio Perm		0.08	c0.44			
v/c Ratio	0.66	0.45	0.74	0.26	0.56	
Uniform Delay, d1	39.8	28.7	18.7	9.7	12.2	
Progression Factor	1.00	1.00	1.18	0.42	1.49	
Incremental Delay, d2	5.9	0.7	5.9	0.3	0.7	
Delay (s)	45.8	29.4	28.0	4.4	18.9	
Level of Service	D	C	C	A	B	
Approach Delay (s)	36.1			13.4	18.9	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	160	280	600	60	190	990
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		3.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.97		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3397		1770	3539
Flt Permitted	0.95	1.00	1.00		0.40	1.00
Satd. Flow (perm)	1770	1583	3397		747	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	280	600	60	190	990
RTOR Reduction (vph)	0	237	6	0	0	0
Lane Group Flow (vph)	160	43	654	0	190	990
Confl. Peds. (#/hr)	113			140		
Confl. Bikes (#/hr)				3		
Turn Type	Prot	Perm	NA		custom	NA
Protected Phases	8		2			6
Permitted Phases		8			1	
Actuated Green, G (s)	15.4	15.4	59.6		14.0	59.6
Effective Green, g (s)	15.4	15.4	59.6		14.0	59.6
Actuated g/C Ratio	0.15	0.15	0.60		0.14	0.60
Clearance Time (s)	4.0	4.0	4.0		3.0	4.0
Vehicle Extension (s)	3.0	3.0	5.0		3.5	5.0
Lane Grp Cap (vph)	272	243	2024		104	2109
v/s Ratio Prot	c0.09		0.19			c0.28
v/s Ratio Perm		0.03			c0.25	
v/c Ratio	0.59	0.18	0.32		1.83	0.47
Uniform Delay, d1	39.4	36.8	10.1		43.0	11.3
Progression Factor	1.00	1.00	1.00		0.99	0.65
Incremental Delay, d2	3.2	0.4	0.4		402.2	0.6
Delay (s)	42.6	37.1	10.5		444.6	8.0
Level of Service	D	D	B		F	A
Approach Delay (s)	39.1		10.5			78.3
Approach LOS	D		B			E

Intersection Summary			
HCM 2000 Control Delay	51.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	640	100	190	870	130	190	260	190	100	690	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.85	1.00	1.00	0.86	1.00	0.98		1.00	0.97	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1347	1770	3539	1367	1770	3259		1770	3303	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1347	1770	3539	1367	1770	3259		1770	3303	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	640	100	190	870	130	190	260	190	100	690	260
RTOR Reduction (vph)	0	0	75	0	0	89	0	102	0	0	31	0
Lane Group Flow (vph)	160	640	25	190	870	41	190	348	0	100	919	0
Confl. Peds. (#/hr)			92			83			26			77
Confl. Bikes (#/hr)			6			8			3			14
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4						
Actuated Green, G (s)	13.5	28.7	28.7	17.4	33.1	33.1	15.5	41.2		10.7	36.4	
Effective Green, g (s)	13.5	28.7	28.7	17.4	33.1	33.1	15.5	41.2		10.7	36.4	
Actuated g/C Ratio	0.12	0.25	0.25	0.15	0.29	0.29	0.14	0.36		0.09	0.32	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	211	1291	342	272	1036	400	242	1188		167	1063	
v/s Ratio Prot	c0.09	0.13		c0.11	c0.25		c0.11	0.11		0.06	c0.28	
v/s Ratio Perm			0.02			0.03						
v/c Ratio	0.76	0.50	0.07	0.70	0.84	0.10	0.79	0.29		0.60	0.86	
Uniform Delay, d1	48.2	36.0	32.0	45.3	37.5	29.1	47.1	25.5		49.1	36.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.9	0.3	0.1	7.6	6.1	0.1	14.2	0.1		3.8	7.5	
Delay (s)	61.1	36.3	32.1	52.9	43.6	29.2	61.4	25.7		52.9	43.4	
Level of Service	E	D	C	D	D	C	E	C		D	D	
Approach Delay (s)		40.2			43.5			36.3			44.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	113.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	740	80	100	730	150	160	300	90	370	860	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3482		1770	3539	1545	1770	3359		1770	3429	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3482		1770	3539	1545	1770	3359		1770	3429	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	740	80	100	730	150	160	300	90	370	860	190
RTOR Reduction (vph)	0	7	0	0	0	102	0	22	0	0	14	0
Lane Group Flow (vph)	280	813	0	100	730	48	160	368	0	370	1036	0
Confl. Peds. (#/hr)	11					11			30	30		
Confl. Bikes (#/hr)			8						14			15
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4						
Actuated Green, G (s)	22.4	43.2		9.7	30.5	30.5	14.1	27.9		28.2	42.0	
Effective Green, g (s)	22.4	43.2		9.7	30.5	30.5	14.1	27.9		28.2	42.0	
Actuated g/C Ratio	0.18	0.35		0.08	0.24	0.24	0.11	0.22		0.23	0.34	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.0	3.0	2.0	2.0		2.0	3.0	
Lane Grp Cap (vph)	317	1203		137	863	376	199	749		399	1152	
v/s Ratio Prot	c0.16	0.23		0.06	c0.21		0.09	0.11		c0.21	c0.30	
v/s Ratio Perm						0.03						
v/c Ratio	0.88	0.68		0.73	0.85	0.13	0.80	0.49		0.93	0.90	
Uniform Delay, d1	50.0	34.9		56.4	45.0	36.9	54.1	42.4		47.4	39.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	23.3	1.2		15.2	7.7	0.2	19.5	2.3		27.0	11.2	
Delay (s)	73.4	36.1		71.5	52.7	37.0	73.6	44.7		74.4	50.7	
Level of Service	E	D		E	D	D	E	D		E	D	
Approach Delay (s)		45.6			52.2			53.1			56.9	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	52.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	280	210	70	420	60	460	360	30	40	760	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1764	3539	1491	1739	3465		1770	3488		1770	3483	
Flt Permitted	0.36	1.00	1.00	0.57	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	663	3539	1491	1045	3465		1770	3488		1770	3483	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	280	210	70	420	60	460	360	30	40	760	70
RTOR Reduction (vph)	0	0	160	0	16	0	0	5	0	0	8	0
Lane Group Flow (vph)	60	280	50	70	464	0	460	385	0	40	822	0
Confl. Peds. (#/hr)	9		35	35		9			23			30
Confl. Bikes (#/hr)			23						24			6
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	14.7	14.7	14.7	14.7	14.7		14.1	32.4		2.9	21.2	
Effective Green, g (s)	14.7	14.7	14.7	14.7	14.7		14.1	32.4		2.9	21.2	
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.24		0.23	0.52		0.05	0.34	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	157	839	353	247	821		402	1822		82	1190	
v/s Ratio Prot		0.08			c0.13		c0.26	0.11		0.02	c0.24	
v/s Ratio Perm	0.09		0.03	0.07								
v/c Ratio	0.38	0.33	0.14	0.28	0.57		1.14	0.21		0.49	0.69	
Uniform Delay, d1	19.8	19.6	18.7	19.3	20.8		23.9	7.9		28.8	17.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.2	0.2	0.6	0.9		90.4	0.1		4.5	1.7	
Delay (s)	21.4	19.8	18.9	20.0	21.7		114.4	8.0		33.3	19.3	
Level of Service	C	B	B	B	C		F	A		C	B	
Approach Delay (s)		19.6			21.5			65.6			20.0	
Approach LOS		B			C			E			B	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	90	40	160	80	170	60	630	100	180	800	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.90		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1735	1769		1766	1625		1759	3450		1762	3492	
Flt Permitted	0.55	1.00		0.67	1.00		0.29	1.00		0.35	1.00	
Satd. Flow (perm)	1001	1769		1252	1625		535	3450		648	3492	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	90	40	160	80	170	60	630	100	180	800	60
RTOR Reduction (vph)	0	18	0	0	86	0	0	17	0	0	7	0
Lane Group Flow (vph)	40	112	0	160	164	0	60	713	0	180	853	0
Confl. Peds. (#/hr)	53		5	5		53	24		14	14		24
Confl. Bikes (#/hr)						3			3			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	12.7	12.7		12.7	12.7		24.1	24.1		24.1	24.1	
Effective Green, g (s)	12.7	12.7		12.7	12.7		24.1	24.1		24.1	24.1	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	501		354	460		287	1855		348	1878	
v/s Ratio Prot		0.06			0.10			0.21			0.24	
v/s Ratio Perm	0.04			c0.13			0.11			c0.28		
v/c Ratio	0.14	0.22		0.45	0.36		0.21	0.38		0.52	0.45	
Uniform Delay, d1	12.0	12.3		13.2	12.8		5.4	6.0		6.6	6.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.2		0.9	0.5		0.4	0.1		1.3	0.2	
Delay (s)	12.2	12.5		14.1	13.3		5.8	6.2		7.9	6.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.4			13.6			6.1			6.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	44.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	200	630	640	590	800	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3414	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3414	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	630	640	590	800	200
RTOR Reduction (vph)	0	18	0	0	22	0
Lane Group Flow (vph)	200	612	640	590	978	0
Confl. Peds. (#/hr)	62					17
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	16.7	52.8	32.1	65.6	29.5	
Effective Green, g (s)	16.7	52.8	32.1	65.6	29.5	
Actuated g/C Ratio	0.18	0.58	0.36	0.73	0.33	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	327	1629	629	2570	1115	
v/s Ratio Prot	c0.11	0.22	c0.36	0.17	c0.29	
v/s Ratio Perm						
v/c Ratio	0.61	0.38	1.02	0.23	0.88	
Uniform Delay, d1	33.8	10.0	29.1	4.1	28.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.4	0.1	40.3	0.0	8.0	
Delay (s)	37.2	10.1	69.4	4.1	36.7	
Level of Service	D	B	E	A	D	
Approach Delay (s)	16.6			38.1	36.7	
Approach LOS	B			D	D	

Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	220	60	70	480	30	40	490	40	30	930	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	1779		1732	1838		1759	1833		1745	1826	
Flt Permitted	0.24	1.00		0.50	1.00		0.12	1.00		0.33	1.00	
Satd. Flow (perm)	441	1779		906	1838		224	1833		602	1826	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	220	60	70	480	30	40	490	40	30	930	90
RTOR Reduction (vph)	0	15	0	0	4	0	0	4	0	0	5	0
Lane Group Flow (vph)	80	265	0	70	506	0	40	526	0	30	1015	0
Confl. Peds. (#/hr)	39		26	26		39	48		35	35		48
Confl. Bikes (#/hr)			9			9			11			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Effective Green, g (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.51	0.51		0.51	0.51	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Grp Cap (vph)	169	684		348	706		113	930		305	927	
v/s Ratio Prot		0.15			c0.28			0.29			c0.56	
v/s Ratio Perm	0.18			0.08			0.18			0.05		
v/c Ratio	0.47	0.39		0.20	0.72		0.35	0.57		0.10	1.09	
Uniform Delay, d1	15.0	14.5		13.3	17.0		9.6	11.0		8.3	16.0	
Progression Factor	0.68	0.65		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.0	1.4		1.3	6.2		8.5	2.5		0.6	58.8	
Delay (s)	18.2	10.8		14.6	23.2		18.1	13.5		8.9	74.8	
Level of Service	B	B		B	C		B	B		A	E	
Approach Delay (s)		12.5			22.1			13.8			72.9	
Approach LOS		B			C			B			E	

Intersection Summary			
HCM 2000 Control Delay	39.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↱		↰	↑↑↱				
Volume (vph)	0	300	0	0	1170	80	340	540	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.95		1.00	0.95				
Frpb, ped/bikes		1.00			1.00		1.00	1.00				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.99		1.00	0.97				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5085			3505		1770	3431				
Flt Permitted		1.00			1.00		0.95	1.00				
Satd. Flow (perm)		5085			3505		1770	3431				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	300	0	0	1170	80	340	540	120	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	29	0	0	0	0
Lane Group Flow (vph)	0	300	0	0	1242	0	340	631	0	0	0	0
Confl. Peds. (#/hr)									8			
Confl. Bikes (#/hr)									3			
Turn Type		NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases							8					
Actuated Green, G (s)		27.0			27.0		30.5	30.5				
Effective Green, g (s)		27.0			27.0		30.5	30.5				
Actuated g/C Ratio		0.42			0.42		0.47	0.47				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		2112			1455		830	1609				
v/s Ratio Prot		0.06			c0.35			0.18				
v/s Ratio Perm							c0.19					
v/c Ratio		0.14			0.85		0.41	0.39				
Uniform Delay, d1		11.8			17.2		11.3	11.2				
Progression Factor		0.86			0.81		1.00	1.00				
Incremental Delay, d2		0.0			0.5		1.5	0.7				
Delay (s)		10.2			14.5		12.8	11.9				
Level of Service		B			B		B	B				
Approach Delay (s)		10.2			14.5			12.2			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	280	40	50	670	60	370	830	290	0	930	620
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.95	1.00
Frt	1.00	0.98			0.99		1.00	0.96			1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1828			3487		1770	4888			3539	1583
Flt Permitted	0.14	1.00			0.90		0.95	1.00			1.00	1.00
Satd. Flow (perm)	266	1828			3150		1770	4888			3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	280	40	50	670	60	370	830	290	0	930	620
RTOR Reduction (vph)	0	5	0	0	6	0	0	63	0	0	0	221
Lane Group Flow (vph)	340	315	0	0	774	0	370	1057	0	0	930	399
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	41.0	41.0			24.5		18.8	48.0			25.2	25.2
Effective Green, g (s)	41.0	41.0			24.5		18.8	48.0			25.2	25.2
Actuated g/C Ratio	0.41	0.41			0.24		0.19	0.48			0.25	0.25
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	304	749			771		332	2346			891	398
v/s Ratio Prot	c0.15	0.17					c0.21	0.22			c0.26	
v/s Ratio Perm	c0.31				0.25							0.25
v/c Ratio	1.12	0.42			1.00		1.11	0.45			1.04	1.00
Uniform Delay, d1	26.6	21.0			37.8		40.6	17.3			37.4	37.4
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	87.4	1.7			33.4		83.9	0.6			42.2	45.5
Delay (s)	113.9	22.8			71.1		124.5	17.9			79.6	82.9
Level of Service	F	C			E		F	B			E	F
Approach Delay (s)		69.7			71.1			44.4			80.9	
Approach LOS		E			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	65.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	0	0	10	300	10	190	20	0	1270	240	20	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		0.96			0.99				0.98			1.00
Flpb, ped/bikes		1.00			0.98				1.00			1.00
Frt		0.86			0.95				0.98			1.00
Flt Protected		1.00			0.97				1.00			0.95
Satd. Flow (prot)		1542			1670				4884			1770
Flt Permitted		1.00			0.81				0.92			0.10
Satd. Flow (perm)		1542			1394				4519			193
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	10	300	10	190	20	0	1270	240	20	240
RTOR Reduction (vph)	0	6	0	0	25	0	0	0	30	0	0	0
Lane Group Flow (vph)	0	4	0	0	475	0	0	0	1500	0	0	260
Confl. Peds. (#/hr)			20	20				6		23		23
Confl. Bikes (#/hr)						14				3		
Turn Type		NA		Perm	NA		Perm		NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		31.6			31.6				34.1			49.0
Effective Green, g (s)		31.6			31.6				34.1			49.0
Actuated g/C Ratio		0.35			0.35				0.38			0.55
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		543			491				1719			288
v/s Ratio Prot		0.00										c0.10
v/s Ratio Perm					c0.34				0.33			c0.39
v/c Ratio		0.01			0.97				0.87			0.90
Uniform Delay, d1		18.8			28.5				25.7			22.3
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			32.0				6.5			28.7
Delay (s)		18.8			60.5				32.2			51.0
Level of Service		B			E				C			D
Approach Delay (s)		18.8			60.5				32.2			
Approach LOS		B			E				C			

Intersection Summary			
HCM 2000 Control Delay	33.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	630	60
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	5000	
Flt Permitted	1.00	
Satd. Flow (perm)	5000	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	630	60
RTOR Reduction (vph)	12	0
Lane Group Flow (vph)	678	0
Confl. Peds. (#/hr)		6
Confl. Bikes (#/hr)		5
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	49.0	
Effective Green, g (s)	49.0	
Actuated g/C Ratio	0.55	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	2734	
v/s Ratio Prot	0.14	
v/s Ratio Perm		
v/c Ratio	0.25	
Uniform Delay, d1	10.6	
Progression Factor	1.00	
Incremental Delay, d2	0.2	
Delay (s)	10.9	
Level of Service	B	
Approach Delay (s)	21.9	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	230	220	190	70	290	100	150	1070	90	50	640	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1733		1770	3403		1770	3539	1583	1770	3539	1583
Flt Permitted	0.50	1.00		0.35	1.00		0.21	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	932	1733		650	3403		392	3539	1583	401	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	230	220	190	70	290	100	150	1070	90	50	640	190
RTOR Reduction (vph)	0	38	0	0	41	0	0	0	56	0	0	122
Lane Group Flow (vph)	230	372	0	70	349	0	150	1070	34	50	640	68
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	27.0	27.0		27.0	27.0		28.0	28.0	28.0	27.3	25.3	25.3
Effective Green, g (s)	27.0	27.0		27.0	27.0		28.0	28.0	28.0	27.3	25.3	25.3
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.38	0.38	0.38	0.37	0.34	0.34
Clearance Time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	338	629		236	1236		314	1333	596	263	1205	539
v/s Ratio Prot		0.21			0.10		0.06	c0.30		0.02	c0.18	
v/s Ratio Perm	c0.25			0.11			0.12		0.02	0.05		0.04
v/c Ratio	0.68	0.59		0.30	0.28		0.48	0.80	0.06	0.19	0.53	0.13
Uniform Delay, d1	20.0	19.2		16.9	16.8		16.5	20.7	14.7	19.5	19.7	16.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.6	4.1		3.2	0.6		0.4	5.2	0.2	0.1	1.7	0.5
Delay (s)	30.6	23.2		20.1	17.3		16.9	25.9	14.9	19.6	21.4	17.4
Level of Service	C	C		C	B		B	C	B	B	C	B
Approach Delay (s)		25.9			17.8			24.1			20.4	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	74.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	900	500	100	30	780	140	80	320	30	170	210	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	1.00			0.97		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3262			3337		1770	3422		1770	1863	2787
Flt Permitted	0.95	0.56			0.89		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	1877			2985		1770	3422		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	900	500	100	30	780	140	80	320	30	170	210	320
RTOR Reduction (vph)	0	7	0	0	14	0	0	9	0	0	0	245
Lane Group Flow (vph)	495	998	0	0	936	0	80	341	0	170	210	75
Confl. Peds. (#/hr)			23			233			210			
Confl. Bikes (#/hr)			5			18			12			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	11.0	40.1			25.1		7.3	14.8		10.7	18.2	18.2
Effective Green, g (s)	11.0	40.1			25.1		7.3	14.8		10.7	18.2	18.2
Actuated g/C Ratio	0.14	0.52			0.32		0.09	0.19		0.14	0.23	0.23
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	228	1166			965		166	652		244	436	653
v/s Ratio Prot	c0.31	0.12					0.05	0.10		c0.10	c0.11	
v/s Ratio Perm		0.32			c0.31							0.03
v/c Ratio	2.17	0.86			0.97		0.48	0.52		0.70	0.48	0.11
Uniform Delay, d1	33.3	16.2			25.9		33.4	28.2		31.9	25.6	23.4
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	541.2	6.4			22.0		2.2	0.8		8.4	0.8	0.1
Delay (s)	574.5	22.6			47.9		35.6	29.0		40.3	26.5	23.4
Level of Service	F	C			D		D	C		D	C	C
Approach Delay (s)		204.7			47.9			30.2			28.4	
Approach LOS		F			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	107.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	77.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	600	80	20	1090	80	80	10	60	90	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.98			1.00		0.99		0.91		0.85
Flt Protected	1.00			1.00		0.98		0.98		1.00
Satd. Flow (prot)	3477			3536		4925		1660		1504
Flt Permitted	1.00			0.94		0.98		0.98		1.00
Satd. Flow (perm)	3477			3313		4925		1660		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	600	80	20	1090	80	80	10	60	90	40
RTOR Reduction (vph)	11	0	0	0	0	0	0	47	0	30
Lane Group Flow (vph)	669	0	0	1110	0	170	0	107	0	6
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1390			1325		1503		297		269
v/s Ratio Prot	0.19							c0.06		
v/s Ratio Perm				c0.34		0.03				0.00
v/c Ratio	0.48			0.84		0.11		0.36		0.02
Uniform Delay, d1	21.2			25.7		23.7		34.2		32.2
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	1.2			6.4		0.2		3.4		0.2
Delay (s)	22.4			32.2		23.9		37.6		32.3
Level of Service	C			C		C		D		C
Approach Delay (s)	22.4			32.2		23.9		36.6		
Approach LOS	C			C		C		D		

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	170	80	20	410	90	60	240	30	20	280	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		0.99			1.00			1.00			1.00	
Frt		0.97			0.98			0.99			0.97	
Flt Protected		0.98			1.00			0.99			1.00	
Satd. Flow (prot)		1747			1789			1814			1780	
Flt Permitted		0.57			0.98			0.88			0.98	
Satd. Flow (perm)		1021			1755			1614			1744	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	170	80	20	410	90	60	240	30	20	280	90
RTOR Reduction (vph)	0	16	0	0	12	0	0	5	0	0	17	0
Lane Group Flow (vph)	0	354	0	0	508	0	0	325	0	0	373	0
Confl. Peds. (#/hr)	32		21	21		32	18		6	6		18
Confl. Bikes (#/hr)			11			17			14			14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		361			621			819			885	
v/s Ratio Prot												
v/s Ratio Perm		c0.35			0.29			0.20			c0.21	
v/c Ratio		0.98			0.82			0.40			0.42	
Uniform Delay, d1		20.8			19.1			9.9			10.0	
Progression Factor		1.04			1.29			1.00			1.00	
Incremental Delay, d2		28.0			7.7			1.4			1.5	
Delay (s)		49.8			32.3			11.3			11.5	
Level of Service		D			C			B			B	
Approach Delay (s)		49.8			32.3			11.3			11.5	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	250	100	50	320	200	200	1190	20	140	780	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.91	1.00
Frt		0.97			0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1787			1767		1770	3530		1770	5085	1583
Flt Permitted		0.76			0.93		0.30	1.00		0.15	1.00	1.00
Satd. Flow (perm)		1383			1658		559	3530		287	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	250	100	50	320	200	200	1190	20	140	780	40
RTOR Reduction (vph)	0	15	0	0	10	0	0	2	0	0	0	24
Lane Group Flow (vph)	0	445	0	0	560	0	200	1208	0	140	780	16
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	0.40
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		659			790		223	1412		114	2034	633
v/s Ratio Prot								0.34			0.15	
v/s Ratio Perm		0.32			c0.34		0.36			c0.49		0.01
v/c Ratio		0.68			0.71		0.90	0.86		1.23	0.38	0.03
Uniform Delay, d1		13.1			13.4		18.2	17.8		19.5	13.8	11.8
Progression Factor		1.00			0.66		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		5.5			3.8		38.4	6.8		157.9	0.5	0.1
Delay (s)		18.6			12.6		56.7	24.6		177.4	14.4	11.9
Level of Service		B			B		E	C		F	B	B
Approach Delay (s)		18.6			12.6			29.2			38.0	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	290	1220	170	550	0	0	0	130	800	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Frt	1.00	0.85	1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3524	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3524	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	290	1220	170	550	0	0	0	130	800	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	290	1220	170	550	0	0	0	130	818	0
Confl. Peds. (#/hr)										18
Confl. Bikes (#/hr)										8
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	14.9	29.2	9.3	65.0				25.8	25.8	
Effective Green, g (s)	14.9	29.2	9.3	65.0				25.8	25.8	
Actuated g/C Ratio	0.23	0.45	0.14	1.00				0.40	0.40	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	405	1621	491	1583				702	1398	
v/s Ratio Prot	0.16	c0.34						0.07	c0.23	
v/s Ratio Perm			0.05	0.35						
v/c Ratio	0.72	0.75	0.35	0.35				0.19	0.58	
Uniform Delay, d1	23.1	14.9	25.1	0.0				12.8	15.4	
Progression Factor	1.49	1.20	1.00	1.00				1.00	1.00	
Incremental Delay, d2	3.9	1.3	0.4	0.6				0.6	1.8	
Delay (s)	38.4	19.3	25.5	0.6				13.3	17.2	
Level of Service	D	B	C	A				B	B	
Approach Delay (s)	22.9		6.5			0.0			16.7	
Approach LOS	C		A			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	670	250	480	660	10	330	0	850	0	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00		0.95	
Frt		0.96		1.00	1.00		1.00		0.85		0.85	
Flt Protected		1.00		0.95	1.00		0.95		1.00		1.00	
Satd. Flow (prot)		3395		1770	3531		1770		1583		3008	
Flt Permitted		1.00		0.95	1.00		0.75		1.00		1.00	
Satd. Flow (perm)		3395		1770	3531		1398		1583		3008	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	670	250	480	660	10	330	0	850	0	0	10
RTOR Reduction (vph)	0	43	0	0	1	0	0	0	396	0	7	0
Lane Group Flow (vph)	0	877	0	480	669	0	330	0	454	0	3	0
Turn Type		NA		Prot	NA		Perm		Perm		NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		27.0		25.0	56.0		25.5		25.5		25.5	
Effective Green, g (s)		27.0		25.0	56.0		25.5		25.5		25.5	
Actuated g/C Ratio		0.30		0.28	0.62		0.28		0.28		0.28	
Clearance Time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)		1018		491	2197		396		448		852	
v/s Ratio Prot		c0.26		c0.27	0.19						0.00	
v/s Ratio Perm							0.24		c0.29			
v/c Ratio		0.86		0.98	0.30		0.83		1.01		0.00	
Uniform Delay, d1		29.7		32.2	7.9		30.3		32.2		23.1	
Progression Factor		1.00		1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		9.6		34.5	0.1		14.0		45.7		0.0	
Delay (s)		39.3		66.7	8.0		44.2		78.0		23.1	
Level of Service		D		E	A		D		E		C	
Approach Delay (s)		39.3			32.5			68.5			23.1	
Approach LOS		D			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	47.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	540	160	190	850	100	130	1020	80	50	640	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.97			0.99		1.00	0.99		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3409			3464		1770	3501		1770	3428	
Flt Permitted		0.55			0.62		0.20	1.00		0.17	1.00	
Satd. Flow (perm)		1890			2173		379	3501		310	3428	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	540	160	190	850	100	130	1020	80	50	640	170
RTOR Reduction (vph)	0	28	0	0	8	0	0	8	0	0	33	0
Lane Group Flow (vph)	0	822	0	0	1132	0	130	1092	0	50	777	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		38.0			38.0		24.0	24.0		24.0	24.0	
Effective Green, g (s)		38.0			38.0		24.0	24.0		24.0	24.0	
Actuated g/C Ratio		0.53			0.53		0.33	0.33		0.33	0.33	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		997			1146		126	1167		103	1142	
v/s Ratio Prot								0.31			0.23	
v/s Ratio Perm		0.43			c0.52		c0.34			0.16		
v/c Ratio		0.82			0.99		1.03	0.94		0.49	0.68	
Uniform Delay, d1		14.2			16.8		24.0	23.3		19.1	20.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		7.7			23.8		88.9	14.8		15.5	3.3	
Delay (s)		21.9			40.6		112.9	38.1		34.5	24.0	
Level of Service		C			D		F	D		C	C	
Approach Delay (s)		21.9			40.6			46.0			24.6	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	109.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	110	30	90	220	50	70	1150	30	40	910	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00		1.00	0.98	
Flt Protected		0.98			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1772			1818	1535	1751	3489		1749	3414	
Flt Permitted		0.45			0.83	1.00	0.22	1.00		0.19	1.00	
Satd. Flow (perm)		808			1532	1535	405	3489		344	3414	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	110	30	90	220	50	70	1150	30	40	910	160
RTOR Reduction (vph)	0	8	0	0	0	37	0	2	0	0	15	0
Lane Group Flow (vph)	0	222	0	0	310	13	70	1178	0	40	1055	0
Confl. Peds. (#/hr)	5		2	2		5	3		11	11		3
Confl. Bikes (#/hr)			2			5			6			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		15.9			16.9	16.9	41.4	41.4		41.4	41.4	
Effective Green, g (s)		15.9			16.9	16.9	41.4	41.4		41.4	41.4	
Actuated g/C Ratio		0.24			0.25	0.25	0.62	0.62		0.62	0.62	
Clearance Time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		1.0			1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)		193			390	391	252	2178		214	2131	
v/s Ratio Prot								c0.34			0.31	
v/s Ratio Perm		c0.27			0.20	0.01	0.17			0.12		
v/c Ratio		1.15			0.79	0.03	0.28	0.54		0.19	0.49	
Uniform Delay, d1		25.2			23.1	18.6	5.7	7.1		5.3	6.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		110.4			10.0	0.0	2.7	1.0		1.9	0.8	
Delay (s)		135.6			33.1	18.6	8.4	8.0		7.2	7.6	
Level of Service		F			C	B	A	A		A	A	
Approach Delay (s)		135.6			31.1			8.0			7.6	
Approach LOS		F			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	20	420	10	130	20	1140	160	140	970	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.86			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1166			1732		1751	3431		1752	3499	
Flt Permitted		1.00			0.77		0.21	1.00		0.11	1.00	
Satd. Flow (perm)		1166			1379		393	3431		209	3499	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	20	420	10	130	20	1140	160	140	970	10
RTOR Reduction (vph)	0	12	0	0	14	0	0	14	0	0	1	0
Lane Group Flow (vph)	0	8	0	0	546	0	20	1286	0	140	979	0
Confl. Peds. (#/hr)	3					3	3					3
Confl. Bikes (#/hr)						3			2			
Heavy Vehicles (%)	41%	41%	41%	2%	2%	2%	3%	3%	3%	3%	3%	3%
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		29.0			29.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.38			0.38		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		439			519		204	1782		108	1817	
v/s Ratio Prot		0.01						0.37			0.28	
v/s Ratio Perm					c0.40		0.05			c0.67		
v/c Ratio		0.02			1.05		0.10	0.72		1.30	0.54	
Uniform Delay, d1		15.1			24.0		9.4	14.2		18.5	12.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			53.7		1.0	2.6		185.7	1.2	
Delay (s)		15.1			77.7		10.3	16.8		204.2	13.5	
Level of Service		B			E		B	B		F	B	
Approach Delay (s)		15.1			77.7			16.7			37.3	
Approach LOS		B			E			B			D	

Intersection Summary			
HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	260	230	110	460	60	300	1130	120	330	1010	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frt		0.95			0.99		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3311			1823		1770	3488		1770	3500	
Flt Permitted		0.59			0.61		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1976			1118		1770	3488		1770	3500	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	260	230	110	460	60	300	1130	120	330	1010	80
RTOR Reduction (vph)	0	66	0	0	4	0	0	7	0	0	5	0
Lane Group Flow (vph)	0	584	0	0	626	0	300	1243	0	330	1085	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		44.0			44.0		19.0	29.1		22.9	33.0	
Effective Green, g (s)		44.0			44.0		19.0	29.1		22.9	33.0	
Actuated g/C Ratio		0.39			0.39		0.17	0.26		0.20	0.29	
Clearance Time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)		1.0			1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		772			437		298	902		360	1026	
v/s Ratio Prot							c0.17	c0.36		0.19	c0.31	
v/s Ratio Perm		0.30			c0.56							
v/c Ratio		0.76			1.43		1.01	1.38		0.92	1.06	
Uniform Delay, d1		29.6			34.2		46.8	41.7		43.9	39.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.8			207.8		53.8	176.9		26.9	44.6	
Delay (s)		33.4			242.0		100.6	218.6		70.7	84.4	
Level of Service		C			F		F	F		E	F	
Approach Delay (s)		33.4			242.0			195.8			81.2	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	139.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	112.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	125.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	20	150	180	50	190	100	1210	260	220	980	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.94		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1712		1770	3445		1770	3477	
Flt Permitted	0.46	1.00	1.00		0.85		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	859	1863	1583		1490		1770	3445		1770	3477	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	20	150	180	50	190	100	1210	260	220	980	130
RTOR Reduction (vph)	0	0	107	0	31	0	0	17	0	0	9	0
Lane Group Flow (vph)	150	20	43	0	389	0	100	1453	0	220	1101	0
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	27.5	27.5	27.5		27.5		8.1	43.1		13.0	48.0	
Effective Green, g (s)	27.5	27.5	27.5		27.5		8.1	43.1		13.0	48.0	
Actuated g/C Ratio	0.28	0.28	0.28		0.28		0.08	0.45		0.13	0.50	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	244	530	450		424		148	1537		238	1727	
v/s Ratio Prot		0.01					0.06	c0.42		c0.12	0.32	
v/s Ratio Perm	0.17		0.03		c0.26							
v/c Ratio	0.61	0.04	0.09		0.92		0.68	0.95		0.92	0.64	
Uniform Delay, d1	30.0	25.0	25.4		33.4		43.0	25.6		41.3	17.9	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.2	0.0	0.0		23.9		9.2	12.1		37.6	0.6	
Delay (s)	33.2	25.0	25.4		57.3		52.2	37.7		78.9	18.5	
Level of Service	C	C	C		E		D	D		E	B	
Approach Delay (s)		29.0			57.3			38.6			28.5	
Approach LOS		C			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	36.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	96.6	Sum of lost time (s)	13.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	200	1570	870	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.95	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3366	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3366	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	200	1570	870	420
RTOR Reduction (vph)	0	0	0	0	88	0
Lane Group Flow (vph)	0	0	200	1570	1202	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			6.4	42.9	28.5	
Effective Green, g (s)			6.4	42.9	28.5	
Actuated g/C Ratio			0.15	1.00	0.66	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			512	3539	2236	
v/s Ratio Prot			0.06	c0.44	c0.36	
v/s Ratio Perm						
v/c Ratio			0.39	0.44	0.54	
Uniform Delay, d1			16.5	0.0	3.8	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			0.5	0.1	0.3	
Delay (s)			17.0	0.1	4.0	
Level of Service			B	A	A	
Approach Delay (s)	0.0			2.0	4.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	2.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	42.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	230	200	120	0	260	0	1320	130	110	760	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.91			0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1763	1583		1664			3492		1770	3539	
Flt Permitted	0.95	1.00	1.00		0.98			1.00		0.11	1.00	
Satd. Flow (perm)	1681	1763	1583		1664			3492		205	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	230	200	120	0	260	0	1320	130	110	760	0
RTOR Reduction (vph)	0	0	159	0	89	0	0	8	0	0	0	0
Lane Group Flow (vph)	171	249	41	0	291	0	0	1442	0	110	760	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	17.0	17.0	17.0		17.9			36.4		36.4	36.4	
Effective Green, g (s)	17.0	17.0	17.0		17.9			36.4		36.4	36.4	
Actuated g/C Ratio	0.20	0.20	0.20		0.21			0.44		0.44	0.44	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	343	359	323		357			1525		89	1546	
v/s Ratio Prot	0.10	c0.14			c0.18			0.41			0.21	
v/s Ratio Perm			0.03							c0.54		
v/c Ratio	0.50	0.69	0.13		0.82			0.95		1.24	0.49	
Uniform Delay, d1	29.4	30.7	27.1		31.1			22.5		23.4	16.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	1.1	5.7	0.2		13.4			12.3		171.7	0.2	
Delay (s)	30.5	36.4	27.3		44.5			34.8		195.1	17.1	
Level of Service	C	D	C		D			C		F	B	
Approach Delay (s)		31.8			44.5			34.8			39.6	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	83.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	0	0	80	0	200	0	1240	110	150	940	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		1.00			0.90			0.99		1.00	1.00	
Flt Protected		0.95			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1698			1576			3356		1703	3399	
Flt Permitted		0.47			0.91			1.00		0.95	1.00	
Satd. Flow (perm)		831			1454			3356		1703	3399	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	0	80	0	200	0	1240	110	150	940	10
RTOR Reduction (vph)	0	0	0	0	120	0	0	9	0	0	1	0
Lane Group Flow (vph)	0	10	0	0	160	0	0	1341	0	150	949	0
Confl. Peds. (#/hr)	5					5			3	3		
Confl. Bikes (#/hr)									5			8
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		19.0			19.0			36.0		8.0	39.0	
Effective Green, g (s)		19.0			19.0			36.0		8.0	39.0	
Actuated g/C Ratio		0.25			0.25			0.48		0.11	0.52	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)		210			368			1610		181	1767	
v/s Ratio Prot								c0.40		c0.09	c0.28	
v/s Ratio Perm		0.01			c0.11							
v/c Ratio		0.05			0.43			0.83		0.83	0.54	
Uniform Delay, d1		21.2			23.5			16.9		32.8	12.0	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		0.4			3.7			5.2		33.5	1.2	
Delay (s)		21.6			27.2			22.1		66.4	13.2	
Level of Service		C			C			C		E	B	
Approach Delay (s)		21.6			27.2			22.1			20.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	120	50	50	220	170	120	1070	70	140	720	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.95		1.00	0.99		1.00	0.97	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1711			1677		1698	3368		1702	3292	
Flt Permitted		0.68			0.94		0.27	1.00		0.17	1.00	
Satd. Flow (perm)		1182			1588		483	3368		310	3292	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	120	50	50	220	170	120	1070	70	140	720	160
RTOR Reduction (vph)	0	16	0	0	34	0	0	7	0	0	29	0
Lane Group Flow (vph)	0	234	0	0	406	0	120	1133	0	140	851	0
Confl. Peds. (#/hr)	3		5	5		3	5		2	2		5
Confl. Bikes (#/hr)						5			6			5
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		19.0			19.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)		19.0			19.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio		0.32			0.32		0.52	0.52		0.52	0.52	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		374			502		249	1740		160	1700	
v/s Ratio Prot								0.34			0.26	
v/s Ratio Perm		0.20			c0.26		0.25			c0.45		
v/c Ratio		0.62			0.81		0.48	0.65		0.88	0.50	
Uniform Delay, d1		17.5			18.8		9.3	10.6		12.8	9.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.2			9.3		6.5	1.9		44.1	1.1	
Delay (s)		20.7			28.1		15.9	12.5		56.9	10.5	
Level of Service		C			C		B	B		E	B	
Approach Delay (s)		20.7			28.1			12.8			16.9	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	490	150	70	850	170	240	650	110	120	460	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1559	1770	3435		1770	3462		1770	3539	1546
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1559	1770	3435		1770	3462		1770	3539	1546
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	490	150	70	850	170	240	650	110	120	460	280
RTOR Reduction (vph)	0	0	92	0	15	0	0	12	0	0	0	156
Lane Group Flow (vph)	160	490	58	70	1005	0	240	748	0	120	460	124
Confl. Peds. (#/hr)			3			12						2
Confl. Bikes (#/hr)						3						12
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	11.0	37.8	37.8	7.0	33.8		16.0	35.3		11.9	31.2	31.2
Effective Green, g (s)	11.0	37.8	37.8	7.0	33.8		16.0	35.3		11.9	31.2	31.2
Actuated g/C Ratio	0.10	0.34	0.34	0.06	0.31		0.15	0.32		0.11	0.28	0.28
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	177	1216	535	112	1055		257	1110		191	1003	438
v/s Ratio Prot	c0.09	c0.14		0.04	c0.29		c0.14	c0.22		0.07	0.13	
v/s Ratio Perm			0.04									0.08
v/c Ratio	0.90	0.40	0.11	0.62	0.95		0.93	0.67		0.63	0.46	0.28
Uniform Delay, d1	49.0	27.5	24.6	50.2	37.3		46.5	32.4		46.9	32.4	30.7
Progression Factor	0.81	0.86	1.33	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	36.8	0.2	0.1	10.4	17.3		38.4	3.3		6.3	1.5	1.6
Delay (s)	76.4	23.9	32.8	60.6	54.7		84.8	35.6		53.3	34.0	32.3
Level of Service	E	C	C	E	D		F	D		D	C	C
Approach Delay (s)		36.1			55.0			47.4			36.1	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	80	120	1040	40	60	540
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	80	120	1040	40	60	540
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1450	540			1080	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1450	540			1080	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	27	75			91	
cM capacity (veh/h)	110	486			641	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	200	693	387	240	360
Volume Left	80	0	0	60	0
Volume Right	120	0	40	0	0
cSH	206	1700	1700	641	1700
Volume to Capacity	0.97	0.41	0.23	0.09	0.21
Queue Length 95th (ft)	208	0	0	8	0
Control Delay (s)	103.9	0.0	0.0	3.7	0.0
Lane LOS	F			A	
Approach Delay (s)	103.9	0.0		1.5	
Approach LOS	F				

Intersection Summary			
Average Delay	11.5		
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	260	80	970	140	140	480
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	260	80	970	140	140	480
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1560	555			1110	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1560	555			1110	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	83			78	
cM capacity (veh/h)	80	475			625	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	340	647	463	300	320
Volume Left	260	0	0	140	0
Volume Right	80	0	140	0	0
cSH	99	1700	1700	625	1700
Volume to Capacity	3.42	0.38	0.27	0.22	0.19
Queue Length 95th (ft)	Err	0	0	21	0
Control Delay (s)	Err	0.0	0.0	7.4	0.0
Lane LOS	F			A	
Approach Delay (s)	Err	0.0		3.6	
Approach LOS	F				

Intersection Summary				
Average Delay	1643.4			
Intersection Capacity Utilization	77.9%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	440	200	300	820	220	390	650	190	80	620	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1529	3433	3539	1547	3433	3388		3433	3354	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1529	3433	3539	1547	3433	3388		3433	3354	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	440	200	300	820	220	390	650	190	80	620	240
RTOR Reduction (vph)	0	0	135	0	0	144	0	22	0	0	35	0
Lane Group Flow (vph)	300	440	65	300	820	76	390	818	0	80	825	0
Confl. Peds. (#/hr)			21			11			24			17
Confl. Bikes (#/hr)			2						9			15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	11.2	32.0	32.0	11.2	32.0	32.0	11.2	37.3		6.4	32.5	
Effective Green, g (s)	11.2	32.0	32.0	11.2	32.0	32.0	11.2	37.3		6.4	32.5	
Actuated g/C Ratio	0.11	0.31	0.31	0.11	0.31	0.31	0.11	0.36		0.06	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	373	1100	475	373	1100	481	373	1228		213	1059	
v/s Ratio Prot	c0.09	0.12		0.09	c0.23		c0.11	0.24		0.02	c0.25	
v/s Ratio Perm			0.04			0.05						
v/c Ratio	0.80	0.40	0.14	0.80	0.75	0.16	1.05	0.67		0.38	0.78	
Uniform Delay, d1	44.8	27.9	25.5	44.8	31.8	25.7	45.9	27.6		46.3	31.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.9	0.2	0.1	11.9	2.8	0.2	59.0	1.4		1.1	3.7	
Delay (s)	56.7	28.1	25.6	56.7	34.6	25.8	104.8	29.0		47.4	35.6	
Level of Service	E	C	C	E	C	C	F	C		D	D	
Approach Delay (s)		36.7			38.1			53.0			36.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	102.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	90	100	20	110	10	120	1060	20	30	700	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	0.98	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.92			0.99		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1742	1693			1824		1770	3523		1770	3539	1520
Flt Permitted	0.65	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1199	1693			1741		1770	3523		1770	3539	1520
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	90	100	20	110	10	120	1060	20	30	700	340
RTOR Reduction (vph)	0	33	0	0	2	0	0	1	0	0	0	200
Lane Group Flow (vph)	190	157	0	0	138	0	120	1079	0	30	700	140
Confl. Peds. (#/hr)	30		14	14		30	5		35	35		5
Confl. Bikes (#/hr)			5			15			8			11
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	18.6	18.6			18.6		10.2	36.1		2.6	28.5	28.5
Effective Green, g (s)	18.6	18.6			18.6		10.2	36.1		2.6	28.5	28.5
Actuated g/C Ratio	0.27	0.27			0.27		0.15	0.52		0.04	0.41	0.41
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	321	454			467		260	1835		66	1455	625
v/s Ratio Prot		0.09					c0.07	c0.31		0.02	0.20	
v/s Ratio Perm	c0.16				0.08							0.09
v/c Ratio	0.59	0.35			0.30		0.46	0.59		0.45	0.48	0.22
Uniform Delay, d1	22.0	20.4			20.1		27.0	11.5		32.7	15.0	13.2
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.9	0.5			0.4		1.3	0.5		4.9	0.3	0.2
Delay (s)	25.0	20.9			20.5		28.3	12.0		37.6	15.2	13.4
Level of Service	C	C			C		C	B		D	B	B
Approach Delay (s)		22.9			20.5			13.6			15.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	320	310	370	10	420	70	370	780	10	70	620	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1861	1583	1770	3532		1770	3405	
Flt Permitted	0.95	1.00	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1842	1583	1770	3532		1770	3405	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	320	310	370	10	420	70	370	780	10	70	620	210
RTOR Reduction (vph)	0	0	211	0	0	54	0	1	0	0	28	0
Lane Group Flow (vph)	320	310	159	0	430	16	370	789	0	70	802	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	20.0	52.0	52.0		27.0	27.0	23.0	46.1		7.7	30.8	
Effective Green, g (s)	20.0	52.0	52.0		27.0	27.0	23.0	46.1		7.7	30.8	
Actuated g/C Ratio	0.17	0.43	0.43		0.22	0.22	0.19	0.38		0.06	0.25	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	801	681		411	353	337	1347		112	868	
v/s Ratio Prot	c0.18	0.17					c0.21	0.22		0.04	c0.24	
v/s Ratio Perm			0.10		c0.23	0.01						
v/c Ratio	1.09	0.39	0.23		1.05	0.04	1.10	0.59		0.62	0.92	
Uniform Delay, d1	50.4	23.5	21.8		46.9	36.8	48.9	29.7		55.1	43.9	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	79.5	0.3	0.2		57.0	0.1	77.9	0.7		10.4	15.3	
Delay (s)	129.9	23.8	22.0		103.9	36.8	126.8	30.4		65.5	59.1	
Level of Service	F	C	C		F	D	F	C		E	E	
Approach Delay (s)		57.1			94.5			61.2			59.6	
Approach LOS		E			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	64.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	470	330	210	80	230	30	10	90	600	70	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.94		1.00	0.98			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3311		1770	3472			1770	3474			1762
Flt Permitted	0.95	1.00		0.95	1.00			0.35	1.00			1.00
Satd. Flow (perm)	3433	3311		1770	3472			659	3474			1855
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	470	330	210	80	230	30	10	90	600	70	10	20
RTOR Reduction (vph)	0	112	0	0	12	0	0	0	8	0	0	0
Lane Group Flow (vph)	470	428	0	80	248	0	0	100	662	0	0	30
Confl. Peds. (#/hr)			3	3						15		15
Confl. Bikes (#/hr)			3			2				6		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	11.3	18.6		7.1	14.4			11.3	30.3			3.8
Effective Green, g (s)	11.3	18.6		7.1	14.4			11.3	30.3			3.8
Actuated g/C Ratio	0.15	0.25		0.09	0.19			0.15	0.40			0.05
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	511	812		165	659			98	1388			92
v/s Ratio Prot	c0.14	c0.13		0.05	0.07				0.19			
v/s Ratio Perm								c0.15				0.02
v/c Ratio	0.92	0.53		0.48	0.38			1.02	0.48			0.33
Uniform Delay, d1	31.8	24.8		32.6	26.8			32.2	16.9			34.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	21.6	0.6		2.2	0.4			96.5	0.3			2.1
Delay (s)	53.4	25.4		34.9	27.1			128.8	17.1			36.8
Level of Service	D	C		C	C			F	B			D
Approach Delay (s)		38.4			29.0				31.6			
Approach LOS		D			C				C			

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	600	360
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1562
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1562
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	600	360
RTOR Reduction (vph)	0	252
Lane Group Flow (vph)	600	108
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		2
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	22.8	22.8
Effective Green, g (s)	22.8	22.8
Actuated g/C Ratio	0.30	0.30
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1064	469
v/s Ratio Prot	c0.17	
v/s Ratio Perm		0.07
v/c Ratio	0.56	0.23
Uniform Delay, d1	22.3	19.9
Progression Factor	1.00	1.00
Incremental Delay, d2	0.7	0.3
Delay (s)	23.0	20.2
Level of Service	C	C
Approach Delay (s)	22.4	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	10	320	10	90	10	260	140	70	260	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	10	10	320	10	90	10	260	140	70	260	10
Pedestrians					3							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					4.0							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	780	828	265	703	693	263	270			403		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	780	828	265	703	693	263	270			403		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	96	99	0	97	88	99			94		
cM capacity (veh/h)	253	283	769	317	338	769	1282			1142		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	30	420	270	140	340
Volume Left	10	320	10	0	70
Volume Right	10	90	0	140	10
cSH	341	363	1282	1700	1142
Volume to Capacity	0.09	1.16	0.01	0.08	0.06
Queue Length 95th (ft)	7	415	1	0	5
Control Delay (s)	16.6	130.1	0.4	0.0	2.2
Lane LOS	C	F	A		A
Approach Delay (s)	16.6	130.1	0.2		2.2
Approach LOS	C	F			

Intersection Summary				
Average Delay	46.7			
Intersection Capacity Utilization	72.8%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	500	230	40	720	150	230	80	30	150	60	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.96		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.99	0.85	1.00	0.97		1.00	1.00	0.85		0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (prot)	1687	3032	2563	1703	4745		1643	3359	1551		2703	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (perm)	1687	3032	2563	1703	4745		1643	3359	1551		2703	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	500	230	40	720	150	230	80	30	150	60	300
RTOR Reduction (vph)	0	2	105	0	27	0	0	0	26	0	203	0
Lane Group Flow (vph)	310	521	102	40	843	0	115	195	4	0	307	0
Confl. Peds. (#/hr)	12					12			12	12		
Confl. Bikes (#/hr)			2			5			11			
Heavy Vehicles (%)	7%	7%	7%	6%	6%	6%	0%	0%	0%	20%	20%	20%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	21.7	42.3	42.3	4.7	25.3		12.1	12.1	12.1		14.8	
Effective Green, g (s)	21.7	42.3	42.3	4.7	25.3		12.1	12.1	12.1		14.8	
Actuated g/C Ratio	0.25	0.49	0.49	0.05	0.29		0.14	0.14	0.14		0.17	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	426	1493	1262	93	1397		231	473	218		465	
v/s Ratio Prot	c0.18	0.17		0.02	c0.18		c0.07	0.06			c0.11	
v/s Ratio Perm			0.04						0.00			
v/c Ratio	0.73	0.35	0.08	0.43	0.60		0.50	0.41	0.02		0.66	
Uniform Delay, d1	29.4	13.4	11.5	39.3	26.0		34.1	33.7	31.8		33.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	6.1	0.1	0.0	3.2	0.7		1.7	0.6	0.0		3.5	
Delay (s)	35.5	13.5	11.6	42.5	26.7		35.8	34.2	31.8		36.7	
Level of Service	D	B	B	D	C		D	C	C		D	
Approach Delay (s)		19.7			27.4			34.5			36.7	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	40	0	1200	110	160	2090	0	140	0	150	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Lane Util. Factor		1.00	0.86		1.00	0.86			1.00	1.00		
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00		
Flpb, ped/bikes		1.00	1.00		1.00	1.00			0.98	1.00		
Frt		1.00	0.99		1.00	1.00			1.00	0.85		
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1684	6020		1687	6108			1655	1509		
Flt Permitted		0.48	1.00		0.95	1.00			0.76	1.00		
Satd. Flow (perm)		854	6020		1687	6108			1320	1509		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	0	1200	110	160	2090	0	140	0	150	0	0
RTOR Reduction (vph)	0	0	10	0	0	0	0	0	0	128	0	0
Lane Group Flow (vph)	0	40	1300	0	160	2090	0	0	140	22	0	0
Confl. Peds. (#/hr)		15					15	17				
Confl. Bikes (#/hr)				3			5					
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type	custom	Prot	NA		Prot	NA		Perm	NA	Perm		
Protected Phases		5	2		1	6			3			3
Permitted Phases	5							3	3	3	3	3
Actuated Green, G (s)		8.3	67.3		11.0	70.0			15.7	15.7		
Effective Green, g (s)		8.3	67.3		11.0	70.0			15.7	15.7		
Actuated g/C Ratio		0.08	0.63		0.10	0.66			0.15	0.15		
Clearance Time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Vehicle Extension (s)		2.0	2.0		2.0	2.0			2.0	2.0		
Lane Grp Cap (vph)		66	3822		175	4033			195	223		
v/s Ratio Prot			0.22		c0.09	c0.34						
v/s Ratio Perm		0.05							c0.11	0.01		
v/c Ratio		0.61	0.34		0.91	0.52			0.72	0.10		
Uniform Delay, d1		47.3	9.0		47.0	9.3			43.0	39.0		
Progression Factor		0.91	0.73		1.00	1.00			1.00	1.00		
Incremental Delay, d2		9.2	0.2		43.3	0.5			10.0	0.1		
Delay (s)		52.1	6.8		90.3	9.8			53.1	39.1		
Level of Service		D	A		F	A			D	D		
Approach Delay (s)			8.1			15.5			45.8			0.0
Approach LOS			A			B			D			A

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	17
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	7%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	870	180	120	2050	110	480	170	320	40	20	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.97		1.00	0.99		1.00	0.92			0.91	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99			0.99	1.00
Satd. Flow (prot)	3433	4955		1770	6359		1610	3099			1589	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.99			0.99	1.00
Satd. Flow (perm)	3433	4955		1770	6359		1610	3099			1589	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	870	180	120	2050	110	480	170	320	40	20	230
RTOR Reduction (vph)	0	22	0	0	5	0	0	181	0	0	63	126
Lane Group Flow (vph)	100	1028	0	120	2155	0	331	458	0	0	87	14
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	7.5	42.2		10.3	45.0		26.2	26.2			10.3	10.3
Effective Green, g (s)	7.5	42.2		10.3	45.0		26.2	26.2			10.3	10.3
Actuated g/C Ratio	0.07	0.40		0.10	0.42		0.25	0.25			0.10	0.10
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	242	1972		171	2699		397	765			154	146
v/s Ratio Prot	0.03	0.21		c0.07	c0.34		c0.21	0.15			c0.05	
v/s Ratio Perm												0.01
v/c Ratio	0.41	0.52		0.70	0.80		0.83	0.60			0.56	0.09
Uniform Delay, d1	47.1	24.2		46.4	26.6		37.8	35.2			45.7	43.6
Progression Factor	1.00	1.00		1.35	0.79		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.4	1.0		9.0	2.3		13.4	0.8			2.8	0.1
Delay (s)	47.6	25.2		71.5	23.2		51.2	36.1			48.5	43.7
Level of Service	D	C		E	C		D	D			D	D
Approach Delay (s)		27.2			25.8			41.3			46.2	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	620	130	70	1360	200	230	230	120	100	90	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.95		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3288		1719	3356		1719	1696		1719	1642	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	3288		1719	3356		1719	1696		1719	1642	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	620	130	70	1360	200	230	230	120	100	90	110
RTOR Reduction (vph)	0	13	0	0	8	0	0	21	0	0	47	0
Lane Group Flow (vph)	90	737	0	70	1552	0	230	329	0	100	153	0
Confl. Peds. (#/hr)	5		27	27		5	3		21	21		3
Confl. Bikes (#/hr)			6			2						3
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	5.8	53.3		4.8	52.3		15.0	25.9		6.0	16.9	
Effective Green, g (s)	5.8	53.3		4.8	52.3		15.0	25.9		6.0	16.9	
Actuated g/C Ratio	0.05	0.48		0.04	0.48		0.14	0.24		0.05	0.15	
Clearance Time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	90	1593		75	1595		234	399		93	252	
v/s Ratio Prot	c0.05	0.22		0.04	c0.46		c0.13	c0.19		0.06	0.09	
v/s Ratio Perm												
v/c Ratio	1.00	0.46		0.93	0.97		0.98	0.83		1.08	0.61	
Uniform Delay, d1	52.1	18.8		52.4	28.2		47.4	39.9		52.0	43.4	
Progression Factor	1.00	1.00		1.22	0.49		1.00	1.00		1.00	1.00	
Incremental Delay, d2	94.9	0.1		63.3	13.1		53.6	12.4		115.2	2.8	
Delay (s)	147.0	18.9		127.3	26.8		100.9	52.4		167.2	46.2	
Level of Service	F	B		F	C		F	D		F	D	
Approach Delay (s)		32.6			31.1			71.6			86.6	
Approach LOS		C			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	43.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	510	0	0	1090	540	140	1010	230	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95			0.95	1.00			
Frt	1.00	1.00			0.95			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (prot)	1770	3539			3363			3518	1583			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	1770	3539			3363			3518	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	510	0	0	1090	540	140	1010	230	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	88	0	0	0
Lane Group Flow (vph)	300	510	0	0	1610	0	0	1150	142	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	14.0	56.0			38.0			26.0	26.0			
Effective Green, g (s)	14.0	56.0			38.0			26.0	26.0			
Actuated g/C Ratio	0.16	0.62			0.42			0.29	0.29			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	275	2202			1419			1016	457			
v/s Ratio Prot	c0.17	0.14			c0.48							
v/s Ratio Perm								0.33	0.09			
v/c Ratio	1.09	0.23			1.13			1.13	0.31			
Uniform Delay, d1	38.0	7.5			26.0			32.0	25.0			
Progression Factor	0.74	1.70			1.00			1.00	1.00			
Incremental Delay, d2	59.3	0.1			69.8			71.9	0.4			
Delay (s)	87.5	12.9			95.8			103.9	25.4			
Level of Service	F	B			F			F	C			
Approach Delay (s)		40.5			95.8			90.8			0.0	
Approach LOS		D			F			F			A	

Intersection Summary			
HCM 2000 Control Delay	82.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	350	350	540	690	0	0	0	0	460	790	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0						4.0	
Lane Util. Factor		0.95		0.95	0.95						0.91	
Frt		0.93		1.00	1.00						0.97	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3274		1681	1763						4859	
Flt Permitted		1.00		0.95	0.82						0.99	
Satd. Flow (perm)		3274		1681	1455						4859	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	350	350	540	690	0	0	0	0	460	790	320
RTOR Reduction (vph)	0	85	0	0	0	0	0	0	0	0	50	0
Lane Group Flow (vph)	0	615	0	486	744	0	0	0	0	0	1520	0
Turn Type		NA		Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases												
Actuated Green, G (s)		19.0		30.0	53.0						29.0	
Effective Green, g (s)		19.0		30.0	53.0						29.0	
Actuated g/C Ratio		0.21		0.33	0.59						0.32	
Clearance Time (s)		4.0		4.0	4.0						4.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		691		560	959						1565	
v/s Ratio Prot		c0.19		c0.29	0.26						c0.31	
v/s Ratio Perm					0.20							
v/c Ratio		0.89		0.87	0.78						0.97	
Uniform Delay, d1		34.5		28.1	14.0						30.1	
Progression Factor		1.00		1.46	1.43						1.00	
Incremental Delay, d2		15.9		1.4	0.4						16.3	
Delay (s)		50.4		42.4	20.4						46.4	
Level of Service		D		D	C						D	
Approach Delay (s)		50.4			29.1			0.0			46.4	
Approach LOS		D			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	41.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	400	490	120	500	570	220	530	530	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	1.00				
Frt	1.00	0.92		1.00	0.92		1.00	0.93				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	3433	3247		1770	3256		1770	1723				
Flt Permitted	0.95	1.00		0.31	1.00		0.95	1.00				
Satd. Flow (perm)	3433	3247		575	3256		1770	1723				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	400	490	120	500	570	220	530	530	0	0	0
RTOR Reduction (vph)	0	276	0	0	164	0	0	45	0	0	0	0
Lane Group Flow (vph)	280	615	0	120	906	0	220	1015	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	7.0	32.5		21.0	21.0		38.5	38.5				
Effective Green, g (s)	7.0	32.5		21.0	21.0		38.5	38.5				
Actuated g/C Ratio	0.09	0.41		0.26	0.26		0.48	0.48				
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0		2.0	2.0		2.0	2.0				
Lane Grp Cap (vph)	300	1319		150	854		851	829				
v/s Ratio Prot	c0.08	0.19			c0.28			c0.59				
v/s Ratio Perm				0.21			0.12					
v/c Ratio	0.93	0.47		0.80	1.06		0.26	1.22				
Uniform Delay, d1	36.3	17.4		27.5	29.5		12.3	20.8				
Progression Factor	1.42	0.19		1.00	1.00		1.00	1.00				
Incremental Delay, d2	18.6	0.5		34.7	48.4		0.1	111.6				
Delay (s)	69.9	3.8		62.2	77.9		12.4	132.4				
Level of Service	E	A		E	E		B	F				
Approach Delay (s)		19.6			76.3			111.7			0.0	
Approach LOS		B			E			F			A	

Intersection Summary			
HCM 2000 Control Delay	70.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	111.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

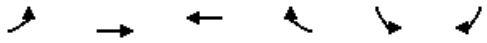
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	860	900	350	370	0	50	0	120	190	1310	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Lane Util. Factor		0.91		0.97	0.95			1.00		0.91	0.91	1.00
Frt		0.92		1.00	1.00			0.90		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)		4695		3433	3539			1661		1610	3388	1583
Flt Permitted		1.00		0.95	1.00			0.29		0.65	0.95	1.00
Satd. Flow (perm)		4695		3433	3539			496		1100	3221	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	860	900	350	370	0	50	0	120	190	1310	180
RTOR Reduction (vph)	0	6	0	0	0	0	0	73	0	0	0	109
Lane Group Flow (vph)	0	1754	0	350	370	0	0	97	0	171	1329	71
Turn Type		NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases							8			4		4
Actuated Green, G (s)		28.5		7.5	39.5			31.5		31.5	31.5	31.5
Effective Green, g (s)		28.5		7.5	39.5			31.5		31.5	31.5	31.5
Actuated g/C Ratio		0.36		0.09	0.49			0.39		0.39	0.39	0.39
Clearance Time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0		2.0	2.0			2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		1672		321	1747			195		433	1268	623
v/s Ratio Prot		c0.37		c0.10	0.10							
v/s Ratio Perm								0.20		0.16	c0.41	0.04
v/c Ratio		1.55dr		1.09	0.21			0.50		0.39	1.05	0.11
Uniform Delay, d1		25.8		36.2	11.4			18.3		17.4	24.2	15.4
Progression Factor		1.00		0.78	0.89			1.00		1.00	1.00	1.00
Incremental Delay, d2		36.0		64.5	0.2			0.7		0.2	38.9	0.0
Delay (s)		61.8		93.0	10.4			19.0		17.6	63.1	15.4
Level of Service		E		F	B			B		B	E	B
Approach Delay (s)		61.8			50.5			19.0			53.4	
Approach LOS		E			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	55.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	620	0	0	840	190	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	620	0	0	840	190	420
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	620	0	0	840	190	420
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	17.9			17.9	16.2	16.2
Effective Green, g (s)	17.9			17.9	16.2	16.2
Actuated g/C Ratio	0.43			0.43	0.38	0.38
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2162			1504	681	609
v/s Ratio Prot	0.12			c0.24	0.11	c0.27
v/s Ratio Perm						
v/c Ratio	0.29			0.56	0.28	0.69
Uniform Delay, d1	7.9			9.1	8.9	10.8
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.5	0.2	3.3
Delay (s)	8.0			9.6	9.1	14.1
Level of Service	A			A	A	B
Approach Delay (s)	8.0			9.6	12.6	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	42.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	
Volume (vph)	0	260	490	0	470	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.94	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3539	3539		3305	
Flt Permitted		1.00	1.00		0.97	
Satd. Flow (perm)		3539	3539		3305	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	260	490	0	470	290
RTOR Reduction (vph)	0	0	0	0	156	0
Lane Group Flow (vph)	0	260	490	0	604	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		10.3	10.3		11.0	
Effective Green, g (s)		10.3	10.3		11.0	
Actuated g/C Ratio		0.35	0.35		0.38	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1244	1244		1240	
v/s Ratio Prot		0.07	c0.14		c0.18	
v/s Ratio Perm						
v/c Ratio		0.21	0.39		0.49	
Uniform Delay, d1		6.6	7.2		7.0	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.1	0.2		0.3	
Delay (s)		6.7	7.4		7.3	
Level of Service		A	A		A	
Approach Delay (s)		6.7	7.4		7.3	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	29.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	620	160	90	200	120	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		4.0			4.0
Lane Util. Factor	0.97		1.00			1.00
Frpb, ped/bikes	1.00		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.97		0.91			1.00
Flt Protected	0.96		1.00			0.98
Satd. Flow (prot)	3304		1552			1670
Flt Permitted	0.96		1.00			0.73
Satd. Flow (perm)	3304		1552			1248
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	620	160	90	200	120	120
RTOR Reduction (vph)	21	0	84	0	0	0
Lane Group Flow (vph)	759	0	206	0	0	240
Confl. Bikes (#/hr)				3		
Heavy Vehicles (%)	4%	4%	10%	10%	11%	11%
Turn Type	Prot		NA		Perm	NA
Protected Phases	6		8			4
Permitted Phases					4	
Actuated Green, G (s)	15.3		14.8			14.8
Effective Green, g (s)	15.3		14.8			14.8
Actuated g/C Ratio	0.41		0.39			0.39
Clearance Time (s)	3.5		4.0			4.0
Vehicle Extension (s)	2.2		2.0			2.0
Lane Grp Cap (vph)	1344		610			491
v/s Ratio Prot	c0.23		0.13			
v/s Ratio Perm						c0.19
v/c Ratio	0.56		0.34			0.49
Uniform Delay, d1	8.6		8.0			8.6
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.4		0.1			0.3
Delay (s)	9.0		8.1			8.8
Level of Service	A		A			A
Approach Delay (s)	9.0		8.1			8.8
Approach LOS	A		A			A

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	37.6	Sum of lost time (s)	11.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	920	0	130	0	0	0	180	250	0	0	230	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.98	
Flt Protected	0.95		1.00					0.98			1.00	
Satd. Flow (prot)	3273		1509					3215			1766	
Flt Permitted	0.95		1.00					0.98			1.00	
Satd. Flow (perm)	3273		1509					3215			1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	920	0	130	0	0	0	180	250	0	0	230	40
RTOR Reduction (vph)	0	0	83	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	920	0	47	0	0	0	0	430	0	0	265	0
Confl. Peds. (#/hr)	2						3					3
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	10%	10%	10%	5%	5%	5%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4						2	2			6	
Permitted Phases			4									
Actuated Green, G (s)	30.0		30.0					17.2			19.2	
Effective Green, g (s)	30.0		30.0					17.2			19.2	
Actuated g/C Ratio	0.36		0.36					0.21			0.23	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1191		549					671			411	
v/s Ratio Prot	c0.28							c0.13			c0.15	
v/s Ratio Perm			0.03									
v/c Ratio	0.77		0.09					0.64			0.65	
Uniform Delay, d1	23.2		17.2					29.8			28.5	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	3.2		0.1					2.1			3.5	
Delay (s)	26.4		17.3					31.9			32.0	
Level of Service	C		B					C			C	
Approach Delay (s)		25.2			0.0			31.9			32.0	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	82.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↑		↰↰	↱↱
Volume (vph)	0	1250	1430	0	380	1630
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5711	5711		3060	2484
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5711	5711		3060	2484
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1250	1430	0	380	1630
RTOR Reduction (vph)	0	0	0	0	0	1
Lane Group Flow (vph)	0	1250	1430	0	380	1629
Confl. Bikes (#/hr)				3		3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		27.0	18.0		25.0	34.0
Effective Green, g (s)		27.0	18.0		25.0	34.0
Actuated g/C Ratio		0.45	0.30		0.42	0.57
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		2569	1713		1275	1407
v/s Ratio Prot		0.22	c0.25		0.12	c0.66
v/s Ratio Perm						
v/c Ratio		0.49	0.83		0.30	1.16
Uniform Delay, d1		11.6	19.6		11.7	13.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1	3.7		0.1	79.4
Delay (s)		11.8	23.3		11.8	92.4
Level of Service		B	C		B	F
Approach Delay (s)		11.8	23.3		77.2	
Approach LOS		B	C		E	

Intersection Summary			
HCM 2000 Control Delay	43.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	560	420	0	1360	340	940	0	250	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frpb, ped/bikes		1.00	0.99		1.00		1.00		1.00			
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00			
Frt		0.97	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3138	1356		4702		3273		1509			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3138	1356		4702		3273		1509			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	560	420	0	1360	340	940	0	250	0	0	0
RTOR Reduction (vph)	0	16	0	0	41	0	0	0	152	0	0	0
Lane Group Flow (vph)	0	666	298	0	1659	0	940	0	98	0	0	0
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		56.0	105.0		56.0		41.0		41.0			
Effective Green, g (s)		56.0	105.0		56.0		41.0		41.0			
Actuated g/C Ratio		0.53	1.00		0.53		0.39		0.39			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1673	1356		2507		1278		589			
v/s Ratio Prot		0.21			c0.35		c0.29					
v/s Ratio Perm			0.22						0.06			
v/c Ratio		0.40	0.22		0.66		0.74		0.17			
Uniform Delay, d1		14.5	0.0		17.7		27.4		20.9			
Progression Factor		1.00	1.00		1.00		1.00		1.00			
Incremental Delay, d2		0.7	0.4		1.4		3.8		0.6			
Delay (s)		15.2	0.4		19.1		31.2		21.5			
Level of Service		B	A		B		C		C			
Approach Delay (s)		10.7			19.1			29.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	650	960	0	1800	0	0	0	0	330	0	720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		0.99	1.00		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.94	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4306	1310		4893					3303		1493
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4306	1310		4893					3303		1493
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	650	960	0	1800	0	0	0	0	330	0	720
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	5
Lane Group Flow (vph)	0	1130	480	0	1800	0	0	0	0	330	0	715
Confl. Peds. (#/hr)							8					8
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		42.0	42.0		42.0					51.0		51.0
Effective Green, g (s)		42.0	42.0		42.0					51.0		51.0
Actuated g/C Ratio		0.42	0.42		0.42					0.50		0.50
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		1790	544		2034					1667		753
v/s Ratio Prot		0.26	0.37		c0.37							
v/s Ratio Perm										0.10		c0.48
v/c Ratio		0.63	0.88		0.88					0.20		0.95
Uniform Delay, d1		23.4	27.2		27.3					13.8		23.8
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.7	15.5		5.0					0.1		21.1
Delay (s)		24.1	42.7		32.3					13.8		44.9
Level of Service		C	D		C					B		D
Approach Delay (s)		29.7			32.3			0.0			35.1	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	101.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	720	370	0	1090	550	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.99	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3471	1516		3471	3360	1413
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3471	1516		3471	3360	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	720	370	0	1090	550	260
RTOR Reduction (vph)	0	0	0	0	3	146
Lane Group Flow (vph)	720	370	0	1090	573	88
Confl. Peds. (#/hr)		6	6			
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	25.8	48.5		25.8	14.7	14.7
Effective Green, g (s)	25.8	48.5		25.8	14.7	14.7
Actuated g/C Ratio	0.53	1.00		0.53	0.30	0.30
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1846	1516		1846	1018	428
v/s Ratio Prot	0.21			c0.31	c0.17	
v/s Ratio Perm		0.24				0.06
v/c Ratio	0.39	0.24		0.59	0.56	0.20
Uniform Delay, d1	6.7	0.0		7.7	14.2	12.6
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4		0.5	0.7	0.2
Delay (s)	6.8	0.4		8.3	14.9	12.8
Level of Service	A	A		A	B	B
Approach Delay (s)	4.6			8.3	14.3	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	48.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Volume (vph)	0	870	1100	0	1230	410	0	0	0	220	0	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.95	1.00				0.95	0.91	0.95
Frt		1.00	0.85		1.00	0.85				1.00	0.86	0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)		5085	1583		3539	1583				1681	1456	1504
Flt Permitted		1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)		5085	1583		3539	1583				1681	1456	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	870	1100	0	1230	410	0	0	0	220	0	490
RTOR Reduction (vph)	0	0	433	0	0	163	0	0	0	0	60	60
Lane Group Flow (vph)	0	870	667	0	1230	247	0	0	0	198	197	195
Turn Type		NA	Perm		NA	Perm				Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4			8				6		6
Actuated Green, G (s)		36.6	36.6		36.6	36.6				16.1	16.1	16.1
Effective Green, g (s)		36.6	36.6		36.6	36.6				16.1	16.1	16.1
Actuated g/C Ratio		0.60	0.60		0.60	0.60				0.27	0.27	0.27
Clearance Time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)		3066	954		2133	954				445	386	398
v/s Ratio Prot		0.17			0.35							
v/s Ratio Perm			c0.42			0.16				0.12	0.14	0.13
v/c Ratio		0.28	0.70		0.58	0.26				0.44	0.51	0.49
Uniform Delay, d1		5.8	8.3		7.3	5.7				18.6	19.0	18.8
Progression Factor		1.00	1.00		1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2		0.1	2.3		0.4	0.1				0.7	1.1	1.0
Delay (s)		5.8	10.5		7.7	5.8				19.3	20.1	19.8
Level of Service		A	B		A	A				B	C	B
Approach Delay (s)		8.5			7.2			0.0			19.8	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	980	600	70	780	560	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.94		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3338		1770	3539	3388	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3338		1770	3539	3388	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	980	600	70	780	560	100
RTOR Reduction (vph)	75	0	0	0	16	0
Lane Group Flow (vph)	1505	0	70	780	644	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	44.6		6.4	55.0	20.0	
Effective Green, g (s)	44.6		6.4	55.0	20.0	
Actuated g/C Ratio	0.55		0.08	0.68	0.25	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1837		139	2403	836	
v/s Ratio Prot	c0.45		c0.04	0.22	c0.19	
v/s Ratio Perm						
v/c Ratio	0.82		0.50	0.32	0.77	
Uniform Delay, d1	14.9		35.8	5.4	28.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.8		1.0	0.0	4.0	
Delay (s)	17.7		36.8	5.4	32.4	
Level of Service	B		D	A	C	
Approach Delay (s)	17.7			8.0	32.4	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	1320	50	30	810	260	40	120	420	270	80	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.96			0.90			0.99	
Flt Protected		1.00			1.00			1.00			0.97	
Satd. Flow (prot)		3514			3409			1675			1780	
Flt Permitted		0.87			0.86			0.97			0.21	
Satd. Flow (perm)		3061			2943			1622			380	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	1320	50	30	810	260	40	120	420	270	80	30
RTOR Reduction (vph)	0	3	0	0	34	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	1417	0	0	1066	0	0	580	0	0	376	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		42.0			42.0			21.3			21.3	
Effective Green, g (s)		42.0			42.0			21.3			21.3	
Actuated g/C Ratio		0.55			0.55			0.28			0.28	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1684			1620			452			106	
v/s Ratio Prot												
v/s Ratio Perm		c0.46			0.36			0.36			c0.99	
v/c Ratio		0.84			0.66			1.28			3.55	
Uniform Delay, d1		14.4			12.1			27.5			27.5	
Progression Factor		1.00			1.00			0.18			1.00	
Incremental Delay, d2		4.0			1.0			129.0			1171.1	
Delay (s)		18.4			13.1			134.1			1198.6	
Level of Service		B			B			F			F	
Approach Delay (s)		18.4			13.1			134.1			1198.6	
Approach LOS		B			B			F			F	

Intersection Summary			
HCM 2000 Control Delay	164.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.72		
Actuated Cycle Length (s)	76.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	139.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	790	150	230	760	260	130	450	410	390	260	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (prot)	1770	3455		1770	3404			1842	1583		1808	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (perm)	1770	3455		1770	3404			1842	1583		1808	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	790	150	230	760	260	130	450	410	390	260	30
RTOR Reduction (vph)	0	17	0	0	32	0	0	0	114	0	0	24
Lane Group Flow (vph)	40	923	0	230	988	0	0	580	296	0	650	6
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	5.1	26.6		13.6	35.1			16.0	16.0		19.0	19.0
Effective Green, g (s)	5.1	26.6		13.6	35.1			16.0	16.0		19.0	19.0
Actuated g/C Ratio	0.06	0.29		0.15	0.38			0.18	0.18		0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	98	1007		263	1310			323	277		376	329
v/s Ratio Prot	0.02	c0.27		c0.13	0.29			c0.31			c0.36	
v/s Ratio Perm									0.19			0.00
v/c Ratio	0.41	0.92		0.87	0.75			1.80	1.07		1.73	0.02
Uniform Delay, d1	41.6	31.2		38.0	24.3			37.6	37.6		36.1	28.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	2.8	12.6		25.9	2.5			370.2	73.7		338.9	0.0
Delay (s)	44.4	43.8		63.9	26.8			407.8	111.3		375.0	28.7
Level of Service	D	D		E	C			F	F		F	C
Approach Delay (s)		43.8			33.6			285.0			359.7	
Approach LOS		D			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	156.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	140	790	10	220	420	0	250	10	510	270	290	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.95		1.00	0.97
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1846		1770	1863	1583			3356		1770	1811
Flt Permitted		0.86		0.95	1.00	1.00			0.95		0.21	1.00
Satd. Flow (perm)		1597		1770	1863	1583			3193		393	1811
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	790	10	220	420	0	250	10	510	270	290	220
RTOR Reduction (vph)	0	1	0	0	0	115	0	0	68	0	0	0
Lane Group Flow (vph)	0	939	0	220	420	135	0	0	722	0	290	270
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.0		13.1	40.1	40.1			26.0		26.0	26.0
Effective Green, g (s)		23.0		13.1	40.1	40.1			26.0		26.0	26.0
Actuated g/C Ratio		0.31		0.18	0.54	0.54			0.35		0.35	0.35
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		495		312	1008	856			1120		137	635
v/s Ratio Prot				c0.12	0.23							0.15
v/s Ratio Perm		c0.59				0.09			0.23		c0.74	
v/c Ratio		1.90		0.71	0.42	0.16			0.65		2.12	0.43
Uniform Delay, d1		25.5		28.7	10.1	8.5			20.2		24.0	18.3
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		411.5		7.1	0.3	0.1			1.3		526.3	0.5
Delay (s)		437.0		35.8	10.4	8.6			21.5		550.4	18.8
Level of Service		F		D	B	A			C		F	B
Approach Delay (s)		437.0			16.1				21.5			294.1
Approach LOS		F			B				C			F

Intersection Summary			
HCM 2000 Control Delay	190.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.85		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	50	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	50	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	600	30	240	660	20	20	450	320	60	90	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.98	1.00
Satd. Flow (prot)		3505		1770	3524			1859	1583		1826	1583
Flt Permitted		1.00		0.95	1.00			0.99	1.00		0.45	1.00
Satd. Flow (perm)		3505		1770	3524			1836	1583		840	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	600	30	240	660	20	20	450	320	60	90	50
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	144	0	0	34
Lane Group Flow (vph)	0	666	0	240	678	0	0	470	176	0	150	16
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		22.2		23.7	23.7			26.7	26.7		26.7	26.7
Effective Green, g (s)		22.2		23.7	23.7			26.7	26.7		26.7	26.7
Actuated g/C Ratio		0.26		0.28	0.28			0.32	0.32		0.32	0.32
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		919		495	987			579	499		265	499
v/s Ratio Prot		c0.19		0.14	c0.19							
v/s Ratio Perm								c0.26	0.11		0.18	0.01
v/c Ratio		0.73		0.48	0.69			0.81	0.35		0.57	0.03
Uniform Delay, d1		28.4		25.4	27.1			26.6	22.3		24.1	20.0
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		2.9		0.8	2.0			8.5	0.4		2.8	0.0
Delay (s)		31.3		26.1	29.1			35.1	22.7		26.9	20.0
Level of Service		C		C	C			D	C		C	C
Approach Delay (s)		31.3			28.4			30.1			25.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	84.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	860	150	40	580	120	120	550	70	180	360	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.98		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3444		1767	3434		1749	3462		1751	3539	1530
Flt Permitted		0.88		0.18	1.00		0.51	1.00		0.32	1.00	1.00
Satd. Flow (perm)		3024		339	3434		943	3462		599	3539	1530
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	860	150	40	580	120	120	550	70	180	360	30
RTOR Reduction (vph)	0	18	0	0	25	0	0	14	0	0	0	18
Lane Group Flow (vph)	0	1052	0	40	675	0	120	606	0	180	360	12
Confl. Peds. (#/hr)	12		11	11		12	23		33	33		23
Confl. Bikes (#/hr)			5			8			5			3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51		0.51	0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1555		174	1766		350	1285		222	1314	568
v/s Ratio Prot					0.20			0.18			0.10	
v/s Ratio Perm		c0.35		0.12			0.13			c0.30		0.01
v/c Ratio		0.68		0.23	0.38		0.34	0.47		0.81	0.27	0.02
Uniform Delay, d1		12.7		9.4	10.3		15.8	16.8		19.8	15.4	13.9
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		2.4		3.1	0.6		2.7	1.2		26.5	0.5	0.1
Delay (s)		15.0		12.4	10.9		18.5	18.0		46.3	15.9	14.0
Level of Service		B		B	B		B	B		D	B	B
Approach Delay (s)		15.0			11.0			18.1			25.4	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	210	60	140	200	130	140	570	150	270	620	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3523	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3523	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	210	60	140	200	130	140	570	150	270	620	20
RTOR Reduction (vph)	0	0	0	0	0	86	0	0	110	0	3	0
Lane Group Flow (vph)	10	210	60	140	200	44	140	570	40	270	637	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.1	16.2	16.2	7.2	22.3	22.3	8.9	17.9	17.9	9.2	18.2	
Effective Green, g (s)	1.1	16.2	16.2	7.2	22.3	22.3	8.9	17.9	17.9	9.2	18.2	
Actuated g/C Ratio	0.02	0.24	0.24	0.11	0.34	0.34	0.13	0.27	0.27	0.14	0.27	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	29	453	385	191	624	530	236	952	426	244	964	
v/s Ratio Prot	0.01	c0.11		c0.08	0.11		0.08	0.16		c0.15	c0.18	
v/s Ratio Perm			0.04			0.03			0.03			
v/c Ratio	0.34	0.46	0.16	0.73	0.32	0.08	0.59	0.60	0.09	1.11	0.66	
Uniform Delay, d1	32.3	21.4	19.8	28.7	16.5	15.1	27.1	21.2	18.2	28.6	21.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.0	0.8	0.2	13.5	0.3	0.1	4.0	1.0	0.1	89.2	1.7	
Delay (s)	39.4	22.2	20.0	42.3	16.8	15.2	31.1	22.2	18.3	117.8	23.1	
Level of Service	D	C	B	D	B	B	C	C	B	F	C	
Approach Delay (s)		22.3			23.9			23.0			51.2	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	66.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	130	180	300	100	100	100	700	560	90	760	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1720		1770	1723		1770	1863	1583	1770	3526	
Flt Permitted		0.98		0.47	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1688		867	1723		1770	1863	1583	1770	3526	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	130	180	300	100	100	100	700	560	90	760	20
RTOR Reduction (vph)	0	62	0	0	52	0	0	0	350	0	3	0
Lane Group Flow (vph)	0	268	0	300	148	0	100	700	210	90	777	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		24.9		24.9	24.9		5.3	25.3	25.3	5.3	25.3	
Effective Green, g (s)		24.9		24.9	24.9		5.3	25.3	25.3	5.3	25.3	
Actuated g/C Ratio		0.37		0.37	0.37		0.08	0.37	0.37	0.08	0.37	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		622		319	635		138	698	593	138	1321	
v/s Ratio Prot					0.09		c0.06	c0.38		0.05	0.22	
v/s Ratio Perm		0.16		c0.35					0.13			
v/c Ratio		0.43		0.94	0.23		0.72	1.00	0.35	0.65	0.59	
Uniform Delay, d1		16.0		20.6	14.7		30.4	21.1	15.2	30.2	16.9	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5		35.0	0.2		17.1	34.8	0.4	10.5	0.7	
Delay (s)		16.5		55.5	14.9		47.5	55.9	15.6	40.7	17.6	
Level of Service		B		E	B		D	E	B	D	B	
Approach Delay (s)		16.5			39.3			38.7			20.0	
Approach LOS		B			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	40	180	290	40	90	110	1170	190	100	1010	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.90			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667			1748		1770	3465		1770	3529	
Flt Permitted		0.96			0.58		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1612			1041		1770	3465		1770	3529	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	40	180	290	40	90	110	1170	190	100	1010	20
RTOR Reduction (vph)	0	126	0	0	14	0	0	19	0	0	2	0
Lane Group Flow (vph)	0	114	0	0	406	0	110	1341	0	100	1028	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		20.2			20.2		6.1	29.2		6.1	29.2	
Effective Green, g (s)		20.2			20.2		6.1	29.2		6.1	29.2	
Actuated g/C Ratio		0.30			0.30		0.09	0.43		0.09	0.43	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		482			311		159	1498		159	1526	
v/s Ratio Prot							c0.06	c0.39		0.06	0.29	
v/s Ratio Perm		0.07			c0.39							
v/c Ratio		0.24			1.31		0.69	0.90		0.63	0.67	
Uniform Delay, d1		17.8			23.6		29.8	17.7		29.6	15.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			158.8		12.2	7.3		7.6	1.2	
Delay (s)		18.1			182.5		42.0	25.1		37.2	16.5	
Level of Service		B			F		D	C		D	B	
Approach Delay (s)		18.1			182.5			26.3			18.4	
Approach LOS		B			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	640	80	1390	720	70	1410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.98		0.95		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3402		3358		1770	3539
Flt Permitted	0.96		1.00		0.95	1.00
Satd. Flow (perm)	3402		3358		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	640	80	1390	720	70	1410
RTOR Reduction (vph)	13	0	62	0	0	0
Lane Group Flow (vph)	707	0	2048	0	70	1410
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	20.5		36.6		4.6	45.2
Effective Green, g (s)	20.5		36.6		4.6	45.2
Actuated g/C Ratio	0.28		0.50		0.06	0.61
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	946		1667		110	2170
v/s Ratio Prot	c0.21		c0.61		0.04	c0.40
v/s Ratio Perm						
v/c Ratio	0.75		1.23		0.64	0.65
Uniform Delay, d1	24.2		18.6		33.7	9.2
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	3.3		108.4		11.5	0.7
Delay (s)	27.5		126.9		45.2	9.8
Level of Service	C		F		D	A
Approach Delay (s)	27.5		126.9			11.5
Approach LOS	C		F			B

Intersection Summary			
HCM 2000 Control Delay	70.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	73.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	10	50	0	130	40	0	440	140	20	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95		1.00	0.95
Frpb, ped/bikes		0.99		1.00	0.98			1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00		0.99	1.00
Frt		0.86		1.00	0.86			1.00	0.96		1.00	1.00
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)		1590		1618	1425			1703	3254		1693	3406
Flt Permitted		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)		1590		1618	1425			1703	3254		1693	3406
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	10	50	0	130	40	0	440	140	20	220
RTOR Reduction (vph)	0	10	0	0	111	0	0	0	30	0	0	0
Lane Group Flow (vph)	0	0	0	45	24	0	0	40	550	0	20	220
Confl. Peds. (#/hr)			2			2				11	11	
Confl. Bikes (#/hr)						3				3		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type		NA		Split	NA		Prot	Prot	NA		Prot	NA
Protected Phases	4	4		8	8		5	5	2		1	6
Permitted Phases												
Actuated Green, G (s)		0.6		6.0	6.0			1.0	17.6		0.8	17.4
Effective Green, g (s)		0.6		6.0	6.0			1.0	17.6		0.8	17.4
Actuated g/C Ratio		0.01		0.15	0.15			0.02	0.43		0.02	0.42
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		23		236	208			41	1396		33	1445
v/s Ratio Prot		c0.00		c0.03	0.02			c0.02	c0.17		0.01	0.06
v/s Ratio Perm												
v/c Ratio		0.01		0.19	0.12			0.98	0.39		0.61	0.15
Uniform Delay, d1		19.9		15.4	15.2			20.0	8.0		19.9	7.3
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1		0.4	0.2			130.1	0.2		27.6	0.0
Delay (s)		20.0		15.8	15.4			150.1	8.2		47.5	7.3
Level of Service		C		B	B			F	A		D	A
Approach Delay (s)		20.0			15.5				17.4			10.7
Approach LOS		C			B				B			B

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	41.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	5
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	30	320	1110	30	20	180	2070	790	30	80	160	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	0.99	0.95		1.00	0.98	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.98	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1719	6195			1752	5836	1205		1689	1432	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1719	6195			1752	5836	1205		1689	1432	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	320	1110	30	20	180	2070	790	30	80	160	10
RTOR Reduction (vph)	0	0	2	0	0	0	14	281	0	0	141	0
Lane Group Flow (vph)	0	350	1138	0	0	200	2333	232	0	110	19	0
Confl. Peds. (#/hr)		18		2		2		18	96			
Confl. Bikes (#/hr)				2							2	
Heavy Vehicles (%)	5%	5%	5%	5%	3%	3%	3%	3%	11%	11%	11%	3%
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		28.1	65.4			20.8	58.1	58.1		17.2	17.2	
Effective Green, g (s)		28.1	65.4			20.8	58.1	58.1		17.2	17.2	
Actuated g/C Ratio		0.19	0.44			0.14	0.39	0.39		0.12	0.12	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		327	2748			247	2300	474		197	167	
v/s Ratio Prot		c0.20	0.18			0.11	c0.40			c0.07		
v/s Ratio Perm								0.19			0.01	
v/c Ratio		1.07	0.41			0.81	1.01	0.49		0.56	0.11	
Uniform Delay, d1		59.7	27.9			61.4	44.7	33.5		61.5	58.3	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		69.7	0.0			16.6	22.4	0.3		1.9	0.1	
Delay (s)		129.3	28.0			78.0	67.1	33.8		63.5	58.4	
Level of Service		F	C			E	E	C		E	E	
Approach Delay (s)			51.8				62.2			60.4		
Approach LOS			D				E			E		

Intersection Summary			
HCM 2000 Control Delay	64.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	147.4	Sum of lost time (s)	21.0
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	340	180	120
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.92	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.94	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3400	1599	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3400	1599	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	340	180	120
RTOR Reduction (vph)	0	15	0
Lane Group Flow (vph)	350	285	0
Confl. Peds. (#/hr)	2		96
Confl. Bikes (#/hr)			2
Heavy Vehicles (%)	3%	3%	3%
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	23.0	23.0	
Effective Green, g (s)	23.0	23.0	
Actuated g/C Ratio	0.16	0.16	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	530	249	
v/s Ratio Prot	0.10	c0.18	
v/s Ratio Perm			
v/c Ratio	0.66	1.14	
Uniform Delay, d1	58.5	62.2	
Progression Factor	1.00	1.00	
Incremental Delay, d2	2.4	101.4	
Delay (s)	60.9	163.6	
Level of Service	E	F	
Approach Delay (s)		108.3	
Approach LOS		F	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	460	30	90	1680	190	200	190	320	350	170	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	0.88	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1377	2756	1210	1719	4940	1505	1651	1743	2572	1752	1786	
Flt Permitted	0.17	1.00	1.00	0.95	1.00	1.00	0.63	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	249	2756	1210	1719	4940	1505	1089	1743	2572	1752	1786	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	460	30	90	1680	190	200	190	320	350	170	40
RTOR Reduction (vph)	0	0	21	0	0	107	0	0	208	0	0	0
Lane Group Flow (vph)	30	460	9	90	1680	83	200	190	112	350	210	0
Confl. Peds. (#/hr)	9		6	6		9	6					6
Confl. Bikes (#/hr)									2			
Heavy Vehicles (%)	31%	31%	31%	5%	5%	5%	9%	9%	9%	3%	3%	3%
Turn Type	Perm	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		6		5	2			4		3	8	
Permitted Phases	6		6			2	4		4			
Actuated Green, G (s)	23.3	23.3	23.3	5.0	32.3	32.3	21.5	21.5	21.5	16.2	41.7	
Effective Green, g (s)	23.3	23.3	23.3	5.0	32.3	32.3	21.5	21.5	21.5	16.2	41.7	
Actuated g/C Ratio	0.28	0.28	0.28	0.06	0.39	0.39	0.26	0.26	0.26	0.20	0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	70	783	343	104	1945	592	285	457	674	346	908	
v/s Ratio Prot		0.17		0.05	c0.34			0.11		c0.20	0.12	
v/s Ratio Perm	0.12		0.01			0.05	c0.18		0.04			
v/c Ratio	0.43	0.59	0.02	0.87	0.86	0.14	0.70	0.42	0.17	1.01	0.23	
Uniform Delay, d1	23.9	25.2	21.2	38.2	22.8	15.9	27.4	25.0	23.3	32.9	11.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.2	1.1	0.0	48.1	4.3	0.1	7.6	0.6	0.1	51.3	0.1	
Delay (s)	28.1	26.4	21.2	86.3	27.1	16.0	34.9	25.7	23.5	84.2	11.4	
Level of Service	C	C	C	F	C	B	C	C	C	F	B	
Approach Delay (s)		26.2			28.7			27.3			56.9	
Approach LOS		C			C			C			E	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	82.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1160	20	100	1570	450	50	220	140	210	60	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.97	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		5057		1752	5036	1548	1671	4395	1286	1480	2959	1324
Flt Permitted		0.71		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3581		1752	5036	1548	1671	4395	1286	1480	2959	1324
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	1160	20	100	1570	450	50	220	140	210	60	20
RTOR Reduction (vph)	0	1	0	0	0	187	0	45	72	0	0	15
Lane Group Flow (vph)	0	1259	0	100	1570	263	50	234	9	210	60	5
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	8%	8%	8%	22%	22%	22%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		51.8		11.4	67.2	67.2	7.7	12.3	12.3	21.5	26.1	26.1
Effective Green, g (s)		51.8		11.4	67.2	67.2	7.7	12.3	12.3	21.5	26.1	26.1
Actuated g/C Ratio		0.45		0.10	0.58	0.58	0.07	0.11	0.11	0.19	0.23	0.23
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1613		173	2942	904	111	470	137	276	671	300
v/s Ratio Prot				0.06	c0.31		0.03	c0.05		c0.14	0.02	
v/s Ratio Perm		c0.35				0.17			0.01			0.00
v/c Ratio		0.78		0.58	0.53	0.29	0.45	0.50	0.06	0.76	0.09	0.02
Uniform Delay, d1		26.8		49.5	14.4	12.0	51.6	48.4	46.2	44.3	35.1	34.5
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		3.8		4.6	0.7	0.8	2.9	0.8	0.2	11.7	0.1	0.0
Delay (s)		30.6		54.1	15.1	12.8	54.5	49.3	46.4	56.0	35.1	34.5
Level of Service		C		D	B	B	D	D	D	E	D	C
Approach Delay (s)		30.6			16.5			49.3			50.2	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1220	830	340	770	1340	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3324		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3324		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1220	830	340	770	1340	310
RTOR Reduction (vph)	200	0	0	0	0	0
Lane Group Flow (vph)	1850	0	340	770	1340	310
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		11.0	38.0	14.0	60.0
Effective Green, g (s)	23.0		11.0	38.0	14.0	60.0
Actuated g/C Ratio	0.38		0.18	0.63	0.23	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1274		324	2241	801	1583
v/s Ratio Prot	c0.56		c0.19	0.22	c0.39	
v/s Ratio Perm						0.20
v/c Ratio	1.45		1.05	0.34	1.67	0.20
Uniform Delay, d1	18.5		24.5	5.2	23.0	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	208.0		63.5	0.1	308.3	0.3
Delay (s)	226.5		88.0	5.2	331.3	0.3
Level of Service	F		F	A	F	A
Approach Delay (s)	226.5			30.6	269.1	
Approach LOS	F			C	F	

Intersection Summary			
HCM 2000 Control Delay	195.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	127.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1140	390	190	820	270	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1140	390	190	820	270	100
RTOR Reduction (vph)	0	202	0	0	0	83
Lane Group Flow (vph)	1140	188	190	820	270	17
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	28.9	28.9	8.7	41.6	10.5	10.5
Effective Green, g (s)	28.9	28.9	8.7	41.6	10.5	10.5
Actuated g/C Ratio	0.48	0.48	0.14	0.69	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1701	761	496	2449	599	276
v/s Ratio Prot	c0.32		0.06	c0.23	c0.08	
v/s Ratio Perm		0.12				0.01
v/c Ratio	0.67	0.25	0.38	0.33	0.45	0.06
Uniform Delay, d1	11.9	9.2	23.3	3.7	22.2	20.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.2	0.5	0.1	0.5	0.1
Delay (s)	13.0	9.4	23.8	3.8	22.8	20.8
Level of Service	B	A	C	A	C	C
Approach Delay (s)	12.1			7.5	22.2	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	120	40	20	90	100	990	90	100	1280	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.88		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1649	1728	1553	1736	3045		3367	3423		1736	3467	
Flt Permitted	0.68	0.98	1.00	0.75	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1185	1698	1553	1370	3045		3367	3423		1736	3467	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	120	40	20	90	100	990	90	100	1280	10
RTOR Reduction (vph)	0	0	95	0	71	0	0	4	0	0	1	0
Lane Group Flow (vph)	9	11	25	40	39	0	100	1076	0	100	1289	0
Confl. Peds. (#/hr)									5	5		
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.2	10.2	10.2	10.2	10.2		4.8	21.7		6.0	22.9	
Effective Green, g (s)	10.2	10.2	10.2	10.2	10.2		4.8	21.7		6.0	22.9	
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.10	0.44		0.12	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	244	350	320	282	628		327	1503		210	1607	
v/s Ratio Prot					0.01		0.03	0.31		c0.06	c0.37	
v/s Ratio Perm	0.01	0.01	0.02	c0.03								
v/c Ratio	0.04	0.03	0.08	0.14	0.06		0.31	0.72		0.48	0.80	
Uniform Delay, d1	15.7	15.7	15.8	16.0	15.8		20.7	11.3		20.2	11.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.1	0.2	0.4	0.1		0.2	1.4		0.6	2.8	
Delay (s)	15.8	15.7	16.0	16.5	15.8		20.9	12.7		20.9	14.1	
Level of Service	B	B	B	B	B		C	B		C	B	
Approach Delay (s)		16.0			16.0			13.4			14.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	49.4	Sum of lost time (s)	11.5
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	0	10	180	1200	490	450	670	220	340	900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91		0.97	0.95	1.00	0.97	0.95
Frpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt					1.00	0.96		1.00	1.00	0.85	1.00	1.00
Flt Protected					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)					1736	4750		3367	3471	1553	3367	3471
Flt Permitted					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)					1736	4750		3367	3471	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	10	180	1200	490	450	670	220	340	900
RTOR Reduction (vph)	0	0	0	0	0	73	0	0	0	144	0	0
Lane Group Flow (vph)	0	0	0	0	190	1617	0	450	670	76	340	900
Confl. Peds. (#/hr)	2						2					
Confl. Bikes (#/hr)			5									
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	Perm	NA		Prot	NA	Perm	Prot	NA
Protected Phases						8		5	2		1	6
Permitted Phases				8	8					2		
Actuated Green, G (s)					39.0	39.0		15.7	34.6	34.6	14.4	33.3
Effective Green, g (s)					39.0	39.0		15.7	34.6	34.6	14.4	33.3
Actuated g/C Ratio					0.39	0.39		0.16	0.35	0.35	0.14	0.33
Clearance Time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					677	1852		528	1200	537	484	1155
v/s Ratio Prot						c0.34		c0.13	0.19		0.10	c0.26
v/s Ratio Perm					0.11					0.05		
v/c Ratio					0.28	0.87		0.85	0.56	0.14	0.70	0.78
Uniform Delay, d1					20.9	28.2		41.0	26.5	22.5	40.8	30.0
Progression Factor					1.00	1.00		0.90	1.37	4.53	1.00	1.00
Incremental Delay, d2					0.2	4.9		10.9	1.6	0.5	4.6	5.2
Delay (s)					21.1	33.1		47.7	38.0	102.4	45.3	35.3
Level of Service					C	C		D	D	F	D	D
Approach Delay (s)		0.0				31.9			51.9			36.6
Approach LOS		A				C			D			D

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	160
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1529
Flt Permitted	1.00
Satd. Flow (perm)	1529
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	160
RTOR Reduction (vph)	37
Lane Group Flow (vph)	123
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	5
Heavy Vehicles (%)	4%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	33.3
Effective Green, g (s)	33.3
Actuated g/C Ratio	0.33
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	509
v/s Ratio Prot	
v/s Ratio Perm	0.08
v/c Ratio	0.24
Uniform Delay, d1	24.2
Progression Factor	1.00
Incremental Delay, d2	1.1
Delay (s)	25.3
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	40	300	100	0	70	0	1140	300	30	1050	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00		1.00		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5085	1552	3367		1553		3343	1459	1770	3539	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5085	1552	3367		1553		3343	1459	1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	40	300	100	0	70	0	1140	300	30	1050	0
RTOR Reduction (vph)	0	0	179	0	0	64	0	0	131	0	0	0
Lane Group Flow (vph)	130	40	121	100	0	6	0	1140	169	30	1050	0
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)			5						9			5
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	8%	8%	8%	2%	2%	2%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	14.5	14.5	14.5	8.3		8.3		56.3	56.3	4.9	65.2	
Effective Green, g (s)	14.5	14.5	14.5	8.3		8.3		56.3	56.3	4.9	65.2	
Actuated g/C Ratio	0.14	0.14	0.14	0.08		0.08		0.56	0.56	0.05	0.65	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	256	737	225	279		128		1882	821	86	2307	
v/s Ratio Prot	0.07	0.01		c0.03				c0.34		0.02	c0.30	
v/s Ratio Perm			c0.08			0.00			0.12			
v/c Ratio	0.51	0.05	0.54	0.36		0.05		0.61	0.21	0.35	0.46	
Uniform Delay, d1	39.5	36.8	39.7	43.3		42.2		14.5	10.8	46.0	8.6	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.19	0.32	
Incremental Delay, d2	1.6	0.0	2.5	0.8		0.1		1.5	0.6	1.7	0.5	
Delay (s)	41.0	36.9	42.1	44.1		42.4		15.9	11.4	56.6	3.2	
Level of Service	D	D	D	D		D		B	B	E	A	
Approach Delay (s)		41.4			43.4			15.0			4.7	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	170	40	320	140	860	60	780	330	680	530	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1299	2516		3242	1759	1485	1671	4803	1479	3335	3394	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1299	2516		3242	1759	1485	1671	4803	1479	3335	3394	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	170	40	320	140	860	60	780	330	680	530	50
RTOR Reduction (vph)	0	20	0	0	0	119	0	0	186	0	5	0
Lane Group Flow (vph)	70	190	0	320	140	741	60	780	144	680	575	0
Confl. Peds. (#/hr)			3	3					5	5		
Confl. Bikes (#/hr)						2			6			
Heavy Vehicles (%)	39%	39%	39%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	8.3	12.4		13.2	17.3	33.5	8.9	21.3	34.5	16.2	28.6	
Effective Green, g (s)	8.3	12.4		13.2	17.3	33.5	8.9	21.3	34.5	16.2	28.6	
Actuated g/C Ratio	0.10	0.16		0.17	0.22	0.42	0.11	0.27	0.44	0.20	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	136	394		541	384	704	188	1293	719	683	1227	
v/s Ratio Prot	0.05	0.08		c0.10	0.08	c0.22	0.04	c0.16	0.03	0.20	0.17	
v/s Ratio Perm						0.28			0.06			
v/c Ratio	0.51	0.48		0.59	0.36	1.05	0.32	0.60	0.20	1.00	0.47	
Uniform Delay, d1	33.5	30.4		30.5	26.2	22.8	32.3	25.2	13.8	31.4	19.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.3	0.9		1.7	0.6	48.7	1.0	0.8	0.1	33.1	0.3	
Delay (s)	36.8	31.3		32.2	26.8	71.5	33.3	26.0	13.9	64.5	19.7	
Level of Service	D	C		C	C	E	C	C	B	E	B	
Approach Delay (s)		32.7			57.2			23.0			43.9	
Approach LOS		C			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	79.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	420	20	20	840	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1851			1861	1695	
Flt Permitted	1.00			0.99	0.98	
Satd. Flow (perm)	1851			1838	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	420	20	20	840	20	20
RTOR Reduction (vph)	3	0	0	0	19	0
Lane Group Flow (vph)	437	0	0	860	21	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	36.8			36.8	5.0	
Effective Green, g (s)	36.8			36.8	5.0	
Actuated g/C Ratio	0.49			0.49	0.07	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	911			905	113	
v/s Ratio Prot	0.24				c0.01	
v/s Ratio Perm				c0.47		
v/c Ratio	0.48			0.95	0.19	
Uniform Delay, d1	12.6			18.1	32.9	
Progression Factor	1.00			0.67	1.00	
Incremental Delay, d2	0.1			9.5	0.3	
Delay (s)	12.7			21.7	33.2	
Level of Service	B			C	C	
Approach Delay (s)	12.7			21.7	33.2	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	580	10	0	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1858			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1858			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	580	10	0	160
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	590	0	0	160
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.0		21.3			21.3
Effective Green, g (s)	1.0		21.3			21.3
Actuated g/C Ratio	0.01		0.28			0.28
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	23		518			520
v/s Ratio Prot	c0.01		c0.32			0.09
v/s Ratio Perm						
v/c Ratio	0.43		1.14			0.31
Uniform Delay, d1	37.4		27.5			21.7
Progression Factor	1.00		1.00			0.86
Incremental Delay, d2	12.6		83.8			0.0
Delay (s)	50.0		111.3			18.7
Level of Service	D		F			B
Approach Delay (s)	50.0		111.3			18.7
Approach LOS	D		F			B

Intersection Summary			
HCM 2000 Control Delay	91.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	76.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	120	50	590	70	40	20	40	280	70	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	120	50	590	70	40	20	40	280	70	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	760	130	390
Volume Left (vph)	120	70	40
Volume Right (vph)	590	20	70
Hadj (s)	-0.40	0.05	-0.05
Departure Headway (s)	5.0	6.2	6.0
Degree Utilization, x	1.0	0.23	0.65
Capacity (veh/h)	707	551	585
Control Delay (s)	72.1	11.1	19.4
Approach Delay (s)	72.1	11.1	19.4
Approach LOS	F	B	C

Intersection Summary				
Delay	49.8			
Level of Service	E			
Intersection Capacity Utilization	74.5%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	20	780	10	20	650
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	20	780	10	20	650
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1477	790			792	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1477	790			792	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	95			98	
cM capacity (veh/h)	135	388			827	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	30	790	670
Volume Left	10	0	20
Volume Right	20	10	0
cSH	239	1700	827
Volume to Capacity	0.13	0.46	0.02
Queue Length 95th (ft)	11	0	2
Control Delay (s)	22.2	0.0	0.6
Lane LOS	C		A
Approach Delay (s)	22.2	0.0	0.6
Approach LOS	C		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	670	280	50	20	700	20	0	0	10	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	0	670	280	50	20	700	20	0	0	10	20
Pedestrians		2										
Lane Width (ft)		12.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1477	1442	22	2110	1452	10	32			20		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1477	1442	22	2110	1452	10	32			20		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	63	100	36	0	32	98	56			100		
cM capacity (veh/h)	27	74	1051	7	73	1075	1583			1609		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1
Volume Total	680	280	70	700	10	10	30
Volume Left	10	280	0	700	0	0	0
Volume Right	670	0	20	0	0	0	20
cSH	678	7	100	1583	1700	1700	1700
Volume to Capacity	1.00	40.09	0.70	0.44	0.01	0.01	0.02
Queue Length 95th (ft)	402	Err	89	58	0	0	0
Control Delay (s)	60.0	Err	99.5	9.1	0.0	0.0	0.0
Lane LOS	F	F	F	A			
Approach Delay (s)	60.0	8019.1		8.8			0.0
Approach LOS	F	F					

Intersection Summary				
Average Delay	1603.3			
Intersection Capacity Utilization	113.0%	ICU Level of Service	H	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	630	500	50	0	0	0	30	90	40	500	120	340
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	630	500	50	0	0	0	30	90	40	500	120	340

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	880	300	160	500	460
Volume Left (vph)	630	0	30	500	0
Volume Right (vph)	0	50	40	0	340
Hadj (s)	0.37	-0.10	0.01	0.50	-0.48
Departure Headway (s)	7.6	7.2	7.5	7.6	6.6
Degree Utilization, x	1.0	0.60	0.34	1.0	0.85
Capacity (veh/h)	478	489	472	468	538
Control Delay (s)	414.1	19.0	14.3	83.4	34.9
Approach Delay (s)	313.6		14.3	60.2	
Approach LOS	F		B	F	

Intersection Summary				
Delay	187.0			
Level of Service	F			
Intersection Capacity Utilization	81.8%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	930	20	20	350	0	20	0	20	230	110	760
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	930	20	20	350	0	20	0	20	230	110	760
Pedestrians								5				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	350			955			2150	1335	480	875	1345	350
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	350			955			2150	1335	480	875	1345	350
tC, single (s)	4.1			4.8			7.5	6.5	7.1	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.5			3.5	4.0	3.4	3.5	4.0	3.3
p0 queue free %	100			96			0	100	96	0	24	0
cM capacity (veh/h)	1220			550			0	149	514	230	145	649

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	620	330	20	350	40	340	760
Volume Left	0	0	20	0	20	230	0
Volume Right	0	20	0	0	20	0	760
cSH	1700	1700	550	1700	0	194	649
Volume to Capacity	0.36	0.19	0.04	0.21	Err	1.76	1.17
Queue Length 95th (ft)	0	0	3	0	Err	592	630
Control Delay (s)	0.0	0.0	11.8	0.0	Err	402.9	115.3
Lane LOS			B		F	F	F
Approach Delay (s)	0.0		0.6		Err	204.2	
Approach LOS					F	F	

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	78.8%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	590	90	270	20	10	40	220	30	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			5.0	5.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.89			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1805	1665			1692	1510	1787	1900	1500			
Flt Permitted	0.95	1.00			0.60	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1805	1665			1049	1510	1787	1900	1500			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	590	90	270	20	10	40	220	30	30	0	0	0
RTOR Reduction (vph)	0	97	0	0	0	35	0	0	24	0	0	0
Lane Group Flow (vph)	590	263	0	0	30	5	220	30	6	0	0	0
Confl. Peds. (#/hr)						2			2			
Heavy Vehicles (%)	0%	2%	1%	13%	0%	4%	1%	0%	5%	0%	0%	0%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	23.5	34.3			7.3	7.3	11.8	11.8	11.8			
Effective Green, g (s)	22.5	34.3			6.8	6.8	11.3	11.3	11.3			
Actuated g/C Ratio	0.42	0.64			0.13	0.13	0.21	0.21	0.21			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	757	1065			133	191	376	400	316			
v/s Ratio Prot	c0.33	c0.16						0.02				
v/s Ratio Perm					0.03	0.00	c0.12		0.00			
v/c Ratio	0.78	0.25			0.23	0.03	0.59	0.07	0.02			
Uniform Delay, d1	13.4	4.1			21.0	20.5	19.0	17.0	16.8			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	5.1	0.2			0.3	0.0	1.5	0.0	0.0			
Delay (s)	18.5	4.3			21.3	20.5	20.5	17.0	16.8			
Level of Service	B	A			C	C	C	B	B			
Approach Delay (s)		13.1			20.9			19.8			0.0	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	53.6	Sum of lost time (s)	13.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	820	10	10	220	0	10	0	10	120	10	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.93
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			0.93			1.00	0.85
Flt Protected		1.00			1.00			0.98			0.96	1.00
Satd. Flow (prot)		1896			1878			1383			1631	1484
Flt Permitted		1.00			0.97			0.98			0.96	1.00
Satd. Flow (perm)		1896			1825			1383			1631	1484
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	820	10	10	220	0	10	0	10	120	10	460
RTOR Reduction (vph)	0	0	0	0	0	0	0	20	0	0	0	382
Lane Group Flow (vph)	0	830	0	0	230	0	0	0	0	0	130	78
Confl. Peds. (#/hr)	3					3						30
Confl. Bikes (#/hr)			2			2						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	50%	4%	100%	1%
Turn Type		NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		33.8			33.8			0.9			9.6	9.6
Effective Green, g (s)		33.8			33.8			0.9			9.6	9.6
Actuated g/C Ratio		0.60			0.60			0.02			0.17	0.17
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		1138			1095			22			278	253
v/s Ratio Prot		c0.44						c0.00			c0.08	
v/s Ratio Perm					0.13							0.05
v/c Ratio		0.73			0.21			0.01			0.47	0.31
Uniform Delay, d1		8.0			5.1			27.3			21.0	20.4
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		2.5			0.1			0.3			0.5	0.3
Delay (s)		10.5			5.3			27.5			21.5	20.7
Level of Service		B			A			C			C	C
Approach Delay (s)		10.5			5.3			27.5			20.9	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	56.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	130	210	630	240	0	70	0	830	160	760	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.98	1.00	1.00		1.00		1.00		0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		0.99	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1881	1553	3433	1881		1770		2814		3484	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1881	1553	3433	1881		1770		2814		3484	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	130	210	630	240	0	70	0	830	160	760	60
RTOR Reduction (vph)	0	0	134	0	0	0	0	0	478	0	5	0
Lane Group Flow (vph)	0	130	76	630	240	0	70	0	352	0	975	0
Confl. Peds. (#/hr)			3			30			30			30
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	2%	0%	1%	1%	1%	0%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		11.3	11.3	31.8	48.1		6.6		43.4		31.3	
Effective Green, g (s)		11.3	11.3	31.8	48.1		5.6		42.4		31.3	
Actuated g/C Ratio		0.11	0.11	0.32	0.48		0.06		0.42		0.31	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		212	175	1091	904		99		1193		1090	
v/s Ratio Prot		c0.07		c0.18	0.13		c0.04		0.13		c0.28	
v/s Ratio Perm			0.05									
v/c Ratio		0.61	0.43	0.58	0.27		0.71		0.29		0.89	
Uniform Delay, d1		42.3	41.4	28.5	15.4		46.4		19.0		32.8	
Progression Factor		1.00	1.00	0.99	0.74		1.00		1.00		1.00	
Incremental Delay, d2		3.7	0.6	1.3	0.4		17.1		0.1		9.4	
Delay (s)		45.9	42.0	29.4	11.9		63.5		19.0		42.2	
Level of Service		D	D	C	B		E		B		D	
Approach Delay (s)		43.5			24.6			22.5			42.2	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	780	340	0	0	330	160	540	10	290	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3467	1881			1810	1575		1811	1599			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3467	1881			1810	1575		1811	1599			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	780	340	0	0	330	160	540	10	290	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	123	0	0	167	0	0	0
Lane Group Flow (vph)	780	340	0	0	330	37	0	550	123	0	0	0
Confl. Peds. (#/hr)			5	5		2						
Heavy Vehicles (%)	1%	1%	0%	0%	5%	1%	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	26.1	52.5			21.9	21.9		38.5	38.5			
Effective Green, g (s)	26.1	52.5			21.9	21.9		38.5	38.5			
Actuated g/C Ratio	0.26	0.52			0.22	0.22		0.38	0.38			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	904	987			396	344		697	615			
v/s Ratio Prot	c0.22	0.18			c0.18							
v/s Ratio Perm						0.02		0.30	0.08			
v/c Ratio	0.86	0.34			0.83	0.11		0.79	0.20			
Uniform Delay, d1	35.2	13.8			37.3	31.2		27.2	20.5			
Progression Factor	0.96	1.21			1.00	1.00		1.00	1.00			
Incremental Delay, d2	8.0	0.4			15.4	0.3		8.8	0.7			
Delay (s)	41.9	17.0			52.7	31.5		36.0	21.2			
Level of Service	D	B			D	C		D	C			
Approach Delay (s)		34.3			45.8			30.9			0.0	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	900	440	290	1310
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	900	440	290	1310
Pedestrians	3					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.79					
vC, conflicting volume	2358	673			903	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2185	673			903	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			62	
cM capacity (veh/h)	19	402			755	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	600	740	290	655	655
Volume Left	0	0	290	0	0
Volume Right	0	440	0	0	0
cSH	1700	1700	755	1700	1700
Volume to Capacity	0.35	0.44	0.38	0.39	0.39
Queue Length 95th (ft)	0	0	45	0	0
Control Delay (s)	0.0	0.0	12.7	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.3		
Approach LOS					

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	61.8%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	540	120	10	300	790	190	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.93	
Flt Protected	1.00	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3539	1583		1766	3539	1665	
Flt Permitted	1.00	1.00		0.31	1.00	0.98	
Satd. Flow (perm)	3539	1583		584	3539	1665	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	540	120	10	300	790	190	230
RTOR Reduction (vph)	0	23	0	0	0	46	0
Lane Group Flow (vph)	540	97	0	310	790	374	0
Confl. Peds. (#/hr)		8		8			15
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	15.9	40.5		30.7	30.7	19.1	
Effective Green, g (s)	15.9	40.5		30.7	30.7	19.1	
Actuated g/C Ratio	0.27	0.68		0.51	0.51	0.32	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	940	1072		533	1816	531	
v/s Ratio Prot	0.15	0.06		c0.11	0.22	c0.22	
v/s Ratio Perm				c0.18			
v/c Ratio	0.57	0.09		0.58	0.44	0.71	
Uniform Delay, d1	19.0	3.3		9.0	9.1	17.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0		1.6	0.2	4.2	
Delay (s)	19.9	3.4		10.6	9.3	22.1	
Level of Service	B	A		B	A	C	
Approach Delay (s)	16.9				9.7	22.1	
Approach LOS	B				A	C	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	59.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	380	20	150	590	240	30	260	100	180	400	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		1.00			1.00	0.85		0.96		1.00	0.95	
Flt Protected		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1824			3504	1583		3377		1770	1754	
Flt Permitted		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1824			3504	1583		3377		1770	1754	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	380	20	150	590	240	30	260	100	180	400	180
RTOR Reduction (vph)	0	1	0	0	0	55	0	33	0	0	13	0
Lane Group Flow (vph)	0	549	0	0	740	185	0	357	0	180	567	0
Confl. Peds. (#/hr)	5		17	17		5	18		2	2		18
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		25.0			20.0	30.0		16.2		30.0	30.0	
Effective Green, g (s)		25.0			20.0	30.0		16.2		30.0	30.0	
Actuated g/C Ratio		0.24			0.19	0.29		0.16		0.29	0.29	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		441			679	460		530		514	509	
v/s Ratio Prot		c0.30			c0.21	0.12		c0.11		0.10	c0.32	
v/s Ratio Perm												
v/c Ratio		1.25			1.09	0.40		0.67		0.35	1.11	
Uniform Delay, d1		39.1			41.6	29.4		41.0		28.9	36.6	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		128.3			61.5	0.6		3.4		0.4	74.6	
Delay (s)		167.4			103.1	30.0		44.4		29.3	111.2	
Level of Service		F			F	C		D		C	F	
Approach Delay (s)		167.4			85.2			44.4			91.8	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	98.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	103.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	610	180	80	450	60	290	800	120	160	410	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			0.99			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1736	1881	1568	1805	1831			3387			3409	1447
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1736	1881	1568	1805	1831			3387			3409	1447
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	610	180	80	450	60	290	800	120	160	410	160
RTOR Reduction (vph)	0	0	76	0	3	0	0	5	0	0	0	0
Lane Group Flow (vph)	190	610	104	80	507	0	0	1205	0	0	570	160
Confl. Peds. (#/hr)			3						26			6
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	4%	1%	1%	0%	2%	0%	7%	1%	0%	3%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	16.0	51.2	51.2	7.7	42.9			52.0			25.0	155.4
Effective Green, g (s)	16.0	52.7	52.7	7.7	44.4			53.0			26.0	155.4
Actuated g/C Ratio	0.10	0.34	0.34	0.05	0.29			0.34			0.17	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	178	637	531	89	523			1155			570	1447
v/s Ratio Prot	c0.11	c0.32		0.04	c0.28			c0.36			c0.17	
v/s Ratio Perm			0.07									0.11
v/c Ratio	1.07	0.96	0.20	0.90	0.97			1.04			1.00	0.11
Uniform Delay, d1	69.7	50.3	36.4	73.5	54.8			51.2			64.7	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	86.5	25.3	0.2	62.4	31.3			38.4			37.7	0.2
Delay (s)	156.2	75.5	36.5	135.9	86.1			89.6			102.4	0.2
Level of Service	F	E	D	F	F			F			F	A
Approach Delay (s)		84.0			92.9			89.6			80.0	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	86.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	155.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	10	980	40	20	70	650	210	20	20	20	320	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0				4.0			4.0			4.0
Lane Util. Factor		0.95				0.95			1.00			0.95
Frpb, ped/bikes		1.00				0.99			1.00			0.99
Flpb, ped/bikes		1.00				1.00			0.99			1.00
Frt		0.99				0.97			0.95			0.98
Flt Protected		1.00				1.00			0.98			0.96
Satd. Flow (prot)		3504				3376			1727			3283
Flt Permitted		0.95				0.77			0.83			0.74
Satd. Flow (perm)		3317				2601			1449			2520
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	980	40	20	70	650	210	20	20	20	320	20
RTOR Reduction (vph)	0	4	0	0	0	36	0	0	16	0	0	23
Lane Group Flow (vph)	0	1026	0	0	0	914	0	0	44	0	0	377
Confl. Peds. (#/hr)	42		86		86		42	63				
Confl. Bikes (#/hr)			14				2					
Turn Type	Perm	NA			Perm	NA		Perm	NA		Perm	NA
Protected Phases		1				1			2			2
Permitted Phases	1				1			2			2	
Actuated Green, G (s)		42.5				42.5			14.5			14.5
Effective Green, g (s)		42.5				42.5			14.5			14.5
Actuated g/C Ratio		0.65				0.65			0.22			0.22
Clearance Time (s)		4.0				4.0			4.0			4.0
Vehicle Extension (s)		3.0				3.0			3.0			3.0
Lane Grp Cap (vph)		2168				1700			323			562
v/s Ratio Prot												
v/s Ratio Perm		0.31				c0.35			0.03			c0.15
v/c Ratio		0.47				0.54			0.14			0.88dl
Uniform Delay, d1		5.6				6.0			20.2			23.1
Progression Factor		1.00				1.00			1.00			1.00
Incremental Delay, d2		0.7				1.2			0.2			3.1
Delay (s)		6.4				7.2			20.4			26.2
Level of Service		A				A			C			C
Approach Delay (s)		6.4				7.2			20.4			26.2
Approach LOS		A				A			C			C

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	60
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	60
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	63
Confl. Bikes (#/hr)	5
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	840	540	450	560	90	490	480	250	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			0.99				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.99			0.97				
Flt Protected		1.00	1.00		0.98			0.98				
Satd. Flow (prot)		3539	1566		3422			3315				
Flt Permitted		1.00	1.00		0.54			0.98				
Satd. Flow (perm)		3539	1566		1901			3315				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	840	540	450	560	90	490	480	250	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	840	540	0	1090	0	0	1185	0	0	0	0
Confl. Peds. (#/hr)	33								26			
Confl. Bikes (#/hr)			20			5			26			
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		36.0	57.5		36.0			21.5				
Effective Green, g (s)		36.0	57.5		36.0			21.5				
Actuated g/C Ratio		0.55	0.88		0.55			0.33				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		1960	1493		1052			1096				
v/s Ratio Prot		0.24	0.12									
v/s Ratio Perm			0.23		c0.57			0.36				
v/c Ratio		0.43	0.36		1.53dl			1.08				
Uniform Delay, d1		8.5	0.6		14.5			21.8				
Progression Factor		0.79	1.24		1.00			1.00				
Incremental Delay, d2		0.1	0.1		37.4			51.8				
Delay (s)		6.9	0.9		51.9			73.5				
Level of Service		A	A		D			E				
Approach Delay (s)		4.5			51.9			73.5			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	350	80	30	220	190	40	970	30	130	530	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.97			1.00			0.93	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.94			1.00			0.94	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1781			1697			3504			3066	
Flt Permitted		0.93			0.95			0.69			0.52	
Satd. Flow (perm)		1666			1621			2409			1601	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	350	80	30	220	190	40	970	30	130	530	430
RTOR Reduction (vph)	0	11	0	0	37	0	0	3	0	0	143	0
Lane Group Flow (vph)	0	469	0	0	403	0	0	1037	0	0	947	0
Confl. Peds. (#/hr)	44		63	63		44	59		39	39		59
Confl. Bikes (#/hr)			17			5			14			24
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		40.8			25.0			25.0			25.0	
Effective Green, g (s)		36.8			25.0			25.0			25.0	
Actuated g/C Ratio		0.49			0.33			0.33			0.33	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		819			541			805			535	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			c0.25			0.43			c0.59	
v/c Ratio		0.57			0.75			1.29			1.77	
Uniform Delay, d1		13.4			22.1			24.9			24.9	
Progression Factor		0.36			1.00			1.00			1.00	
Incremental Delay, d2		0.4			4.9			139.2			354.0	
Delay (s)		5.2			26.9			164.1			378.9	
Level of Service		A			C			F			F	
Approach Delay (s)		5.2			26.9			164.1			378.9	
Approach LOS		A			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	196.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	113.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1020	280	30	350	110	150	870	40	70	390	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.92			0.87		1.00	0.98		1.00	0.89	
Flpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.97		1.00	0.99		1.00	0.97	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3106			1574		1770	1820		1770	1605	
Flt Permitted		0.84			0.51		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2618			805		1770	1820		1770	1605	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	1020	280	30	350	110	150	870	40	70	390	100
RTOR Reduction (vph)	0	23	0	0	10	0	0	2	0	0	10	0
Lane Group Flow (vph)	0	1357	0	0	480	0	150	908	0	70	480	0
Confl. Peds. (#/hr)	230		128	128		230			324			204
Confl. Bikes (#/hr)			5			20			29			14
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		42.8			42.8		10.2	37.7		4.0	31.5	
Effective Green, g (s)		42.8			42.8		10.2	37.7		4.0	31.5	
Actuated g/C Ratio		0.43			0.43		0.10	0.38		0.04	0.32	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1120			344		180	686		70	505	
v/s Ratio Prot							c0.08	c0.50		0.04	0.30	
v/s Ratio Perm		0.52			c0.60							
v/c Ratio		1.21			1.39		0.83	1.32		1.00	0.95	
Uniform Delay, d1		28.6			28.6		44.1	31.1		48.0	33.5	
Progression Factor		1.00			1.00		0.84	0.51		1.00	1.00	
Incremental Delay, d2		103.7			194.4		3.0	146.7		107.6	27.9	
Delay (s)		132.3			223.0		40.0	162.5		155.6	61.4	
Level of Service		F			F		D	F		F	E	
Approach Delay (s)		132.3			223.0			145.2			73.2	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	139.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	121.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	110	630	950	220	280	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.96	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1770	1863	1762		1716	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1770	1863	1762		1716	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	630	950	220	280	110
RTOR Reduction (vph)	0	0	5	0	15	0
Lane Group Flow (vph)	110	630	1165	0	375	0
Confl. Peds. (#/hr)	149			149	44	
Confl. Bikes (#/hr)				9		6
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	5.5	65.6	55.6		25.9	
Effective Green, g (s)	5.5	65.6	55.6		25.9	
Actuated g/C Ratio	0.06	0.66	0.56		0.26	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	97	1222	979		444	
v/s Ratio Prot	c0.06	0.34	c0.66		c0.22	
v/s Ratio Perm						
v/c Ratio	1.13	0.52	1.19		0.84	
Uniform Delay, d1	47.2	8.9	22.2		35.1	
Progression Factor	0.78	0.54	0.90		1.00	
Incremental Delay, d2	87.1	0.4	86.6		13.7	
Delay (s)	123.8	5.2	106.6		48.9	
Level of Service	F	A	F		D	
Approach Delay (s)		22.8	106.6		48.9	
Approach LOS		C	F		D	

Intersection Summary			
HCM 2000 Control Delay	69.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	830	150	120	740	210	120	640	90	100	530	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.98			0.97			0.98		1.00	0.96	
Flt Protected		0.99			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1814			1803			3459		1770	3399	
Flt Permitted		0.53			0.73			0.63		0.21	1.00	
Satd. Flow (perm)		973			1317			2194		387	3399	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	830	150	120	740	210	120	640	90	100	530	190
RTOR Reduction (vph)	0	5	0	0	9	0	0	9	0	0	36	0
Lane Group Flow (vph)	0	1225	0	0	1061	0	0	841	0	100	684	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		50.2			50.2			39.8		39.8	39.8	
Effective Green, g (s)		50.2			50.2			39.8		39.8	39.8	
Actuated g/C Ratio		0.50			0.50			0.40		0.40	0.40	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		488			661			873		154	1352	
v/s Ratio Prot											0.20	
v/s Ratio Perm		c1.26			0.81			c0.38		0.26		
v/c Ratio		2.51			1.61			0.96		0.65	0.51	
Uniform Delay, d1		24.9			24.9			29.4		24.4	22.7	
Progression Factor		1.00			1.00			1.00		1.04	0.99	
Incremental Delay, d2		685.7			279.4			21.8		7.5	0.2	
Delay (s)		710.6			304.3			51.2		32.8	22.8	
Level of Service		F			F			D		C	C	
Approach Delay (s)		710.6			304.3			51.2			24.0	
Approach LOS		F			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	318.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	168.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	310	70	90	240	60	40	660	110	90	630	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99		0.95	1.00		0.98	1.00		0.99	1.00	
Frt		0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1744		1685	1767		1733	1805		1748	1801	
Flt Permitted		0.72		0.28	1.00		0.26	1.00		0.24	1.00	
Satd. Flow (perm)		1272		498	1767		477	1805		435	1801	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	310	70	90	240	60	40	660	110	90	630	100
RTOR Reduction (vph)	0	10	0	0	14	0	0	9	0	0	9	0
Lane Group Flow (vph)	0	440	0	90	286	0	40	761	0	90	721	0
Confl. Peds. (#/hr)	44		78	78		44	84		54	54		84
Confl. Bikes (#/hr)			17			6			11			15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		332		130	462		293	1110		267	1108	
v/s Ratio Prot					0.16			c0.42			0.40	
v/s Ratio Perm		c0.35		0.18			0.08			0.21		
v/c Ratio		1.32		0.69	0.62		0.14	0.69		0.34	0.65	
Uniform Delay, d1		24.0		21.6	21.1		5.2	8.3		6.1	8.0	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		165.5		14.8	2.5		1.0	3.4		3.4	3.0	
Delay (s)		189.5		36.4	23.6		6.2	11.8		9.5	11.0	
Level of Service		F		D	C		A	B		A	B	
Approach Delay (s)		189.5			26.6			11.5			10.8	
Approach LOS		F			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	280	90	10	170	70	280	620	30	90	500	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99			0.99		1.00	1.00		1.00	1.00	0.92
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96			0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1783			3351		1770	1846		1770	1863	1451
Flt Permitted	0.95	1.00			0.94		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1783			3145		1770	1846		1770	1863	1451
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	280	90	10	170	70	280	620	30	90	500	240
RTOR Reduction (vph)	0	12	0	0	43	0	0	2	0	0	0	172
Lane Group Flow (vph)	280	358	0	0	207	0	280	648	0	90	500	68
Confl. Peds. (#/hr)	6		9	9		6	59		29	29		59
Confl. Bikes (#/hr)			6						6			12
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	16.0	42.0			21.0		16.0	36.0		5.0	27.0	27.0
Effective Green, g (s)	16.0	42.0			21.0		16.0	36.0		5.0	27.0	27.0
Actuated g/C Ratio	0.17	0.44			0.22		0.17	0.38		0.05	0.28	0.28
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	298	788			695		298	699		93	529	412
v/s Ratio Prot	c0.16	c0.20					c0.16	0.35		0.05	c0.27	
v/s Ratio Perm					0.07							0.05
v/c Ratio	0.94	0.45			0.30		0.94	0.93		0.97	0.95	0.17
Uniform Delay, d1	39.0	18.5			30.9		39.0	28.2		44.9	33.3	25.5
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	35.6	1.9			1.1		35.6	20.3		81.5	27.7	0.9
Delay (s)	74.6	20.4			31.9		74.6	48.5		126.4	60.9	26.4
Level of Service	E	C			C		E	D		F	E	C
Approach Delay (s)		43.7			31.9			56.4			58.0	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	51.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	93.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	750	140	150	560	20	170	790	260	30	460	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			1.00			0.97			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3394			3467			3370			3423	
Flt Permitted		0.58			0.56			0.76			0.71	
Satd. Flow (perm)		1997			1970			2592			2436	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	750	140	150	560	20	170	790	260	30	460	90
RTOR Reduction (vph)	0	16	0	0	3	0	0	31	0	0	19	0
Lane Group Flow (vph)	0	1014	0	0	727	0	0	1189	0	0	561	0
Confl. Peds. (#/hr)	77		68	68		77	27		14	14		27
Confl. Bikes (#/hr)			5			5			12			11
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		34.0			26.0			28.0			36.0	
Effective Green, g (s)		34.0			26.0			28.0			36.0	
Actuated g/C Ratio		0.42			0.32			0.35			0.45	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		918			640			907			1145	
v/s Ratio Prot		c0.06									c0.02	
v/s Ratio Perm		c0.41			0.37			c0.46			0.20	
v/c Ratio		1.11			1.20dl			1.31			0.49	
Uniform Delay, d1		23.0			27.0			26.0			15.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		62.8			79.5			148.0			1.5	
Delay (s)		85.8			106.5			174.0			17.0	
Level of Service		F			F			F			B	
Approach Delay (s)		85.8			106.5			174.0			17.0	
Approach LOS		F			F			F			B	

Intersection Summary			
HCM 2000 Control Delay	109.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	120.1%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Volume (vph)	80	10	470	90	40	670	120	20	40	730	10	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0			4.0			4.0	4.0	4.0	
Lane Util. Factor			1.00			1.00			1.00	1.00	1.00	
Frpb, ped/bikes			0.99			0.98			1.00	1.00	0.91	
Flpb, ped/bikes			1.00			1.00			0.99	1.00	1.00	
Frt			0.98			0.98			1.00	1.00	0.85	
Flt Protected			0.99			1.00			0.95	1.00	1.00	
Satd. Flow (prot)			1790			1783			1748	1863	1442	
Flt Permitted			0.80			0.95			0.22	1.00	1.00	
Satd. Flow (perm)			1434			1706			409	1863	1442	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	10	470	90	40	670	120	20	40	730	10	60
RTOR Reduction (vph)	0	0	8	0	0	1	0	0	0	0	51	0
Lane Group Flow (vph)	0	0	642	0	0	849	0	0	40	730	19	0
Confl. Peds. (#/hr)	24	54		56	56		24	54	18			35
Confl. Bikes (#/hr)				2			2					3
Turn Type	Perm	Perm	NA		Perm	NA			Perm	NA	Perm	
Protected Phases			2			6				8		
Permitted Phases	2	2			6				8		8	
Actuated Green, G (s)			33.0			33.0			18.0	18.0	18.0	
Effective Green, g (s)			33.0			33.0			18.0	18.0	18.0	
Actuated g/C Ratio			0.51			0.51			0.28	0.28	0.28	
Clearance Time (s)			4.0			4.0			4.0	4.0	4.0	
Vehicle Extension (s)			3.0			3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)			728			866			113	515	399	
v/s Ratio Prot										c0.39		
v/s Ratio Perm			0.45			c0.50			0.10		0.01	
v/c Ratio			0.88			0.98			0.35	1.42	0.05	
Uniform Delay, d1			14.3			15.7			18.8	23.5	17.2	
Progression Factor			0.95			1.00			1.00	1.00	1.00	
Incremental Delay, d2			11.8			26.2			1.9	199.1	0.1	
Delay (s)			25.4			41.9			20.7	222.6	17.3	
Level of Service			C			D			C	F	B	
Approach Delay (s)			25.4			41.9				195.8		
Approach LOS			C			D				F		

Intersection Summary			
HCM 2000 Control Delay	82.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	125.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Volume (vph)	20	60	340	110	10	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0		
Lane Util. Factor		1.00	1.00			1.00		
Frpb, ped/bikes		1.00	0.99			1.00		
Flpb, ped/bikes		1.00	1.00			1.00		
Frt		1.00	0.96			0.93		
Flt Protected		0.95	1.00			0.98		
Satd. Flow (prot)		1770	1769			1695		
Flt Permitted		0.22	1.00			1.00		
Satd. Flow (perm)		414	1769			1737		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	60	340	110	10	10	10	10
RTOR Reduction (vph)	0	0	18	0	0	0	0	0
Lane Group Flow (vph)	0	80	432	0	0	40	0	0
Confl. Peds. (#/hr)		35		18				
Confl. Bikes (#/hr)				3				
Turn Type	Perm	Perm	NA		Perm	Prot		
Protected Phases			4			9		
Permitted Phases	4	4			9			
Actuated Green, G (s)		18.0	18.0			2.0		
Effective Green, g (s)		18.0	18.0			2.0		
Actuated g/C Ratio		0.28	0.28			0.03		
Clearance Time (s)		4.0	4.0			4.0		
Vehicle Extension (s)		3.0	3.0			3.0		
Lane Grp Cap (vph)		114	489			53		
v/s Ratio Prot			0.24					
v/s Ratio Perm		0.19				c0.02		
v/c Ratio		0.70	0.88			0.75		
Uniform Delay, d1		21.1	22.5			31.3		
Progression Factor		1.00	1.00			1.00		
Incremental Delay, d2		17.7	17.0			45.2		
Delay (s)		38.8	39.5			76.5		
Level of Service		D	D			E		
Approach Delay (s)			39.4			76.5		
Approach LOS			D			E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	220	50	170	350	20	90	760	160	20	370	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	0.99			0.99	
Flpb, ped/bikes	0.98	1.00			1.00		0.99	1.00			1.00	
Frt	1.00	0.97			0.99		1.00	0.97			0.97	
Flt Protected	0.95	1.00			0.98		0.95	1.00			1.00	
Satd. Flow (prot)	1736	1796			3441		1758	1805			1792	
Flt Permitted	0.36	1.00			0.70		0.43	1.00			0.70	
Satd. Flow (perm)	662	1796			2443		802	1805			1253	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	220	50	170	350	20	90	760	160	20	370	110
RTOR Reduction (vph)	0	10	0	0	3	0	0	9	0	0	12	0
Lane Group Flow (vph)	60	260	0	0	537	0	90	911	0	0	488	0
Confl. Peds. (#/hr)	30		15	15		30	27		11	11		27
Confl. Bikes (#/hr)			3			3						5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	28.5	28.5			28.5		46.5	46.5			46.5	
Effective Green, g (s)	28.5	28.5			28.5		46.5	46.5			46.5	
Actuated g/C Ratio	0.34	0.34			0.34		0.55	0.55			0.55	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	221	602			819		438	987			685	
v/s Ratio Prot		0.14						c0.51				
v/s Ratio Perm	0.09				c0.22		0.11				0.39	
v/c Ratio	0.27	0.43			0.66		0.21	0.92			0.71	
Uniform Delay, d1	20.7	22.0			24.1		9.8	17.6			14.3	
Progression Factor	0.50	0.48			1.00		1.00	1.00			1.00	
Incremental Delay, d2	1.1	0.8			4.1		0.2	13.7			3.5	
Delay (s)	11.5	11.3			28.1		10.1	31.3			17.8	
Level of Service	B	B			C		B	C			B	
Approach Delay (s)		11.3			28.1			29.4			17.8	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	110.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	480	0	0	700	120	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	3539			3539	3203	
Flt Permitted	1.00			1.00	0.98	
Satd. Flow (perm)	3539			3539	3203	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	480	0	0	700	120	140
RTOR Reduction (vph)	0	0	0	0	59	0
Lane Group Flow (vph)	480	0	0	700	201	0
Confl. Bikes (#/hr)		3				2
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	41.4			41.4	9.1	
Effective Green, g (s)	41.4			41.4	9.1	
Actuated g/C Ratio	0.69			0.69	0.15	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2441			2441	485	
v/s Ratio Prot	0.14			c0.20	c0.06	
v/s Ratio Perm						
v/c Ratio	0.20			0.29	0.41	
Uniform Delay, d1	3.3			3.6	23.0	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.2			0.3	0.6	
Delay (s)	3.5			3.9	23.6	
Level of Service	A			A	C	
Approach Delay (s)	3.5			3.9	23.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	940	0	0	810	20	100	190	100	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			0.99				
Frt		1.00			1.00			0.96				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3529			3523			3300				
Flt Permitted		0.88			1.00			0.99				
Satd. Flow (perm)		3102			3523			3300				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	940	0	0	810	20	100	190	100	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	56	0	0	0	0
Lane Group Flow (vph)	0	990	0	0	828	0	0	334	0	0	0	0
Confl. Peds. (#/hr)	47		92	92		47	23		33	33		23
Confl. Bikes (#/hr)			6			11			3			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		44.0			44.0			11.0				
Effective Green, g (s)		44.0			44.0			11.0				
Actuated g/C Ratio		0.68			0.68			0.17				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		2099			2384			558				
v/s Ratio Prot					0.24							
v/s Ratio Perm		c0.32						0.10				
v/c Ratio		0.47			0.35			0.60				
Uniform Delay, d1		5.0			4.4			25.0				
Progression Factor		1.11			1.00			1.00				
Incremental Delay, d2		0.7			0.4			1.2				
Delay (s)		6.2			4.8			26.1				
Level of Service		A			A			C				
Approach Delay (s)		6.2			4.8			26.1			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	480	230	140	690	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	0.99		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.95		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3350		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3350		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	480	230	140	690	0	0
RTOR Reduction (vph)	127	0	0	0	0	0
Lane Group Flow (vph)	584	0	140	690	0	0
Confl. Peds. (#/hr)		3	3			2
Confl. Bikes (#/hr)		3				
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1507		663	3539		
v/s Ratio Prot	c0.17		0.08	c0.19		
v/s Ratio Perm						
v/c Ratio	0.39		0.21	0.19		
Uniform Delay, d1	7.3		8.5	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.8		0.7	0.1		
Delay (s)	8.1		9.2	0.1		
Level of Service	A		A	A		
Approach Delay (s)	8.1			1.7	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	940	200	90	800	0	0	0	0	50	250	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		0.99			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.97			1.00						0.97	
Flt Protected		1.00			0.99						0.99	
Satd. Flow (prot)		3408			3518						3352	
Flt Permitted		1.00			0.73						0.99	
Satd. Flow (perm)		3408			2597						3352	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	940	200	90	800	0	0	0	0	50	250	70
RTOR Reduction (vph)	0	25	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	1115	0	0	890	0	0	0	0	0	338	0
Confl. Peds. (#/hr)	54		107	107		54	27		38	38		27
Confl. Bikes (#/hr)			14			3			2			6
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		43.8			43.8						11.2	
Effective Green, g (s)		43.8			43.8						11.2	
Actuated g/C Ratio		0.67			0.67						0.17	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2296			1749						577	
v/s Ratio Prot		0.33										
v/s Ratio Perm					c0.34						0.10	
v/c Ratio		0.49			0.51						0.59	
Uniform Delay, d1		5.1			5.3						24.8	
Progression Factor		1.00			0.91						1.00	
Incremental Delay, d2		0.7			1.0						1.5	
Delay (s)		5.9			5.8						26.3	
Level of Service		A			A						C	
Approach Delay (s)		5.9			5.8			0.0			26.3	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	500	60	140	600	50	80	540	40	80	440	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.99			0.99		1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1818			1820		1749	1835		1770	1854	
Flt Permitted		0.94			0.81		0.21	1.00		0.21	1.00	
Satd. Flow (perm)		1721			1479		388	1835		392	1854	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	500	60	140	600	50	80	540	40	80	440	10
RTOR Reduction (vph)	0	6	0	0	4	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	584	0	0	786	0	80	576	0	80	449	0
Confl. Peds. (#/hr)	12		42	42		12	15		15	15		15
Confl. Bikes (#/hr)						2			3			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		36.5			36.5		19.0	19.0		19.0	19.0	
Effective Green, g (s)		36.5			36.5		19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.56			0.56		0.29	0.29		0.29	0.29	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		966			830		113	536		114	541	
v/s Ratio Prot								c0.31			0.24	
v/s Ratio Perm		0.34			c0.53		0.21			0.20		
v/c Ratio		0.60			0.95		0.71	1.07		0.70	0.83	
Uniform Delay, d1		9.5			13.3		20.5	23.0		20.5	21.5	
Progression Factor		1.00			1.19		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.8			11.8		18.3	60.3		17.7	10.2	
Delay (s)		12.3			27.7		38.8	83.3		38.2	31.6	
Level of Service		B			C		D	F		D	C	
Approach Delay (s)		12.3			27.7			77.9			32.6	
Approach LOS		B			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	38.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	125.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	180	120	210	220	80	60	600	100	20	600	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes		0.97		1.00	0.95			0.99			0.99	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.96		1.00	0.96			0.98			0.98	
Flt Protected		0.99		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		1711		1770	1704			1806			1817	
Flt Permitted		0.99		0.95	1.00			0.90			0.97	
Satd. Flow (perm)		1711		1770	1704			1639			1768	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	180	120	210	220	80	60	600	100	20	600	80
RTOR Reduction (vph)	0	19	0	0	15	0	0	7	0	0	6	0
Lane Group Flow (vph)	0	361	0	210	285	0	0	753	0	0	694	0
Confl. Peds. (#/hr)	60		27	27		60	44		78	78		44
Confl. Bikes (#/hr)			3						3			3
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)		16.0		15.7	15.7			42.3			42.3	
Effective Green, g (s)		16.0		15.7	15.7			42.3			42.3	
Actuated g/C Ratio		0.19		0.18	0.18			0.50			0.50	
Clearance Time (s)		3.0		3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		322		326	314			815			879	
v/s Ratio Prot		c0.21		0.12	c0.17							
v/s Ratio Perm								c0.46			0.39	
v/c Ratio		1.12		0.64	0.91			0.92			0.79	
Uniform Delay, d1		34.5		32.1	33.9			19.9			17.7	
Progression Factor		1.00		0.72	0.72			1.00			1.00	
Incremental Delay, d2		86.4		3.6	24.3			17.8			7.2	
Delay (s)		120.9		26.5	48.8			37.6			24.8	
Level of Service		F		C	D			D			C	
Approach Delay (s)		120.9			39.6			37.6			24.8	
Approach LOS		F			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	117.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	20	270	750	180	190	740	90	250	440	10	50	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes		1.00	1.00	0.93	1.00	1.00	0.91	1.00	1.00		1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.95
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)		1770	3539	1470	1770	3539	1436	1770	3522		1770	3281
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (perm)		1770	3539	1470	1770	3539	1436	1770	3522		1770	3281
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	270	750	180	190	740	90	250	440	10	50	580
RTOR Reduction (vph)	0	0	0	127	0	0	68	0	1	0	0	59
Lane Group Flow (vph)	0	290	750	53	190	740	22	250	449	0	50	831
Confl. Peds. (#/hr)		63		44	44		63	29		41	41	
Confl. Bikes (#/hr)				11			9			5		
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA
Protected Phases	5	5	2		1	6		7	4		3	8
Permitted Phases				2			6					
Actuated Green, G (s)		20.9	34.0	34.0	15.3	28.4	28.4	17.7	42.3		6.4	31.0
Effective Green, g (s)		20.9	34.0	34.0	15.3	28.4	28.4	17.7	42.3		6.4	31.0
Actuated g/C Ratio		0.18	0.29	0.29	0.13	0.24	0.24	0.15	0.36		0.06	0.27
Clearance Time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)		318	1037	430	233	866	351	270	1284		97	876
v/s Ratio Prot		c0.16	0.21		0.11	c0.21		c0.14	0.13		0.03	c0.25
v/s Ratio Perm				0.04			0.02					
v/c Ratio		0.91	0.72	0.12	0.82	0.85	0.06	0.93	0.35		0.52	0.95
Uniform Delay, d1		46.6	36.8	30.1	49.0	41.8	33.6	48.5	26.8		53.3	41.7
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2		28.6	2.1	0.0	18.4	10.5	0.3	34.9	0.1		1.9	18.6
Delay (s)		75.2	38.9	30.1	67.4	52.3	33.9	83.4	26.9		55.2	60.4
Level of Service		E	D	C	E	D	C	F	C		E	E
Approach Delay (s)			46.2			53.5			47.1			60.1
Approach LOS			D			D			D			E

Intersection Summary			
HCM 2000 Control Delay	51.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	310
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	310
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	29
Confl. Bikes (#/hr)	18
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	330	20	70	430	160	0	850	90	0	770	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.99			0.98	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1642			1601			3100			3089	
Flt Permitted		0.74			0.92			1.00			1.00	
Satd. Flow (perm)		1224			1476			3100			3089	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	330	20	70	430	160	0	850	90	0	770	100
RTOR Reduction (vph)	0	3	0	0	16	0	0	12	0	0	15	0
Lane Group Flow (vph)	0	457	0	0	644	0	0	928	0	0	855	0
Confl. Peds. (#/hr)	11		38	38		11	36		42	42		36
Confl. Bikes (#/hr)						3			17			15
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.7			31.7			25.3			25.3	
Effective Green, g (s)		31.7			31.7			25.3			25.3	
Actuated g/C Ratio		0.49			0.49			0.39			0.39	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		596			719			1206			1202	
v/s Ratio Prot								c0.30			0.28	
v/s Ratio Perm		0.37			c0.44							
v/c Ratio		0.77			0.90			0.77			0.71	
Uniform Delay, d1		13.6			15.1			17.3			16.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.9			13.7			4.8			3.6	
Delay (s)		19.5			28.9			22.1			20.4	
Level of Service		B			C			C			C	
Approach Delay (s)		19.5			28.9			22.1			20.4	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	1070	150	40	420	130	130	840	220	90	640	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.58		0.93		1.00	0.93		1.00	0.97	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	0.97		1.00	0.99	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3515	917		3178		1770	1686		1770	1777	
Flt Permitted		0.90	1.00		0.70		0.19	1.00		0.09	1.00	
Satd. Flow (perm)		3155	917		2223		359	1686		162	1777	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	1070	150	40	420	130	130	840	220	90	640	70
RTOR Reduction (vph)	0	0	37	0	22	0	0	2	0	0	4	0
Lane Group Flow (vph)	0	1120	113	0	568	0	130	1058	0	90	706	0
Confl. Peds. (#/hr)	140		203	203		140	234		228	228		234
Confl. Bikes (#/hr)			20			12			6			14
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.4	34.4		34.4		46.1	46.1		46.1	46.1	
Effective Green, g (s)		34.4	34.4		34.4		46.1	46.1		46.1	46.1	
Actuated g/C Ratio		0.38	0.38		0.38		0.51	0.51		0.51	0.51	
Clearance Time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1205	350		849		183	863		82	910	
v/s Ratio Prot								c0.63			0.40	
v/s Ratio Perm		c0.35	0.12		0.26		0.36			0.56		
v/c Ratio		0.93	0.32		0.67		0.71	1.23		1.10	0.78	
Uniform Delay, d1		26.6	19.6		23.1		16.8	21.9		21.9	17.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		12.4	0.5		2.0		20.8	111.7		128.4	6.4	
Delay (s)		39.0	20.1		25.1		37.6	133.7		150.3	24.2	
Level of Service		D	C		C		D	F		F	C	
Approach Delay (s)		36.8			25.1			123.2			38.4	
Approach LOS		D			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	62.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	130.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	470	140	50	520	120	260	1050	50	190	930	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3417		1770	3440		1770	3515		1770	3474	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3417		1770	3440		1770	3515		1770	3474	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	470	140	50	520	120	260	1050	50	190	930	130
RTOR Reduction (vph)	0	29	0	0	21	0	0	3	0	0	11	0
Lane Group Flow (vph)	250	581	0	50	619	0	260	1097	0	190	1049	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.0	32.0		5.6	25.6		17.2	31.9		14.0	28.7	
Effective Green, g (s)	12.0	32.0		5.6	25.6		17.2	31.9		14.0	28.7	
Actuated g/C Ratio	0.12	0.32		0.06	0.26		0.17	0.32		0.14	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	212	1093		99	880		304	1121		247	997	
v/s Ratio Prot	c0.14	0.17		0.03	c0.18		c0.15	c0.31		0.11	0.30	
v/s Ratio Perm												
v/c Ratio	1.18	0.53		0.51	0.70		0.86	0.98		0.77	1.05	
Uniform Delay, d1	44.0	27.9		45.9	33.8		40.2	33.7		41.4	35.6	
Progression Factor	1.00	1.00		1.00	1.00		1.27	0.72		1.00	1.00	
Incremental Delay, d2	118.6	0.5		4.0	2.9		16.1	18.7		13.4	43.1	
Delay (s)	162.6	28.4		49.9	36.7		67.0	43.1		54.9	78.8	
Level of Service	F	C		D	D		E	D		D	E	
Approach Delay (s)		67.4			37.7			47.7			75.1	
Approach LOS		E			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	58.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	770	80	90	620	140	100	1040	150	260	740	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.98		1.00	0.98		1.00	0.97	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3479			3434		1770	3472		1770	3450	
Flt Permitted		0.65			0.59		0.26	1.00		0.15	1.00	
Satd. Flow (perm)		2282			2047		476	3472		288	3450	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	770	80	90	620	140	100	1040	150	260	740	150
RTOR Reduction (vph)	0	7	0	0	17	0	0	11	0	0	17	0
Lane Group Flow (vph)	0	923	0	0	833	0	100	1179	0	260	873	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		36.0			36.0		55.5	55.5		55.5	55.5	
Effective Green, g (s)		36.0			36.0		55.5	55.5		55.5	55.5	
Actuated g/C Ratio		0.36			0.36		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		821			736		264	1926		159	1914	
v/s Ratio Prot								0.34			0.25	
v/s Ratio Perm		0.40			c0.41		0.21			c0.90		
v/c Ratio		1.12			1.13		0.38	0.61		1.64	0.46	
Uniform Delay, d1		32.0			32.0		12.5	15.0		22.2	13.3	
Progression Factor		1.00			1.00		1.00	1.00		0.83	0.27	
Incremental Delay, d2		71.4			75.9		4.1	1.5		297.2	0.3	
Delay (s)		103.4			107.9		16.6	16.5		315.7	3.9	
Level of Service		F			F		B	B		F	A	
Approach Delay (s)		103.4			107.9			16.5			74.4	
Approach LOS		F			F			B			E	

Intersection Summary			
HCM 2000 Control Delay	69.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	118.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	280	30	150	420	130	80	950	180	90	840	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.97	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1822		1708	1768		1770	1768		1770	1820	
Flt Permitted	0.15	1.00		0.34	1.00		0.15	1.00		0.06	1.00	
Satd. Flow (perm)	276	1822		606	1768		275	1768		116	1820	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	280	30	150	420	130	80	950	180	90	840	100
RTOR Reduction (vph)	0	4	0	0	11	0	0	7	0	0	4	0
Lane Group Flow (vph)	50	306	0	150	539	0	80	1123	0	90	936	0
Confl. Peds. (#/hr)	23		62	62		23	17		65	65		17
Confl. Bikes (#/hr)			3			5			17			15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.7	26.7		26.7	26.7		64.0	64.0		64.0	64.0	
Effective Green, g (s)	26.7	26.7		26.7	26.7		64.0	64.0		64.0	64.0	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.64	0.64		0.64	0.64	
Clearance Time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	73	486		161	472		176	1131		74	1164	
v/s Ratio Prot		0.17			c0.30			0.64			0.51	
v/s Ratio Perm	0.18			0.25			0.29			c0.77		
v/c Ratio	0.68	0.63		0.93	1.14		0.45	0.99		1.22	0.80	
Uniform Delay, d1	32.9	32.3		35.8	36.6		9.1	17.8		18.0	13.3	
Progression Factor	1.00	1.00		1.00	1.00		0.36	0.67		1.00	1.00	
Incremental Delay, d2	23.4	2.7		50.9	86.5		6.4	22.0		173.9	5.9	
Delay (s)	56.3	35.0		86.7	123.2		9.7	33.9		191.9	19.3	
Level of Service	E	C		F	F		A	C		F	B	
Approach Delay (s)		37.9			115.4			32.3			34.4	
Approach LOS		D			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	51.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.3
Intersection Capacity Utilization	122.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	340	280	280	800	720	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3278	
Flt Permitted	0.95	1.00	0.17	1.00	1.00	
Satd. Flow (perm)	1770	1583	316	3539	3278	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	280	280	800	720	170
RTOR Reduction (vph)	0	21	0	0	18	0
Lane Group Flow (vph)	340	259	280	800	872	0
Confl. Peds. (#/hr)	29					114
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	24.2	44.2	52.8	32.8	44.8	
Effective Green, g (s)	24.2	44.2	52.8	32.8	44.8	
Actuated g/C Ratio	0.24	0.44	0.53	0.33	0.45	
Clearance Time (s)	4.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.5	3.5	5.0	5.0	
Lane Grp Cap (vph)	428	747	457	1160	1468	
v/s Ratio Prot	c0.19	0.07	c0.12	c0.23	c0.27	
v/s Ratio Perm		0.09	0.20			
v/c Ratio	0.79	0.35	0.61	0.69	0.59	
Uniform Delay, d1	35.6	18.4	26.9	29.2	20.8	
Progression Factor	1.00	1.00	1.00	0.31	0.98	
Incremental Delay, d2	9.8	0.3	1.5	2.0	1.0	
Delay (s)	45.4	18.7	28.2	11.0	21.3	
Level of Service	D	B	C	B	C	
Approach Delay (s)	33.3			15.5	21.3	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	130	180	900	120	290	710
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		3.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3423		1770	3539
Flt Permitted	0.95	1.00	1.00		0.28	1.00
Satd. Flow (perm)	1770	1583	3423		523	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	180	900	120	290	710
RTOR Reduction (vph)	0	136	9	0	0	0
Lane Group Flow (vph)	130	44	1011	0	290	710
Confl. Peds. (#/hr)	41			54		
Confl. Bikes (#/hr)				5		
Turn Type	Prot	Perm	NA		custom	NA
Protected Phases	8		2			6
Permitted Phases		8			1	
Actuated Green, G (s)	24.2	24.2	32.8		32.0	44.8
Effective Green, g (s)	24.2	24.2	32.8		32.0	44.8
Actuated g/C Ratio	0.24	0.24	0.33		0.32	0.45
Clearance Time (s)	4.0	4.0	4.0		3.0	4.0
Vehicle Extension (s)	3.0	3.0	5.0		3.5	5.0
Lane Grp Cap (vph)	428	383	1122		167	1585
v/s Ratio Prot	c0.07		c0.30			0.20
v/s Ratio Perm		0.03			c0.55	
v/c Ratio	0.30	0.11	0.90		1.74	0.45
Uniform Delay, d1	31.0	29.5	32.0		34.0	19.1
Progression Factor	1.00	1.00	1.00		0.89	0.57
Incremental Delay, d2	0.4	0.1	11.6		352.0	0.8
Delay (s)	31.4	29.7	43.6		382.1	11.6
Level of Service	C	C	D		F	B
Approach Delay (s)	30.4		43.6			119.0
Approach LOS	C		D			F

Intersection Summary			
HCM 2000 Control Delay	74.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	940	200	210	880	180	200	580	150	170	420	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.85	1.00	1.00	0.78	1.00	0.99		1.00	0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1349	1770	3539	1235	1770	3385		1770	3199	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1349	1770	3539	1235	1770	3385		1770	3199	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	290	940	200	210	880	180	200	580	150	170	420	260
RTOR Reduction (vph)	0	0	138	0	0	115	0	19	0	0	83	0
Lane Group Flow (vph)	290	940	62	210	880	65	200	711	0	170	597	0
Confl. Peds. (#/hr)			93			144			51			84
Confl. Bikes (#/hr)			11			14			3			18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4						
Actuated Green, G (s)	21.2	33.9	33.9	17.2	30.4	30.4	16.1	27.9		15.0	26.8	
Effective Green, g (s)	21.2	33.9	33.9	17.2	30.4	30.4	16.1	27.9		15.0	26.8	
Actuated g/C Ratio	0.19	0.31	0.31	0.16	0.28	0.28	0.15	0.26		0.14	0.25	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	344	1581	419	279	987	344	261	866		243	786	
v/s Ratio Prot	c0.16	0.18		0.12	c0.25		c0.11	c0.21		0.10	0.19	
v/s Ratio Perm			0.05			0.05						
v/c Ratio	0.84	0.59	0.15	0.75	0.89	0.19	0.77	0.82		0.70	0.76	
Uniform Delay, d1	42.3	31.7	27.1	43.9	37.7	29.9	44.6	38.2		44.8	38.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	16.3	0.6	0.2	10.9	10.2	0.3	11.4	6.3		6.9	4.2	
Delay (s)	58.6	32.3	27.3	54.8	47.9	30.2	56.1	44.5		51.8	42.4	
Level of Service	E	C	C	D	D	C	E	D		D	D	
Approach Delay (s)		37.0			46.5			47.0			44.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	109.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	880	290	240	510	190	170	730	280	320	590	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.92	1.00	0.98		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3336		1770	3539	1461	1770	3327		1770	3305	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3336		1770	3539	1461	1770	3327		1770	3305	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	880	290	240	510	190	170	730	280	320	590	180
RTOR Reduction (vph)	0	25	0	0	0	124	0	32	0	0	21	0
Lane Group Flow (vph)	340	1145	0	240	510	66	170	979	0	320	749	0
Confl. Peds. (#/hr)			59			57			29			72
Confl. Bikes (#/hr)			9						12			12
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4						
Actuated Green, G (s)	25.0	41.1		18.9	35.0	35.0	16.4	32.0		20.0	35.6	
Effective Green, g (s)	25.0	41.1		18.9	35.0	35.0	16.4	32.0		20.0	35.6	
Actuated g/C Ratio	0.20	0.32		0.15	0.27	0.27	0.13	0.25		0.16	0.28	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.0	3.0	2.0	2.0		2.0	3.0	
Lane Grp Cap (vph)	345	1071		261	967	399	226	831		276	919	
v/s Ratio Prot	c0.19	c0.34		0.14	0.14		0.10	c0.29		c0.18	0.23	
v/s Ratio Perm						0.05						
v/c Ratio	0.99	1.07		0.92	0.53	0.17	0.75	1.18		1.16	0.82	
Uniform Delay, d1	51.3	43.5		53.8	39.5	35.4	53.8	48.0		54.0	43.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	44.1	47.9		34.0	0.5	0.2	11.8	92.3		104.3	7.9	
Delay (s)	95.4	91.4		87.8	40.0	35.6	65.6	140.3		158.3	51.0	
Level of Service	F	F		F	D	D	E	F		F	D	
Approach Delay (s)		92.3			51.3			129.6			82.5	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	91.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	128.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	109.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	640	520	40	310	50	540	870	120	70	600	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1759	3539	1484	1740	3455		1770	3452		1770	3474	
Flt Permitted	0.50	1.00	1.00	0.30	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	930	3539	1484	544	3455		1770	3452		1770	3474	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	640	520	40	310	50	540	870	120	70	600	60
RTOR Reduction (vph)	0	0	244	0	16	0	0	11	0	0	9	0
Lane Group Flow (vph)	170	640	276	40	344	0	540	979	0	70	651	0
Confl. Peds. (#/hr)	12		53	53		12			44			33
Confl. Bikes (#/hr)			8						8			18
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	25.9	25.9	25.9	25.9	25.9		15.6	29.4		6.7	20.5	
Effective Green, g (s)	25.9	25.9	25.9	25.9	25.9		15.6	29.4		6.7	20.5	
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.35		0.21	0.40		0.09	0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	325	1238	519	190	1209		373	1371		160	962	
v/s Ratio Prot		0.18			0.10		c0.31	0.28		0.04	c0.19	
v/s Ratio Perm	0.18		c0.19	0.07								
v/c Ratio	0.52	0.52	0.53	0.21	0.28		1.45	0.71		0.44	0.68	
Uniform Delay, d1	19.1	19.1	19.2	16.9	17.4		29.2	18.8		31.9	23.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.4	1.1	0.6	0.1		216.0	1.8		1.9	1.9	
Delay (s)	20.7	19.5	20.3	17.4	17.5		245.2	20.6		33.8	25.7	
Level of Service	C	B	C	B	B		F	C		C	C	
Approach Delay (s)		19.9			17.5			99.9			26.5	
Approach LOS		B			B			F			C	

Intersection Summary			
HCM 2000 Control Delay	51.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	190	50	200	100	200	110	1170	180	230	810	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.92		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.94	1.00		0.99	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.90		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	1792		1749	1537		1742	3436		1761	3438	
Flt Permitted	0.37	1.00		0.46	1.00		0.27	1.00		0.14	1.00	
Satd. Flow (perm)	646	1792		854	1537		488	3436		259	3438	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	190	50	200	100	200	110	1170	180	230	810	110
RTOR Reduction (vph)	0	11	0	0	58	0	0	13	0	0	11	0
Lane Group Flow (vph)	170	229	0	200	242	0	110	1337	0	230	909	0
Confl. Peds. (#/hr)	105		17	17		105	38		27	27		38
Confl. Bikes (#/hr)			3			5			6			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.5	24.5		24.5	24.5		56.1	56.1		56.1	56.1	
Effective Green, g (s)	24.5	24.5		24.5	24.5		56.1	56.1		56.1	56.1	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.63	0.63		0.63	0.63	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	495		236	425		308	2175		163	2176	
v/s Ratio Prot		0.13			0.16			0.39			0.26	
v/s Ratio Perm	c0.26			0.23			0.23			c0.89		
v/c Ratio	0.96	0.46		0.85	0.57		0.36	0.61		1.41	0.42	
Uniform Delay, d1	31.5	26.6		30.3	27.5		7.7	9.8		16.2	8.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	53.9	0.7		23.5	1.8		0.7	0.5		217.2	0.1	
Delay (s)	85.4	27.3		53.8	29.3		8.4	10.3		233.5	8.2	
Level of Service	F	C		D	C		A	B		F	A	
Approach Delay (s)		51.4			39.1			10.1			53.3	
Approach LOS		D			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	88.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	90	750	420	1250	900	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3489	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3489	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	750	420	1250	900	80
RTOR Reduction (vph)	0	68	0	0	6	0
Lane Group Flow (vph)	90	682	420	1250	974	0
Confl. Peds. (#/hr)	21					8
Confl. Bikes (#/hr)						6
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	15.2	48.6	29.4	68.6	35.2	
Effective Green, g (s)	15.2	48.6	29.4	68.6	35.2	
Actuated g/C Ratio	0.17	0.53	0.32	0.75	0.38	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	293	1475	566	2644	1337	
v/s Ratio Prot	0.05	c0.24	c0.24	0.35	c0.28	
v/s Ratio Perm						
v/c Ratio	0.31	0.46	0.74	0.47	0.73	
Uniform Delay, d1	33.7	13.5	27.8	4.5	24.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.2	5.2	0.1	2.0	
Delay (s)	34.3	13.7	33.0	4.7	26.2	
Level of Service	C	B	C	A	C	
Approach Delay (s)	15.9			11.8	26.2	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	91.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	380	130	50	290	20	50	330	80	20	540	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	0.98	1.00		0.98	1.00		0.98	1.00		0.99	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	1757		1739	1838		1730	1794		1753	1766	
Flt Permitted	0.46	1.00		0.24	1.00		0.21	1.00		0.43	1.00	
Satd. Flow (perm)	843	1757		442	1838		383	1794		790	1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	380	130	50	290	20	50	330	80	20	540	140
RTOR Reduction (vph)	0	19	0	0	4	0	0	13	0	0	14	0
Lane Group Flow (vph)	110	491	0	50	306	0	50	397	0	20	666	0
Confl. Peds. (#/hr)	26		36	36		26	78		18	18		78
Confl. Bikes (#/hr)			11						3			15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Effective Green, g (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.51	0.51		0.51	0.51	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Grp Cap (vph)	324	675		170	706		194	910		401	896	
v/s Ratio Prot		c0.28			0.17			0.22			c0.38	
v/s Ratio Perm	0.13			0.11			0.13			0.03		
v/c Ratio	0.34	0.73		0.29	0.43		0.26	0.44		0.05	0.74	
Uniform Delay, d1	14.2	17.1		13.9	14.8		9.1	10.1		8.1	12.6	
Progression Factor	0.56	0.52		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	2.8		4.4	1.9		3.2	1.5		0.2	5.5	
Delay (s)	9.1	11.7		18.2	16.7		12.3	11.6		8.3	18.2	
Level of Service	A	B		B	B		B	B		A	B	
Approach Delay (s)		11.2			16.9			11.7			17.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	740	0	0	990	90	640	350	270	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.95		1.00	0.95				
Frpb, ped/bikes		1.00			1.00		1.00	0.99				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.99		1.00	0.93				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5085			3495		1770	3268				
Flt Permitted		1.00			1.00		0.95	1.00				
Satd. Flow (perm)		5085			3495		1770	3268				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	740	0	0	990	90	640	350	270	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	55	0	0	0	0
Lane Group Flow (vph)	0	740	0	0	1069	0	640	565	0	0	0	0
Confl. Peds. (#/hr)									17			
Confl. Bikes (#/hr)									11			
Turn Type		NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases							8					
Actuated Green, G (s)		25.8			25.8		31.7	31.7				
Effective Green, g (s)		25.8			25.8		31.7	31.7				
Actuated g/C Ratio		0.40			0.40		0.49	0.49				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		2018			1387		863	1593				
v/s Ratio Prot		0.15			c0.31			0.17				
v/s Ratio Perm							c0.36					
v/c Ratio		0.37			0.77		0.74	0.35				
Uniform Delay, d1		13.8			17.0		13.4	10.3				
Progression Factor		0.65			0.99		1.00	1.00				
Incremental Delay, d2		0.1			0.3		5.7	0.6				
Delay (s)		9.1			17.2		19.1	10.9				
Level of Service		A			B		B	B				
Approach Delay (s)		9.1			17.2			15.1			0.0	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	450	50	100	430	20	210	870	220	0	1250	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.95	1.00
Frt	1.00	0.98			0.99		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1835			3488		1770	4931			3539	1583
Flt Permitted	0.22	1.00			0.76		0.95	1.00			1.00	1.00
Satd. Flow (perm)	404	1835			2665		1770	4931			3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	450	50	100	430	20	210	870	220	0	1250	510
RTOR Reduction (vph)	0	4	0	0	2	0	0	44	0	0	0	244
Lane Group Flow (vph)	340	496	0	0	548	0	210	1046	0	0	1250	266
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	39.0	39.0			22.5		12.0	50.0			34.0	34.0
Effective Green, g (s)	39.0	39.0			22.5		12.0	50.0			34.0	34.0
Actuated g/C Ratio	0.39	0.39			0.22		0.12	0.50			0.34	0.34
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	335	715			599		212	2465			1203	538
v/s Ratio Prot	c0.13	0.27					c0.12	0.21			c0.35	
v/s Ratio Perm	c0.26				0.21							0.17
v/c Ratio	1.01	0.69			0.91		0.99	0.42			1.04	0.50
Uniform Delay, d1	25.7	25.5			37.8		43.9	15.9			33.0	26.2
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	53.0	5.5			20.8		59.4	0.5			36.7	3.2
Delay (s)	78.7	31.0			58.6		103.4	16.4			69.7	29.4
Level of Service	E	C			E		F	B			E	C
Approach Delay (s)		50.3			58.6			30.5			58.0	
Approach LOS		D			E			C			E	

Intersection Summary			
HCM 2000 Control Delay	48.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	105.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	10	10	10	410	10	140	10	10	1150	370	20	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		0.99			1.00				0.98			1.00
Flpb, ped/bikes		1.00			1.00				1.00			1.00
Frt		0.95			0.97				0.96			1.00
Flt Protected		0.98			0.96				1.00			0.95
Satd. Flow (prot)		1741			1727				4795			1770
Flt Permitted		0.86			0.76				0.90			0.10
Satd. Flow (perm)		1523			1369				4332			189
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	10	410	10	140	10	10	1150	370	20	180
RTOR Reduction (vph)	0	6	0	0	13	0	0	0	63	0	0	0
Lane Group Flow (vph)	0	24	0	0	547	0	0	0	1477	0	0	200
Confl. Peds. (#/hr)			2	2						20		5
Confl. Bikes (#/hr)						2						
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		35.5			35.5				35.0			46.0
Effective Green, g (s)		35.5			35.5				35.0			46.0
Actuated g/C Ratio		0.39			0.39				0.39			0.51
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		597			537				1675			209
v/s Ratio Prot												c0.07
v/s Ratio Perm		0.02			c0.40				0.34			c0.42
v/c Ratio		0.04			1.02				0.88			0.96
Uniform Delay, d1		17.0			27.5				25.8			19.3
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			43.4				7.1			49.2
Delay (s)		17.0			70.9				32.9			68.5
Level of Service		B			E				C			E
Approach Delay (s)		17.0			70.9				32.9			
Approach LOS		B			E				C			

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	1360	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	5085	
Flt Permitted	1.00	
Satd. Flow (perm)	5085	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	1360	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	1360	0
Confl. Peds. (#/hr)		2
Confl. Bikes (#/hr)		12
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	46.0	
Effective Green, g (s)	46.0	
Actuated g/C Ratio	0.51	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	2584	
v/s Ratio Prot	0.27	
v/s Ratio Perm		
v/c Ratio	0.53	
Uniform Delay, d1	14.9	
Progression Factor	1.00	
Incremental Delay, d2	0.8	
Delay (s)	15.7	
Level of Service	B	
Approach Delay (s)	22.5	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	370	280	100	270	120	170	800	150	120	1080	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.94		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1742		1770	3376		1770	3539	1583	1770	3539	1583
Flt Permitted	0.50	1.00		0.15	1.00		0.25	1.00	1.00	0.35	1.00	1.00
Satd. Flow (perm)	932	1742		276	3376		460	3539	1583	651	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	240	370	280	100	270	120	170	800	150	120	1080	490
RTOR Reduction (vph)	0	32	0	0	61	0	0	0	98	0	0	188
Lane Group Flow (vph)	240	618	0	100	329	0	170	800	52	120	1080	302
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	27.0	27.0		27.0	27.0		25.9	25.9	25.9	26.7	24.7	24.7
Effective Green, g (s)	27.0	27.0		27.0	27.0		25.9	25.9	25.9	26.7	24.7	24.7
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.35	0.35	0.35	0.36	0.33	0.33
Clearance Time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	338	632		100	1225		330	1231	551	361	1174	525
v/s Ratio Prot		0.35			0.10		0.07	c0.23		0.04	c0.31	
v/s Ratio Perm	0.26			c0.36			0.11		0.03	0.08		0.19
v/c Ratio	0.71	0.98		1.00	0.27		0.52	0.65	0.09	0.33	0.92	0.57
Uniform Delay, d1	20.3	23.4		23.7	16.7		18.6	20.4	16.3	18.7	23.9	20.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.9	30.6		90.0	0.5		0.6	2.7	0.3	0.2	13.0	4.5
Delay (s)	32.3	54.0		113.7	17.3		19.2	23.1	16.7	18.9	36.9	25.0
Level of Service	C	D		F	B		B	C	B	B	D	C
Approach Delay (s)		48.1			36.9			21.6			32.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	700	910	170	70	430	100	130	220	60	330	390	790
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	0.99			0.95		1.00	0.96		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.97		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3279			3273		1770	3288		1770	1863	2787
Flt Permitted	0.95	0.66			0.67		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	2169			2213		1770	3288		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	700	910	170	70	430	100	130	220	60	330	390	790
RTOR Reduction (vph)	0	11	0	0	15	0	0	23	0	0	0	588
Lane Group Flow (vph)	588	1181	0	0	585	0	130	257	0	330	390	202
Confl. Peds. (#/hr)			29			201			116			
Confl. Bikes (#/hr)			2			21			12			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	27.5	59.1			27.6		9.0	22.5		14.0	27.5	27.5
Effective Green, g (s)	27.5	59.1			27.6		9.0	22.5		14.0	27.5	27.5
Actuated g/C Ratio	0.26	0.55			0.26		0.08	0.21		0.13	0.26	0.26
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	411	1475			567		148	687		230	476	712
v/s Ratio Prot	c0.37	0.20					0.07	0.08		c0.19	c0.21	
v/s Ratio Perm		0.24			c0.26							0.07
v/c Ratio	1.43	0.80			1.03		0.88	0.37		1.43	0.82	0.28
Uniform Delay, d1	40.0	19.5			40.0		48.8	36.5		46.8	37.7	32.1
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	207.4	3.2			46.3		40.1	0.3		218.8	10.6	0.2
Delay (s)	247.4	22.7			86.3		88.9	36.9		265.6	48.3	32.4
Level of Service	F	C			F		F	D		F	D	C
Approach Delay (s)		97.0			86.3			53.4			87.4	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	88.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	730	80	20	820	140	160	20	20	100	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.99			1.00		0.99		0.87		0.85
Flt Protected	1.00			1.00		0.98		0.99		1.00
Satd. Flow (prot)	3487			3535		4930		1616		1504
Flt Permitted	1.00			0.93		0.98		0.99		1.00
Satd. Flow (perm)	3487			3275		4930		1616		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	730	80	20	820	140	160	20	20	100	20
RTOR Reduction (vph)	9	0	0	0	0	0	0	47	0	15
Lane Group Flow (vph)	801	0	0	840	0	320	0	75	0	3
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1394			1310		1504		289		269
v/s Ratio Prot	0.23							c0.05		
v/s Ratio Perm				c0.26		0.06				0.00
v/c Ratio	0.57			0.64		0.21		0.26		0.01
Uniform Delay, d1	22.2			23.0		24.5		33.6		32.1
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	1.7			2.4		0.3		2.2		0.1
Delay (s)	23.9			25.4		24.8		35.8		32.2
Level of Service	C			C		C		D		C
Approach Delay (s)	23.9			25.4		24.8		35.3		
Approach LOS	C			C		C		D		

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	420	30	20	320	50	30	120	30	180	280	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			0.99			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.96	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1827			1814			1795			1735	
Flt Permitted		0.84			0.97			0.87			0.85	
Satd. Flow (perm)		1540			1762			1582			1501	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	420	30	20	320	50	30	120	30	180	280	190
RTOR Reduction (vph)	0	3	0	0	8	0	0	11	0	0	23	0
Lane Group Flow (vph)	0	537	0	0	382	0	0	169	0	0	627	0
Confl. Peds. (#/hr)	11		5	5		11	15		6	6		15
Confl. Bikes (#/hr)			12			12			9			26
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		544			623			803			762	
v/s Ratio Prot												
v/s Ratio Perm		c0.35			0.22			0.11			c0.42	
v/c Ratio		0.99			0.61			0.21			0.82	
Uniform Delay, d1		20.8			17.3			8.8			13.5	
Progression Factor		1.06			1.16			1.00			1.00	
Incremental Delay, d2		18.8			3.9			0.6			9.8	
Delay (s)		40.8			24.0			9.4			23.3	
Level of Service		D			C			A			C	
Approach Delay (s)		40.8			24.0			9.4			23.3	
Approach LOS		D			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	121.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	350	120	50	370	180	90	1190	10	160	1950	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.91	1.00
Frt		0.97			0.96		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1794			1780		1770	3535		1770	5085	1583
Flt Permitted		0.81			0.93		0.15	1.00		0.15	1.00	1.00
Satd. Flow (perm)		1472			1662		287	3535		287	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	350	120	50	370	180	90	1190	10	160	1950	240
RTOR Reduction (vph)	0	1	0	0	10	0	0	1	0	0	0	130
Lane Group Flow (vph)	0	569	0	0	590	0	90	1199	0	160	1950	110
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	0.40
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		702			792		114	1414		114	2034	633
v/s Ratio Prot								0.34			0.38	
v/s Ratio Perm		c0.39			0.35		0.31			c0.56		0.07
v/c Ratio		0.81			0.75		0.79	0.85		1.40	0.96	0.17
Uniform Delay, d1		14.5			13.8		17.1	17.7		19.5	19.0	12.6
Progression Factor		1.00			0.95		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		9.9			5.1		41.2	6.5		225.8	12.3	0.6
Delay (s)		24.4			18.1		58.3	24.2		245.3	31.3	13.2
Level of Service		C			B		E	C		F	C	B
Approach Delay (s)		24.4			18.1			26.6			44.0	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	280	1350	560	1110	0	0	0	200	430	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frt	1.00	0.85	1.00	0.85				1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3516	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3516	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	1350	560	1110	0	0	0	200	430	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	280	1350	560	1110	0	0	0	200	445	0
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	14.8	33.9	14.1	65.0				21.1	21.1	
Effective Green, g (s)	14.8	33.9	14.1	65.0				21.1	21.1	
Actuated g/C Ratio	0.23	0.52	0.22	1.00				0.32	0.32	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	403	1882	744	1583				574	1141	
v/s Ratio Prot	0.16	0.37						0.11	0.13	
v/s Ratio Perm			0.16	c0.70						
v/c Ratio	0.69	0.72	0.75	0.70				0.35	0.39	
Uniform Delay, d1	23.0	11.9	23.8	0.0				16.7	17.0	
Progression Factor	1.26	0.75	1.00	1.00				1.00	1.00	
Incremental Delay, d2	3.4	0.9	4.3	2.6				1.7	1.0	
Delay (s)	32.5	9.8	28.1	2.6				18.4	18.0	
Level of Service	C	A	C	A				B	B	
Approach Delay (s)	13.7		11.2			0.0			18.1	
Approach LOS	B		B			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1060	380	610	690	10	420	0	730	0	30	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00		0.95	
Frt		0.96		1.00	1.00		1.00		0.85		0.93	
Flt Protected		1.00		0.95	1.00		0.95		1.00		1.00	
Satd. Flow (prot)		3399		1770	3532		1770		1583		3274	
Flt Permitted		1.00		0.95	1.00		0.72		1.00		1.00	
Satd. Flow (perm)		3399		1770	3532		1333		1583		3274	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1060	380	610	690	10	420	0	730	0	30	30
RTOR Reduction (vph)	0	36	0	0	1	0	0	0	335	0	23	0
Lane Group Flow (vph)	0	1404	0	610	699	0	420	0	395	0	37	0
Turn Type		NA		Prot	NA		Perm		Perm		NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		41.0		24.5	69.5		22.0		22.0		22.0	
Effective Green, g (s)		41.0		24.5	69.5		22.0		22.0		22.0	
Actuated g/C Ratio		0.41		0.24	0.70		0.22		0.22		0.22	
Clearance Time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)		1393		433	2454		293		348		720	
v/s Ratio Prot		c0.41		c0.34	0.20						0.01	
v/s Ratio Perm							c0.31		0.25			
v/c Ratio		1.01		1.41	0.28		1.43		1.14		0.05	
Uniform Delay, d1		29.5		37.8	5.8		39.0		39.0		30.8	
Progression Factor		1.00		1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		26.1		197.3	0.1		213.6		90.5		0.0	
Delay (s)		55.6		235.1	5.9		252.6		129.5		30.8	
Level of Service		E		F	A		F		F		C	
Approach Delay (s)		55.6			112.6			174.5			30.8	
Approach LOS		E			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	108.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	115.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	570	140	130	600	100	180	950	150	70	1030	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.98			0.98		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3423			3448		1770	3467		1770	3460	
Flt Permitted		0.60			0.60		0.12	1.00		0.15	1.00	
Satd. Flow (perm)		2062			2088		233	3467		272	3460	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	570	140	130	600	100	180	950	150	70	1030	180
RTOR Reduction (vph)	0	22	0	0	15	0	0	17	0	0	19	0
Lane Group Flow (vph)	0	838	0	0	815	0	180	1083	0	70	1191	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		30.0			30.0		32.0	32.0		32.0	32.0	
Actuated g/C Ratio		0.42			0.42		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		859			870		103	1540		120	1537	
v/s Ratio Prot								0.31			0.34	
v/s Ratio Perm		c0.41			0.39		c0.77			0.26		
v/c Ratio		0.98			0.94		1.75	0.70		0.58	0.77	
Uniform Delay, d1		20.6			20.1		20.0	16.2		15.0	16.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		25.3			18.6		373.2	2.7		19.1	3.9	
Delay (s)		45.9			38.7		393.2	18.9		34.1	20.8	
Level of Service		D			D		F	B		C	C	
Approach Delay (s)		45.9			38.7			71.5			21.5	
Approach LOS		D			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	44.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	109.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	370	60	90	150	50	30	980	90	100	1390	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.99			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1806			1828	1551	1768	3485		1768	3504	
Flt Permitted		0.70			0.64	1.00	0.10	1.00		0.19	1.00	
Satd. Flow (perm)		1291			1196	1551	182	3485		353	3504	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	370	60	90	150	50	30	980	90	100	1390	80
RTOR Reduction (vph)	0	5	0	0	0	32	0	9	0	0	6	0
Lane Group Flow (vph)	0	605	0	0	240	18	30	1061	0	100	1464	0
Confl. Peds. (#/hr)	5		3	3		5	11		6	6		11
Confl. Bikes (#/hr)			3			5			8			2
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		26.0			27.0	27.0	41.0	41.0		41.0	41.0	
Effective Green, g (s)		26.0			27.0	27.0	41.0	41.0		41.0	41.0	
Actuated g/C Ratio		0.34			0.36	0.36	0.54	0.54		0.54	0.54	
Clearance Time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		1.0			1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)		441			424	551	98	1880		190	1890	
v/s Ratio Prot								0.30			c0.42	
v/s Ratio Perm		c0.47			0.20	0.01	0.17			0.28		
v/c Ratio		1.37			0.57	0.03	0.31	0.56		0.53	0.77	
Uniform Delay, d1		25.0			19.8	16.0	9.7	11.6		11.3	13.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		181.0			1.0	0.0	7.9	1.2		10.1	3.2	
Delay (s)		206.0			20.8	16.0	17.6	12.8		21.3	17.0	
Level of Service		F			C	B	B	B		C	B	
Approach Delay (s)		206.0			20.0			12.9			17.3	
Approach LOS		F			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	48.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	76.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	10	330	10	210	10	970	310	130	1470	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.95		1.00	0.96		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1723			1689		1752	3378		1752	3501	
Flt Permitted		0.87			0.80		0.10	1.00		0.12	1.00	
Satd. Flow (perm)		1518			1389		184	3378		218	3501	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	10	330	10	210	10	970	310	130	1470	10
RTOR Reduction (vph)	0	6	0	0	29	0	0	40	0	0	0	0
Lane Group Flow (vph)	0	24	0	0	521	0	10	1240	0	130	1480	0
Confl. Peds. (#/hr)	3					3	3					3
Confl. Bikes (#/hr)			6									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		29.0			29.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.38			0.38		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		571			523		95	1754		113	1818	
v/s Ratio Prot								0.37			0.42	
v/s Ratio Perm		0.02			c0.38		0.05			c0.60		
v/c Ratio		0.04			1.00		0.11	0.71		1.15	0.81	
Uniform Delay, d1		15.2			24.0		9.4	14.0		18.5	15.4	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			38.2		2.2	2.4		130.8	4.1	
Delay (s)		15.2			62.2		11.6	16.5		149.3	19.5	
Level of Service		B			E		B	B		F	B	
Approach Delay (s)		15.2			62.2			16.4			30.0	
Approach LOS		B			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	410	390	140	450	110	330	920	220	180	1290	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frt		0.95			0.98		1.00	0.97		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3305			1805		1770	3437		1770	3439	
Flt Permitted		0.59			0.34		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1979			620		1770	3437		1770	3439	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	410	390	140	450	110	330	920	220	180	1290	300
RTOR Reduction (vph)	0	70	0	0	6	0	0	19	0	0	18	0
Lane Group Flow (vph)	0	1010	0	0	694	0	330	1121	0	180	1572	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		51.0			51.0		10.0	35.0		10.0	35.0	
Effective Green, g (s)		51.0			51.0		10.0	35.0		10.0	35.0	
Actuated g/C Ratio		0.45			0.45		0.09	0.31		0.09	0.31	
Clearance Time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)		1.0			1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		897			281		157	1069		157	1069	
v/s Ratio Prot							c0.19	0.33		0.10	c0.46	
v/s Ratio Perm		0.51			c1.12							
v/c Ratio		1.13			2.47		2.10	1.05		1.15	1.47	
Uniform Delay, d1		30.8			30.8		51.2	38.8		51.2	38.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		71.0			672.0		516.8	41.3		116.6	216.9	
Delay (s)		101.8			702.7		568.1	80.1		167.9	255.7	
Level of Service		F			F		F	F		F	F	
Approach Delay (s)		101.8			702.7			189.6			246.7	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	262.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	2.07		
Actuated Cycle Length (s)	112.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	152.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	30	170	80	60	60	140	1260	80	150	1520	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1752		1770	3508		1770	3486	
Flt Permitted	0.54	1.00	1.00		0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1013	1863	1583		1544		1770	3508		1770	3486	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	30	170	80	60	60	140	1260	80	150	1520	170
RTOR Reduction (vph)	0	0	134	0	18	0	0	4	0	0	7	0
Lane Group Flow (vph)	170	30	36	0	182	0	140	1336	0	150	1683	0
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	18.3	18.3	18.3		18.3		8.1	44.9		10.6	47.4	
Effective Green, g (s)	18.3	18.3	18.3		18.3		8.1	44.9		10.6	47.4	
Actuated g/C Ratio	0.21	0.21	0.21		0.21		0.09	0.52		0.12	0.55	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	213	392	333		325		165	1814		216	1903	
v/s Ratio Prot		0.02					c0.08	0.38		0.08	c0.48	
v/s Ratio Perm	c0.17		0.02		0.12							
v/c Ratio	0.80	0.08	0.11		0.56		0.85	0.74		0.69	0.88	
Uniform Delay, d1	32.5	27.5	27.7		30.6		38.7	16.3		36.5	17.3	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.4	0.0	0.1		1.2		30.2	1.4		7.6	5.2	
Delay (s)	49.9	27.5	27.7		31.8		68.9	17.7		44.1	22.4	
Level of Service	D	C	C		C		E	B		D	C	
Approach Delay (s)		37.9			31.8			22.6			24.2	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	350	1440	1460	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.97	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3446	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3446	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	350	1440	1460	310
RTOR Reduction (vph)	0	0	0	0	28	0
Lane Group Flow (vph)	0	0	350	1440	1742	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			9.9	55.0	37.1	
Effective Green, g (s)			9.9	55.0	37.1	
Actuated g/C Ratio			0.18	1.00	0.67	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			617	3539	2324	
v/s Ratio Prot			0.10	c0.41	c0.51	
v/s Ratio Perm						
v/c Ratio			0.57	0.41	0.75	
Uniform Delay, d1			20.6	0.0	5.9	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			1.2	0.1	1.4	
Delay (s)			21.8	0.1	7.3	
Level of Service			C	A	A	
Approach Delay (s)	0.0			4.3	7.3	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	270	140	150	160	0	290	0	1230	380	290	1170	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.91			0.96		1.00	1.00	
Flt Protected	0.95	0.98	1.00		0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1741	1583		1671			3414		1770	3539	
Flt Permitted	0.95	0.98	1.00		0.98			1.00		0.11	1.00	
Satd. Flow (perm)	1681	1741	1583		1671			3414		206	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	140	150	160	0	290	0	1230	380	290	1170	0
RTOR Reduction (vph)	0	0	122	0	71	0	0	31	0	0	0	0
Lane Group Flow (vph)	202	208	28	0	379	0	0	1579	0	290	1170	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	15.7	15.7	15.7		21.1			36.1		36.1	36.1	
Effective Green, g (s)	15.7	15.7	15.7		21.1			36.1		36.1	36.1	
Actuated g/C Ratio	0.18	0.18	0.18		0.25			0.43		0.43	0.43	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	310	321	292		415			1451		87	1504	
v/s Ratio Prot	c0.12	0.12			c0.23			0.46			0.33	
v/s Ratio Perm			0.02							c1.41		
v/c Ratio	0.65	0.65	0.09		0.91			1.09		3.33	0.78	
Uniform Delay, d1	32.1	32.0	28.7		31.0			24.4		24.4	21.0	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	4.8	4.5	0.1		24.0			51.5		1078.8	2.6	
Delay (s)	36.9	36.5	28.8		55.0			75.9		1103.2	23.6	
Level of Service	D	D	C		E			E		F	C	
Approach Delay (s)		34.6			55.0			75.9			238.0	
Approach LOS		C			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	125.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	2.04		
Actuated Cycle Length (s)	84.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	80	0	170	0	1380	80	140	1340	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frpb, ped/bikes					1.00			1.00		1.00	1.00	
Flpb, ped/bikes					1.00			1.00		1.00	1.00	
Frt					0.91			0.99		1.00	1.00	
Flt Protected					0.98			1.00		0.95	1.00	
Satd. Flow (prot)					1664			3506		1770	3539	
Flt Permitted					0.90			1.00		0.95	1.00	
Satd. Flow (perm)					1526			3506		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	80	0	170	0	1380	80	140	1340	0
RTOR Reduction (vph)	0	0	0	0	102	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	148	0	0	1454	0	140	1340	0
Confl. Peds. (#/hr)			2	2						5		
Confl. Bikes (#/hr)									3			
Turn Type				Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)					19.0			37.0		7.0	39.0	
Effective Green, g (s)					19.0			37.0		7.0	39.0	
Actuated g/C Ratio					0.25			0.49		0.09	0.52	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)					386			1729		165	1840	
v/s Ratio Prot								c0.41		c0.08	0.38	
v/s Ratio Perm					c0.10							
v/c Ratio					0.38			0.84		0.85	0.73	
Uniform Delay, d1					23.2			16.5		33.5	13.9	
Progression Factor					1.00			1.45		1.00	1.00	
Incremental Delay, d2					2.9			3.1		38.9	2.6	
Delay (s)					26.0			27.0		72.4	16.5	
Level of Service					C			C		E	B	
Approach Delay (s)		0.0			26.0			27.0			21.8	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	280	170	60	170	200	90	1040	120	170	1140	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.94		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1742			1692		1752	3439		1752	3443	
Flt Permitted		0.70			0.86		0.12	1.00		0.12	1.00	
Satd. Flow (perm)		1244			1468		231	3439		231	3443	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	280	170	60	170	200	90	1040	120	170	1140	110
RTOR Reduction (vph)	0	16	0	0	22	0	0	11	0	0	10	0
Lane Group Flow (vph)	0	614	0	0	408	0	90	1149	0	170	1240	0
Confl. Peds. (#/hr)	17					17	8		3	3		8
Confl. Bikes (#/hr)			2			3			3			11
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Actuated g/C Ratio		0.44			0.44		0.43	0.43		0.43	0.43	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		547			645		98	1467		98	1469	
v/s Ratio Prot								0.33			0.36	
v/s Ratio Perm		c0.49			0.28		0.39			c0.74		
v/c Ratio		1.12			0.63		0.92	0.78		1.73	0.84	
Uniform Delay, d1		21.0			16.3		20.3	18.5		21.5	19.3	
Progression Factor		1.00			1.00		1.00	1.00		1.17	1.13	
Incremental Delay, d2		77.0			2.0		70.7	4.2		358.0	4.3	
Delay (s)		98.0			18.3		90.9	22.8		383.1	26.1	
Level of Service		F			B		F	C		F	C	
Approach Delay (s)		98.0			18.3			27.7			68.9	
Approach LOS		F			B			C			E	

Intersection Summary			
HCM 2000 Control Delay	54.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	210	850	260	110	820	160	270	660	200	210	1000	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1543	1770	3453		1770	3405		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1543	1770	3453		1770	3405		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	210	850	260	110	820	160	270	660	200	210	1000	150
RTOR Reduction (vph)	0	0	112	0	14	0	0	26	0	0	0	106
Lane Group Flow (vph)	210	850	148	110	966	0	270	834	0	210	1000	44
Confl. Peds. (#/hr)			9						2			
Confl. Bikes (#/hr)			5									
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	12.0	32.3	32.3	10.7	31.0		17.0	32.0		17.0	32.0	32.0
Effective Green, g (s)	12.0	32.3	32.3	10.7	31.0		17.0	32.0		17.0	32.0	32.0
Actuated g/C Ratio	0.11	0.29	0.29	0.10	0.28		0.15	0.29		0.15	0.29	0.29
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	193	1039	453	172	973		273	990		273	1029	460
v/s Ratio Prot	c0.12	0.24		0.06	c0.28		c0.15	0.25		0.12	c0.28	
v/s Ratio Perm			0.10									0.03
v/c Ratio	1.09	0.82	0.33	0.64	0.99		0.99	0.84		0.77	0.97	0.10
Uniform Delay, d1	49.0	36.1	30.3	47.8	39.4		46.4	36.6		44.6	38.6	28.5
Progression Factor	0.61	0.92	1.09	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	73.6	2.9	0.2	7.6	26.9		50.9	8.7		12.3	22.0	0.4
Delay (s)	103.2	36.1	33.2	55.4	66.2		97.3	45.3		56.9	60.6	28.9
Level of Service	F	D	C	E	E		F	D		E	E	C
Approach Delay (s)		46.2			65.1			57.7			56.5	
Approach LOS		D			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	55.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	170	1190	120	60	930
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	70	170	1190	120	60	930
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1835	655			1310	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1835	655			1310	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	58			89	
cM capacity (veh/h)	60	409			524	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	240	793	517	370	620
Volume Left	70	0	0	60	0
Volume Right	170	0	120	0	0
cSH	151	1700	1700	524	1700
Volume to Capacity	1.59	0.47	0.30	0.11	0.36
Queue Length 95th (ft)	414	0	0	10	0
Control Delay (s)	347.6	0.0	0.0	3.6	0.0
Lane LOS	F			A	
Approach Delay (s)	347.6	0.0		1.3	
Approach LOS	F				

Intersection Summary			
Average Delay	33.4		
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	150	230	1000	320	180	770
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	150	230	1000	320	180	770
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1905	660			1320	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1905	660			1320	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	43			65	
cM capacity (veh/h)	39	406			519	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	380	667	653	437	513
Volume Left	150	0	0	180	0
Volume Right	230	0	320	0	0
cSH	87	1700	1700	519	1700
Volume to Capacity	4.37	0.39	0.38	0.35	0.30
Queue Length 95th (ft)	Err	0	0	38	0
Control Delay (s)	Err	0.0	0.0	10.1	0.0
Lane LOS	F			B	
Approach Delay (s)	Err	0.0		4.7	
Approach LOS	F				

Intersection Summary				
Average Delay	1435.5			
Intersection Capacity Utilization	96.8%	ICU Level of Service	F	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	510	930	190	270	1210	110	270	790	200	320	640	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.96	1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1491	3433	3539	1520	3433	3391		3433	3289	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1491	3433	3539	1520	3433	3391		3433	3289	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	510	930	190	270	1210	110	270	790	200	320	640	320
RTOR Reduction (vph)	0	0	57	0	0	54	0	19	0	0	52	0
Lane Group Flow (vph)	510	930	133	270	1210	56	270	971	0	320	908	0
Confl. Peds. (#/hr)			35			23			39			42
Confl. Bikes (#/hr)			9			2			3			8
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	18.0	45.3	45.3	13.7	41.0	41.0	10.0	34.0		11.0	35.0	
Effective Green, g (s)	18.0	45.3	45.3	13.7	41.0	41.0	10.0	34.0		11.0	35.0	
Actuated g/C Ratio	0.15	0.38	0.38	0.11	0.34	0.34	0.08	0.28		0.09	0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	514	1335	562	391	1209	519	286	960		314	959	
v/s Ratio Prot	c0.15	0.26		0.08	c0.34		0.08	c0.29		c0.09	0.28	
v/s Ratio Perm			0.09			0.04						
v/c Ratio	0.99	0.70	0.24	0.69	1.00	0.11	0.94	1.01		1.02	0.95	
Uniform Delay, d1	50.9	31.5	25.5	51.1	39.5	27.0	54.7	43.0		54.5	41.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	37.5	1.6	0.2	5.2	26.1	0.1	38.2	32.0		55.8	17.5	
Delay (s)	88.4	33.1	25.7	56.3	65.6	27.1	92.9	75.0		110.3	59.1	
Level of Service	F	C	C	E	E	C	F	E		F	E	
Approach Delay (s)		49.6			61.3			78.8			71.9	
Approach LOS		D			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	64.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	200	190	20	120	30	140	760	30	20	780	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98			0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	0.98	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1729	1700			1791		1770	3507		1770	3539	1501
Flt Permitted	0.62	1.00			0.94		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1123	1700			1693		1770	3507		1770	3539	1501
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	200	190	20	120	30	140	760	30	20	780	360
RTOR Reduction (vph)	0	30	0	0	6	0	0	2	0	0	0	228
Lane Group Flow (vph)	310	360	0	0	164	0	140	788	0	20	780	132
Confl. Peds. (#/hr)	39		14	14		39	11		27	27		11
Confl. Bikes (#/hr)			14			8			3			5
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	30.2	30.2			30.2		11.2	39.8		2.5	31.1	31.1
Effective Green, g (s)	30.2	30.2			30.2		11.2	39.8		2.5	31.1	31.1
Actuated g/C Ratio	0.36	0.36			0.36		0.13	0.47		0.03	0.37	0.37
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	401	607			605		234	1651		52	1302	552
v/s Ratio Prot		0.21					c0.08	0.22		0.01	c0.22	
v/s Ratio Perm	c0.28				0.10							0.09
v/c Ratio	0.77	0.59			0.27		0.60	0.48		0.38	0.60	0.24
Uniform Delay, d1	24.1	22.1			19.3		34.5	15.3		40.2	21.6	18.5
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.0	1.6			0.2		4.1	0.2		4.7	0.7	0.2
Delay (s)	33.1	23.7			19.6		38.6	15.5		44.9	22.4	18.7
Level of Service	C	C			B		D	B		D	C	B
Approach Delay (s)		27.9			19.6			19.0			21.6	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	84.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	460	570	430	10	230	50	240	410	30	90	750	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1859	1583	1770	3503		1770	3441	
Flt Permitted	0.95	1.00	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1799	1583	1770	3503		1770	3441	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	460	570	430	10	230	50	240	410	30	90	750	170
RTOR Reduction (vph)	0	0	170	0	0	42	0	4	0	0	16	0
Lane Group Flow (vph)	460	570	260	0	240	8	240	436	0	90	904	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	29.0	53.7	53.7		19.7	19.7	15.0	39.3		8.8	33.1	
Effective Green, g (s)	29.0	53.7	53.7		19.7	19.7	15.0	39.3		8.8	33.1	
Actuated g/C Ratio	0.25	0.46	0.46		0.17	0.17	0.13	0.34		0.08	0.28	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	439	856	727		303	266	227	1178		133	975	
v/s Ratio Prot	c0.26	0.31					c0.14	0.12		0.05	c0.26	
v/s Ratio Perm			0.16		c0.13	0.01						
v/c Ratio	1.05	0.67	0.36		0.79	0.03	1.06	0.37		0.68	0.93	
Uniform Delay, d1	43.9	24.6	20.4		46.6	40.6	50.9	29.4		52.6	40.7	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	56.0	2.0	0.3		13.2	0.0	75.6	0.2		12.8	14.3	
Delay (s)	99.9	26.5	20.7		59.8	40.6	126.5	29.6		65.4	55.0	
Level of Service	F	C	C		E	D	F	C		E	D	
Approach Delay (s)		47.9			56.5			63.8			55.9	
Approach LOS		D			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	54.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	116.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	320	280	210	100	360	20	10	150	310	70	20	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.94		1.00	0.99			1.00	0.97			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3283		1770	3508			1767	3425			1761
Flt Permitted	0.95	1.00		0.95	1.00			0.35	1.00			0.35
Satd. Flow (perm)	3433	3283		1770	3508			653	3425			650
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	320	280	210	100	360	20	10	150	310	70	20	50
RTOR Reduction (vph)	0	121	0	0	4	0	0	0	20	0	0	0
Lane Group Flow (vph)	320	369	0	100	376	0	0	160	360	0	0	70
Confl. Peds. (#/hr)	3		11	11		3		5		14		14
Confl. Bikes (#/hr)						3				5		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	12.4	19.2		8.4	15.2			11.4	21.6			11.4
Effective Green, g (s)	12.4	19.2		8.4	15.2			11.4	21.6			11.4
Actuated g/C Ratio	0.16	0.25		0.11	0.20			0.15	0.28			0.15
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	555	822		194	696			97	965			96
v/s Ratio Prot	c0.09	c0.11		0.06	c0.11				0.11			
v/s Ratio Perm								c0.25				0.11
v/c Ratio	0.58	0.45		0.52	0.54			1.65	0.37			0.73
Uniform Delay, d1	29.7	24.2		32.2	27.6			32.6	22.1			31.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	1.5	0.4		2.3	0.9			333.6	0.2			24.0
Delay (s)	31.1	24.6		34.5	28.4			366.2	22.3			55.1
Level of Service	C	C		C	C			F	C			E
Approach Delay (s)		27.2			29.7				124.2			
Approach LOS		C			C				F			

Intersection Summary			
HCM 2000 Control Delay	44.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	76.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	550	530
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.98
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1555
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1555
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	550	530
RTOR Reduction (vph)	0	309
Lane Group Flow (vph)	550	221
Confl. Peds. (#/hr)		5
Confl. Bikes (#/hr)		3
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	21.6	21.6
Effective Green, g (s)	21.6	21.6
Actuated g/C Ratio	0.28	0.28
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	997	438
v/s Ratio Prot	c0.16	
v/s Ratio Perm		0.14
v/c Ratio	0.55	0.51
Uniform Delay, d1	23.4	23.0
Progression Factor	1.00	1.00
Incremental Delay, d2	0.7	0.9
Delay (s)	24.0	23.9
Level of Service	C	C
Approach Delay (s)	25.9	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	10	140	10	80	10	210	320	220	220	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	10	10	140	10	80	10	210	320	220	220	0
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	975	1210	223	908	890	210	220			530		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	975	1210	223	908	890	210	220			530		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	93	99	29	95	90	99			78		
cM capacity (veh/h)	165	140	807	196	217	823	1332			1022		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	30	230	220	320	440
Volume Left	10	140	10	0	220
Volume Right	10	80	0	320	0
cSH	208	268	1332	1700	1022
Volume to Capacity	0.14	0.86	0.01	0.19	0.22
Queue Length 95th (ft)	12	180	1	0	20
Control Delay (s)	25.2	65.1	0.4	0.0	5.9
Lane LOS	D	F	A		A
Approach Delay (s)	25.2	65.1	0.2		5.9
Approach LOS	D	F			

Intersection Summary				
Average Delay	14.9			
Intersection Capacity Utilization	65.2%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	800	390	50	860	160	380	110	70	140	110	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.99	0.85	1.00	0.98		1.00	1.00	0.85		0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (prot)	1736	3118	2631	1736	4855		1579	3223	1525		3102	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (perm)	1736	3118	2631	1736	4855		1579	3223	1525		3102	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	800	390	50	860	160	380	110	70	140	110	330
RTOR Reduction (vph)	0	2	197	0	22	0	0	0	57	0	187	0
Lane Group Flow (vph)	250	837	154	50	998	0	190	300	13	0	393	0
Confl. Peds. (#/hr)	6					6			6	6		
Confl. Bikes (#/hr)			6			3						6
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	19.2	41.9	41.9	6.9	29.6		18.3	18.3	18.3		16.5	
Effective Green, g (s)	19.2	41.9	41.9	6.9	29.6		18.3	18.3	18.3		16.5	
Actuated g/C Ratio	0.20	0.44	0.44	0.07	0.31		0.19	0.19	0.19		0.17	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	348	1366	1153	125	1503		302	616	291		535	
v/s Ratio Prot	c0.14	c0.27		0.03	0.21		c0.12	0.09			c0.13	
v/s Ratio Perm			0.06						0.01			
v/c Ratio	0.72	0.61	0.13	0.40	0.66		0.63	0.49	0.05		0.73	
Uniform Delay, d1	35.7	20.6	16.0	42.4	28.7		35.5	34.5	31.5		37.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	6.9	0.8	0.1	2.1	1.1		4.1	0.6	0.1		5.2	
Delay (s)	42.6	21.4	16.1	44.5	29.8		39.6	35.1	31.6		42.7	
Level of Service	D	C	B	D	C		D	D	C		D	
Approach Delay (s)		23.8			30.5			36.2			42.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	95.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	40	0	1800	110	210	1990	0	150	0	180	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Lane Util. Factor		1.00	0.86		1.00	0.86			1.00	1.00		
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	0.99		
Flpb, ped/bikes		1.00	1.00		1.00	1.00			0.99	1.00		
Frt		1.00	0.99		1.00	1.00			1.00	0.85		
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1764	6343		1770	6408			1746	1560		
Flt Permitted		0.37	1.00		0.95	1.00			0.76	1.00		
Satd. Flow (perm)		694	6343		1770	6408			1392	1560		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	0	1800	110	210	1990	0	150	0	180	0	0
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	0	153	0	0
Lane Group Flow (vph)	0	40	1904	0	210	1990	0	0	150	27	0	0
Confl. Peds. (#/hr)		23		6	6		23	12				
Confl. Bikes (#/hr)				2			5			2		
Turn Type	custom	Prot	NA		Prot	NA		Perm	NA	Perm		
Protected Phases		5	2		1	6			3			3
Permitted Phases	5							3	3	3	3	3
Actuated Green, G (s)		10.7	63.8		14.4	67.5			15.8	15.8		
Effective Green, g (s)		10.7	63.8		14.4	67.5			15.8	15.8		
Actuated g/C Ratio		0.10	0.60		0.14	0.64			0.15	0.15		
Clearance Time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Vehicle Extension (s)		2.0	2.0		2.0	2.0			2.0	2.0		
Lane Grp Cap (vph)		70	3817		240	4080			207	232		
v/s Ratio Prot			0.30		c0.12	c0.31						
v/s Ratio Perm		0.06							c0.11	0.02		
v/c Ratio		0.57	0.50		0.88	0.49			0.72	0.12		
Uniform Delay, d1		45.5	12.0		44.9	10.1			43.0	39.1		
Progression Factor		1.01	0.61		1.00	1.00			1.00	1.00		
Incremental Delay, d2		4.5	0.3		27.1	0.4			10.2	0.1		
Delay (s)		50.5	7.7		72.0	10.6			53.2	39.1		
Level of Service		D	A		E	B			D	D		
Approach Delay (s)			8.5			16.4			45.5			0.0
Approach LOS			A			B			D			A

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	12
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	1430	160	140	1930	110	440	240	490	60	30	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.98		1.00	0.99		1.00	0.91			0.92	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	3433	5009		1770	6356		1610	3060			1599	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (perm)	3433	5009		1770	6356		1610	3060			1599	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	1430	160	140	1930	110	440	240	490	60	30	300
RTOR Reduction (vph)	0	10	0	0	6	0	0	297	0	0	50	117
Lane Group Flow (vph)	300	1580	0	140	2034	0	396	477	0	0	151	72
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	7.0	46.7		6.0	45.7		22.0	22.0			14.3	14.3
Effective Green, g (s)	7.0	46.7		6.0	45.7		22.0	22.0			14.3	14.3
Actuated g/C Ratio	0.07	0.44		0.06	0.43		0.21	0.21			0.13	0.13
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	226	2206		100	2740		334	635			215	202
v/s Ratio Prot	c0.09	0.32		0.08	c0.32		c0.25	0.16			c0.09	
v/s Ratio Perm												0.05
v/c Ratio	1.33	0.72		1.40	0.74		1.19	0.75			0.70	0.36
Uniform Delay, d1	49.5	24.2		50.0	25.2		42.0	39.4			43.8	41.7
Progression Factor	1.00	1.00		1.22	0.80		1.00	1.00			1.00	1.00
Incremental Delay, d2	174.6	2.0		225.0	1.7		109.7	4.4			8.2	0.4
Delay (s)	224.1	26.3		285.8	21.9		151.7	43.9			52.0	42.1
Level of Service	F	C		F	C		F	D			D	D
Approach Delay (s)		57.7			38.9			80.4			47.2	
Approach LOS		E			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	54.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	110	1220	180	60	1060	110	10	210	200	110	10	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00			1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99			1.00	0.99			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.98		1.00	0.99			1.00	0.95			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	1752	3416		1752	3422			1752	1723			1719
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (perm)	1752	3416		1752	3422			1752	1723			1719
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	1220	180	60	1060	110	10	210	200	110	10	110
RTOR Reduction (vph)	0	8	0	0	6	0	0	0	21	0	0	0
Lane Group Flow (vph)	110	1392	0	60	1164	0	0	220	289	0	0	120
Confl. Peds. (#/hr)	27		9	9		27		29		24		24
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA		Prot	Prot
Protected Phases	5	2		1	6		3	3	8		7	7
Permitted Phases												
Actuated Green, G (s)	9.3	51.8		6.4	48.9			14.0	22.9			8.9
Effective Green, g (s)	9.3	51.8		6.4	48.9			14.0	22.9			8.9
Actuated g/C Ratio	0.08	0.47		0.06	0.44			0.13	0.21			0.08
Clearance Time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)	148	1608		101	1521			222	358			139
v/s Ratio Prot	0.06	c0.41		0.03	c0.34			c0.13	c0.17			0.07
v/s Ratio Perm												
v/c Ratio	0.74	0.87		0.59	0.77			0.99	0.81			0.86
Uniform Delay, d1	49.2	26.0		50.5	25.7			47.9	41.5			49.9
Progression Factor	1.09	1.08		0.63	0.29			1.00	1.00			1.00
Incremental Delay, d2	9.4	2.9		2.6	1.6			57.6	11.9			37.9
Delay (s)	63.0	30.8		34.6	9.0			105.5	53.4			87.8
Level of Service	E	C		C	A			F	D			F
Approach Delay (s)		33.2			10.3				75.0			
Approach LOS		C			B				E			

Intersection Summary			
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	100	140
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.97	
Flpb, ped/bikes	1.00	
Frt	0.91	
Flt Protected	1.00	
Satd. Flow (prot)	1606	
Flt Permitted	1.00	
Satd. Flow (perm)	1606	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	100	140
RTOR Reduction (vph)	54	0
Lane Group Flow (vph)	186	0
Confl. Peds. (#/hr)		29
Confl. Bikes (#/hr)		3
Heavy Vehicles (%)	5%	5%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	17.8	
Effective Green, g (s)	17.8	
Actuated g/C Ratio	0.16	
Clearance Time (s)	5.0	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	259	
v/s Ratio Prot	c0.12	
v/s Ratio Perm		
v/c Ratio	0.72	
Uniform Delay, d1	43.7	
Progression Factor	1.00	
Incremental Delay, d2	7.7	
Delay (s)	51.5	
Level of Service	D	
Approach Delay (s)	63.6	
Approach LOS	E	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	730	0	0	950	450	30	1180	610	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95			0.95	1.00			
Frt	1.00	1.00			0.95			1.00	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	1770	3539			3369			3535	1583			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	1770	3539			3369			3535	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	730	0	0	950	450	30	1180	610	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	132	0	0	0
Lane Group Flow (vph)	130	730	0	0	1383	0	0	1210	478	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	7.0	51.0			40.0			31.0	31.0			
Effective Green, g (s)	7.0	51.0			40.0			31.0	31.0			
Actuated g/C Ratio	0.08	0.57			0.44			0.34	0.34			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	137	2005			1497			1217	545			
v/s Ratio Prot	c0.07	0.21			c0.41							
v/s Ratio Perm								0.34	0.30			
v/c Ratio	0.95	0.36			0.92			0.99	0.88			
Uniform Delay, d1	41.3	10.6			23.6			29.4	27.7			
Progression Factor	1.01	0.53			1.00			1.00	1.00			
Incremental Delay, d2	41.5	0.3			11.1			24.3	14.7			
Delay (s)	83.2	5.9			34.6			53.7	42.4			
Level of Service	F	A			C			D	D			
Approach Delay (s)		17.6			34.6			49.9			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	710	50	560	420	0	0	0	0	150	760	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0						4.0	
Lane Util. Factor		0.95		0.95	0.95						0.91	
Frt		0.99		1.00	1.00						0.96	
Flt Protected		1.00		0.95	0.99						0.99	
Satd. Flow (prot)		3504		1681	1756						4857	
Flt Permitted		1.00		0.95	0.78						0.99	
Satd. Flow (perm)		3504		1681	1381						4857	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	710	50	560	420	0	0	0	0	150	760	320
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	70	0
Lane Group Flow (vph)	0	754	0	482	498	0	0	0	0	0	1160	0
Turn Type		NA		Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases												
Actuated Green, G (s)		24.0		31.0	59.0						23.0	
Effective Green, g (s)		24.0		31.0	59.0						23.0	
Actuated g/C Ratio		0.27		0.34	0.66						0.26	
Clearance Time (s)		4.0		4.0	4.0						4.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		934		579	1034						1241	
v/s Ratio Prot		c0.22		c0.29	0.17						c0.24	
v/s Ratio Perm					0.15							
v/c Ratio		0.81		0.83	0.48						0.93	
Uniform Delay, d1		30.8		27.1	7.8						32.8	
Progression Factor		1.00		0.44	0.44						1.00	
Incremental Delay, d2		7.4		3.9	0.1						12.8	
Delay (s)		38.3		15.9	3.6						45.6	
Level of Service		D		B	A						D	
Approach Delay (s)		38.3			9.6			0.0			45.6	
Approach LOS		D			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	650	250	360	50	520	430	260	740	700	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	1.00				
Frt	1.00	0.91		1.00	0.93		1.00	0.93				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	3433	3226		1770	3299		1770	1727				
Flt Permitted	0.95	1.00		0.42	1.00		0.95	1.00				
Satd. Flow (perm)	3433	3226		784	3299		1770	1727				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	650	250	360	50	520	430	260	740	700	0	0	0
RTOR Reduction (vph)	0	222	0	0	107	0	0	36	0	0	0	0
Lane Group Flow (vph)	650	388	0	50	843	0	260	1404	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	13.5	36.5		18.5	18.5		49.5	49.5				
Effective Green, g (s)	13.5	36.5		18.5	18.5		49.5	49.5				
Actuated g/C Ratio	0.14	0.38		0.19	0.19		0.52	0.52				
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0		2.0	2.0		2.0	2.0				
Lane Grp Cap (vph)	487	1239		152	642		922	899				
v/s Ratio Prot	c0.19	0.12			c0.26			c0.81				
v/s Ratio Perm				0.06			0.15					
v/c Ratio	1.33	0.31		0.33	1.31		0.28	1.56				
Uniform Delay, d1	40.8	20.5		32.9	38.2		12.8	22.8				
Progression Factor	1.48	0.07		1.00	1.00		1.00	1.00				
Incremental Delay, d2	154.3	0.2		5.7	151.7		0.1	258.3				
Delay (s)	214.5	1.7		38.6	190.0		12.8	281.0				
Level of Service	F	A		D	F		B	F				
Approach Delay (s)		111.5			182.4			240.0			0.0	
Approach LOS		F			F			F			A	

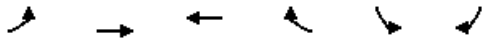
Intersection Summary			
HCM 2000 Control Delay	184.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	139.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	940	500	330	450	0	150	0	200	120	1090	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Lane Util. Factor		0.91		0.97	0.95			1.00		0.91	0.91	1.00
Frt		0.95		1.00	1.00			0.92		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00			0.98		0.95	1.00	1.00
Satd. Flow (prot)		4820		3433	3539			1683		1610	3388	1583
Flt Permitted		1.00		0.95	1.00			0.28		0.54	0.95	1.00
Satd. Flow (perm)		4820		3433	3539			476		914	3222	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	940	500	330	450	0	150	0	200	120	1090	160
RTOR Reduction (vph)	0	40	0	0	0	0	0	50	0	0	0	78
Lane Group Flow (vph)	0	1400	0	330	450	0	0	300	0	108	1102	82
Turn Type		NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases							8			4		4
Actuated Green, G (s)		26.5		7.5	37.5			48.5		48.5	48.5	48.5
Effective Green, g (s)		26.5		7.5	37.5			48.5		48.5	48.5	48.5
Actuated g/C Ratio		0.28		0.08	0.39			0.51		0.51	0.51	0.51
Clearance Time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0		2.0	2.0			2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		1344		271	1396			243		466	1644	808
v/s Ratio Prot		c0.29		c0.10	0.13							
v/s Ratio Perm								c0.63		0.12	0.34	0.05
v/c Ratio		1.04		1.22	0.32			1.23		0.23	0.67	0.10
Uniform Delay, d1		34.2		43.8	19.9			23.2		12.9	17.3	12.0
Progression Factor		1.00		0.74	0.84			1.00		1.00	1.00	1.00
Incremental Delay, d2		36.0		109.4	0.2			135.2		0.1	0.9	0.0
Delay (s)		70.3		141.9	16.9			158.4		13.0	18.2	12.0
Level of Service		E		F	B			F		B	B	B
Approach Delay (s)		70.3			69.8			158.4			17.0	
Approach LOS		E			E			F			B	

Intersection Summary			
HCM 2000 Control Delay	59.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	660	0	0	1130	90	780
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	660	0	0	1130	90	780
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	660	0	0	1130	90	780
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	21.8			21.8	30.0	30.0
Effective Green, g (s)	21.8			21.8	30.0	30.0
Actuated g/C Ratio	0.36			0.36	0.50	0.50
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1853			1290	887	794
v/s Ratio Prot	0.13			c0.32	0.05	c0.49
v/s Ratio Perm						
v/c Ratio	0.36			0.88	0.10	0.98
Uniform Delay, d1	13.9			17.7	7.8	14.6
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			6.9	0.1	27.4
Delay (s)	14.0			24.7	7.9	42.1
Level of Service	B			C	A	D
Approach Delay (s)	14.0			24.7	38.5	
Approach LOS	B			C	D	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	59.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	
Volume (vph)	0	650	520	0	440	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.96	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3539	3539		3346	
Flt Permitted		1.00	1.00		0.96	
Satd. Flow (perm)		3539	3539		3346	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	650	520	0	440	160
RTOR Reduction (vph)	0	0	0	0	75	0
Lane Group Flow (vph)	0	650	520	0	525	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		12.5	12.5		10.5	
Effective Green, g (s)		12.5	12.5		10.5	
Actuated g/C Ratio		0.40	0.40		0.34	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1427	1427		1133	
v/s Ratio Prot		c0.18	0.15		c0.16	
v/s Ratio Perm						
v/c Ratio		0.46	0.36		0.46	
Uniform Delay, d1		6.8	6.5		8.0	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.2	0.2		0.3	
Delay (s)		7.0	6.6		8.3	
Level of Service		A	A		A	
Approach Delay (s)		7.0	6.6		8.3	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	31.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	500	180	150	640	170	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		4.0			4.0
Lane Util. Factor	0.97		1.00			1.00
Frpb, ped/bikes	1.00		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.96		0.89			1.00
Flt Protected	0.96		1.00			0.98
Satd. Flow (prot)	3315		1643			1810
Flt Permitted	0.96		1.00			0.50
Satd. Flow (perm)	3315		1643			926
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	500	180	150	640	170	270
RTOR Reduction (vph)	38	0	103	0	0	0
Lane Group Flow (vph)	642	0	687	0	0	440
Confl. Peds. (#/hr)	3					
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot		NA		Perm	NA
Protected Phases	6		8			4
Permitted Phases					4	
Actuated Green, G (s)	13.0		49.0			49.0
Effective Green, g (s)	13.0		49.0			49.0
Actuated g/C Ratio	0.19		0.71			0.71
Clearance Time (s)	3.5		4.0			4.0
Vehicle Extension (s)	2.2		2.0			2.0
Lane Grp Cap (vph)	620		1158			652
v/s Ratio Prot	c0.19		0.42			
v/s Ratio Perm						c0.48
v/c Ratio	1.04		0.59			0.67
Uniform Delay, d1	28.2		5.2			5.8
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	45.5		0.5			2.2
Delay (s)	73.8		5.7			7.9
Level of Service	E		A			A
Approach Delay (s)	73.8		5.7			7.9
Approach LOS	E		A			A

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	11.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	840	0	180	0	0	0	250	170	0	0	220	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.98	
Flt Protected	0.95		1.00					0.97			1.00	
Satd. Flow (prot)	3367		1553					3371			1797	
Flt Permitted	0.95		1.00					0.97			1.00	
Satd. Flow (perm)	3367		1553					3371			1797	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	840	0	180	0	0	0	250	170	0	0	220	30
RTOR Reduction (vph)	0	0	118	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	840	0	62	0	0	0	0	420	0	0	246	0
Confl. Peds. (#/hr)									2	2		
Confl. Bikes (#/hr)									2			
Heavy Vehicles (%)	4%	2%	4%	2%	2%	2%	4%	4%	2%	2%	4%	4%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4				8		2	2			6	
Permitted Phases			4	8						6		
Actuated Green, G (s)	26.2		26.2					16.0			17.3	
Effective Green, g (s)	26.2		26.2					16.0			17.3	
Actuated g/C Ratio	0.35		0.35					0.21			0.23	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1168		538					714			411	
v/s Ratio Prot	c0.25							c0.12			c0.14	
v/s Ratio Perm			0.04									
v/c Ratio	0.72		0.12					0.59			0.60	
Uniform Delay, d1	21.4		16.8					26.8			26.0	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	2.1		0.1					1.2			2.3	
Delay (s)	23.6		16.9					28.0			28.3	
Level of Service	C		B					C			C	
Approach Delay (s)		22.4			0.0			28.0			28.3	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	75.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↑		↰↰	↱↱
Volume (vph)	0	1860	1400	0	340	1290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5767	5767		3090	2508
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5767	5767		3090	2508
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1860	1400	0	340	1290
RTOR Reduction (vph)	0	0	0	0	0	1
Lane Group Flow (vph)	0	1860	1400	0	340	1289
Confl. Peds. (#/hr)	12			12		12
Confl. Bikes (#/hr)				5		
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		34.5	25.4		41.8	50.9
Effective Green, g (s)		34.5	25.4		41.8	50.9
Actuated g/C Ratio		0.41	0.30		0.50	0.60
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		2360	1737		1532	1514
v/s Ratio Prot		c0.32	0.24		0.11	c0.51
v/s Ratio Perm						
v/c Ratio		0.79	0.81		0.22	0.85
Uniform Delay, d1		21.7	27.2		12.0	13.6
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.8	2.8		0.1	4.8
Delay (s)		23.5	30.0		12.1	18.5
Level of Service		C	C		B	B
Approach Delay (s)		23.5	30.0		17.1	
Approach LOS		C	C		B	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	84.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1040	790	0	1160	330	840	0	630	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frt		0.97	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3235	1413		4822		3367		1553			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3235	1413		4822		3367		1553			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1040	790	0	1160	330	840	0	630	0	0	0
RTOR Reduction (vph)	0	16	0	0	46	0	0	0	74	0	0	0
Lane Group Flow (vph)	0	1253	561	0	1444	0	840	0	556	0	0	0
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		66.0	110.0		66.0		36.0		36.0			
Effective Green, g (s)		66.0	110.0		66.0		36.0		36.0			
Actuated g/C Ratio		0.60	1.00		0.60		0.33		0.33			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1941	1413		2893		1101		508			
v/s Ratio Prot		c0.39			0.30		0.25					
v/s Ratio Perm			0.40						c0.36			
v/c Ratio		0.65	0.40		0.50		0.76		1.09			
Uniform Delay, d1		14.4	0.0		12.6		33.2		37.0			
Progression Factor		1.00	1.00		1.69		1.00		1.00			
Incremental Delay, d2		1.7	0.8		0.4		5.0		68.1			
Delay (s)		16.0	0.8		21.7		38.2		105.1			
Level of Service		B	A		C		D		F			
Approach Delay (s)		11.4			21.7			66.9			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1460	1240	0	1650	0	0	0	0	370	0	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		0.99
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.96	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4503	1335		4988					3367		1530
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4503	1335		4988					3367		1530
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1460	1240	0	1650	0	0	0	0	370	0	250
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	28
Lane Group Flow (vph)	0	2080	620	0	1650	0	0	0	0	370	0	222
Confl. Peds. (#/hr)							8					3
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	4%	4%	4%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		63.8	63.8		63.8					18.6		18.6
Effective Green, g (s)		63.8	63.8		63.8					18.6		18.6
Actuated g/C Ratio		0.71	0.71		0.71					0.21		0.21
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3178	942		3520					692		314
v/s Ratio Prot		0.46	c0.46		0.33							
v/s Ratio Perm										0.11		c0.15
v/c Ratio		0.65	0.66		0.47					0.53		0.71
Uniform Delay, d1		7.3	7.3		5.8					32.0		33.4
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.5	1.7		0.1					0.8		7.1
Delay (s)		7.8	9.0		5.9					32.8		40.5
Level of Service		A	A		A					C		D
Approach Delay (s)		8.0			5.9			0.0			35.9	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1320	650	0	1150	520	560
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.96	0.85
Flt Protected	1.00	1.00		1.00	0.97	1.00
Satd. Flow (prot)	3471	1517		3471	3272	1413
Flt Permitted	1.00	1.00		1.00	0.97	1.00
Satd. Flow (perm)	3471	1517		3471	3272	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1320	650	0	1150	520	560
RTOR Reduction (vph)	0	0	0	0	43	43
Lane Group Flow (vph)	1320	650	0	1150	695	299
Confl. Peds. (#/hr)		6	6			
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	36.4	65.5		36.4	21.1	21.1
Effective Green, g (s)	36.4	65.5		36.4	21.1	21.1
Actuated g/C Ratio	0.56	1.00		0.56	0.32	0.32
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1928	1517		1928	1054	455
v/s Ratio Prot	c0.38			0.33	c0.21	
v/s Ratio Perm		0.43				0.21
v/c Ratio	0.68	0.43		0.60	0.66	0.66
Uniform Delay, d1	10.4	0.0		9.7	19.1	19.1
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	0.9		0.5	1.5	3.4
Delay (s)	11.5	0.9		10.2	20.6	22.5
Level of Service	B	A		B	C	C
Approach Delay (s)	8.0			10.2	21.2	
Approach LOS	A			B	C	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	65.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Volume (vph)	0	1560	480	0	1250	420	0	0	0	410	0	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.95	1.00				0.95	0.91	0.95
Frt		1.00	0.85		1.00	0.85				1.00	0.90	0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95	0.98	1.00
Satd. Flow (prot)		5085	1583		3539	1583				1681	1500	1504
Flt Permitted		1.00	1.00		1.00	1.00				0.95	0.98	1.00
Satd. Flow (perm)		5085	1583		3539	1583				1681	1500	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1560	480	0	1250	420	0	0	0	410	0	480
RTOR Reduction (vph)	0	0	189	0	0	165	0	0	0	0	55	55
Lane Group Flow (vph)	0	1560	291	0	1250	255	0	0	0	312	240	228
Turn Type		NA	Perm		NA	Perm				Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4			8				6		6
Actuated Green, G (s)		44.8	44.8		44.8	44.8				21.0	21.0	21.0
Effective Green, g (s)		44.8	44.8		44.8	44.8				21.0	21.0	21.0
Actuated g/C Ratio		0.61	0.61		0.61	0.61				0.28	0.28	0.28
Clearance Time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)		3086	960		2148	960				478	426	427
v/s Ratio Prot		0.31			c0.35							
v/s Ratio Perm			0.18			0.16				c0.19	0.16	0.15
v/c Ratio		0.51	0.30		0.58	0.27				0.65	0.56	0.53
Uniform Delay, d1		8.2	7.0		8.8	6.8				23.2	22.5	22.3
Progression Factor		1.00	1.00		1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2		0.1	0.2		0.4	0.1				3.2	1.7	1.3
Delay (s)		8.4	7.2		9.2	6.9				26.4	24.2	23.6
Level of Service		A	A		A	A				C	C	C
Approach Delay (s)		8.1			8.6			0.0			24.8	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	73.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	980	330	120	1060	540	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.96		1.00	1.00	0.96	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3405		1770	3539	3352	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3405		1770	3539	3352	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	980	330	120	1060	540	180
RTOR Reduction (vph)	30	0	0	0	34	0
Lane Group Flow (vph)	1280	0	120	1060	686	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	37.4		8.1	49.5	21.8	
Effective Green, g (s)	37.4		8.1	49.5	21.8	
Actuated g/C Ratio	0.48		0.10	0.64	0.28	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1647		185	2266	945	
v/s Ratio Prot	c0.38		c0.07	0.30	c0.20	
v/s Ratio Perm						
v/c Ratio	0.78		0.65	0.47	0.73	
Uniform Delay, d1	16.5		33.2	7.1	25.0	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.2		5.8	0.1	2.4	
Delay (s)	18.7		39.0	7.2	27.4	
Level of Service	B		D	A	C	
Approach Delay (s)	18.7			10.4	27.4	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	77.3	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	1250	40	20	1470	360	30	70	150	190	50	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.97			0.92			0.98	
Flt Protected		1.00			1.00			0.99			0.97	
Satd. Flow (prot)		3520			3413			1659			1727	
Flt Permitted		0.80			0.93			0.95			0.51	
Satd. Flow (perm)		2808			3178			1583			915	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	1250	40	20	1470	360	30	70	150	190	50	30
RTOR Reduction (vph)	0	3	0	0	23	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	1307	0	0	1827	0	0	250	0	0	265	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	5%	5%	5%	5%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		46.1			46.1			21.1			21.1	
Effective Green, g (s)		46.1			46.1			21.1			21.1	
Actuated g/C Ratio		0.57			0.57			0.26			0.26	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1612			1824			415			240	
v/s Ratio Prot												
v/s Ratio Perm		0.47			c0.57			0.16			c0.29	
v/c Ratio		0.81			1.00			0.60			1.10	
Uniform Delay, d1		13.6			17.1			25.9			29.6	
Progression Factor		1.00			1.00			0.12			1.00	
Incremental Delay, d2		3.2			21.5			2.1			88.6	
Delay (s)		16.8			38.6			5.2			118.2	
Level of Service		B			D			A			F	
Approach Delay (s)		16.8			38.6			5.2			118.2	
Approach LOS		B			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	630	190	380	840	350	120	450	220	320	480	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.97		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1770	3416		1770	3383			1843	1583		1826	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (perm)	1770	3416		1770	3383			1843	1583		1826	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	630	190	380	840	350	120	450	220	320	480	100
RTOR Reduction (vph)	0	31	0	0	44	0	0	0	90	0	0	79
Lane Group Flow (vph)	50	789	0	380	1146	0	0	570	130	0	800	21
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	5.5	25.6		14.0	34.1			16.0	16.0		19.0	19.0
Effective Green, g (s)	5.5	25.6		14.0	34.1			16.0	16.0		19.0	19.0
Actuated g/C Ratio	0.06	0.28		0.15	0.38			0.18	0.18		0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	107	965		273	1273			325	279		382	331
v/s Ratio Prot	0.03	0.23		c0.21	c0.34			c0.31			c0.44	
v/s Ratio Perm									0.08			0.01
v/c Ratio	0.47	0.82		1.39	0.90			1.75	0.47		2.09	0.06
Uniform Delay, d1	41.1	30.3		38.3	26.6			37.3	33.5		35.8	28.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.2	5.5		197.3	9.0			351.7	1.2		501.3	0.1
Delay (s)	44.3	35.8		235.6	35.6			389.0	34.7		537.1	28.8
Level of Service	D	D		F	D			F	C		F	C
Approach Delay (s)		36.3			84.0			290.3			480.6	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	199.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	131.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	100	390	20	270	580	0	270	10	380	240	350	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.96			1.00		1.00	0.99
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Frt		0.99		1.00	1.00	0.85			0.94		1.00	0.97
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1831		1770	1863	1523			3334		1764	1794
Flt Permitted		0.79		0.95	1.00	1.00			0.88		0.30	1.00
Satd. Flow (perm)		1466		1770	1863	1523			2924		558	1794
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	390	20	270	580	0	270	10	380	240	350	460
RTOR Reduction (vph)	0	1	0	0	0	122	0	0	96	0	0	0
Lane Group Flow (vph)	0	509	0	270	580	148	0	0	534	0	350	580
Confl. Peds. (#/hr)	9		3	3		9					6	
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.0		14.0	41.0	41.0			26.0		26.0	26.0
Effective Green, g (s)		23.0		14.0	41.0	41.0			26.0		26.0	26.0
Actuated g/C Ratio		0.31		0.19	0.55	0.55			0.35		0.35	0.35
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		449		330	1018	832			1013		193	621
v/s Ratio Prot				c0.15	0.31							0.32
v/s Ratio Perm		c0.35				0.10			0.18		c0.63	
v/c Ratio		1.13		0.82	0.57	0.18			0.53		1.81	0.93
Uniform Delay, d1		26.0		29.3	11.2	8.5			19.6		24.5	23.7
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		84.1		14.5	0.7	0.1			0.5		385.8	21.2
Delay (s)		110.1		43.8	11.9	8.6			20.1		410.3	44.9
Level of Service		F		D	B	A			C		F	D
Approach Delay (s)		110.1			18.8				20.1			182.4
Approach LOS		F			B				C			F

Intersection Summary			
HCM 2000 Control Delay	81.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	120	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frpb, ped/bikes			
Flpb, ped/bikes			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	120	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Confl. Peds. (#/hr)	6		
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	560	10	390	650	20	10	200	250	60	250	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3514		1770	3523			1858	1583		1845	1583
Flt Permitted		1.00		0.95	1.00			0.98	1.00		0.90	1.00
Satd. Flow (perm)		3514		1770	3523			1826	1583		1672	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	560	10	390	650	20	10	200	250	60	250	60
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	184	0	0	40
Lane Group Flow (vph)	0	629	0	390	668	0	0	210	66	0	310	20
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		20.5		24.2	24.2			20.4	20.4		20.4	20.4
Effective Green, g (s)		20.5		24.2	24.2			20.4	20.4		20.4	20.4
Actuated g/C Ratio		0.27		0.31	0.31			0.26	0.26		0.26	0.26
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		934		555	1105			483	418		442	418
v/s Ratio Prot		c0.18		c0.22	0.19							
v/s Ratio Perm								0.11	0.04		c0.19	0.01
v/c Ratio		0.67		0.70	0.60			0.43	0.16		0.70	0.05
Uniform Delay, d1		25.3		23.3	22.4			23.6	21.8		25.6	21.1
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		1.9		4.0	0.9			0.6	0.2		5.0	0.0
Delay (s)		27.2		27.3	23.3			24.2	21.9		30.6	21.2
Level of Service		C		C	C			C	C		C	C
Approach Delay (s)		27.2			24.8			23.0			29.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	77.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	730	110	60	890	90	180	380	90	170	330	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.98		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3429		1766	3484		1747	3411		1745	3539	1533
Flt Permitted		0.76		0.24	1.00		0.54	1.00		0.43	1.00	1.00
Satd. Flow (perm)		2610		440	3484		989	3411		784	3539	1533
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	730	110	60	890	90	180	380	90	170	330	120
RTOR Reduction (vph)	0	15	0	0	11	0	0	30	0	0	0	65
Lane Group Flow (vph)	0	905	0	60	969	0	180	440	0	170	330	55
Confl. Peds. (#/hr)	75		66	11		12	23		33	33		23
Confl. Bikes (#/hr)			21									
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51		0.51	0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1342		226	1791		367	1266		291	1314	569
v/s Ratio Prot					0.28			0.13			0.09	
v/s Ratio Perm		c0.35		0.14			0.18			c0.22		0.04
v/c Ratio		0.67		0.27	0.54		0.49	0.35		0.58	0.25	0.10
Uniform Delay, d1		12.6		9.6	11.4		16.9	15.9		17.7	15.3	14.3
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		2.7		2.9	1.2		4.6	0.8		8.3	0.5	0.3
Delay (s)		15.4		12.4	12.6		21.5	16.6		26.0	15.7	14.7
Level of Service		B		B	B		C	B		C	B	B
Approach Delay (s)		15.4			12.6			18.0			18.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	240	160	150	390	160	210	670	150	300	770	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3513	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3513	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	240	160	150	390	160	210	670	150	300	770	40
RTOR Reduction (vph)	0	0	0	0	0	102	0	0	64	0	3	0
Lane Group Flow (vph)	30	240	160	150	390	58	210	670	86	300	807	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	4.6	22.7	22.7	14.5	32.6	32.6	17.6	29.2	29.2	21.9	33.5	
Effective Green, g (s)	4.6	22.7	22.7	14.5	32.6	32.6	17.6	29.2	29.2	21.9	33.5	
Actuated g/C Ratio	0.04	0.22	0.22	0.14	0.31	0.31	0.17	0.28	0.28	0.21	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	78	405	344	246	582	494	298	990	443	371	1128	
v/s Ratio Prot	0.02	0.13		c0.08	c0.21		0.12	0.19		c0.17	c0.23	
v/s Ratio Perm			0.10			0.04			0.05			
v/c Ratio	0.38	0.59	0.47	0.61	0.67	0.12	0.70	0.68	0.19	0.81	0.72	
Uniform Delay, d1	48.5	36.6	35.5	42.2	31.2	25.6	40.9	33.4	28.6	39.2	31.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	2.3	1.0	4.2	3.0	0.1	7.4	1.8	0.2	12.2	2.2	
Delay (s)	51.6	39.0	36.5	46.5	34.2	25.7	48.3	35.2	28.8	51.4	33.4	
Level of Service	D	D	D	D	C	C	D	D	C	D	C	
Approach Delay (s)		38.9			34.9			36.9			38.3	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	37.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	104.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	100	120	340	170	140	150	780	440	190	850	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1730		1770	1737		1770	1863	1583	1770	3527	
Flt Permitted		0.96		0.55	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1672		1030	1737		1770	1863	1583	1770	3527	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	100	120	340	170	140	150	780	440	190	850	20
RTOR Reduction (vph)	0	53	0	0	43	0	0	0	279	0	3	0
Lane Group Flow (vph)	0	187	0	340	267	0	150	780	161	190	867	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		24.5		24.5	24.5		7.0	25.0	25.0	7.0	25.0	
Effective Green, g (s)		24.5		24.5	24.5		7.0	25.0	25.0	7.0	25.0	
Actuated g/C Ratio		0.36		0.36	0.36		0.10	0.36	0.36	0.10	0.36	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		598		368	621		180	679	577	180	1287	
v/s Ratio Prot					0.15		0.08	c0.42		c0.11	0.25	
v/s Ratio Perm		0.11		c0.33					0.10			
v/c Ratio		0.31		0.92	0.43		0.83	1.15	0.28	1.06	0.67	
Uniform Delay, d1		15.9		21.1	16.7		30.2	21.8	15.4	30.8	18.3	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3		28.3	0.5		26.8	83.4	0.3	82.5	1.4	
Delay (s)		16.2		49.4	17.2		57.0	105.1	15.6	113.3	19.7	
Level of Service		B		D	B		E	F	B	F	B	
Approach Delay (s)		16.2			34.1			71.1			36.5	
Approach LOS		B			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	48.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	30	190	220	70	120	150	1290	110	120	1100	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.89			0.96		1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1651			1742		1770	3498		1770	3525	
Flt Permitted		0.98			0.63		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1627			1129		1770	3498		1770	3525	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	30	190	220	70	120	150	1290	110	120	1100	30
RTOR Reduction (vph)	0	135	0	0	21	0	0	9	0	0	3	0
Lane Group Flow (vph)	0	95	0	0	389	0	150	1391	0	120	1127	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		20.1			20.1		7.9	30.7		6.2	29.0	
Effective Green, g (s)		20.1			20.1		7.9	30.7		6.2	29.0	
Actuated g/C Ratio		0.29			0.29		0.11	0.44		0.09	0.42	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		473			328		202	1556		159	1481	
v/s Ratio Prot							c0.08	c0.40		0.07	0.32	
v/s Ratio Perm		0.06			c0.34							
v/c Ratio		0.20			1.19		0.74	0.89		0.75	0.76	
Uniform Delay, d1		18.4			24.4		29.6	17.7		30.7	17.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			110.0		13.7	7.0		18.2	2.4	
Delay (s)		18.6			134.4		43.3	24.7		48.9	19.4	
Level of Service		B			F		D	C		D	B	
Approach Delay (s)		18.6			134.4			26.5			22.2	
Approach LOS		B			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	69.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	990	30	1520	950	50	1460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frpb, ped/bikes	1.00		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		1.00	1.00
Frt	1.00		0.94		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	3428		3318		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	3428		3318		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	990	30	1520	950	50	1460
RTOR Reduction (vph)	3	0	99	0	0	0
Lane Group Flow (vph)	1017	0	2371	0	50	1460
Confl. Peds. (#/hr)		2				
Confl. Bikes (#/hr)		5		3		
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	29.0		36.7		3.2	43.9
Effective Green, g (s)	29.0		36.7		3.2	43.9
Actuated g/C Ratio	0.36		0.45		0.04	0.54
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1228		1505		70	1920
v/s Ratio Prot	c0.30		c0.71		0.03	c0.41
v/s Ratio Perm						
v/c Ratio	0.83		1.58		0.71	0.76
Uniform Delay, d1	23.7		22.1		38.4	14.4
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	4.8		262.2		29.1	1.8
Delay (s)	28.4		284.3		67.4	16.2
Level of Service	C		F		E	B
Approach Delay (s)	28.4		284.3			17.9
Approach LOS	C		F			B

Intersection Summary			
HCM 2000 Control Delay	151.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	80.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	10	10	30	500	0	30	50	0	140	170	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95			1.00
Frpb, ped/bikes		0.99		1.00	1.00			1.00	0.97			1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00			0.99
Frt		0.92		1.00	0.98			1.00	0.92			1.00
Flt Protected		0.99		0.95	0.96			0.95	1.00			0.95
Satd. Flow (prot)		1681		1618	1600			1703	3039			1687
Flt Permitted		0.99		0.95	0.96			0.95	1.00			0.30
Satd. Flow (perm)		1681		1618	1600			1703	3039			534
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	30	500	0	30	50	0	140	170	10	20
RTOR Reduction (vph)	0	28	0	0	84	0	0	0	138	0	0	0
Lane Group Flow (vph)	0	22	0	265	181	0	0	50	172	0	0	30
Confl. Peds. (#/hr)			2	2						14		14
Confl. Bikes (#/hr)						2				3		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA			Prot
Protected Phases	4	4		8	8		5	5	2			1
Permitted Phases												
Actuated Green, G (s)		3.8		13.3	13.3			3.0	10.9			13.3
Effective Green, g (s)		3.8		13.3	13.3			3.0	10.9			13.3
Actuated g/C Ratio		0.07		0.23	0.23			0.05	0.19			0.23
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		111		375	371			89	578			123
v/s Ratio Prot		c0.01		c0.16	0.11			c0.03	0.06			
v/s Ratio Perm												0.06
v/c Ratio		0.20		0.71	0.49			0.56	0.30			0.24
Uniform Delay, d1		25.3		20.2	19.1			26.5	19.9			17.9
Progression Factor		1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2		0.9		6.0	1.0			7.9	0.3			1.0
Delay (s)		26.2		26.2	20.1			34.4	20.2			18.9
Level of Service		C		C	C			C	C			B
Approach Delay (s)		26.2			23.1				22.2			
Approach LOS		C			C				C			

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	380	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3406	
Flt Permitted	1.00	
Satd. Flow (perm)	3406	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	380	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	380	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		2
Heavy Vehicles (%)	6%	2%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	21.2	
Effective Green, g (s)	21.2	
Actuated g/C Ratio	0.37	
Clearance Time (s)	4.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1260	
v/s Ratio Prot	c0.11	
v/s Ratio Perm		
v/c Ratio	0.30	
Uniform Delay, d1	12.8	
Progression Factor	1.00	
Incremental Delay, d2	0.1	
Delay (s)	12.9	
Level of Service	B	
Approach Delay (s)	13.4	
Approach LOS	B	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	10	160	1520	20	50	140	2020	480	30	70	230	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00	0.87		1.00	0.98	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1770	6395			1770	5997	1120		1835	1558	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1770	6395			1770	5997	1120		1835	1558	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	160	1520	20	50	140	2020	480	30	70	230	10
RTOR Reduction (vph)	0	0	1	0	0	0	2	178	0	0	114	0
Lane Group Flow (vph)	0	170	1539	0	0	190	2066	254	0	100	116	0
Confl. Peds. (#/hr)		53						53	44			
Confl. Bikes (#/hr)								3			2	
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		15.8	50.9			19.0	54.1	54.1		15.1	15.1	
Effective Green, g (s)		15.8	50.9			19.0	54.1	54.1		15.1	15.1	
Actuated g/C Ratio		0.11	0.35			0.13	0.37	0.37		0.10	0.10	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		192	2243			231	2235	417		190	162	
v/s Ratio Prot		0.10	0.24			c0.11	c0.34			0.05		
v/s Ratio Perm								0.23			c0.07	
v/c Ratio		0.89	0.69			0.82	0.92	0.61		0.53	0.72	
Uniform Delay, d1		63.8	40.3			61.4	43.5	36.9		61.6	62.9	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		34.2	0.7			19.6	7.0	1.7		1.2	11.9	
Delay (s)		97.9	41.0			81.0	50.5	38.6		62.8	74.8	
Level of Service		F	D			F	D	D		E	E	
Approach Delay (s)			46.6				50.8			71.2		
Approach LOS			D				D			E		

Intersection Summary			
HCM 2000 Control Delay	52.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	145.1	Sum of lost time (s)	21.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	840	140	180
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.97	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.92	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3433	1647	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3433	1647	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	840	140	180
RTOR Reduction (vph)	0	29	0
Lane Group Flow (vph)	850	291	0
Confl. Peds. (#/hr)			44
Confl. Bikes (#/hr)			2
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	39.1	39.1	
Effective Green, g (s)	39.1	39.1	
Actuated g/C Ratio	0.27	0.27	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	925	443	
v/s Ratio Prot	c0.25	0.18	
v/s Ratio Perm			
v/c Ratio	0.92	0.66	
Uniform Delay, d1	51.5	47.0	
Progression Factor	1.00	1.00	
Incremental Delay, d2	13.5	2.7	
Delay (s)	65.0	49.7	
Level of Service	E	D	
Approach Delay (s)		60.8	
Approach LOS		E	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	930	90	290	2090	220	220	120	350	270	80	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	0.88	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1718	3438	1512	1719	4940	1487	1714	1810	2707	1719	1710	
Flt Permitted	0.10	1.00	1.00	0.95	1.00	1.00	0.68	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	180	3438	1512	1719	4940	1487	1227	1810	2707	1719	1710	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	930	90	290	2090	220	220	120	350	270	80	40
RTOR Reduction (vph)	0	0	50	0	0	69	0	0	274	0	2	0
Lane Group Flow (vph)	20	930	40	290	2090	151	220	120	76	270	118	0
Confl. Peds. (#/hr)	12		3	3		12	3					3
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		6		5	2			4		3	8	
Permitted Phases	6		6			2	4		4			
Actuated Green, G (s)	40.1	40.1	40.1	25.7	69.8	69.8	29.1	29.1	29.1	23.9	57.0	
Effective Green, g (s)	40.1	40.1	40.1	25.7	69.8	69.8	29.1	29.1	29.1	23.9	57.0	
Actuated g/C Ratio	0.30	0.30	0.30	0.19	0.52	0.52	0.22	0.22	0.22	0.18	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	53	1022	449	327	2557	769	264	390	584	304	723	
v/s Ratio Prot		c0.27		c0.17	0.42			0.07		c0.16	0.07	
v/s Ratio Perm	0.11		0.03			0.10	c0.18		0.03			
v/c Ratio	0.38	0.91	0.09	0.89	0.82	0.20	0.83	0.31	0.13	0.89	0.16	
Uniform Delay, d1	37.5	45.6	34.2	53.1	27.2	17.4	50.5	44.4	42.6	54.1	24.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.5	11.6	0.1	23.8	2.1	0.1	19.7	0.5	0.1	25.3	0.1	
Delay (s)	41.9	57.2	34.3	76.9	29.3	17.6	70.2	44.8	42.7	79.4	24.2	
Level of Service	D	E	C	E	C	B	E	D	D	E	C	
Approach Delay (s)		55.0			33.6			51.9			62.4	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	134.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	1780	10	190	1130	500	30	140	330	170	130	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.92	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		4965		1736	4988	1531	1736	4331	1335	1736	3471	1553
Flt Permitted		0.71		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3533		1736	4988	1531	1736	4331	1335	1736	3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	1780	10	190	1130	500	30	140	330	170	130	60
RTOR Reduction (vph)	0	0	0	0	0	142	0	137	137	0	0	51
Lane Group Flow (vph)	0	1930	0	190	1130	358	30	168	28	170	130	9
Confl. Peds. (#/hr)	2					2						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		75.6		10.0	89.6	89.6	3.6	12.4	12.4	9.0	17.8	17.8
Effective Green, g (s)		75.6		10.0	89.6	89.6	3.6	12.4	12.4	9.0	17.8	17.8
Actuated g/C Ratio		0.60		0.08	0.72	0.72	0.03	0.10	0.10	0.07	0.14	0.14
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		2136		138	3575	1097	49	429	132	124	494	221
v/s Ratio Prot				c0.11	0.23		0.02	c0.04		c0.10	0.04	
v/s Ratio Perm		c0.55				0.23			0.02			0.01
v/c Ratio		0.90		1.38	0.32	0.33	0.61	0.39	0.21	1.37	0.26	0.04
Uniform Delay, d1		21.5		57.5	6.5	6.5	60.0	52.8	51.8	58.0	47.8	46.2
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		6.8		208.4	0.2	0.8	20.5	0.6	0.8	209.7	0.3	0.1
Delay (s)		28.3		265.9	6.7	7.3	80.6	53.4	52.6	267.7	48.0	46.3
Level of Service		C		F	A	A	F	D	D	F	D	D
Approach Delay (s)		28.3			33.9			54.7			151.5	
Approach LOS		C			C			D			F	

Intersection Summary			
HCM 2000 Control Delay	43.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	950	1500	340	1580	890	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.91		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3214		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3214		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	950	1500	340	1580	890	330
RTOR Reduction (vph)	402	0	0	0	0	0
Lane Group Flow (vph)	2048	0	340	1580	890	330
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		11.0	38.0	14.0	60.0
Effective Green, g (s)	23.0		11.0	38.0	14.0	60.0
Actuated g/C Ratio	0.38		0.18	0.63	0.23	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1232		324	2241	801	1583
v/s Ratio Prot	c0.64		c0.19	0.45	c0.26	
v/s Ratio Perm						0.21
v/c Ratio	1.66		1.05	0.71	1.11	0.21
Uniform Delay, d1	18.5		24.5	7.3	23.0	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	301.7		63.5	1.0	66.8	0.3
Delay (s)	320.2		88.0	8.3	89.8	0.3
Level of Service	F		F	A	F	A
Approach Delay (s)	320.2			22.4	65.6	
Approach LOS	F			C	E	

Intersection Summary			
HCM 2000 Control Delay	162.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	128.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1150	130	140	1240	640	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1150	130	140	1240	640	140
RTOR Reduction (vph)	0	73	0	0	0	100
Lane Group Flow (vph)	1150	57	140	1240	640	40
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	30.0	30.0	6.4	40.4	19.7	19.7
Effective Green, g (s)	30.0	30.0	6.4	40.4	19.7	19.7
Actuated g/C Ratio	0.44	0.44	0.09	0.59	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1559	697	322	2099	993	457
v/s Ratio Prot	c0.32		0.04	c0.35	c0.19	
v/s Ratio Perm		0.04				0.03
v/c Ratio	0.74	0.08	0.43	0.59	0.64	0.09
Uniform Delay, d1	15.8	11.1	29.1	8.7	21.1	17.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.1	0.9	0.4	1.4	0.1
Delay (s)	17.6	11.1	30.1	9.1	22.6	17.7
Level of Service	B	B	C	A	C	B
Approach Delay (s)	17.0			11.2	21.7	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	68.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	30	140	40	20	150	90	1310	30	80	1560	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1661	1749	1568	1752	3003		3400	3492		1752	3501	
Flt Permitted	0.64	0.99	1.00	0.74	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1127	1736	1568	1357	3003		3400	3492		1752	3501	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	30	140	40	20	150	90	1310	30	80	1560	10
RTOR Reduction (vph)	0	0	111	0	119	0	0	1	0	0	1	0
Lane Group Flow (vph)	9	31	29	40	51	0	90	1339	0	80	1569	0
Confl. Peds. (#/hr)	5											
Confl. Bikes (#/hr)						2			5			6
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.2	10.2	10.2	10.2	10.2		4.6	22.7		4.2	22.3	
Effective Green, g (s)	10.2	10.2	10.2	10.2	10.2		4.6	22.7		4.2	22.3	
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.09	0.47		0.09	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	236	364	329	284	630		321	1631		151	1606	
v/s Ratio Prot					0.02		0.03	0.38		c0.05	c0.45	
v/s Ratio Perm	0.01	0.02	0.02	c0.03								
v/c Ratio	0.04	0.09	0.09	0.14	0.08		0.28	0.82		0.53	0.98	
Uniform Delay, d1	15.3	15.4	15.5	15.6	15.4		20.5	11.2		21.3	12.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2	0.2	0.4	0.1		0.2	3.3		1.5	17.1	
Delay (s)	15.4	15.6	15.7	16.1	15.5		20.6	14.5		22.8	30.0	
Level of Service	B	B	B	B	B		C	B		C	C	
Approach Delay (s)		15.6			15.6			14.9			29.6	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	48.6	Sum of lost time (s)	11.5
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	0	0	0	10	360	1200	660	10	220	690	220	630
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91			0.97	0.95	1.00	0.97
Frpb, ped/bikes					1.00	0.99			1.00	1.00	0.99	1.00
Flpb, ped/bikes					1.00	1.00			1.00	1.00	1.00	1.00
Frt					1.00	0.95			1.00	1.00	0.85	1.00
Flt Protected					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (prot)					1752	4738			3400	3505	1546	3400
Flt Permitted					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (perm)					1752	4738			3400	3505	1546	3400
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	10	360	1200	660	10	220	690	220	630
RTOR Reduction (vph)	0	0	0	0	0	99	0	0	0	0	147	0
Lane Group Flow (vph)	0	0	0	0	370	1761	0	0	230	690	73	630
Confl. Peds. (#/hr)							3					
Confl. Bikes (#/hr)							3				3	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm	Perm	NA		Prot	Prot	NA	Perm	Prot
Protected Phases						8		5	5	2		1
Permitted Phases				8	8						2	
Actuated Green, G (s)					39.0	39.0			12.0	33.0	33.0	16.0
Effective Green, g (s)					39.0	39.0			12.0	33.0	33.0	16.0
Actuated g/C Ratio					0.39	0.39			0.12	0.33	0.33	0.16
Clearance Time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					683	1847			408	1156	510	544
v/s Ratio Prot						c0.37			0.07	0.20		c0.19
v/s Ratio Perm					0.21						0.05	
v/c Ratio					0.54	0.95			0.56	0.60	0.14	1.16
Uniform Delay, d1					23.6	29.6			41.5	28.0	23.6	42.0
Progression Factor					1.00	1.00			0.75	1.30	4.67	1.00
Incremental Delay, d2					0.9	11.8			1.6	2.0	0.5	90.2
Delay (s)					24.5	41.4			32.5	38.3	110.6	132.2
Level of Service					C	D			C	D	F	F
Approach Delay (s)		0.0				38.6				51.1		
Approach LOS		A				D				D		

Intersection Summary			
HCM 2000 Control Delay	50.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	930	200
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.98
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3505	1543
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3505	1543
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	930	200
RTOR Reduction (vph)	0	40
Lane Group Flow (vph)	930	160
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		6
Heavy Vehicles (%)	3%	3%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	37.0	37.0
Effective Green, g (s)	37.0	37.0
Actuated g/C Ratio	0.37	0.37
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1296	570
v/s Ratio Prot	c0.27	
v/s Ratio Perm		0.10
v/c Ratio	0.72	0.28
Uniform Delay, d1	27.0	22.1
Progression Factor	1.00	1.00
Incremental Delay, d2	3.4	1.2
Delay (s)	30.5	23.4
Level of Service	C	C
Approach Delay (s)	66.1	
Approach LOS	E	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	250	410	230	0	90	0	880	210	30	1270	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.97		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	5036	1568	3400		1519		3505	1539	1752	3505	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	5036	1568	3400		1519		3505	1539	1752	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	250	410	230	0	90	0	880	210	30	1270	0
RTOR Reduction (vph)	0	0	74	0	0	79	0	0	120	0	0	0
Lane Group Flow (vph)	170	250	336	230	0	11	0	880	90	30	1270	0
Confl. Peds. (#/hr)						8			3	3		
Confl. Bikes (#/hr)									6			5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	24.2	24.2	24.2	12.1		12.1		42.8	42.8	4.9	51.7	
Effective Green, g (s)	24.2	24.2	24.2	12.1		12.1		42.8	42.8	4.9	51.7	
Actuated g/C Ratio	0.24	0.24	0.24	0.12		0.12		0.43	0.43	0.05	0.52	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	423	1218	379	411		183		1500	658	85	1812	
v/s Ratio Prot	0.10	0.05		c0.07				0.25		0.02	c0.36	
v/s Ratio Perm			c0.21			0.01			0.06			
v/c Ratio	0.40	0.21	0.89	0.56		0.06		0.59	0.14	0.35	0.70	
Uniform Delay, d1	31.8	30.2	36.6	41.4		38.9		21.8	17.4	46.0	18.3	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.76	0.74	
Incremental Delay, d2	0.6	0.1	21.1	1.7		0.1		1.7	0.4	1.9	1.7	
Delay (s)	32.5	30.3	57.7	43.1		39.0		23.5	17.8	36.7	15.3	
Level of Service	C	C	E	D		D		C	B	D	B	
Approach Delay (s)		44.3			42.0			22.4			15.8	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	110	50	370	120	580	40	450	330	760	1170	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1504	2851		3242	1759	1495	1671	4803	1483	3335	3400	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1504	2851		3242	1759	1495	1671	4803	1483	3335	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	110	50	370	120	580	40	450	330	760	1170	80
RTOR Reduction (vph)	0	44	0	0	0	145	0	0	171	0	3	0
Lane Group Flow (vph)	100	116	0	370	120	435	40	450	159	760	1247	0
Confl. Peds. (#/hr)			2	2			3		2	2		3
Confl. Bikes (#/hr)			3									2
Heavy Vehicles (%)	20%	20%	20%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	9.1	10.2		14.2	15.3	31.6	4.7	25.1	39.3	16.3	36.7	
Effective Green, g (s)	9.1	10.2		14.2	15.3	31.6	4.7	25.1	39.3	16.3	36.7	
Actuated g/C Ratio	0.11	0.12		0.17	0.19	0.39	0.06	0.31	0.48	0.20	0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	167	355		562	329	650	96	1473	785	664	1525	
v/s Ratio Prot	0.07	0.04		c0.11	0.07	c0.13	0.02	c0.09	0.04	c0.23	c0.37	
v/s Ratio Perm						0.16			0.07			
v/c Ratio	0.60	0.33		0.66	0.36	0.67	0.42	0.31	0.20	1.14	0.82	
Uniform Delay, d1	34.6	32.7		31.5	29.0	20.8	37.2	21.7	12.2	32.8	19.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	5.7	0.5		2.8	0.7	2.6	2.9	0.1	0.1	82.1	3.5	
Delay (s)	40.3	33.2		34.3	29.7	23.4	40.1	21.8	12.4	114.8	23.2	
Level of Service	D	C		C	C	C	D	C	B	F	C	
Approach Delay (s)		35.9			27.9			18.9			57.8	
Approach LOS		D			C			B			E	

Intersection Summary			
HCM 2000 Control Delay	41.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	81.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	460	20	20	670	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1852			1860	1695	
Flt Permitted	1.00			0.87	0.98	
Satd. Flow (perm)	1852			1619	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	460	20	20	670	20	20
RTOR Reduction (vph)	2	0	0	0	17	0
Lane Group Flow (vph)	478	0	0	690	23	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	25.0			25.0	11.8	
Effective Green, g (s)	25.0			25.0	11.8	
Actuated g/C Ratio	0.33			0.33	0.16	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	618			541	267	
v/s Ratio Prot	0.26				c0.01	
v/s Ratio Perm				c0.43		
v/c Ratio	0.77			1.28	0.09	
Uniform Delay, d1	22.4			24.9	26.9	
Progression Factor	1.00			1.12	1.00	
Incremental Delay, d2	5.5			125.3	0.1	
Delay (s)	27.8			153.2	26.9	
Level of Service	C			F	C	
Approach Delay (s)	27.8			153.2	26.9	
Approach LOS	C			F	C	

Intersection Summary			
HCM 2000 Control Delay	99.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	250	10	0	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1853			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1853			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	250	10	0	110
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	260	0	0	110
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.1		21.1			21.1
Effective Green, g (s)	1.1		21.1			21.1
Actuated g/C Ratio	0.01		0.26			0.26
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	24		486			489
v/s Ratio Prot	c0.01		c0.14			0.06
v/s Ratio Perm						
v/c Ratio	0.42		0.53			0.22
Uniform Delay, d1	39.3		25.4			23.2
Progression Factor	1.00		1.00			0.88
Incremental Delay, d2	11.3		1.1			0.1
Delay (s)	50.6		26.5			20.4
Level of Service	D		C			C
Approach Delay (s)	50.6		26.5			20.4
Approach LOS	D		C			C

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix M

LOS Calculation Worksheets
2035 Plus Specific Plan Buildout Conditions

FEHR PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	240	30	50	40	20	30	20	550	50	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	240	30	50	40	20	30	20	550	50	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	320	90	620
Volume Left (vph)	240	40	20
Volume Right (vph)	50	30	50
Hadj (s)	0.09	-0.08	-0.01
Departure Headway (s)	5.9	6.2	5.1
Degree Utilization, x	0.52	0.15	0.88
Capacity (veh/h)	586	549	692
Control Delay (s)	15.2	10.3	34.3
Approach Delay (s)	15.2	10.3	34.3
Approach LOS	C	B	D

Intersection Summary				
Delay	26.3			
Level of Service	D			
Intersection Capacity Utilization	64.4%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	20	30	880	20	10	80
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	30	880	20	10	80
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	992	895			902	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	992	895			902	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	91			99	
cM capacity (veh/h)	268	338			752	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	50	900	90
Volume Left	20	0	10
Volume Right	30	20	0
cSH	306	1700	752
Volume to Capacity	0.16	0.53	0.01
Queue Length 95th (ft)	14	0	1
Control Delay (s)	19.0	0.0	1.2
Lane LOS	C		A
Approach Delay (s)	19.0	0.0	1.2
Approach LOS	C		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	110	200	50	20	820	20	0	0	10	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	0	110	200	50	20	820	20	0	0	10	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1710	1675	15	1785	1680	10	20			20		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1710	1675	15	1785	1680	10	20			20		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	0	100	90	0	0	98	49			100		
cM capacity (veh/h)	0	47	1064	27	43	1075	1595			1609		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1
Volume Total	120	200	70	820	10	10	20
Volume Left	10	200	0	820	0	0	0
Volume Right	110	0	20	0	0	0	10
cSH	0	27	59	1595	1700	1700	1700
Volume to Capacity	Err	7.29	1.19	0.51	0.01	0.01	0.01
Queue Length 95th (ft)	Err	Err	146	77	0	0	0
Control Delay (s)	Err	Err	292.8	9.6	0.0	0.0	0.0
Lane LOS	F	F	F	A			
Approach Delay (s)	Err	7482.6		9.4			0.0
Approach LOS	F	F					

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	76.5%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	670	380	40	0	0	0	40	170	50	90	30	200
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	670	380	40	0	0	0	40	170	50	90	30	200

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	860	230	260	90	230
Volume Left (vph)	670	0	40	90	0
Volume Right (vph)	0	40	50	0	200
Hadj (s)	0.42	-0.11	-0.06	0.52	-0.58
Departure Headway (s)	6.7	6.2	6.9	7.7	6.6
Degree Utilization, x	1.0	0.40	0.50	0.19	0.42
Capacity (veh/h)	543	571	515	458	537
Control Delay (s)	300.6	12.0	16.6	11.3	13.1
Approach Delay (s)	239.7		16.6	12.6	
Approach LOS	F		C	B	

Intersection Summary				
Delay	161.4			
Level of Service	F			
Intersection Capacity Utilization	75.5%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1020	50	10	230	0	30	0	30	40	50	730
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1020	50	10	230	0	30	0	30	40	50	730
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	230			1073			2053	1298	538	790	1323	230
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	230			1073			2053	1298	538	790	1323	230
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			98			0	100	94	85	67	4
cM capacity (veh/h)	1350			656			1	160	492	258	151	760

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	680	390	10	230	60	90	730
Volume Left	0	0	10	0	30	40	0
Volume Right	0	50	0	0	30	0	730
cSH	1700	1700	656	1700	2	185	760
Volume to Capacity	0.40	0.23	0.02	0.14	31.28	0.49	0.96
Queue Length 95th (ft)	0	0	1	0	Err	59	369
Control Delay (s)	0.0	0.0	10.6	0.0	Err	41.6	46.9
Lane LOS			B		F	E	E
Approach Delay (s)	0.0		0.4		Err	46.3	
Approach LOS					F	E	

Intersection Summary				
Average Delay	291.3			
Intersection Capacity Utilization	70.8%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	650	40	150	30	20	70	300	410	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			5.0	5.0	4.0	4.0	3.5			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	0.97			1.00	1.00	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.88			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1752	1514			1782	1568	1752	1863	1383			
Flt Permitted	0.95	1.00			0.71	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1752	1514			1303	1568	1752	1863	1383			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	650	40	150	30	20	70	300	410	20	0	0	0
RTOR Reduction (vph)	0	59	0	0	0	63	0	0	14	0	0	0
Lane Group Flow (vph)	650	131	0	0	50	7	300	410	6	0	0	0
Confl. Peds. (#/hr)			6	6								
Confl. Bikes (#/hr)			2						3			
Heavy Vehicles (%)	3%	0%	10%	5%	0%	3%	3%	2%	14%	2%	2%	2%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	30.0	41.1			7.6	7.6	19.3	19.3	19.3			
Effective Green, g (s)	29.0	41.1			7.1	7.1	18.8	18.8	19.3			
Actuated g/C Ratio	0.43	0.61			0.10	0.10	0.28	0.28	0.28			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	748	916			136	163	485	515	393			
v/s Ratio Prot	c0.37	0.09						c0.22				
v/s Ratio Perm					c0.04	0.00	0.17		0.00			
v/c Ratio	0.87	0.14			0.37	0.04	0.62	0.80	0.01			
Uniform Delay, d1	17.7	5.8			28.3	27.3	21.4	22.8	17.5			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	10.5	0.1			0.6	0.0	1.7	7.8	0.0			
Delay (s)	28.2	5.9			28.9	27.4	23.1	30.6	17.5			
Level of Service	C	A			C	C	C	C	B			
Approach Delay (s)		23.2			28.0			27.1			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	67.9	Sum of lost time (s)	13.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	800	10	0	320	0	10	0	0	40	0	680
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			1.00			1.00	0.85
Flt Protected		1.00			1.00			0.95			0.95	1.00
Satd. Flow (prot)		1824			1863			1805			1656	1561
Flt Permitted		1.00			1.00			0.95			0.95	1.00
Satd. Flow (perm)		1824			1863			1805			1656	1561
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	800	10	0	320	0	10	0	0	40	0	680
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	487
Lane Group Flow (vph)	0	810	0	0	320	0	0	10	0	0	40	193
Confl. Peds. (#/hr)			5	5								2
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	0%	4%	0%	0%	2%	0%	0%	0%	2%	9%	0%	1%
Turn Type		NA			NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		34.4			34.4			2.3			11.8	11.8
Effective Green, g (s)		34.4			34.4			2.3			11.8	11.8
Actuated g/C Ratio		0.57			0.57			0.04			0.20	0.20
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		1037			1059			68			322	304
v/s Ratio Prot		c0.44			0.17			c0.01			0.02	
v/s Ratio Perm												c0.12
v/c Ratio		0.78			0.30			0.15			0.12	0.63
Uniform Delay, d1		10.1			6.8			28.2			20.1	22.4
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		4.1			0.2			1.0			0.1	3.2
Delay (s)		14.2			7.0			29.2			20.2	25.5
Level of Service		B			A			C			C	C
Approach Delay (s)		14.2			7.0			29.2			25.2	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	60.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	120	260	670	260	0	80	0	900	160	860	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.98	1.00	1.00		1.00		1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		1.00	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1900	1571	3433	1881		1736		2760		3488	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1900	1571	3433	1881		1736		2760		3488	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	120	260	670	260	0	80	0	900	160	860	30
RTOR Reduction (vph)	0	0	168	0	0	0	0	0	559	0	2	0
Lane Group Flow (vph)	0	120	92	670	260	0	80	0	341	0	1048	0
Confl. Peds. (#/hr)	3		2			3						5
Heavy Vehicles (%)	0%	0%	1%	2%	1%	0%	4%	0%	2%	2%	2%	7%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		13.0	13.0	34.5	52.5		7.0		46.5		46.5	
Effective Green, g (s)		13.0	13.0	34.5	52.5		6.0		45.5		46.5	
Actuated g/C Ratio		0.11	0.11	0.29	0.44		0.05		0.38		0.39	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		205	170	986	822		86		1046		1351	
v/s Ratio Prot		c0.06		c0.20	0.14		c0.05		0.12		c0.30	
v/s Ratio Perm			0.06									
v/c Ratio		0.59	0.54	0.68	0.32		0.93		0.33		0.78	
Uniform Delay, d1		50.9	50.7	37.9	22.0		56.8		26.4		32.2	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		2.7	1.9	3.8	1.0		73.2		0.1		2.6	
Delay (s)		53.7	52.6	41.6	23.0		130.0		26.5		34.8	
Level of Service		D	D	D	C		F		C		C	
Approach Delay (s)		52.9			36.4			34.9			34.8	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	620	560	0	0	450	180	480	10	380	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3433	1827			1845	1549		1794	1542			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3433	1827			1845	1549		1794	1542			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	620	560	0	0	450	180	480	10	380	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	101	0	0	159	0	0	0
Lane Group Flow (vph)	620	560	0	0	450	80	0	490	221	0	0	0
Confl. Peds. (#/hr)			12			8			3			
Heavy Vehicles (%)	2%	4%	0%	0%	3%	2%	1%	0%	2%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	22.7	52.2			25.0	25.0		38.8	38.8			
Effective Green, g (s)	22.7	52.2			25.0	25.0		38.8	38.8			
Actuated g/C Ratio	0.23	0.52			0.25	0.25		0.39	0.39			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	779	953			461	387		696	598			
v/s Ratio Prot	c0.18	0.31			c0.24							
v/s Ratio Perm						0.05		0.27	0.14			
v/c Ratio	0.80	0.59			0.98	0.21		0.70	0.37			
Uniform Delay, d1	36.5	16.5			37.2	29.6		25.8	21.9			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	6.5	1.4			35.8	0.6		5.9	1.8			
Delay (s)	42.9	17.9			73.0	30.2		31.7	23.6			
Level of Service	D	B			E	C		C	C			
Approach Delay (s)		31.1			60.8			28.2			0.0	
Approach LOS		C			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	980	520	370	1420
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	980	520	370	1420
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.78					
vC, conflicting volume	2690	750			980	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2602	750			980	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			48	
cM capacity (veh/h)	8	358			706	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	653	847	370	710	710
Volume Left	0	0	370	0	0
Volume Right	0	520	0	0	0
cSH	1700	1700	706	1700	1700
Volume to Capacity	0.38	0.50	0.52	0.42	0.42
Queue Length 95th (ft)	0	0	77	0	0
Control Delay (s)	0.0	0.0	15.6	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		3.2		
Approach LOS					

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	70.9%	ICU Level of Service		C
Analysis Period (min)	15			

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	530	70	10	230	640	170	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.92	
Flt Protected	1.00	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3539	1583		1770	3539	1660	
Flt Permitted	1.00	1.00		0.33	1.00	0.98	
Satd. Flow (perm)	3539	1583		611	3539	1660	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	530	70	10	230	640	170	250
RTOR Reduction (vph)	0	13	0	0	0	55	0
Lane Group Flow (vph)	530	57	0	240	640	365	0
Confl. Peds. (#/hr)							9
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	15.2	39.0		28.3	28.3	18.3	
Effective Green, g (s)	15.2	39.0		28.3	28.3	18.3	
Actuated g/C Ratio	0.27	0.69		0.50	0.50	0.32	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	950	1090		512	1769	536	
v/s Ratio Prot	c0.15	0.04		c0.08	0.18	c0.22	
v/s Ratio Perm				0.15			
v/c Ratio	0.56	0.05		0.47	0.36	0.68	
Uniform Delay, d1	17.8	2.8		8.5	8.6	16.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.7	0.0		0.7	0.1	3.6	
Delay (s)	18.5	2.9		9.2	8.8	20.2	
Level of Service	B	A		A	A	C	
Approach Delay (s)	16.7				8.9	20.2	
Approach LOS	B				A	C	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	13.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	350	20	110	400	300	20	240	80	170	340	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.99			1.00	0.85		0.96		1.00	0.95	
Flt Protected		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1825			3501	1583		3338		1770	1742	
Flt Permitted		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1825			3501	1583		3338		1770	1742	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	350	20	110	400	300	20	240	80	170	340	190
RTOR Reduction (vph)	0	1	0	0	0	102	0	26	0	0	17	0
Lane Group Flow (vph)	0	479	0	0	510	198	0	314	0	170	513	0
Confl. Peds. (#/hr)	20		21	21		20	12		41	41		12
Confl. Bikes (#/hr)			2			2						
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		31.1			18.6	35.2		15.4		35.2	35.2	
Effective Green, g (s)		31.1			18.6	35.2		15.4		35.2	35.2	
Actuated g/C Ratio		0.28			0.17	0.31		0.14		0.31	0.31	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		505			579	496		457		554	546	
v/s Ratio Prot		c0.26			c0.15	0.12		c0.09		0.10	c0.29	
v/s Ratio Perm												
v/c Ratio		0.95			0.88	0.40		0.69		0.31	0.94	
Uniform Delay, d1		39.8			45.8	30.2		46.2		29.3	37.5	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		27.1			14.6	0.5		4.3		0.3	24.1	
Delay (s)		66.9			60.4	30.8		50.4		29.6	61.6	
Level of Service		E			E	C		D		C	E	
Approach Delay (s)		66.9			49.4			50.4			53.8	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	54.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	112.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	520	120	40	650	50	220	510	50	100	640	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			0.99			1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1687	1845	1576	1719	1844			3423			3385	1429
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1687	1845	1576	1719	1844			3423			3385	1429
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	520	120	40	650	50	220	510	50	100	640	190
RTOR Reduction (vph)	0	0	62	0	2	0	0	3	0	0	0	0
Lane Group Flow (vph)	160	520	58	40	698	0	0	777	0	0	740	190
Confl. Peds. (#/hr)			5						15			48
Confl. Bikes (#/hr)						3			2			2
Heavy Vehicles (%)	7%	3%	0%	5%	2%	0%	3%	2%	4%	12%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	15.0	58.6	58.6	14.2	57.8			32.0			32.0	156.3
Effective Green, g (s)	15.0	60.1	60.1	14.2	59.3			33.0			33.0	156.3
Actuated g/C Ratio	0.10	0.38	0.38	0.09	0.38			0.21			0.21	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	161	709	605	156	699			722			714	1429
v/s Ratio Prot	c0.09	0.28		0.02	c0.38			c0.23			c0.22	
v/s Ratio Perm			0.04									0.13
v/c Ratio	0.99	0.73	0.10	0.26	1.00			1.08			1.04	0.13
Uniform Delay, d1	70.6	41.2	30.7	66.1	48.5			61.7			61.7	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	68.8	3.9	0.1	0.9	33.5			55.8			43.4	0.2
Delay (s)	139.4	45.2	30.8	67.0	81.9			117.5			105.1	0.2
Level of Service	F	D	C	E	F			F			F	A
Approach Delay (s)		61.9			81.1			117.5			83.7	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	85.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	156.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	500	20	50	950	390	10	50	20	230	40	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			0.95	
Frpb, ped/bikes		1.00			1.00			0.98			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			0.96	
Frt		0.99			0.96			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.97	
Satd. Flow (prot)		3500			3378			1748			3123	
Flt Permitted		0.93			0.92			0.93			0.82	
Satd. Flow (perm)		3253			3111			1642			2656	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	500	20	50	950	390	10	50	20	230	40	100
RTOR Reduction (vph)	0	4	0	0	52	0	0	16	0	0	64	0
Lane Group Flow (vph)	0	526	0	0	1338	0	0	64	0	0	306	0
Confl. Peds. (#/hr)			122	122			32		60	60		32
Confl. Bikes (#/hr)			9						2			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)		44.3			44.3			12.7			12.7	
Effective Green, g (s)		44.3			44.3			12.7			12.7	
Actuated g/C Ratio		0.68			0.68			0.20			0.20	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		2217			2120			320			518	
v/s Ratio Prot												
v/s Ratio Perm		0.16			c0.43			0.04			c0.12	
v/c Ratio		0.24			0.63			0.20			0.59	
Uniform Delay, d1		3.9			5.8			21.9			23.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.3			1.4			0.3			1.8	
Delay (s)		4.2			7.2			22.2			25.6	
Level of Service		A			A			C			C	
Approach Delay (s)		4.2			7.2			22.2			25.6	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	560	230	280	1310	180	260	710	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			1.00				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.98			0.99				
Flt Protected		1.00	1.00		0.99			0.99				
Satd. Flow (prot)		3539	1569		3453			3456				
Flt Permitted		1.00	1.00		0.73			0.99				
Satd. Flow (perm)		3539	1569		2541			3456				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	560	230	280	1310	180	260	710	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	560	230	0	1762	0	0	1014	0	0	0	0
Confl. Peds. (#/hr)									33	33		
Confl. Bikes (#/hr)			3			5			18			2
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		40.0	57.5		40.0			17.5				
Effective Green, g (s)		40.0	57.5		40.0			17.5				
Actuated g/C Ratio		0.62	0.88		0.62			0.27				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		2177	1496		1563			930				
v/s Ratio Prot		0.16	0.04									
v/s Ratio Perm			0.11		c0.69			0.29				
v/c Ratio		0.26	0.15		1.13			1.09				
Uniform Delay, d1		5.7	0.5		12.5			23.8				
Progression Factor		0.81	0.59		1.00			1.00				
Incremental Delay, d2		0.1	0.0		66.0			57.3				
Delay (s)		4.7	0.3		78.5			81.0				
Level of Service		A	A		E			F				
Approach Delay (s)		3.4			78.5			81.0			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM 2000 Control Delay	62.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	104.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	290	100	50	640	150	60	560	30	30	410	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.98			0.98			0.99			0.93	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.97			0.98			0.99			0.95	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1758			1769			3442			3114	
Flt Permitted		0.79			0.95			0.72			0.84	
Satd. Flow (perm)		1401			1688			2476			2626	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	290	100	50	640	150	60	560	30	30	410	200
RTOR Reduction (vph)	0	15	0	0	11	0	0	4	0	0	70	0
Lane Group Flow (vph)	0	455	0	0	830	0	0	646	0	0	570	0
Confl. Peds. (#/hr)	95		60	60		95	81		83	83		81
Confl. Bikes (#/hr)			5			26			6			11
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		46.5			37.5			19.5			19.5	
Effective Green, g (s)		42.5			37.5			19.5			19.5	
Actuated g/C Ratio		0.57			0.50			0.26			0.26	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		793			844			643			682	
v/s Ratio Prot												
v/s Ratio Perm		c0.32			c0.49			c0.26			0.22	
v/c Ratio		0.57			0.98			1.00			0.84	
Uniform Delay, d1		10.4			18.4			27.8			26.2	
Progression Factor		0.27			1.00			1.00			1.00	
Incremental Delay, d2		0.6			26.5			36.5			11.6	
Delay (s)		3.4			45.0			64.2			37.8	
Level of Service		A			D			E			D	
Approach Delay (s)		3.4			45.0			64.2			37.8	
Approach LOS		A			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	530	140	90	630	80	190	840	140	60	540	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.91			0.95		1.00	0.95		1.00	0.97	
Flpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.97			0.99		1.00	0.98		1.00	0.98	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3131			1706		1770	1736		1770	1781	
Flt Permitted		0.92			0.73		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2883			1257		1770	1736		1770	1781	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	530	140	90	630	80	190	840	140	60	540	60
RTOR Reduction (vph)	0	23	0	0	4	0	0	6	0	0	4	0
Lane Group Flow (vph)	0	667	0	0	796	0	190	974	0	60	596	0
Confl. Peds. (#/hr)	215		132	132		215			234			90
Confl. Bikes (#/hr)			2									
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		42.1			42.1		10.9	38.4		4.0	31.5	
Effective Green, g (s)		42.1			42.1		10.9	38.4		4.0	31.5	
Actuated g/C Ratio		0.42			0.42		0.11	0.38		0.04	0.32	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1213			529		192	666		70	561	
v/s Ratio Prot							c0.11	c0.56		0.03	0.33	
v/s Ratio Perm		0.23			c0.63							
v/c Ratio		0.55			1.50		0.99	1.46		0.86	1.06	
Uniform Delay, d1		21.8			28.9		44.5	30.8		47.7	34.2	
Progression Factor		1.00			1.00		1.05	0.97		1.00	1.00	
Incremental Delay, d2		1.8			236.8		16.8	209.2		58.8	55.6	
Delay (s)		23.6			265.8		63.7	239.1		106.5	89.8	
Level of Service		C			F		E	F		F	F	
Approach Delay (s)		23.6			265.8			210.6			91.3	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	161.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	140.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	80	680	930	150	360	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.98		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1770	1863	1795		1693	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1770	1863	1795		1693	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	680	930	150	360	210
RTOR Reduction (vph)	0	0	4	0	21	0
Lane Group Flow (vph)	80	680	1076	0	549	0
Confl. Peds. (#/hr)	101			101		
Confl. Bikes (#/hr)				21		14
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	5.2	61.0	51.3		30.5	
Effective Green, g (s)	5.2	61.0	51.3		30.5	
Actuated g/C Ratio	0.05	0.61	0.51		0.30	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	92	1136	920		516	
v/s Ratio Prot	c0.05	0.37	c0.60		c0.32	
v/s Ratio Perm						
v/c Ratio	0.87	0.60	1.17		1.06	
Uniform Delay, d1	47.1	12.0	24.4		34.8	
Progression Factor	0.67	1.71	0.74		1.00	
Incremental Delay, d2	8.0	0.2	77.6		57.8	
Delay (s)	39.7	20.7	95.5		92.6	
Level of Service	D	C	F		F	
Approach Delay (s)		22.7	95.5		92.6	
Approach LOS		C	F		F	

Intersection Summary			
HCM 2000 Control Delay	71.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	650	200	170	630	240	90	860	120	120	740	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.97			0.97			0.98		1.00	0.99	
Flt Protected		0.99			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1800			1790			3465		1770	3512	
Flt Permitted		0.76			0.61			0.69		0.12	1.00	
Satd. Flow (perm)		1374			1105			2400		220	3512	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	650	200	170	630	240	90	860	120	120	740	40
RTOR Reduction (vph)	0	10	0	0	11	0	0	10	0	0	4	0
Lane Group Flow (vph)	0	941	0	0	1029	0	0	1060	0	120	776	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		50.0			50.0			40.0		40.0	40.0	
Effective Green, g (s)		50.0			50.0			40.0		40.0	40.0	
Actuated g/C Ratio		0.50			0.50			0.40		0.40	0.40	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		687			552			960		88	1404	
v/s Ratio Prot											0.22	
v/s Ratio Perm		0.68			c0.93			0.44		c0.55		
v/c Ratio		1.37			1.86			1.10		1.36	0.55	
Uniform Delay, d1		25.0			25.0			30.0		30.0	23.1	
Progression Factor		1.00			1.00			1.00		0.65	0.58	
Incremental Delay, d2		175.3			395.8			62.1		202.6	0.3	
Delay (s)		200.3			420.8			92.1		222.2	13.8	
Level of Service		F			F			F		F	B	
Approach Delay (s)		200.3			420.8			92.1			41.6	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	192.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	152.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	140	60	100	330	120	50	780	90	60	940	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99		0.89	1.00		0.99	1.00		0.98	1.00	
Frt		0.97		1.00	0.96		1.00	0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1677		1573	1719		1747	1815		1740	1830	
Flt Permitted		0.51		0.51	1.00		0.10	1.00		0.18	1.00	
Satd. Flow (perm)		856		837	1719		184	1815		321	1830	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	140	60	100	330	120	50	780	90	60	940	70
RTOR Reduction (vph)	0	18	0	0	20	0	0	7	0	0	4	0
Lane Group Flow (vph)	0	222	0	100	430	0	50	863	0	60	1006	0
Confl. Peds. (#/hr)	57		102	102		57	98		92	92		98
Confl. Bikes (#/hr)			6			15			14			9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		223		218	449		113	1116		197	1126	
v/s Ratio Prot					0.25			0.48			c0.55	
v/s Ratio Perm		c0.26		0.12			0.27			0.19		
v/c Ratio		0.99		0.46	0.96		0.44	0.77		0.30	0.89	
Uniform Delay, d1		23.9		20.1	23.6		6.6	9.2		5.9	10.7	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		58.6		1.5	31.5		12.1	5.2		4.0	10.9	
Delay (s)		82.6		21.7	55.1		18.7	14.4		9.9	21.6	
Level of Service		F		C	E		B	B		A	C	
Approach Delay (s)		82.6			49.1			14.7			20.9	
Approach LOS		F			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	270	60	20	340	90	240	530	30	70	530	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98			0.95		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1781			3256		1770	1845		1770	1863	1536
Flt Permitted	0.95	1.00			0.93		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1781			3039		1770	1845		1770	1863	1536
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	330	270	60	20	340	90	240	530	30	70	530	590
RTOR Reduction (vph)	0	9	0	0	26	0	0	2	0	0	0	299
Lane Group Flow (vph)	330	321	0	0	424	0	240	558	0	70	530	291
Confl. Peds. (#/hr)	101		63	63		101	14		12	12		14
Confl. Bikes (#/hr)			15			12			2			6
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	15.5	41.5			21.0		7.0	28.3		4.0	27.3	27.3
Effective Green, g (s)	15.5	41.5			21.0		7.0	28.3		4.0	27.3	27.3
Actuated g/C Ratio	0.18	0.48			0.24		0.08	0.33		0.05	0.32	0.32
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	319	861			743		144	608		82	592	488
v/s Ratio Prot	c0.19	0.18					c0.14	c0.30		0.04	0.28	
v/s Ratio Perm					c0.14							0.19
v/c Ratio	1.03	0.37			0.57		1.67	0.92		0.85	0.90	0.60
Uniform Delay, d1	35.1	13.9			28.4		39.4	27.6		40.6	27.9	24.6
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	59.6	1.2			3.2		328.5	21.1		52.2	18.6	5.3
Delay (s)	94.7	15.2			31.6		367.9	48.7		92.8	46.5	29.9
Level of Service	F	B			C		F	D		F	D	C
Approach Delay (s)		55.0			31.6			144.5			41.0	
Approach LOS		D			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	69.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	17.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	350	70	80	960	40	150	620	110	20	510	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		3414			3489			3399			3421	
Flt Permitted		0.52			0.86			0.73			0.90	
Satd. Flow (perm)		1804			2998			2510			3101	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	350	70	80	960	40	150	620	110	20	510	80
RTOR Reduction (vph)	0	15	0	0	3	0	0	14	0	0	15	0
Lane Group Flow (vph)	0	505	0	0	1077	0	0	866	0	0	595	0
Confl. Peds. (#/hr)	77		24	24		77	17		69	69		66
Confl. Bikes (#/hr)			9			6			5			11
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		869			1011			847			1372	
v/s Ratio Prot		c0.03									c0.02	
v/s Ratio Perm		0.22			c0.36			c0.35			0.17	
v/c Ratio		0.58			1.06			1.02			0.43	
Uniform Delay, d1		17.0			26.5			26.5			15.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.8			47.3			36.7			1.0	
Delay (s)		19.8			73.8			63.2			16.6	
Level of Service		B			E			E			B	
Approach Delay (s)		19.8			73.8			63.2			16.6	
Approach LOS		B			E			E			B	

Intersection Summary			
HCM 2000 Control Delay	50.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	107.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	30	400	120	70	530	50	10	30	500	10	50	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	4.0	4.0		
Lane Util. Factor		1.00			1.00			1.00	1.00	1.00		
Frpb, ped/bikes		0.99			1.00			1.00	1.00	0.91		
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00		
Frt		0.97			0.99			1.00	1.00	0.85		
Flt Protected		1.00			0.99			0.95	1.00	1.00		
Satd. Flow (prot)		1780			1820			1770	1863	1448		
Flt Permitted		0.95			0.91			0.21	1.00	1.00		
Satd. Flow (perm)		1699			1664			392	1863	1448		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	400	120	70	530	50	10	30	500	10	50	10
RTOR Reduction (vph)	0	14	0	0	1	0	0	0	0	42	0	0
Lane Group Flow (vph)	0	536	0	0	659	0	0	30	500	18	0	0
Confl. Peds. (#/hr)			35	35		15		20		35		
Confl. Bikes (#/hr)						6						
Turn Type	Perm	NA		Perm	NA			Perm	NA	Perm		Perm
Protected Phases		2			6				8			
Permitted Phases	2			6				8		8		4
Actuated Green, G (s)		32.0			32.0			19.0	19.0	19.0		
Effective Green, g (s)		32.0			32.0			19.0	19.0	19.0		
Actuated g/C Ratio		0.49			0.49			0.29	0.29	0.29		
Clearance Time (s)		4.0			4.0			4.0	4.0	4.0		
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0		
Lane Grp Cap (vph)		836			819			114	544	423		
v/s Ratio Prot									0.27			
v/s Ratio Perm		0.32			c0.40			0.08		0.01		
v/c Ratio		0.64			0.80			0.26	0.92	0.04		
Uniform Delay, d1		12.2			13.9			17.6	22.3	16.5		
Progression Factor		1.17			1.00			1.00	1.00	1.00		
Incremental Delay, d2		3.4			8.3			1.2	20.6	0.0		
Delay (s)		17.7			22.1			18.9	42.8	16.5		
Level of Service		B			C			B	D	B		
Approach Delay (s)		17.7			22.1				38.9			
Approach LOS		B			C				D			

Intersection Summary			
HCM 2000 Control Delay	51.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations							
Volume (vph)	40	590	50	10	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		
Lane Util. Factor	1.00	1.00			1.00		
Frpb, ped/bikes	1.00	1.00			1.00		
Flpb, ped/bikes	0.98	1.00			1.00		
Frt	1.00	0.99			0.93		
Flt Protected	0.95	1.00			0.98		
Satd. Flow (prot)	1734	1832			1695		
Flt Permitted	0.21	1.00			1.00		
Satd. Flow (perm)	384	1832			1737		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	590	50	10	10	10	10
RTOR Reduction (vph)	0	5	0	0	0	0	0
Lane Group Flow (vph)	50	635	0	0	40	0	0
Confl. Peds. (#/hr)	35		20				
Confl. Bikes (#/hr)			3				
Turn Type	Perm	NA		Perm	Prot		
Protected Phases		4			9		
Permitted Phases	4			9			
Actuated Green, G (s)	19.0	19.0			2.0		
Effective Green, g (s)	19.0	19.0			2.0		
Actuated g/C Ratio	0.29	0.29			0.03		
Clearance Time (s)	4.0	4.0			4.0		
Vehicle Extension (s)	3.0	3.0			3.0		
Lane Grp Cap (vph)	112	535			53		
v/s Ratio Prot		c0.35					
v/s Ratio Perm	0.13				c0.02		
v/c Ratio	0.45	1.19			0.75		
Uniform Delay, d1	18.7	23.0			31.3		
Progression Factor	1.00	1.00			1.00		
Incremental Delay, d2	2.8	101.8			45.2		
Delay (s)	21.5	124.8			76.5		
Level of Service	C	F			E		
Approach Delay (s)		117.3			76.5		
Approach LOS		F			E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	300	40	140	320	30	50	470	140	10	710	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00			0.99		0.99	1.00			1.00	
Frt	1.00	0.98			0.99		1.00	0.97			0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1817			3422		1758	1766			1819	
Flt Permitted	0.43	1.00			0.68		0.27	1.00			0.99	
Satd. Flow (perm)	795	1817			2351		504	1766			1806	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	300	40	140	320	30	50	470	140	10	710	110
RTOR Reduction (vph)	0	8	0	0	8	0	0	16	0	0	8	0
Lane Group Flow (vph)	60	332	0	0	482	0	50	594	0	0	822	0
Confl. Peds. (#/hr)			27	27		39	42		56			42
Confl. Bikes (#/hr)			2			2			3			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	22.1	22.1			22.1		32.9	32.9			32.9	
Effective Green, g (s)	22.1	22.1			22.1		32.9	32.9			32.9	
Actuated g/C Ratio	0.34	0.34			0.34		0.51	0.51			0.51	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	270	617			799		255	893			914	
v/s Ratio Prot		0.18						0.34				
v/s Ratio Perm	0.08				c0.21		0.10				c0.46	
v/c Ratio	0.22	0.54			0.60		0.20	0.67			0.90	
Uniform Delay, d1	15.3	17.3			17.8		8.8	12.0			14.6	
Progression Factor	0.35	0.36			1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.9	1.5			3.4		0.4	1.9			11.6	
Delay (s)	6.2	7.8			21.2		9.2	13.8			26.1	
Level of Service	A	A			C		A	B			C	
Approach Delay (s)		7.6			21.2			13.5			26.1	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	105.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	520	0	0	1150	180	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.93	
Flt Protected	1.00			1.00	0.97	
Satd. Flow (prot)	3539			3539	3232	
Flt Permitted	1.00			1.00	0.97	
Satd. Flow (perm)	3539			3539	3232	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	520	0	0	1150	180	160
RTOR Reduction (vph)	0	0	0	0	45	0
Lane Group Flow (vph)	520	0	0	1150	295	0
Confl. Peds. (#/hr)						2
Confl. Bikes (#/hr)						2
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	39.6			39.6	10.9	
Effective Green, g (s)	39.6			39.6	10.9	
Actuated g/C Ratio	0.66			0.66	0.18	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2335			2335	587	
v/s Ratio Prot	0.15			c0.32	c0.09	
v/s Ratio Perm						
v/c Ratio	0.22			0.49	0.50	
Uniform Delay, d1	4.1			5.1	22.1	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.2			0.7	0.7	
Delay (s)	4.3			5.9	22.8	
Level of Service	A			A	C	
Approach Delay (s)	4.3			5.9	22.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	420	0	0	1160	20	110	300	80	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			0.99				
Frt		1.00			1.00			0.98				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3523			3529			3331				
Flt Permitted		0.81			1.00			0.99				
Satd. Flow (perm)		2874			3529			3331				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	420	0	0	1160	20	110	300	80	0	0	0
RTOR Reduction (vph)	0	0	0	0	1	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	460	0	0	1179	0	0	462	0	0	0	0
Confl. Peds. (#/hr)	23		11	11		23	54		66	66		54
Confl. Bikes (#/hr)						3			3			11
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		41.4			41.4			13.6				
Effective Green, g (s)		41.4			41.4			13.6				
Actuated g/C Ratio		0.64			0.64			0.21				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		1830			2247			696				
v/s Ratio Prot					c0.33							
v/s Ratio Perm		0.16						0.14				
v/c Ratio		0.25			0.52			0.66				
Uniform Delay, d1		5.1			6.4			23.6				
Progression Factor		0.95			1.00			1.00				
Incremental Delay, d2		0.3			0.9			1.9				
Delay (s)		5.2			7.3			25.4				
Level of Service		A			A			C				
Approach Delay (s)		5.2			7.3			25.4			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	530	80	70	1250	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.98		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3470		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3470		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	530	80	70	1250	0	0
RTOR Reduction (vph)	30	0	0	0	0	0
Lane Group Flow (vph)	580	0	70	1250	0	0
Confl. Peds. (#/hr)						2
Confl. Bikes (#/hr)						2
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1561		663	3539		
v/s Ratio Prot	0.17		0.04	c0.35		
v/s Ratio Perm						
v/c Ratio	0.37		0.11	0.35		
Uniform Delay, d1	7.3		8.1	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.7		0.3	0.3		
Delay (s)	7.9		8.5	0.3		
Level of Service	A		A	A		
Approach Delay (s)	7.9			0.7	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	3.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	490	160	90	1180	0	0	0	0	30	80	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		0.99			1.00						0.97	
Flpb, ped/bikes		1.00			1.00						0.98	
Frt		0.96			1.00						0.95	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		3391			3526						3183	
Flt Permitted		1.00			0.85						0.99	
Satd. Flow (perm)		3391			3010						3183	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	490	160	90	1180	0	0	0	0	30	80	50
RTOR Reduction (vph)	0	35	0	0	0	0	0	0	0	0	45	0
Lane Group Flow (vph)	0	615	0	0	1270	0	0	0	0	0	115	0
Confl. Peds. (#/hr)	9		20	20		9	50		59	59		50
Confl. Bikes (#/hr)			2			5			5			8
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		48.4			48.4						6.6	
Effective Green, g (s)		48.4			48.4						6.6	
Actuated g/C Ratio		0.74			0.74						0.10	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2524			2241						323	
v/s Ratio Prot		0.18										
v/s Ratio Perm					c0.42						0.04	
v/c Ratio		0.24			0.57						0.36	
Uniform Delay, d1		2.6			3.7						27.2	
Progression Factor		1.00			0.96						1.00	
Incremental Delay, d2		0.2			0.9						0.7	
Delay (s)		2.8			4.4						27.9	
Level of Service		A			A						C	
Approach Delay (s)		2.8			4.4			0.0			27.9	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	400	60	20	580	50	60	310	20	100	260	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		0.97	1.00		0.99	1.00	
Frt		0.98			0.99		1.00	0.99		1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1816			1834		1719	1842		1759	1806	
Flt Permitted		0.97			0.98		0.37	1.00		0.31	1.00	
Satd. Flow (perm)		1760			1802		662	1842		580	1806	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	400	60	20	580	50	60	310	20	100	260	40
RTOR Reduction (vph)	0	7	0	0	4	0	0	4	0	0	9	0
Lane Group Flow (vph)	0	473	0	0	646	0	60	326	0	100	291	0
Confl. Peds. (#/hr)	17		21	21		17	21		5	5		21
Confl. Bikes (#/hr)			3			3			3			3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		39.6			39.6		15.9	15.9		15.9	15.9	
Effective Green, g (s)		39.6			39.6		15.9	15.9		15.9	15.9	
Actuated g/C Ratio		0.61			0.61		0.24	0.24		0.24	0.24	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1072			1097		161	450		141	441	
v/s Ratio Prot								c0.18			0.16	
v/s Ratio Perm		0.27			c0.36		0.09			0.17		
v/c Ratio		0.44			0.59		0.37	0.72		0.71	0.66	
Uniform Delay, d1		6.8			7.7		20.4	22.5		22.4	22.1	
Progression Factor		1.00			1.97		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3			1.6		1.5	5.7		15.1	3.6	
Delay (s)		8.1			16.8		21.9	28.3		37.5	25.7	
Level of Service		A			B		C	C		D	C	
Approach Delay (s)		8.1			16.8			27.3			28.6	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	290	100	200	250	20	60	330	90	20	350	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes		0.99		1.00	0.99			0.99			0.99	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.97		1.00	0.99			0.97			0.98	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1774		1770	1825			1785			1807	
Flt Permitted		1.00		0.95	1.00			0.90			0.97	
Satd. Flow (perm)		1774		1770	1825			1615			1755	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	290	100	200	250	20	60	330	90	20	350	60
RTOR Reduction (vph)	0	17	0	0	5	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	403	0	200	265	0	0	468	0	0	421	0
Confl. Peds. (#/hr)	45		12	12		45	21		38	38		21
Confl. Bikes (#/hr)			6			8			2			
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)		16.0		13.7	13.7			24.3			24.3	
Effective Green, g (s)		16.0		13.7	13.7			24.3			24.3	
Actuated g/C Ratio		0.25		0.21	0.21			0.37			0.37	
Clearance Time (s)		3.0		3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		436		373	384			603			656	
v/s Ratio Prot		c0.23		0.11	c0.15							
v/s Ratio Perm								c0.29			0.24	
v/c Ratio		0.92		0.54	0.69			0.78			0.64	
Uniform Delay, d1		23.9		22.8	23.7			18.0			16.8	
Progression Factor		1.00		0.62	0.63			1.00			1.00	
Incremental Delay, d2		25.1		1.2	4.3			9.5			4.8	
Delay (s)		49.0		15.3	19.1			27.4			21.5	
Level of Service		D		B	B			C			C	
Approach Delay (s)		49.0			17.5			27.4			21.5	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	10	210	710	170	90	890	70	280	490	150	60	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes		1.00	1.00	0.97	1.00	1.00	0.87	1.00	1.00		1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.93
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)		1770	3539	1535	1770	3539	1385	1770	3398		1770	3234
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (perm)		1770	3539	1535	1770	3539	1385	1770	3398		1770	3234
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	210	710	170	90	890	70	280	490	150	60	350
RTOR Reduction (vph)	0	0	0	102	0	0	49	0	23	0	0	40
Lane Group Flow (vph)	0	220	710	68	90	890	21	280	617	0	60	600
Confl. Peds. (#/hr)		99		15	15		99	26		6	6	
Confl. Bikes (#/hr)				3			5			2		
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA
Protected Phases	5	5	2		1	6		7	4		3	8
Permitted Phases				2			6					
Actuated Green, G (s)		19.5	44.3	44.3	8.0	32.8	32.8	17.9	32.5		7.2	21.8
Effective Green, g (s)		19.5	44.3	44.3	8.0	32.8	32.8	17.9	32.5		7.2	21.8
Actuated g/C Ratio		0.18	0.40	0.40	0.07	0.30	0.30	0.16	0.30		0.07	0.20
Clearance Time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)		313	1425	618	128	1055	412	288	1003		115	640
v/s Ratio Prot		c0.12	0.20		0.05	c0.25		c0.16	0.18		0.03	c0.19
v/s Ratio Perm				0.04			0.02					
v/c Ratio		0.70	0.50	0.11	0.70	0.84	0.05	0.97	0.62		0.52	0.94
Uniform Delay, d1		42.5	24.5	20.5	49.8	36.2	27.5	45.8	33.4		49.7	43.4
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2		5.7	0.1	0.0	13.3	8.2	0.2	45.0	0.8		2.0	21.1
Delay (s)		48.3	24.6	20.6	63.2	44.4	27.7	90.8	34.2		51.7	64.5
Level of Service		D	C	C	E	D	C	F	C		D	E
Approach Delay (s)			28.7			44.9			51.4			63.4
Approach LOS			C			D			D			E

Intersection Summary			
HCM 2000 Control Delay	45.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	290
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	290
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	26
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	250	130	50	430	70	0	750	60	0	820	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.96			0.98			0.99			0.98	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1599			1640			3150			3133	
Flt Permitted		0.80			0.93			1.00			1.00	
Satd. Flow (perm)		1284			1536			3150			3133	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	250	130	50	430	70	0	750	60	0	820	100
RTOR Reduction (vph)	0	19	0	0	7	0	0	6	0	0	9	0
Lane Group Flow (vph)	0	441	0	0	543	0	0	804	0	0	911	0
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		38.8			38.8			43.2			43.2	
Effective Green, g (s)		38.8			38.8			43.2			43.2	
Actuated g/C Ratio		0.43			0.43			0.48			0.48	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		553			662			1512			1503	
v/s Ratio Prot								0.26			c0.29	
v/s Ratio Perm		0.34			c0.35							
v/c Ratio		0.80			0.82			0.53			0.61	
Uniform Delay, d1		22.2			22.5			16.3			17.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		7.9			8.0			1.3			1.8	
Delay (s)		30.1			30.6			17.7			19.0	
Level of Service		C			C			B			B	
Approach Delay (s)		30.1			30.6			17.7			19.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	530	130	70	640	80	220	420	130	90	790	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.69		0.98		1.00	0.92		1.00	0.97	
Flpb, ped/bikes		1.00	1.00		0.99		1.00	1.00		0.89	1.00	
Frt		1.00	0.85		0.98		1.00	0.96		1.00	0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3513	1100		3371		1770	1658		1581	1774	
Flt Permitted		0.66	1.00		0.72		0.15	1.00		0.38	1.00	
Satd. Flow (perm)		2330	1100		2448		275	1658		627	1774	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	530	130	70	640	80	220	420	130	90	790	130
RTOR Reduction (vph)	0	0	91	0	9	0	0	7	0	0	6	0
Lane Group Flow (vph)	0	580	39	0	781	0	220	543	0	90	914	0
Confl. Peds. (#/hr)	83		140	140		83	116		257	257		116
Confl. Bikes (#/hr)			17			15			9			12
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		24.5	24.5		24.5		56.0	56.0		56.0	56.0	
Effective Green, g (s)		24.5	24.5		24.5		56.0	56.0		56.0	56.0	
Actuated g/C Ratio		0.27	0.27		0.27		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		634	299		666		171	1031		390	1103	
v/s Ratio Prot								0.33			0.51	
v/s Ratio Perm		0.25	0.04		c0.32		c0.80			0.14		
v/c Ratio		0.91	0.13		1.17		1.29	0.53		0.23	0.83	
Uniform Delay, d1		31.7	24.7		32.8		17.0	9.6		7.5	13.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		17.8	0.2		92.8		165.7	1.9		1.4	7.2	
Delay (s)		49.6	24.9		125.5		182.7	11.5		8.9	20.5	
Level of Service		D	C		F		F	B		A	C	
Approach Delay (s)		45.0			125.5			60.4			19.4	
Approach LOS		D			F			E			B	

Intersection Summary			
HCM 2000 Control Delay	60.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	120.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	360	160	270	630	350	240	580	110	150	980	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3376		1770	3350		1770	3455		1770	3490	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3376		1770	3350		1770	3455		1770	3490	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	360	160	270	630	350	240	580	110	150	980	100
RTOR Reduction (vph)	0	56	0	0	76	0	0	16	0	0	8	0
Lane Group Flow (vph)	160	464	0	270	904	0	240	674	0	150	1072	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	10.0	18.0		21.6	29.6		13.0	30.9		13.0	30.9	
Effective Green, g (s)	10.0	18.0		21.6	29.6		13.0	30.9		13.0	30.9	
Actuated g/C Ratio	0.10	0.18		0.22	0.30		0.13	0.31		0.13	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.5		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	177	607		382	991		230	1067		230	1078	
v/s Ratio Prot	c0.09	0.14		0.15	c0.27		c0.14	0.20		0.08	c0.31	
v/s Ratio Perm												
v/c Ratio	0.90	0.76		0.71	0.91		1.04	0.63		0.65	0.99	
Uniform Delay, d1	44.5	39.0		36.3	33.9		43.5	29.7		41.4	34.5	
Progression Factor	1.00	1.00		1.00	1.00		1.09	0.81		1.00	1.00	
Incremental Delay, d2	40.5	5.1		4.8	12.5		61.3	2.0		5.0	26.2	
Delay (s)	85.0	44.1		41.1	46.5		108.6	25.9		46.3	60.7	
Level of Service	F	D		D	D		F	C		D	E	
Approach Delay (s)		53.8			45.3			47.3			58.9	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	51.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	200	500	40	70	910	300	110	450	90	140	1090	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.96		1.00	0.97		1.00	0.98	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3464			3405		1770	3451		1770	3457	
Flt Permitted		0.53			0.79		0.11	1.00		0.41	1.00	
Satd. Flow (perm)		1861			2691		198	3451		760	3457	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	500	40	70	910	300	110	450	90	140	1090	200
RTOR Reduction (vph)	0	4	0	0	29	0	0	17	0	0	15	0
Lane Group Flow (vph)	0	736	0	0	1251	0	110	523	0	140	1275	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		41.0			41.0		50.5	50.5		50.5	50.5	
Effective Green, g (s)		41.0			41.0		50.5	50.5		50.5	50.5	
Actuated g/C Ratio		0.41			0.41		0.50	0.50		0.50	0.50	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		763			1103		99	1742		383	1745	
v/s Ratio Prot								0.15			0.37	
v/s Ratio Perm		0.40			c0.46		c0.56			0.18		
v/c Ratio		2.53dl			1.13		1.11	0.30		0.37	0.73	
Uniform Delay, d1		28.8			29.5		24.8	14.4		15.0	19.4	
Progression Factor		1.00			1.00		1.00	1.00		0.20	0.19	
Incremental Delay, d2		24.0			72.0		123.6	0.4		1.2	1.3	
Delay (s)		52.8			101.5		148.3	14.9		4.2	5.0	
Level of Service		D			F		F	B		A	A	
Approach Delay (s)		52.8			101.5			37.5			4.9	
Approach LOS		D			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	48.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	129.2%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	180	20	200	350	90	40	450	150	60	930	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1835		1770	1806		1770	1793		1770	1843	
Flt Permitted	0.16	1.00		0.51	1.00		0.12	1.00		0.35	1.00	
Satd. Flow (perm)	290	1835		949	1806		227	1793		659	1843	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	180	20	200	350	90	40	450	150	60	930	70
RTOR Reduction (vph)	0	4	0	0	9	0	0	12	0	0	3	0
Lane Group Flow (vph)	90	196	0	200	431	0	40	588	0	60	997	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.7	25.7		25.7	25.7		65.0	65.0		65.0	65.0	
Effective Green, g (s)	25.7	25.7		25.7	25.7		65.0	65.0		65.0	65.0	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.65	0.65		0.65	0.65	
Clearance Time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	74	471		243	464		147	1165		428	1197	
v/s Ratio Prot		0.11			0.24			0.33			c0.54	
v/s Ratio Perm	c0.31			0.21			0.18			0.09		
v/c Ratio	1.22	0.42		0.82	0.93		0.27	0.50		0.14	0.83	
Uniform Delay, d1	37.1	30.9		35.0	36.3		7.4	9.1		6.7	13.4	
Progression Factor	1.00	1.00		1.00	1.00		0.80	0.81		1.00	1.00	
Incremental Delay, d2	173.9	0.6		19.7	24.9		4.4	1.5		0.7	6.9	
Delay (s)	211.0	31.5		54.7	61.2		10.3	8.9		7.4	20.2	
Level of Service	F	C		D	E		B	A		A	C	
Approach Delay (s)		87.2			59.1			9.0			19.5	
Approach LOS		F			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.3
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	190	270	350	560	940	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3262	
Flt Permitted	0.95	1.00	0.18	1.00	1.00	
Satd. Flow (perm)	1770	1583	340	3539	3262	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	270	350	560	940	190
RTOR Reduction (vph)	0	29	0	0	14	0
Lane Group Flow (vph)	190	241	350	560	1116	0
Confl. Peds. (#/hr)	50					152
Confl. Bikes (#/hr)						12
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	16.0	30.0	73.0	59.0	59.0	
Effective Green, g (s)	16.0	30.0	73.0	59.0	59.0	
Actuated g/C Ratio	0.16	0.30	0.73	0.59	0.59	
Clearance Time (s)	4.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.5	3.5	5.0	5.0	
Lane Grp Cap (vph)	283	522	448	2088	1924	
v/s Ratio Prot	c0.11	0.06	c0.11	0.16	0.34	
v/s Ratio Perm		0.09	c0.46			
v/c Ratio	0.67	0.46	0.78	0.27	0.58	
Uniform Delay, d1	39.5	28.4	19.8	10.0	12.8	
Progression Factor	1.00	1.00	1.16	0.42	1.49	
Incremental Delay, d2	6.1	0.8	8.4	0.3	0.7	
Delay (s)	45.7	29.2	31.3	4.4	19.7	
Level of Service	D	C	C	A	B	
Approach Delay (s)	36.0			14.8	19.7	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	160	280	620	60	190	1000
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		3.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.97		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3401		1770	3539
Flt Permitted	0.95	1.00	1.00		0.39	1.00
Satd. Flow (perm)	1770	1583	3401		732	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	280	620	60	190	1000
RTOR Reduction (vph)	0	235	6	0	0	0
Lane Group Flow (vph)	160	45	674	0	190	1000
Confl. Peds. (#/hr)	113			140		
Confl. Bikes (#/hr)				3		
Turn Type	Prot	Perm	NA		custom	NA
Protected Phases	8		2			6
Permitted Phases		8			1	
Actuated Green, G (s)	16.0	16.0	59.0		14.0	59.0
Effective Green, g (s)	16.0	16.0	59.0		14.0	59.0
Actuated g/C Ratio	0.16	0.16	0.59		0.14	0.59
Clearance Time (s)	4.0	4.0	4.0		3.0	4.0
Vehicle Extension (s)	3.0	3.0	5.0		3.5	5.0
Lane Grp Cap (vph)	283	253	2006		102	2088
v/s Ratio Prot	c0.09		0.20			c0.28
v/s Ratio Perm		0.03			c0.26	
v/c Ratio	0.57	0.18	0.34		1.86	0.48
Uniform Delay, d1	38.8	36.3	10.5		43.0	11.7
Progression Factor	1.00	1.00	1.00		0.98	0.64
Incremental Delay, d2	2.6	0.3	0.5		417.8	0.7
Delay (s)	41.4	36.6	10.9		460.0	8.2
Level of Service	D	D	B		F	A
Approach Delay (s)	38.4		10.9			80.3
Approach LOS	D		B			F

Intersection Summary			
HCM 2000 Control Delay	51.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	750	110	200	1130	140	190	260	190	100	710	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.84	1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1329	1770	3539	1351	1770	3256		1770	3282	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1329	1770	3539	1351	1770	3256		1770	3282	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	750	110	200	1130	140	190	260	190	100	710	290
RTOR Reduction (vph)	0	0	78	0	0	74	0	101	0	0	35	0
Lane Group Flow (vph)	180	750	32	200	1130	66	190	349	0	100	965	0
Confl. Peds. (#/hr)			92			83			26			77
Confl. Bikes (#/hr)			6			8			3			14
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4						
Actuated Green, G (s)	14.1	36.3	36.3	18.7	41.4	41.4	14.9	42.3		11.0	38.4	
Effective Green, g (s)	14.1	36.3	36.3	18.7	41.4	41.4	14.9	42.3		11.0	38.4	
Actuated g/C Ratio	0.11	0.29	0.29	0.15	0.34	0.34	0.12	0.34		0.09	0.31	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	202	1497	391	268	1188	453	213	1117		157	1022	
v/s Ratio Prot	c0.10	0.15		c0.11	c0.32		c0.11	0.11		0.06	c0.29	
v/s Ratio Perm			0.02			0.05						
v/c Ratio	0.89	0.50	0.08	0.75	0.95	0.15	0.89	0.31		0.64	0.94	
Uniform Delay, d1	53.8	36.0	31.5	50.0	40.0	28.6	53.4	29.8		54.2	41.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	34.4	0.3	0.1	10.8	15.8	0.1	33.2	0.2		6.1	16.3	
Delay (s)	88.2	36.3	31.6	60.8	55.8	28.8	86.7	30.0		60.3	57.7	
Level of Service	F	D	C	E	E	C	F	C		E	E	
Approach Delay (s)		44.8			53.9			46.8			58.0	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	51.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	123.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	750	100	100	730	150	180	350	100	370	860	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3470		1770	3539	1545	1770	3366		1770	3429	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3470		1770	3539	1545	1770	3366		1770	3429	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	750	100	100	730	150	180	350	100	370	860	190
RTOR Reduction (vph)	0	9	0	0	0	102	0	20	0	0	14	0
Lane Group Flow (vph)	280	841	0	100	730	48	180	430	0	370	1036	0
Confl. Peds. (#/hr)	11					11			30	30		
Confl. Bikes (#/hr)			8						14			15
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4						
Actuated Green, G (s)	22.4	43.2		9.7	30.5	30.5	15.1	27.9		28.2	41.0	
Effective Green, g (s)	22.4	43.2		9.7	30.5	30.5	15.1	27.9		28.2	41.0	
Actuated g/C Ratio	0.18	0.35		0.08	0.24	0.24	0.12	0.22		0.23	0.33	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.0	3.0	2.0	2.0		2.0	3.0	
Lane Grp Cap (vph)	317	1199		137	863	376	213	751		399	1124	
v/s Ratio Prot	c0.16	0.24		0.06	c0.21		0.10	0.13		c0.21	c0.30	
v/s Ratio Perm						0.03						
v/c Ratio	0.88	0.70		0.73	0.85	0.13	0.85	0.57		0.93	0.92	
Uniform Delay, d1	50.0	35.3		56.4	45.0	36.9	53.8	43.2		47.4	40.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	23.3	1.5		15.2	7.7	0.2	24.3	3.2		27.0	13.6	
Delay (s)	73.4	36.9		71.5	52.7	37.0	78.1	46.4		74.4	54.0	
Level of Service	E	D		E	D	D	E	D		E	D	
Approach Delay (s)		45.9			52.2			55.5			59.3	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	53.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	310	260	70	440	60	510	400	30	40	780	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1764	3539	1491	1740	3468		1770	3493		1770	3485	
Flt Permitted	0.34	1.00	1.00	0.53	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	631	3539	1491	980	3468		1770	3493		1770	3485	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	310	260	70	440	60	510	400	30	40	780	70
RTOR Reduction (vph)	0	0	197	0	15	0	0	4	0	0	7	0
Lane Group Flow (vph)	70	310	63	70	485	0	510	426	0	40	843	0
Confl. Peds. (#/hr)	9		35	35		9			23			30
Confl. Bikes (#/hr)			23						24			6
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	15.2	15.2	15.2	15.2	15.2		14.1	32.9		2.9	21.7	
Effective Green, g (s)	15.2	15.2	15.2	15.2	15.2		14.1	32.9		2.9	21.7	
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.24		0.22	0.52		0.05	0.34	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	152	853	359	236	836		396	1824		81	1200	
v/s Ratio Prot		0.09			c0.14		c0.29	0.12		0.02	c0.24	
v/s Ratio Perm	0.11		0.04	0.07								
v/c Ratio	0.46	0.36	0.17	0.30	0.58		1.29	0.23		0.49	0.70	
Uniform Delay, d1	20.4	19.9	18.9	19.5	21.1		24.4	8.2		29.3	17.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	0.3	0.2	0.7	1.0		147.4	0.1		4.7	1.9	
Delay (s)	22.6	20.1	19.2	20.2	22.1		171.9	8.3		34.0	19.7	
Level of Service	C	C	B	C	C		F	A		C	B	
Approach Delay (s)		20.0			21.8			97.0			20.4	
Approach LOS		C			C			F			C	

Intersection Summary			
HCM 2000 Control Delay	44.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	63.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	90	40	160	80	170	70	720	110	190	860	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.90		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1731	1769		1765	1621		1759	3452		1762	3487	
Flt Permitted	0.52	1.00		0.67	1.00		0.26	1.00		0.30	1.00	
Satd. Flow (perm)	951	1769		1252	1621		486	3452		563	3487	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	90	40	160	80	170	70	720	110	190	860	70
RTOR Reduction (vph)	0	18	0	0	87	0	0	16	0	0	8	0
Lane Group Flow (vph)	40	112	0	160	163	0	70	814	0	190	922	0
Confl. Peds. (#/hr)	53		5	5		53	24		14	14		24
Confl. Bikes (#/hr)						3			3			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.8	13.8		13.8	13.8		28.4	28.4		28.4	28.4	
Effective Green, g (s)	13.8	13.8		13.8	13.8		28.4	28.4		28.4	28.4	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.57	0.57		0.57	0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	261	486		344	445		274	1952		318	1972	
v/s Ratio Prot		0.06			0.10			0.24			0.26	
v/s Ratio Perm	0.04			c0.13			0.14			c0.34		
v/c Ratio	0.15	0.23		0.47	0.37		0.26	0.42		0.60	0.47	
Uniform Delay, d1	13.8	14.1		15.1	14.7		5.5	6.2		7.2	6.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.2		1.0	0.5		0.5	0.1		3.0	0.2	
Delay (s)	14.1	14.3		16.1	15.2		6.0	6.3		10.2	6.6	
Level of Service	B	B		B	B		A	A		B	A	
Approach Delay (s)		14.3			15.6			6.3			7.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	50.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	220	670	720	680	870	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3418	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3418	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	220	670	720	680	870	210
RTOR Reduction (vph)	0	13	0	0	20	0
Lane Group Flow (vph)	220	657	720	680	1060	0
Confl. Peds. (#/hr)	62					17
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	18.2	54.3	32.1	66.2	30.1	
Effective Green, g (s)	18.2	54.3	32.1	66.2	30.1	
Actuated g/C Ratio	0.20	0.59	0.35	0.72	0.33	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	348	1637	614	2535	1113	
v/s Ratio Prot	c0.12	0.24	c0.41	0.19	c0.31	
v/s Ratio Perm						
v/c Ratio	0.63	0.40	1.17	0.27	0.95	
Uniform Delay, d1	34.0	10.3	30.2	4.6	30.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.7	0.2	94.1	0.1	16.7	
Delay (s)	37.8	10.4	124.3	4.7	47.1	
Level of Service	D	B	F	A	D	
Approach Delay (s)	17.2			66.2	47.1	
Approach LOS	B			E	D	

Intersection Summary			
HCM 2000 Control Delay	47.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	92.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	230	60	70	530	30	40	500	40	30	930	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1740	1782		1733	1840		1759	1834		1745	1826	
Flt Permitted	0.19	1.00		0.48	1.00		0.12	1.00		0.32	1.00	
Satd. Flow (perm)	347	1782		885	1840		224	1834		587	1826	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	230	60	70	530	30	40	500	40	30	930	90
RTOR Reduction (vph)	0	14	0	0	3	0	0	4	0	0	5	0
Lane Group Flow (vph)	80	276	0	70	557	0	40	536	0	30	1015	0
Confl. Peds. (#/hr)	39		26	26		39	48		35	35		48
Confl. Bikes (#/hr)			9			9			11			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Effective Green, g (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.51	0.51		0.51	0.51	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Grp Cap (vph)	133	685		340	707		113	931		298	927	
v/s Ratio Prot		0.15			c0.30			0.29			c0.56	
v/s Ratio Perm	0.23			0.08			0.18			0.05		
v/c Ratio	0.60	0.40		0.21	0.79		0.35	0.58		0.10	1.09	
Uniform Delay, d1	16.0	14.6		13.4	17.7		9.6	11.1		8.3	16.0	
Progression Factor	0.64	0.62		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.9	1.1		1.4	8.7		8.5	2.6		0.7	58.8	
Delay (s)	22.1	10.1		14.7	26.3		18.1	13.7		9.0	74.8	
Level of Service	C	B		B	C		B	B		A	E	
Approach Delay (s)		12.7			25.0			14.0			72.9	
Approach LOS		B			C			B			E	

Intersection Summary			
HCM 2000 Control Delay	40.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↰	↑↑↑				
Volume (vph)	0	340	0	0	1180	80	340	540	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.95		1.00	0.95				
Frpb, ped/bikes		1.00			1.00		1.00	1.00				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.99		1.00	0.97				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5085			3506		1770	3431				
Flt Permitted		1.00			1.00		0.95	1.00				
Satd. Flow (perm)		5085			3506		1770	3431				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	340	0	0	1180	80	340	540	120	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	29	0	0	0	0
Lane Group Flow (vph)	0	340	0	0	1252	0	340	631	0	0	0	0
Confl. Peds. (#/hr)									8			
Confl. Bikes (#/hr)									3			
Turn Type		NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases							8					
Actuated Green, G (s)		27.1			27.1		30.4	30.4				
Effective Green, g (s)		27.1			27.1		30.4	30.4				
Actuated g/C Ratio		0.42			0.42		0.47	0.47				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		2120			1461		827	1604				
v/s Ratio Prot		0.07			c0.36			0.18				
v/s Ratio Perm							c0.19					
v/c Ratio		0.16			0.86		0.41	0.39				
Uniform Delay, d1		11.8			17.2		11.4	11.3				
Progression Factor		0.99			0.85		1.00	1.00				
Incremental Delay, d2		0.0			0.5		1.5	0.7				
Delay (s)		11.8			15.0		12.9	12.0				
Level of Service		B			B		B	B				
Approach Delay (s)		11.8			15.0			12.3			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	280	40	50	670	60	390	950	340	0	930	620
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.95	1.00
Frt	1.00	0.98			0.99		1.00	0.96			1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1828			3487		1770	4884			3539	1583
Flt Permitted	0.15	1.00			0.90		0.95	1.00			1.00	1.00
Satd. Flow (perm)	276	1828			3149		1770	4884			3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	280	40	50	670	60	390	950	340	0	930	620
RTOR Reduction (vph)	0	5	0	0	6	0	0	64	0	0	0	221
Lane Group Flow (vph)	340	315	0	0	774	0	390	1226	0	0	930	399
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	40.0	40.0			23.5		19.8	49.0			25.2	25.2
Effective Green, g (s)	40.0	40.0			23.5		19.8	49.0			25.2	25.2
Actuated g/C Ratio	0.40	0.40			0.24		0.20	0.49			0.25	0.25
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	304	731			740		350	2393			891	398
v/s Ratio Prot	c0.15	0.17					c0.22	0.25			c0.26	
v/s Ratio Perm	c0.30				0.25							0.25
v/c Ratio	1.12	0.43			1.05		1.11	0.51			1.04	1.00
Uniform Delay, d1	26.5	21.7			38.2		40.1	17.4			37.4	37.4
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	87.4	1.8			45.7		82.6	0.8			42.2	46.0
Delay (s)	113.9	23.6			83.9		122.7	18.1			79.6	83.4
Level of Service	F	C			F		F	B			E	F
Approach Delay (s)		70.1			83.9			42.4			81.1	
Approach LOS		E			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	66.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	105.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	0	0	10	320	10	200	20	0	1460	290	20	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		0.96			0.99				0.98			1.00
Flpb, ped/bikes		1.00			0.98				1.00			1.00
Frt		0.86			0.95				0.98			1.00
Flt Protected		1.00			0.97				1.00			0.95
Satd. Flow (prot)		1542			1670				4875			1770
Flt Permitted		1.00			0.81				0.93			0.10
Satd. Flow (perm)		1542			1393				4520			183
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	10	320	10	200	20	0	1460	290	20	240
RTOR Reduction (vph)	0	7	0	0	24	0	0	0	32	0	0	0
Lane Group Flow (vph)	0	3	0	0	506	0	0	0	1738	0	0	260
Confl. Peds. (#/hr)			20	20				6		23		23
Confl. Bikes (#/hr)						14				3		
Turn Type		NA		Perm	NA		Perm		NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		31.5			31.5				36.2			50.0
Effective Green, g (s)		31.5			31.5				36.2			50.0
Actuated g/C Ratio		0.35			0.35				0.40			0.55
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		536			484				1808			264
v/s Ratio Prot		0.00										c0.10
v/s Ratio Perm					c0.36				0.38			c0.44
v/c Ratio		0.01			1.05				0.96			0.98
Uniform Delay, d1		19.3			29.5				26.5			24.6
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			53.2				13.8			50.7
Delay (s)		19.3			82.7				40.2			75.3
Level of Service		B			F				D			E
Approach Delay (s)		19.3			82.7				40.2			
Approach LOS		B			F				D			

Intersection Summary			
HCM 2000 Control Delay	43.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	630	60
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	5000	
Flt Permitted	1.00	
Satd. Flow (perm)	5000	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	630	60
RTOR Reduction (vph)	13	0
Lane Group Flow (vph)	677	0
Confl. Peds. (#/hr)		6
Confl. Bikes (#/hr)		5
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	50.0	
Effective Green, g (s)	50.0	
Actuated g/C Ratio	0.55	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	2762	
v/s Ratio Prot	0.14	
v/s Ratio Perm		
v/c Ratio	0.25	
Uniform Delay, d1	10.5	
Progression Factor	1.00	
Incremental Delay, d2	0.2	
Delay (s)	10.7	
Level of Service	B	
Approach Delay (s)	28.4	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	270	240	70	290	100	170	1150	100	50	680	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1731		1770	3403		1770	3539	1583	1770	3539	1583
Flt Permitted	0.50	1.00		0.23	1.00		0.22	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	928	1731		426	3403		403	3539	1583	363	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	270	240	70	290	100	170	1150	100	50	680	200
RTOR Reduction (vph)	0	38	0	0	42	0	0	0	61	0	0	121
Lane Group Flow (vph)	300	472	0	70	348	0	170	1150	39	50	680	79
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	27.0	27.0		27.0	27.0		28.2	28.2	28.2	27.4	25.4	25.4
Effective Green, g (s)	27.0	27.0		27.0	27.0		28.2	28.2	28.2	27.4	25.4	25.4
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.38	0.38	0.38	0.36	0.34	0.34
Clearance Time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	333	622		153	1223		327	1328	594	261	1196	535
v/s Ratio Prot		0.27			0.10		0.07	c0.32		0.02	c0.19	
v/s Ratio Perm	c0.32			0.16			0.13		0.02	0.05		0.05
v/c Ratio	0.90	0.76		0.46	0.28		0.52	0.87	0.07	0.19	0.57	0.15
Uniform Delay, d1	22.8	21.2		18.4	17.2		17.1	21.7	15.0	21.3	20.4	17.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	29.6	8.4		9.5	0.6		0.6	7.8	0.2	0.1	2.0	0.6
Delay (s)	52.3	29.6		28.0	17.7		17.7	29.5	15.2	21.4	22.3	17.9
Level of Service	D	C		C	B		B	C	B	C	C	B
Approach Delay (s)		38.0			19.3			27.0			21.3	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	75.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	990	520	100	30	780	140	80	320	30	180	220	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	1.00			0.97		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3263			3336		1770	3422		1770	1863	2787
Flt Permitted	0.95	0.57			0.89		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	1893			2965		1770	3422		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	990	520	100	30	780	140	80	320	30	180	220	370
RTOR Reduction (vph)	0	6	0	0	14	0	0	9	0	0	0	280
Lane Group Flow (vph)	535	1069	0	0	936	0	80	341	0	180	220	90
Confl. Peds. (#/hr)			23			233			210			
Confl. Bikes (#/hr)			5			18			12			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	11.0	40.2			25.2		7.3	15.4		10.9	19.0	19.0
Effective Green, g (s)	11.0	40.2			25.2		7.3	15.4		10.9	19.0	19.0
Actuated g/C Ratio	0.14	0.51			0.32		0.09	0.20		0.14	0.24	0.24
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	225	1161			951		164	671		245	450	674
v/s Ratio Prot	c0.33	0.13					0.05	0.10		c0.10	c0.12	
v/s Ratio Perm		c0.34			0.32							0.03
v/c Ratio	2.38	0.92			0.98		0.49	0.51		0.73	0.49	0.13
Uniform Delay, d1	33.8	17.7			26.5		33.8	28.2		32.4	25.6	23.3
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	633.5	11.8			25.3		2.3	0.6		10.9	0.8	0.1
Delay (s)	667.3	29.4			51.7		36.1	28.8		43.3	26.4	23.4
Level of Service	F	C			D		D	C		D	C	C
Approach Delay (s)		241.4			51.7			30.1			28.9	
Approach LOS		F			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	125.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	78.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	650	80	20	1330	80	80	10	60	90	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.98			1.00		0.99		0.91		0.85
Flt Protected	1.00			1.00		0.98		0.98		1.00
Satd. Flow (prot)	3481			3537		4925		1660		1504
Flt Permitted	1.00			0.94		0.98		0.98		1.00
Satd. Flow (perm)	3481			3320		4925		1660		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	650	80	20	1330	80	80	10	60	90	40
RTOR Reduction (vph)	10	0	0	0	0	0	0	47	0	30
Lane Group Flow (vph)	720	0	0	1350	0	170	0	107	0	6
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1392			1328		1503		297		269
v/s Ratio Prot	0.21							c0.06		
v/s Ratio Perm				c0.41		0.03				0.00
v/c Ratio	0.52			1.02		0.11		0.36		0.02
Uniform Delay, d1	21.6			28.5		23.7		34.2		32.2
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	1.4			28.9		0.2		3.4		0.2
Delay (s)	22.9			57.4		23.9		37.6		32.3
Level of Service	C			E		C		D		C
Approach Delay (s)	22.9			57.4		23.9		36.6		
Approach LOS	C			E		C		D		

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	190	90	20	460	100	60	280	30	20	280	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.98			0.99			0.97	
Flt Protected		0.98			1.00			0.99			1.00	
Satd. Flow (prot)		1748			1790			1819			1780	
Flt Permitted		0.47			0.98			0.89			0.98	
Satd. Flow (perm)		839			1756			1637			1740	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	190	90	20	460	100	60	280	30	20	280	90
RTOR Reduction (vph)	0	15	0	0	12	0	0	5	0	0	17	0
Lane Group Flow (vph)	0	415	0	0	568	0	0	365	0	0	373	0
Confl. Peds. (#/hr)	32		21	21		32	18		6	6		18
Confl. Bikes (#/hr)			11			17			14			14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		296			621			831			883	
v/s Ratio Prot												
v/s Ratio Perm		c0.49			0.32			c0.22			0.21	
v/c Ratio		1.40			0.92			0.44			0.42	
Uniform Delay, d1		21.0			20.1			10.1			10.0	
Progression Factor		1.03			1.28			1.00			1.00	
Incremental Delay, d2		187.7			13.2			1.7			1.5	
Delay (s)		209.4			39.0			11.8			11.5	
Level of Service		F			D			B			B	
Approach Delay (s)		209.4			39.0			11.8			11.5	
Approach LOS		F			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	68.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	106.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	280	110	50	330	200	200	1200	20	150	810	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.91	1.00
Frt		0.97			0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1787			1768		1770	3531		1770	5085	1583
Flt Permitted		0.75			0.93		0.29	1.00		0.15	1.00	1.00
Satd. Flow (perm)		1359			1652		534	3531		287	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	280	110	50	330	200	200	1200	20	150	810	40
RTOR Reduction (vph)	0	15	0	0	9	0	0	2	0	0	0	24
Lane Group Flow (vph)	0	495	0	0	571	0	200	1218	0	150	810	16
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	0.40
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		648			787		213	1412		114	2034	633
v/s Ratio Prot								0.35			0.16	
v/s Ratio Perm		c0.36			0.35		0.37			c0.52		0.01
v/c Ratio		0.76			0.73		0.94	0.86		1.32	0.40	0.03
Uniform Delay, d1		14.0			13.6		18.7	17.9		19.5	13.9	11.8
Progression Factor		1.00			0.64		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		8.3			3.4		47.6	7.2		191.0	0.6	0.1
Delay (s)		22.3			12.0		66.3	25.0		210.5	14.5	11.9
Level of Service		C			B		E	C		F	B	B
Approach Delay (s)		22.3			12.0			30.9			43.8	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	108.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	290	1230	170	550	0	0	0	170	800	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00				1.00	1.00	
Frt	1.00	0.85	1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3524	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3524	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	290	1230	170	550	0	0	0	170	800	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	290	1230	170	550	0	0	0	170	818	0
Confl. Peds. (#/hr)										18
Confl. Bikes (#/hr)										8
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	14.9	29.3	9.4	65.0				25.7	25.7	
Effective Green, g (s)	14.9	29.3	9.4	65.0				25.7	25.7	
Actuated g/C Ratio	0.23	0.45	0.14	1.00				0.40	0.40	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	405	1627	496	1583				699	1393	
v/s Ratio Prot	0.16	c0.34						0.10	c0.23	
v/s Ratio Perm			0.05	0.35						
v/c Ratio	0.72	0.76	0.34	0.35				0.24	0.59	
Uniform Delay, d1	23.1	14.9	25.0	0.0				13.1	15.5	
Progression Factor	1.49	1.20	1.00	1.00				1.00	1.00	
Incremental Delay, d2	3.9	1.3	0.4	0.6				0.8	1.8	
Delay (s)	38.4	19.2	25.4	0.6				14.0	17.3	
Level of Service	D	B	C	A				B	B	
Approach Delay (s)	22.9		6.5			0.0			16.7	
Approach LOS	C		A			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	670	250	500	690	10	380	0	960	0	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00		0.95	
Frt		0.96		1.00	1.00		1.00		0.85		0.85	
Flt Protected		1.00		0.95	1.00		0.95		1.00		1.00	
Satd. Flow (prot)		3395		1770	3532		1770		1583		3008	
Flt Permitted		1.00		0.95	1.00		0.75		1.00		1.00	
Satd. Flow (perm)		3395		1770	3532		1398		1583		3008	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	670	250	500	690	10	380	0	960	0	0	10
RTOR Reduction (vph)	0	43	0	0	1	0	0	0	379	0	7	0
Lane Group Flow (vph)	0	877	0	500	699	0	380	0	581	0	3	0
Turn Type		NA		Prot	NA		Perm		Perm		NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		24.0		24.0	52.0		29.5		29.5		29.5	
Effective Green, g (s)		24.0		24.0	52.0		29.5		29.5		29.5	
Actuated g/C Ratio		0.27		0.27	0.58		0.33		0.33		0.33	
Clearance Time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)		905		472	2040		458		518		985	
v/s Ratio Prot		c0.26		c0.28	0.20						0.00	
v/s Ratio Perm							0.27		c0.37			
v/c Ratio		0.97		1.06	0.34		0.83		1.12		0.00	
Uniform Delay, d1		32.6		33.0	10.0		27.9		30.2		20.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		23.4		58.0	0.1		11.8		77.3		0.0	
Delay (s)		56.0		91.0	10.1		39.7		107.5		20.4	
Level of Service		E		F	B		D		F		C	
Approach Delay (s)		56.0			43.8			88.3			20.4	
Approach LOS		E			D			F			C	

Intersection Summary			
HCM 2000 Control Delay	64.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	580	170	230	990	150	130	1080	90	50	640	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.97			0.98		1.00	0.99		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3410			3452		1770	3498		1770	3423	
Flt Permitted		0.51			0.60		0.21	1.00		0.16	1.00	
Satd. Flow (perm)		1760			2079		387	3498		298	3423	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	580	170	230	990	150	130	1080	90	50	640	180
RTOR Reduction (vph)	0	27	0	0	8	0	0	8	0	0	36	0
Lane Group Flow (vph)	0	893	0	0	1362	0	130	1162	0	50	784	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.0			37.0		25.0	25.0		25.0	25.0	
Effective Green, g (s)		37.0			37.0		25.0	25.0		25.0	25.0	
Actuated g/C Ratio		0.51			0.51		0.35	0.35		0.35	0.35	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		904			1068		134	1214		103	1188	
v/s Ratio Prot								0.33			0.23	
v/s Ratio Perm		0.51			c0.66		c0.34			0.17		
v/c Ratio		1.31dl			1.28		0.97	0.96		0.49	0.66	
Uniform Delay, d1		17.3			17.5		23.1	23.0		18.5	19.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		27.1			131.3		70.2	17.3		15.5	2.9	
Delay (s)		44.4			148.8		93.3	40.3		33.9	22.8	
Level of Service		D			F		F	D		C	C	
Approach Delay (s)		44.4			148.8			45.6			23.4	
Approach LOS		D			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	72.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	120.4%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	100	30	100	240	60	70	1220	30	40	940	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00		1.00	0.98	
Flt Protected		0.98			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1769			1817	1536	1752	3489		1750	3416	
Flt Permitted		0.40			0.83	1.00	0.21	1.00		0.16	1.00	
Satd. Flow (perm)		725			1534	1536	383	3489		304	3416	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	100	30	100	240	60	70	1220	30	40	940	160
RTOR Reduction (vph)	0	8	0	0	0	37	0	2	0	0	15	0
Lane Group Flow (vph)	0	212	0	0	340	23	70	1248	0	40	1085	0
Confl. Peds. (#/hr)	5		2	2		5	3		11	11		3
Confl. Bikes (#/hr)			2			5			6			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		16.7			17.7	17.7	41.3	41.3		41.3	41.3	
Effective Green, g (s)		16.7			17.7	17.7	41.3	41.3		41.3	41.3	
Actuated g/C Ratio		0.25			0.26	0.26	0.62	0.62		0.62	0.62	
Clearance Time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		1.0			1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)		180			405	405	236	2150		187	2105	
v/s Ratio Prot								c0.36			0.32	
v/s Ratio Perm		c0.29			0.22	0.02	0.18			0.13		
v/c Ratio		1.18			0.84	0.06	0.30	0.58		0.21	0.52	
Uniform Delay, d1		25.2			23.3	18.4	6.0	7.7		5.7	7.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		122.5			13.6	0.0	3.2	1.2		2.6	0.9	
Delay (s)		147.7			36.9	18.4	9.2	8.8		8.3	8.1	
Level of Service		F			D	B	A	A		A	A	
Approach Delay (s)		147.7			34.1			8.8			8.1	
Approach LOS		F			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	21.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	20	420	10	130	20	1210	170	140	1000	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.86			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1166			1732		1751	3431		1752	3499	
Flt Permitted		1.00			0.77		0.20	1.00		0.10	1.00	
Satd. Flow (perm)		1166			1379		373	3431		184	3499	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	20	420	10	130	20	1210	170	140	1000	10
RTOR Reduction (vph)	0	12	0	0	14	0	0	14	0	0	1	0
Lane Group Flow (vph)	0	8	0	0	546	0	20	1366	0	140	1009	0
Confl. Peds. (#/hr)	3					3	3					3
Confl. Bikes (#/hr)						3			2			
Heavy Vehicles (%)	41%	41%	41%	2%	2%	2%	3%	3%	3%	3%	3%	3%
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		29.0			29.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.38			0.38		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		439			519		193	1782		95	1817	
v/s Ratio Prot		0.01						0.40			0.29	
v/s Ratio Perm					c0.40		0.05			c0.76		
v/c Ratio		0.02			1.05		0.10	0.77		1.47	0.56	
Uniform Delay, d1		15.1			24.0		9.4	14.8		18.5	12.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			53.7		1.1	3.2		261.3	1.2	
Delay (s)		15.1			77.7		10.5	18.0		279.8	13.7	
Level of Service		B			E		B	B		F	B	
Approach Delay (s)		15.1			77.7			17.9			46.1	
Approach LOS		B			E			B			D	

Intersection Summary			
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	280	270	100	490	70	320	1180	120	330	1040	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frt		0.94			0.99		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3302			1822		1770	3490		1770	3501	
Flt Permitted		0.58			0.58		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1927			1072		1770	3490		1770	3501	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	280	270	100	490	70	320	1180	120	330	1040	80
RTOR Reduction (vph)	0	76	0	0	4	0	0	7	0	0	5	0
Lane Group Flow (vph)	0	654	0	0	656	0	320	1293	0	330	1115	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		44.0			44.0		19.0	29.1		22.9	33.0	
Effective Green, g (s)		44.0			44.0		19.0	29.1		22.9	33.0	
Actuated g/C Ratio		0.39			0.39		0.17	0.26		0.20	0.29	
Clearance Time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)		1.0			1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		753			419		298	902		360	1026	
v/s Ratio Prot							c0.18	c0.37		0.19	c0.32	
v/s Ratio Perm		0.34			c0.61							
v/c Ratio		0.87			1.57		1.07	1.43		0.92	1.09	
Uniform Delay, d1		31.6			34.2		46.8	41.7		43.9	39.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		10.1			266.3		73.1	201.6		26.9	54.7	
Delay (s)		41.7			300.5		119.9	243.3		70.7	94.5	
Level of Service		D			F		F	F		E	F	
Approach Delay (s)		41.7			300.5			218.9			89.1	
Approach LOS		D			F			F			F	

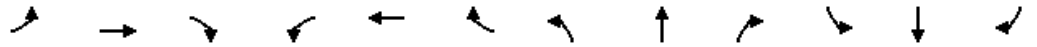
Intersection Summary			
HCM 2000 Control Delay	159.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	112.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	130.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	20	150	250	50	190	100	1280	270	220	1020	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.95		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1721		1770	3447		1770	3479	
Flt Permitted	0.50	1.00	1.00		0.83		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	933	1863	1583		1463		1770	3447		1770	3479	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	20	150	250	50	190	100	1280	270	220	1020	130
RTOR Reduction (vph)	0	0	102	0	23	0	0	18	0	0	9	0
Lane Group Flow (vph)	150	20	48	0	467	0	100	1532	0	220	1141	0
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	32.0	32.0	32.0		32.0		8.1	43.8		12.0	47.7	
Effective Green, g (s)	32.0	32.0	32.0		32.0		8.1	43.8		12.0	47.7	
Actuated g/C Ratio	0.32	0.32	0.32		0.32		0.08	0.43		0.12	0.47	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	296	591	502		464		142	1497		210	1646	
v/s Ratio Prot		0.01					0.06	c0.44		c0.12	c0.33	
v/s Ratio Perm	0.16		0.03		c0.32							
v/c Ratio	0.51	0.03	0.09		1.01		0.70	1.02		1.05	0.69	
Uniform Delay, d1	28.0	23.7	24.2		34.4		45.2	28.5		44.4	20.8	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.0	0.0		43.3		12.2	29.5		75.2	1.0	
Delay (s)	28.5	23.7	24.2		77.7		57.3	58.0		119.6	21.8	
Level of Service	C	C	C		E		E	E		F	C	
Approach Delay (s)		26.2			77.7			57.9			37.5	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	50.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	260	1670	960	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.95	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3370	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3370	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	260	1670	960	450
RTOR Reduction (vph)	0	0	0	0	59	0
Lane Group Flow (vph)	0	0	260	1670	1351	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			8.8	47.9	31.1	
Effective Green, g (s)			8.8	47.9	31.1	
Actuated g/C Ratio			0.18	1.00	0.65	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			630	3539	2188	
v/s Ratio Prot			0.08	c0.47	c0.40	
v/s Ratio Perm						
v/c Ratio			0.41	0.47	0.62	
Uniform Delay, d1			17.3	0.0	4.9	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			0.4	0.1	0.5	
Delay (s)			17.7	0.1	5.4	
Level of Service			B	A	A	
Approach Delay (s)	0.0			2.5	5.4	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	3.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	47.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	200	250	270	180	0	280	0	1450	130	150	810	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.92			0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1763	1583		1677			3496		1770	3539	
Flt Permitted	0.95	1.00	1.00		0.98			1.00		0.11	1.00	
Satd. Flow (perm)	1681	1763	1583		1677			3496		206	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	250	270	180	0	280	0	1450	130	150	810	0
RTOR Reduction (vph)	0	0	155	0	61	0	0	7	0	0	0	0
Lane Group Flow (vph)	180	270	115	0	399	0	0	1573	0	150	810	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	18.0	18.0	18.0		21.0			36.1		36.1	36.1	
Effective Green, g (s)	18.0	18.0	18.0		21.0			36.1		36.1	36.1	
Actuated g/C Ratio	0.21	0.21	0.21		0.24			0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	347	364	327		404			1448		85	1466	
v/s Ratio Prot	0.11	c0.15			c0.24			0.45			0.23	
v/s Ratio Perm			0.07							c0.73		
v/c Ratio	0.52	0.74	0.35		0.99			1.09		1.76	0.55	
Uniform Delay, d1	30.7	32.4	29.6		32.9			25.5		25.5	19.4	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	1.3	7.9	0.7		40.8			50.8		387.5	0.5	
Delay (s)	32.0	40.3	30.2		73.7			76.3		413.0	19.8	
Level of Service	C	D	C		E			E		F	B	
Approach Delay (s)		34.4			73.7			76.3			81.3	
Approach LOS		C			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	69.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	87.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	0	0	80	0	200	0	1390	120	160	1120	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		1.00			0.90			0.99		1.00	1.00	
Flt Protected		0.95			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1698			1576			3357		1703	3400	
Flt Permitted		0.47			0.91			1.00		0.95	1.00	
Satd. Flow (perm)		831			1454			3357		1703	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	0	80	0	200	0	1390	120	160	1120	10
RTOR Reduction (vph)	0	0	0	0	113	0	0	8	0	0	1	0
Lane Group Flow (vph)	0	10	0	0	167	0	0	1502	0	160	1129	0
Confl. Peds. (#/hr)	5					5			3	3		
Confl. Bikes (#/hr)									5			8
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		19.0			19.0			36.0		8.0	39.0	
Effective Green, g (s)		19.0			19.0			36.0		8.0	39.0	
Actuated g/C Ratio		0.25			0.25			0.48		0.11	0.52	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)		210			368			1611		181	1768	
v/s Ratio Prot								c0.45		c0.09	c0.33	
v/s Ratio Perm		0.01			c0.12							
v/c Ratio		0.05			0.45			0.93		0.88	0.64	
Uniform Delay, d1		21.2			23.6			18.4		33.0	12.9	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		0.4			4.0			11.2		42.0	1.8	
Delay (s)		21.6			27.6			29.6		75.0	14.7	
Level of Service		C			C			C		E	B	
Approach Delay (s)		21.6			27.6			29.6			22.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	130	50	50	220	170	130	1210	70	160	890	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.95		1.00	0.99		1.00	0.97	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1713			1677		1700	3372		1702	3300	
Flt Permitted		0.66			0.94		0.19	1.00		0.13	1.00	
Satd. Flow (perm)		1149			1586		348	3372		233	3300	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	130	50	50	220	170	130	1210	70	160	890	180
RTOR Reduction (vph)	0	15	0	0	22	0	0	6	0	0	26	0
Lane Group Flow (vph)	0	255	0	0	418	0	130	1274	0	160	1044	0
Confl. Peds. (#/hr)	3		5	5		3	5		2	2		5
Confl. Bikes (#/hr)						5			6			5
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		19.3			19.3		30.7	30.7		30.7	30.7	
Effective Green, g (s)		19.3			19.3		30.7	30.7		30.7	30.7	
Actuated g/C Ratio		0.32			0.32		0.51	0.51		0.51	0.51	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		369			510		178	1725		119	1688	
v/s Ratio Prot								0.38			0.32	
v/s Ratio Perm		0.22			c0.26		0.37			c0.69		
v/c Ratio		0.69			0.82		0.73	0.74		1.34	0.62	
Uniform Delay, d1		17.8			18.8		11.4	11.5		14.7	10.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		5.5			10.2		23.0	2.9		200.7	1.7	
Delay (s)		23.3			28.9		34.4	14.4		215.3	12.2	
Level of Service		C			C		C	B		F	B	
Approach Delay (s)		23.3			28.9			16.2			38.6	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	540	170	70	860	170	260	700	110	140	600	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1559	1770	3436		1770	3467		1770	3539	1546
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1559	1770	3436		1770	3467		1770	3539	1546
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	540	170	70	860	170	260	700	110	140	600	350
RTOR Reduction (vph)	0	0	95	0	15	0	0	11	0	0	0	160
Lane Group Flow (vph)	180	540	75	70	1015	0	260	799	0	140	600	190
Confl. Peds. (#/hr)			3			12						2
Confl. Bikes (#/hr)						3						12
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	12.0	37.8	37.8	7.0	32.8		17.0	35.8		11.4	30.2	30.2
Effective Green, g (s)	12.0	37.8	37.8	7.0	32.8		17.0	35.8		11.4	30.2	30.2
Actuated g/C Ratio	0.11	0.34	0.34	0.06	0.30		0.15	0.33		0.10	0.27	0.27
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	193	1216	535	112	1024		273	1128		183	971	424
v/s Ratio Prot	c0.10	0.15		0.04	c0.30		c0.15	c0.23		0.08	0.17	
v/s Ratio Perm			0.05									0.12
v/c Ratio	0.93	0.44	0.14	0.62	0.99		0.95	0.71		0.77	0.62	0.45
Uniform Delay, d1	48.6	28.0	24.9	50.2	38.5		46.1	32.5		48.0	34.9	33.0
Progression Factor	0.83	0.75	0.97	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	39.2	0.2	0.1	10.4	25.9		41.4	3.8		17.2	2.9	3.4
Delay (s)	79.5	21.2	24.3	60.6	64.4		87.5	36.3		65.2	37.8	36.4
Level of Service	E	C	C	E	E		F	D		E	D	D
Approach Delay (s)		33.6			64.1			48.7			40.9	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	47.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	80	120	1100	40	70	700
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	80	120	1100	40	70	700
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1610	570			1140	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1610	570			1140	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	5	74			88	
cM capacity (veh/h)	84	465			609	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	200	733	407	303	467
Volume Left	80	0	0	70	0
Volume Right	120	0	40	0	0
cSH	166	1700	1700	609	1700
Volume to Capacity	1.21	0.43	0.24	0.12	0.27
Queue Length 95th (ft)	277	0	0	10	0
Control Delay (s)	191.4	0.0	0.0	3.9	0.0
Lane LOS	F			A	
Approach Delay (s)	191.4	0.0		1.5	
Approach LOS	F				

Intersection Summary			
Average Delay	18.7		
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	260	80	1030	140	170	630
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	260	80	1030	140	170	630
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1755	585			1170	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1755	585			1170	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	82			71	
cM capacity (veh/h)	54	454			593	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	340	687	483	380	420
Volume Left	260	0	0	170	0
Volume Right	80	0	140	0	0
cSH	69	1700	1700	593	1700
Volume to Capacity	4.96	0.40	0.28	0.29	0.25
Queue Length 95th (ft)	Err	0	0	29	0
Control Delay (s)	Err	0.0	0.0	8.5	0.0
Lane LOS	F			A	
Approach Delay (s)	Err	0.0		4.0	
Approach LOS	F				

Intersection Summary				
Average Delay	1473.1			
Intersection Capacity Utilization	84.6%	ICU Level of Service	E	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	460	200	320	870	240	410	710	200	100	730	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.98	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1526	3433	3539	1545	3433	3391		3433	3350	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1526	3433	3539	1545	3433	3391		3433	3350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	460	200	320	870	240	410	710	200	100	730	290
RTOR Reduction (vph)	0	0	128	0	0	147	0	21	0	0	36	0
Lane Group Flow (vph)	310	460	72	320	870	93	410	889	0	100	984	0
Confl. Peds. (#/hr)			21			11			24			17
Confl. Bikes (#/hr)			2						9			15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	11.1	35.1	35.1	11.1	35.1	35.1	11.1	39.7		8.6	37.2	
Effective Green, g (s)	11.1	35.1	35.1	11.1	35.1	35.1	11.1	39.7		8.6	37.2	
Actuated g/C Ratio	0.10	0.32	0.32	0.10	0.32	0.32	0.10	0.36		0.08	0.34	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	344	1124	484	344	1124	490	344	1218		267	1127	
v/s Ratio Prot	0.09	0.13		c0.09	c0.25		c0.12	0.26		0.03	c0.29	
v/s Ratio Perm			0.05			0.06						
v/c Ratio	0.90	0.41	0.15	0.93	0.77	0.19	1.19	0.73		0.37	0.87	
Uniform Delay, d1	49.2	29.6	27.0	49.3	34.1	27.4	49.7	30.7		48.4	34.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.5	0.2	0.1	31.1	3.4	0.2	111.5	2.2		0.9	7.7	
Delay (s)	74.6	29.8	27.1	80.4	37.5	27.6	161.2	33.0		49.3	42.1	
Level of Service	E	C	C	F	D	C	F	C		D	D	
Approach Delay (s)		43.6			45.4			72.8			42.8	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	51.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	210	100	110	20	110	10	120	1100	20	30	750	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	0.98	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.92			0.99		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1740	1693			1824		1770	3523		1770	3539	1519
Flt Permitted	0.65	1.00			0.95		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1193	1693			1739		1770	3523		1770	3539	1519
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	210	100	110	20	110	10	120	1100	20	30	750	380
RTOR Reduction (vph)	0	31	0	0	2	0	0	1	0	0	0	224
Lane Group Flow (vph)	210	179	0	0	138	0	120	1119	0	30	750	156
Confl. Peds. (#/hr)	30		14	14		30	5		35	35		5
Confl. Bikes (#/hr)			5			15			8			11
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	20.9	20.9			20.9		10.3	37.9		2.6	30.2	30.2
Effective Green, g (s)	20.9	20.9			20.9		10.3	37.9		2.6	30.2	30.2
Actuated g/C Ratio	0.28	0.28			0.28		0.14	0.52		0.04	0.41	0.41
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	339	482			495		248	1819		62	1456	624
v/s Ratio Prot		0.11					c0.07	c0.32		0.02	0.21	
v/s Ratio Perm	c0.18				0.08							0.10
v/c Ratio	0.62	0.37			0.28		0.48	0.62		0.48	0.52	0.25
Uniform Delay, d1	22.8	21.0			20.4		29.1	12.6		34.7	16.1	14.2
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.4	0.5			0.3		1.5	0.6		5.8	0.3	0.2
Delay (s)	26.2	21.5			20.7		30.6	13.2		40.6	16.4	14.4
Level of Service	C	C			C		C	B		D	B	B
Approach Delay (s)		23.8			20.7			14.9			16.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	73.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	310	380	10	440	70	390	860	10	70	650	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1861	1583	1770	3533		1770	3405	
Flt Permitted	0.95	1.00	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1843	1583	1770	3533		1770	3405	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	330	310	380	10	440	70	390	860	10	70	650	220
RTOR Reduction (vph)	0	0	217	0	0	54	0	1	0	0	28	0
Lane Group Flow (vph)	330	310	163	0	450	16	390	869	0	70	842	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	20.0	52.0	52.0		27.0	27.0	23.0	46.3		7.7	31.0	
Effective Green, g (s)	20.0	52.0	52.0		27.0	27.0	23.0	46.3		7.7	31.0	
Actuated g/C Ratio	0.17	0.43	0.43		0.22	0.22	0.19	0.38		0.06	0.26	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	292	800	680		411	353	336	1351		112	872	
v/s Ratio Prot	c0.19	0.17					c0.22	0.25		0.04	c0.25	
v/s Ratio Perm			0.10		c0.24	0.01						
v/c Ratio	1.13	0.39	0.24		1.09	0.04	1.16	0.64		0.62	0.97	
Uniform Delay, d1	50.5	23.6	21.9		47.0	36.9	49.0	30.6		55.2	44.5	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	92.5	0.3	0.2		72.5	0.1	100.2	1.1		10.4	22.4	
Delay (s)	143.0	23.9	22.1		119.5	36.9	149.2	31.7		65.6	66.8	
Level of Service	F	C	C		F	D	F	C		E	E	
Approach Delay (s)		61.8			108.4			68.0			66.7	
Approach LOS		E			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	71.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	121.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	490	350	220	100	260	30	10	90	700	70	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.94		1.00	0.98			1.00	0.99			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3313		1770	3479			1770	3483			1763
Flt Permitted	0.95	1.00		0.95	1.00			0.35	1.00			1.00
Satd. Flow (perm)	3433	3313		1770	3479			659	3483			1856
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	490	350	220	100	260	30	10	90	700	70	10	20
RTOR Reduction (vph)	0	107	0	0	10	0	0	0	7	0	0	0
Lane Group Flow (vph)	490	463	0	100	280	0	0	100	763	0	0	30
Confl. Peds. (#/hr)			3	3						15		15
Confl. Bikes (#/hr)			3			2				6		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	11.3	20.1		7.6	16.4			11.3	31.9			3.7
Effective Green, g (s)	11.3	20.1		7.6	16.4			11.3	31.9			3.7
Actuated g/C Ratio	0.14	0.25		0.10	0.21			0.14	0.40			0.05
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	489	839		169	719			93	1401			86
v/s Ratio Prot	c0.14	c0.14		0.06	0.08				c0.22			
v/s Ratio Perm								c0.15				0.02
v/c Ratio	1.00	0.55		0.59	0.39			1.08	0.54			0.35
Uniform Delay, d1	34.0	25.7		34.4	27.1			34.0	18.1			36.6
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	41.2	0.8		5.5	0.4			115.2	0.4			2.4
Delay (s)	75.2	26.5		39.8	27.5			149.2	18.6			39.1
Level of Service	E	C		D	C			F	B			D
Approach Delay (s)		49.0			30.6				33.6			
Approach LOS		D			C				C			

Intersection Summary			
HCM 2000 Control Delay	35.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	79.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	630	360
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1562
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1562
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	630	360
RTOR Reduction (vph)	0	250
Lane Group Flow (vph)	630	110
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		2
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	24.3	24.3
Effective Green, g (s)	24.3	24.3
Actuated g/C Ratio	0.31	0.31
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1084	478
v/s Ratio Prot	0.18	
v/s Ratio Perm		0.07
v/c Ratio	0.58	0.23
Uniform Delay, d1	23.2	20.5
Progression Factor	1.00	1.00
Incremental Delay, d2	0.8	0.2
Delay (s)	24.0	20.8
Level of Service	C	C
Approach Delay (s)	23.3	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	10	320	10	90	10	270	140	70	290	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	10	10	320	10	90	10	270	140	70	290	10
Pedestrians					3							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					4.0							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	820	868	295	743	733	273	300			413		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	820	868	295	743	733	273	300			413		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	96	99	0	97	88	99			94		
cM capacity (veh/h)	237	268	740	297	321	759	1250			1132		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	30	420	280	140	370
Volume Left	10	320	10	0	70
Volume Right	10	90	0	140	10
cSH	322	342	1250	1700	1132
Volume to Capacity	0.09	1.23	0.01	0.08	0.06
Queue Length 95th (ft)	8	458	1	0	5
Control Delay (s)	17.3	158.4	0.4	0.0	2.1
Lane LOS	C	F	A		A
Approach Delay (s)	17.3	158.4	0.2		2.1
Approach LOS	C	F			

Intersection Summary				
Average Delay	54.8			
Intersection Capacity Utilization	74.9%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	550	230	40	770	150	230	80	30	150	60	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.96		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.99	0.85	1.00	0.98		1.00	1.00	0.85		0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (prot)	1687	3034	2563	1703	4753		1643	3359	1550		2703	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (perm)	1687	3034	2563	1703	4753		1643	3359	1550		2703	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	330	550	230	40	770	150	230	80	30	150	60	300
RTOR Reduction (vph)	0	1	101	0	24	0	0	0	26	0	205	0
Lane Group Flow (vph)	330	572	106	40	896	0	115	195	4	0	305	0
Confl. Peds. (#/hr)	12					12			12	12		
Confl. Bikes (#/hr)			2			5			11			
Heavy Vehicles (%)	7%	7%	7%	6%	6%	6%	0%	0%	0%	20%	20%	20%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	23.5	45.9	45.9	4.8	27.2		12.3	12.3	12.3		14.8	
Effective Green, g (s)	23.5	45.9	45.9	4.8	27.2		12.3	12.3	12.3		14.8	
Actuated g/C Ratio	0.26	0.51	0.51	0.05	0.30		0.14	0.14	0.14		0.16	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	441	1550	1310	91	1439		225	460	212		445	
v/s Ratio Prot	c0.20	0.19		0.02	c0.19		c0.07	0.06			c0.11	
v/s Ratio Perm			0.04						0.00			
v/c Ratio	0.75	0.37	0.08	0.44	0.62		0.51	0.42	0.02		0.69	
Uniform Delay, d1	30.4	13.2	11.2	41.2	26.9		36.0	35.5	33.5		35.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	6.8	0.1	0.0	3.4	0.8		2.0	0.6	0.0		4.4	
Delay (s)	37.3	13.4	11.2	44.6	27.7		37.9	36.1	33.6		39.7	
Level of Service	D	B	B	D	C		D	D	C		D	
Approach Delay (s)		20.1			28.4			36.5			39.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	40	0	1370	110	160	2350	0	140	0	150	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Lane Util. Factor		1.00	0.86		1.00	0.86			1.00	1.00		
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00		
Flpb, ped/bikes		1.00	1.00		1.00	1.00			0.98	1.00		
Frt		1.00	0.99		1.00	1.00			1.00	0.85		
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1685	6031		1687	6108			1655	1509		
Flt Permitted		0.48	1.00		0.95	1.00			0.76	1.00		
Satd. Flow (perm)		855	6031		1687	6108			1320	1509		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	0	1370	110	160	2350	0	140	0	150	0	0
RTOR Reduction (vph)	0	0	9	0	0	0	0	0	0	128	0	0
Lane Group Flow (vph)	0	40	1471	0	160	2350	0	0	140	22	0	0
Confl. Peds. (#/hr)		15					15	17				
Confl. Bikes (#/hr)				3			5					
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type	custom	Prot	NA		Prot	NA		Perm	NA	Perm		
Protected Phases		5	2		1	6			3			3
Permitted Phases	5							3	3	3	3	3
Actuated Green, G (s)		8.3	67.3		11.0	70.0			15.7	15.7		
Effective Green, g (s)		8.3	67.3		11.0	70.0			15.7	15.7		
Actuated g/C Ratio		0.08	0.63		0.10	0.66			0.15	0.15		
Clearance Time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Vehicle Extension (s)		2.0	2.0		2.0	2.0			2.0	2.0		
Lane Grp Cap (vph)		66	3829		175	4033			195	223		
v/s Ratio Prot			0.24		c0.09	c0.38						
v/s Ratio Perm		0.05							c0.11	0.01		
v/c Ratio		0.61	0.38		0.91	0.58			0.72	0.10		
Uniform Delay, d1		47.3	9.3		47.0	9.9			43.0	39.0		
Progression Factor		0.93	0.61		1.00	1.00			1.00	1.00		
Incremental Delay, d2		7.7	0.2		43.3	0.6			10.0	0.1		
Delay (s)		51.9	6.0		90.3	10.6			53.1	39.1		
Level of Service		D	A		F	B			D	D		
Approach Delay (s)			7.2			15.6			45.8			0.0
Approach LOS			A			B			D			A

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	17
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	7%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	1080	220	120	2290	130	680	170	320	40	20	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.97		1.00	0.99		1.00	0.94			0.91	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98			0.99	1.00
Satd. Flow (prot)	3433	4956		1770	6356		1610	3122			1589	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.98			0.99	1.00
Satd. Flow (perm)	3433	4956		1770	6356		1610	3122			1589	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	1080	220	120	2290	130	680	170	320	40	20	230
RTOR Reduction (vph)	0	22	0	0	5	0	0	107	0	0	63	126
Lane Group Flow (vph)	100	1278	0	120	2415	0	401	662	0	0	87	14
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	7.5	39.4		10.3	42.2		29.0	29.0			10.3	10.3
Effective Green, g (s)	7.5	39.4		10.3	42.2		29.0	29.0			10.3	10.3
Actuated g/C Ratio	0.07	0.37		0.10	0.40		0.27	0.27			0.10	0.10
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	242	1842		171	2530		440	854			154	146
v/s Ratio Prot	0.03	0.26		c0.07	c0.38		c0.25	0.21			c0.05	
v/s Ratio Perm												0.01
v/c Ratio	0.41	0.69		0.70	0.95		0.91	0.78			0.56	0.09
Uniform Delay, d1	47.1	28.2		46.4	31.0		37.3	35.5			45.7	43.6
Progression Factor	1.00	1.00		1.28	0.85		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.4	2.2		8.5	8.7		22.5	4.1			2.8	0.1
Delay (s)	47.6	30.4		68.0	34.9		59.8	39.6			48.5	43.7
Level of Service	D	C		E	C		E	D			D	D
Approach Delay (s)		31.6			36.5			46.5			46.2	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	690	140	70	1400	210	240	240	120	120	100	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.95		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3292		1719	3355		1719	1699		1719	1650	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	3292		1719	3355		1719	1699		1719	1650	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	690	140	70	1400	210	240	240	120	120	100	110
RTOR Reduction (vph)	0	13	0	0	9	0	0	20	0	0	42	0
Lane Group Flow (vph)	100	817	0	70	1601	0	240	340	0	120	168	0
Confl. Peds. (#/hr)	5		27	27		5	3		21	21		3
Confl. Bikes (#/hr)			6			2						3
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	6.8	52.7		4.8	50.7		15.0	26.5		6.0	17.5	
Effective Green, g (s)	6.8	52.7		4.8	50.7		15.0	26.5		6.0	17.5	
Actuated g/C Ratio	0.06	0.48		0.04	0.46		0.14	0.24		0.05	0.16	
Clearance Time (s)	4.0	6.0		4.0	6.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	106	1577		75	1546		234	409		93	262	
v/s Ratio Prot	c0.06	0.25		0.04	c0.48		c0.14	c0.20		0.07	0.10	
v/s Ratio Perm												
v/c Ratio	0.94	0.52		0.93	1.04		1.03	0.83		1.29	0.64	
Uniform Delay, d1	51.4	19.9		52.4	29.6		47.5	39.6		52.0	43.3	
Progression Factor	1.00	1.00		1.18	0.55		1.00	1.00		1.00	1.00	
Incremental Delay, d2	68.5	0.1		58.5	27.7		65.6	12.9		189.8	4.0	
Delay (s)	119.9	20.0		120.3	43.9		113.1	52.6		241.8	47.3	
Level of Service	F	B		F	D		F	D		F	D	
Approach Delay (s)		30.7			47.1			76.8			118.0	
Approach LOS		C			D			E			F	

Intersection Summary			
HCM 2000 Control Delay	54.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	550	0	0	1120	540	150	1060	250	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95			0.95	1.00			
Frt	1.00	1.00			0.95			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (prot)	1770	3539			3367			3517	1583			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	1770	3539			3367			3517	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	550	0	0	1120	540	150	1060	250	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	91	0	0	0
Lane Group Flow (vph)	300	550	0	0	1640	0	0	1210	159	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	14.0	56.0			38.0			26.0	26.0			
Effective Green, g (s)	14.0	56.0			38.0			26.0	26.0			
Actuated g/C Ratio	0.16	0.62			0.42			0.29	0.29			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	275	2202			1421			1016	457			
v/s Ratio Prot	c0.17	0.16			c0.49							
v/s Ratio Perm								0.34	0.10			
v/c Ratio	1.09	0.25			1.15			1.19	0.35			
Uniform Delay, d1	38.0	7.6			26.0			32.0	25.3			
Progression Factor	0.71	1.79			1.00			1.00	1.00			
Incremental Delay, d2	54.8	0.1			77.9			95.8	0.5			
Delay (s)	81.9	13.7			103.9			127.8	25.8			
Level of Service	F	B			F			F	C			
Approach Delay (s)		37.7			103.9			110.4			0.0	
Approach LOS		D			F			F			A	

Intersection Summary			
HCM 2000 Control Delay	92.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	136.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	350	350	580	690	0	0	0	0	500	810	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0						4.0	
Lane Util. Factor		0.95		0.95	0.95						0.91	
Frt		0.93		1.00	1.00						0.97	
Flt Protected		1.00		0.95	1.00						0.98	
Satd. Flow (prot)		3274		1681	1763						4861	
Flt Permitted		1.00		0.95	0.77						0.98	
Satd. Flow (perm)		3274		1681	1355						4861	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	350	350	580	690	0	0	0	0	500	810	320
RTOR Reduction (vph)	0	76	0	0	0	0	0	0	0	0	46	0
Lane Group Flow (vph)	0	624	0	522	748	0	0	0	0	0	1584	0
Turn Type		NA		Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases												
Actuated Green, G (s)		17.8		31.2	53.0						29.0	
Effective Green, g (s)		17.8		31.2	53.0						29.0	
Actuated g/C Ratio		0.20		0.35	0.59						0.32	
Clearance Time (s)		4.0		4.0	4.0						4.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		647		582	939						1566	
v/s Ratio Prot		c0.19		c0.31	0.28						c0.33	
v/s Ratio Perm					0.19							
v/c Ratio		0.96		0.90	0.80						1.01	
Uniform Delay, d1		35.8		27.9	14.3						30.5	
Progression Factor		1.00		1.42	1.40						1.00	
Incremental Delay, d2		27.6		1.9	0.4						25.6	
Delay (s)		63.4		41.5	20.5						56.1	
Level of Service		E		D	C						E	
Approach Delay (s)		63.4			29.1			0.0			56.1	
Approach LOS		E			C			A			E	

Intersection Summary			
HCM 2000 Control Delay	48.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	136.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	410	490	160	560	640	220	540	560	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	1.00				
Frt	1.00	0.92		1.00	0.92		1.00	0.92				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	3433	3250		1770	3256		1770	1720				
Flt Permitted	0.95	1.00		0.30	1.00		0.95	1.00				
Satd. Flow (perm)	3433	3250		562	3256		1770	1720				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	410	490	160	560	640	220	540	560	0	0	0
RTOR Reduction (vph)	0	269	0	0	159	0	0	47	0	0	0	0
Lane Group Flow (vph)	280	631	0	160	1041	0	220	1053	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	7.0	32.5		21.0	21.0		38.5	38.5				
Effective Green, g (s)	7.0	32.5		21.0	21.0		38.5	38.5				
Actuated g/C Ratio	0.09	0.41		0.26	0.26		0.48	0.48				
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0		2.0	2.0		2.0	2.0				
Lane Grp Cap (vph)	300	1320		147	854		851	827				
v/s Ratio Prot	c0.08	0.19			c0.32			c0.61				
v/s Ratio Perm				0.28			0.12					
v/c Ratio	0.93	0.48		1.09	1.22		0.26	1.27				
Uniform Delay, d1	36.3	17.5		29.5	29.5		12.3	20.8				
Progression Factor	1.40	0.20		1.00	1.00		1.00	1.00				
Incremental Delay, d2	16.3	0.4		99.9	109.0		0.1	132.6				
Delay (s)	67.0	3.8		129.4	138.5		12.4	153.3				
Level of Service	E	A		F	F		B	F				
Approach Delay (s)		18.8			137.4			129.8			0.0	
Approach LOS		B			F			F			A	

Intersection Summary			
HCM 2000 Control Delay	98.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	118.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	850	910	380	400	0	70	0	130	200	1340	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Lane Util. Factor		0.91		0.97	0.95			1.00		0.91	0.91	1.00
Frt		0.92		1.00	1.00			0.91		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00			0.98		0.95	1.00	1.00
Satd. Flow (prot)		4691		3433	3539			1670		1610	3388	1583
Flt Permitted		1.00		0.95	1.00			0.20		0.62	0.95	1.00
Satd. Flow (perm)		4691		3433	3539			334		1054	3219	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	850	910	380	400	0	70	0	130	200	1340	200
RTOR Reduction (vph)	0	6	0	0	0	0	0	79	0	0	0	121
Lane Group Flow (vph)	0	1754	0	380	400	0	0	121	0	180	1360	79
Turn Type		NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases							8			4		4
Actuated Green, G (s)		28.5		7.5	39.5			31.5		31.5	31.5	31.5
Effective Green, g (s)		28.5		7.5	39.5			31.5		31.5	31.5	31.5
Actuated g/C Ratio		0.36		0.09	0.49			0.39		0.39	0.39	0.39
Clearance Time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0		2.0	2.0			2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		1671		321	1747			131		415	1267	623
v/s Ratio Prot		c0.37		c0.11	0.11							
v/s Ratio Perm								0.36		0.17	c0.42	0.05
v/c Ratio		1.57dr		1.18	0.23			0.93		0.43	1.07	0.13
Uniform Delay, d1		25.8		36.2	11.6			23.1		17.7	24.2	15.5
Progression Factor		1.00		0.74	0.85			1.00		1.00	1.00	1.00
Incremental Delay, d2		36.4		94.5	0.1			55.1		0.3	47.5	0.0
Delay (s)		62.1		121.5	9.9			78.2		18.0	71.7	15.5
Level of Service		E		F	A			E		B	E	B
Approach Delay (s)		62.1			64.3			78.2			59.7	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	62.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	111.2%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	680	0	0	880	190	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	680	0	0	880	190	430
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	680	0	0	880	190	430
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	18.9			18.9	16.6	16.6
Effective Green, g (s)	18.9			18.9	16.6	16.6
Actuated g/C Ratio	0.43			0.43	0.38	0.38
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2209			1537	675	604
v/s Ratio Prot	0.13			c0.25	0.11	c0.27
v/s Ratio Perm						
v/c Ratio	0.31			0.57	0.28	0.71
Uniform Delay, d1	8.0			9.3	9.3	11.4
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.5	0.2	4.0
Delay (s)	8.1			9.8	9.5	15.4
Level of Service	A			A	A	B
Approach Delay (s)	8.1			9.8	13.6	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	43.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	
Volume (vph)	0	420	520	0	510	840
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.91	
Flt Protected		1.00	1.00		0.98	
Satd. Flow (prot)		3539	3539		3216	
Flt Permitted		1.00	1.00		0.98	
Satd. Flow (perm)		3539	3539		3216	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	420	520	0	510	840
RTOR Reduction (vph)	0	0	0	0	109	0
Lane Group Flow (vph)	0	420	520	0	1241	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		12.4	12.4		22.1	
Effective Green, g (s)		12.4	12.4		22.1	
Actuated g/C Ratio		0.29	0.29		0.52	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1032	1032		1672	
v/s Ratio Prot		0.12	c0.15		c0.39	
v/s Ratio Perm						
v/c Ratio		0.41	0.50		0.89dr	
Uniform Delay, d1		12.1	12.5		8.0	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.3	0.4		1.8	
Delay (s)		12.4	12.9		9.8	
Level of Service		B	B		A	
Approach Delay (s)		12.4	12.9		9.8	
Approach LOS		B	B		A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	42.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1200	160	120	420	140	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		4.0			4.0
Lane Util. Factor	0.97		1.00			1.00
Frpb, ped/bikes	1.00		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.98		0.90			1.00
Flt Protected	0.96		1.00			0.98
Satd. Flow (prot)	3335		1530			1681
Flt Permitted	0.96		1.00			0.55
Satd. Flow (perm)	3335		1530			945
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1200	160	120	420	140	240
RTOR Reduction (vph)	10	0	107	0	0	0
Lane Group Flow (vph)	1350	0	433	0	0	380
Confl. Bikes (#/hr)				3		
Heavy Vehicles (%)	4%	4%	10%	10%	11%	11%
Turn Type	Prot		NA		Perm	NA
Protected Phases	6		8			4
Permitted Phases					4	
Actuated Green, G (s)	26.5		35.5			35.5
Effective Green, g (s)	26.5		35.5			35.5
Actuated g/C Ratio	0.38		0.51			0.51
Clearance Time (s)	3.5		4.0			4.0
Vehicle Extension (s)	2.2		2.0			2.0
Lane Grp Cap (vph)	1271		781			482
v/s Ratio Prot	c0.40		0.28			
v/s Ratio Perm						c0.40
v/c Ratio	1.06		0.55			0.79
Uniform Delay, d1	21.5		11.6			13.9
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	43.6		0.5			7.7
Delay (s)	65.1		12.1			21.6
Level of Service	E		B			C
Approach Delay (s)	65.1		12.1			21.6
Approach LOS	E		B			C

Intersection Summary			
HCM 2000 Control Delay	45.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	11.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1120	0	140	0	0	0	200	250	0	0	250	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			0.99	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.97	
Flt Protected	0.95		1.00					0.98			1.00	
Satd. Flow (prot)	3273		1509					3210			1753	
Flt Permitted	0.95		1.00					0.98			1.00	
Satd. Flow (perm)	3273		1509					3210			1753	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1120	0	140	0	0	0	200	250	0	0	250	60
RTOR Reduction (vph)	0	0	69	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	1120	0	71	0	0	0	0	450	0	0	304	0
Confl. Peds. (#/hr)	2						3					3
Heavy Vehicles (%)	7%	7%	7%	2%	2%	2%	10%	10%	10%	5%	5%	5%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4						2	2			6	
Permitted Phases			4									
Actuated Green, G (s)	40.3		40.3					18.6			20.1	
Effective Green, g (s)	40.3		40.3					18.6			20.1	
Actuated g/C Ratio	0.42		0.42					0.20			0.21	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1388		640					628			370	
v/s Ratio Prot	c0.34							c0.14			c0.17	
v/s Ratio Perm			0.05									
v/c Ratio	0.81		0.11					0.72			0.82	
Uniform Delay, d1	23.9		16.5					35.7			35.7	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	3.5		0.1					3.9			13.6	
Delay (s)	27.5		16.6					39.6			49.3	
Level of Service	C		B					D			D	
Approach Delay (s)		26.3			0.0			39.6			49.3	
Approach LOS		C			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↑		↰↰	↱↱
Volume (vph)	0	1720	1980	0	380	1840
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5711	5711		3060	2484
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5711	5711		3060	2484
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1720	1980	0	380	1840
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1720	1980	0	380	1840
Confl. Bikes (#/hr)				3		3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		27.0	18.0		25.0	34.0
Effective Green, g (s)		27.0	18.0		25.0	34.0
Actuated g/C Ratio		0.45	0.30		0.42	0.57
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		2569	1713		1275	1407
v/s Ratio Prot		0.30	c0.35		0.12	c0.74
v/s Ratio Perm						
v/c Ratio		0.67	1.16		0.30	1.31
Uniform Delay, d1		13.0	21.0		11.7	13.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.7	77.2		0.1	143.7
Delay (s)		13.7	98.2		11.8	156.7
Level of Service		B	F		B	F
Approach Delay (s)		13.7	98.2		131.9	
Approach LOS		B	F		F	

Intersection Summary			
HCM 2000 Control Delay	86.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	640	430	0	1400	360	950	0	250	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frpb, ped/bikes		1.00	0.99		1.00		1.00		1.00			
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00			
Frt		0.98	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3159	1356		4699		3273		1509			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3159	1356		4699		3273		1509			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	640	430	0	1400	360	950	0	250	0	0	0
RTOR Reduction (vph)	0	12	0	0	43	0	0	0	139	0	0	0
Lane Group Flow (vph)	0	731	327	0	1717	0	950	0	111	0	0	0
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		56.0	105.0		56.0		41.0		41.0			
Effective Green, g (s)		56.0	105.0		56.0		41.0		41.0			
Actuated g/C Ratio		0.53	1.00		0.53		0.39		0.39			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1684	1356		2506		1278		589			
v/s Ratio Prot		0.23			c0.37		c0.29					
v/s Ratio Perm			0.24						0.07			
v/c Ratio		0.43	0.24		0.68		0.74		0.19			
Uniform Delay, d1		14.9	0.0		18.0		27.5		21.1			
Progression Factor		1.00	1.00		1.00		1.00		1.00			
Incremental Delay, d2		0.8	0.4		1.5		3.9		0.7			
Delay (s)		15.7	0.4		19.6		31.4		21.8			
Level of Service		B	A		B		C		C			
Approach Delay (s)		11.0			19.6			29.4			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	700	990	0	1830	0	0	0	0	370	0	810
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		0.99	1.00		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.94	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4314	1310		4893					3303		1492
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4314	1310		4893					3303		1492
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	700	990	0	1830	0	0	0	0	370	0	810
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	5
Lane Group Flow (vph)	0	1195	495	0	1830	0	0	0	0	370	0	805
Confl. Peds. (#/hr)							8					8
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		41.0	41.0		41.0					56.0		56.0
Effective Green, g (s)		41.0	41.0		41.0					56.0		56.0
Actuated g/C Ratio		0.39	0.39		0.39					0.53		0.53
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		1684	511		1910					1761		795
v/s Ratio Prot		0.28	c0.38		0.37							
v/s Ratio Perm										0.11		c0.54
v/c Ratio		0.88dr	0.97		0.96					0.21		1.01
Uniform Delay, d1		27.0	31.4		31.2					12.9		24.5
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		1.4	31.5		12.1					0.1		35.2
Delay (s)		28.4	62.9		43.2					12.9		59.7
Level of Service		C	E		D					B		E
Approach Delay (s)		38.5			43.2			0.0			45.0	
Approach LOS		D			D			A			D	

Intersection Summary			
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	760	380	0	1200	550	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.99	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3471	1516		3471	3360	1413
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3471	1516		3471	3360	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	760	380	0	1200	550	260
RTOR Reduction (vph)	0	0	0	0	4	148
Lane Group Flow (vph)	760	380	0	1200	572	86
Confl. Peds. (#/hr)		6	6			
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	29.2	52.9		29.2	15.7	15.7
Effective Green, g (s)	29.2	52.9		29.2	15.7	15.7
Actuated g/C Ratio	0.55	1.00		0.55	0.30	0.30
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1915	1516		1915	997	419
v/s Ratio Prot	0.22			c0.35	c0.17	
v/s Ratio Perm		0.25				0.06
v/c Ratio	0.40	0.25		0.63	0.57	0.21
Uniform Delay, d1	6.8	0.0		8.1	15.8	13.9
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4		0.6	0.8	0.2
Delay (s)	6.9	0.4		8.8	16.6	14.2
Level of Service	A	A		A	B	B
Approach Delay (s)	4.8			8.8	15.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Volume (vph)	0	920	1130	0	1330	420	0	0	0	220	0	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.95	1.00				0.95	0.91	0.95
Frt		1.00	0.85		1.00	0.85				1.00	0.86	0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)		5085	1583		3539	1583				1681	1456	1504
Flt Permitted		1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)		5085	1583		3539	1583				1681	1456	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	920	1130	0	1330	420	0	0	0	220	0	490
RTOR Reduction (vph)	0	0	417	0	0	160	0	0	0	0	48	48
Lane Group Flow (vph)	0	920	713	0	1330	260	0	0	0	198	209	207
Turn Type		NA	Perm		NA	Perm				Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4			8				6		6
Actuated Green, G (s)		40.6	40.6		40.6	40.6				17.1	17.1	17.1
Effective Green, g (s)		40.6	40.6		40.6	40.6				17.1	17.1	17.1
Actuated g/C Ratio		0.62	0.62		0.62	0.62				0.26	0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)		3142	978		2186	978				437	378	391
v/s Ratio Prot		0.18			0.38							
v/s Ratio Perm			c0.45			0.16				0.12	0.14	0.14
v/c Ratio		0.29	0.73		0.61	0.27				0.45	0.55	0.53
Uniform Delay, d1		5.9	8.7		7.7	5.7				20.4	21.0	20.8
Progression Factor		1.00	1.00		1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2		0.1	2.8		0.5	0.1				0.7	1.7	1.3
Delay (s)		5.9	11.5		8.2	5.9				21.1	22.7	22.1
Level of Service		A	B		A	A				C	C	C
Approach Delay (s)		9.0			7.6			0.0			22.1	
Approach LOS		A			A			A			C	

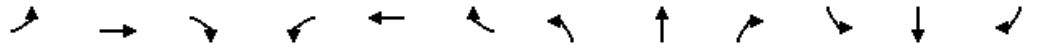
Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	65.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	990	610	70	810	560	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.94		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3337		1770	3539	3388	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3337		1770	3539	3388	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	990	610	70	810	560	100
RTOR Reduction (vph)	75	0	0	0	16	0
Lane Group Flow (vph)	1525	0	70	810	644	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	45.5		6.5	56.0	20.0	
Effective Green, g (s)	45.5		6.5	56.0	20.0	
Actuated g/C Ratio	0.55		0.08	0.68	0.24	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1851		140	2416	826	
v/s Ratio Prot	c0.46		c0.04	0.23	c0.19	
v/s Ratio Perm						
v/c Ratio	0.82		0.50	0.34	0.78	
Uniform Delay, d1	15.0		36.2	5.3	28.9	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	3.0		1.0	0.0	4.3	
Delay (s)	17.9		37.2	5.4	33.2	
Level of Service	B		D	A	C	
Approach Delay (s)	17.9			7.9	33.2	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	82.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	1320	50	30	810	260	40	120	420	270	80	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.96			0.90			0.99	
Flt Protected		1.00			1.00			1.00			0.97	
Satd. Flow (prot)		3514			3409			1675			1780	
Flt Permitted		0.87			0.86			0.97			0.21	
Satd. Flow (perm)		3061			2943			1622			380	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	1320	50	30	810	260	40	120	420	270	80	30
RTOR Reduction (vph)	0	3	0	0	34	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	1417	0	0	1066	0	0	580	0	0	376	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		42.0			42.0			21.3			21.3	
Effective Green, g (s)		42.0			42.0			21.3			21.3	
Actuated g/C Ratio		0.55			0.55			0.28			0.28	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1684			1620			452			106	
v/s Ratio Prot												
v/s Ratio Perm		c0.46			0.36			0.36			c0.99	
v/c Ratio		0.84			0.66			1.28			3.55	
Uniform Delay, d1		14.4			12.1			27.5			27.5	
Progression Factor		1.00			1.00			0.18			1.00	
Incremental Delay, d2		4.0			1.0			129.0			1171.1	
Delay (s)		18.4			13.1			134.1			1198.6	
Level of Service		B			B			F			F	
Approach Delay (s)		18.4			13.1			134.1			1198.6	
Approach LOS		B			B			F			F	

Intersection Summary			
HCM 2000 Control Delay	164.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.72		
Actuated Cycle Length (s)	76.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	139.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	810	170	230	780	270	130	450	410	400	280	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.97		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (prot)	1770	3447		1770	3403			1842	1583		1810	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (perm)	1770	3447		1770	3403			1842	1583		1810	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	810	170	230	780	270	130	450	410	400	280	30
RTOR Reduction (vph)	0	19	0	0	33	0	0	0	114	0	0	24
Lane Group Flow (vph)	50	961	0	230	1017	0	0	580	296	0	680	6
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	5.5	26.6		13.6	34.7			16.0	16.0		19.0	19.0
Effective Green, g (s)	5.5	26.6		13.6	34.7			16.0	16.0		19.0	19.0
Actuated g/C Ratio	0.06	0.29		0.15	0.38			0.18	0.18		0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	106	1005		263	1294			323	277		377	329
v/s Ratio Prot	0.03	c0.28		c0.13	0.30			c0.31			c0.38	
v/s Ratio Perm									0.19			0.00
v/c Ratio	0.47	0.96		0.87	0.79			1.80	1.07		1.80	0.02
Uniform Delay, d1	41.4	31.7		38.0	25.0			37.6	37.6		36.1	28.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.3	18.5		25.9	3.2			370.2	73.7		372.1	0.0
Delay (s)	44.7	50.2		63.9	28.2			407.8	111.3		408.2	28.7
Level of Service	D	D		E	C			F	F		F	C
Approach Delay (s)		50.0			34.6			285.0			392.2	
Approach LOS		D			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	163.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	140	790	10	220	430	0	260	10	510	270	290	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.95		1.00	0.97
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1846		1770	1863	1583			3356		1770	1811
Flt Permitted		0.86		0.95	1.00	1.00			0.95		0.21	1.00
Satd. Flow (perm)		1593		1770	1863	1583			3193		393	1811
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	790	10	220	430	0	260	10	510	270	290	220
RTOR Reduction (vph)	0	1	0	0	0	119	0	0	68	0	0	0
Lane Group Flow (vph)	0	939	0	220	430	141	0	0	722	0	290	270
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.0		13.1	40.1	40.1			26.0		26.0	26.0
Effective Green, g (s)		23.0		13.1	40.1	40.1			26.0		26.0	26.0
Actuated g/C Ratio		0.31		0.18	0.54	0.54			0.35		0.35	0.35
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		494		312	1008	856			1120		137	635
v/s Ratio Prot				c0.12	0.23							0.15
v/s Ratio Perm		c0.59				0.09			0.23		c0.74	
v/c Ratio		1.90		0.71	0.43	0.16			0.65		2.12	0.43
Uniform Delay, d1		25.5		28.7	10.1	8.6			20.2		24.0	18.3
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		413.2		7.1	0.3	0.1			1.3		526.3	0.5
Delay (s)		438.7		35.8	10.4	8.7			21.5		550.4	18.8
Level of Service		F		D	B	A			C		F	B
Approach Delay (s)		438.7			16.0				21.5			294.1
Approach LOS		F			B				C			F

Intersection Summary			
HCM 2000 Control Delay	190.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.85		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	125.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	50	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	50	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	640	30	240	680	20	20	460	330	60	90	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.98	1.00
Satd. Flow (prot)		3507		1770	3524			1859	1583		1826	1583
Flt Permitted		1.00		0.95	1.00			0.99	1.00		0.43	1.00
Satd. Flow (perm)		3507		1770	3524			1837	1583		792	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	640	30	240	680	20	20	460	330	60	90	50
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	145	0	0	34
Lane Group Flow (vph)	0	707	0	240	698	0	0	480	185	0	150	16
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		23.2		24.3	24.3			27.2	27.2		27.2	27.2
Effective Green, g (s)		23.2		24.3	24.3			27.2	27.2		27.2	27.2
Actuated g/C Ratio		0.27		0.28	0.28			0.31	0.31		0.31	0.31
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		938		496	987			576	496		248	496
v/s Ratio Prot		c0.20		0.14	c0.20							
v/s Ratio Perm								c0.26	0.12		0.19	0.01
v/c Ratio		0.75		0.48	0.71			0.83	0.37		0.60	0.03
Uniform Delay, d1		29.1		26.0	28.0			27.6	23.1		25.2	20.6
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		3.5		0.7	2.3			10.0	0.5		4.1	0.0
Delay (s)		32.6		26.7	30.3			37.7	23.6		29.3	20.6
Level of Service		C		C	C			D	C		C	C
Approach Delay (s)		32.6			29.4			31.9			27.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	86.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	880	160	40	630	130	120	560	70	190	390	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.98		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3441		1767	3434		1750	3464		1751	3539	1530
Flt Permitted		0.87		0.17	1.00		0.49	1.00		0.32	1.00	1.00
Satd. Flow (perm)		3004		320	3434		899	3464		587	3539	1530
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	880	160	40	630	130	120	560	70	190	390	30
RTOR Reduction (vph)	0	19	0	0	25	0	0	14	0	0	0	16
Lane Group Flow (vph)	0	1081	0	40	735	0	120	616	0	190	390	14
Confl. Peds. (#/hr)	12		11	11		12	23		33	33		23
Confl. Bikes (#/hr)			5			8			5			3
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51		0.51	0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1544		164	1766		333	1286		218	1314	568
v/s Ratio Prot					0.21			0.18			0.11	
v/s Ratio Perm		c0.36		0.12			0.13			c0.32		0.01
v/c Ratio		0.70		0.24	0.42		0.36	0.48		0.87	0.30	0.02
Uniform Delay, d1		12.9		9.4	10.5		16.0	16.8		20.4	15.5	14.0
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		2.7		3.5	0.7		3.0	1.3		34.9	0.6	0.1
Delay (s)		15.6		12.9	11.2		19.0	18.1		55.4	16.1	14.0
Level of Service		B		B	B		B	B		E	B	B
Approach Delay (s)		15.6			11.3			18.2			28.2	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	210	60	140	200	130	140	580	150	270	640	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3523	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3523	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	210	60	140	200	130	140	580	150	270	640	20
RTOR Reduction (vph)	0	0	0	0	0	87	0	0	109	0	3	0
Lane Group Flow (vph)	10	210	60	140	200	43	140	580	41	270	657	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.1	16.4	16.4	7.1	22.4	22.4	8.9	18.5	18.5	9.2	18.8	
Effective Green, g (s)	1.1	16.4	16.4	7.1	22.4	22.4	8.9	18.5	18.5	9.2	18.8	
Actuated g/C Ratio	0.02	0.24	0.24	0.11	0.33	0.33	0.13	0.28	0.28	0.14	0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	28	454	386	187	621	527	234	974	435	242	985	
v/s Ratio Prot	0.01	c0.11		c0.08	0.11		0.08	0.16		c0.15	c0.19	
v/s Ratio Perm			0.04			0.03			0.03			
v/c Ratio	0.36	0.46	0.16	0.75	0.32	0.08	0.60	0.60	0.09	1.12	0.67	
Uniform Delay, d1	32.7	21.6	20.0	29.2	16.7	15.4	27.5	21.1	18.1	29.0	21.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.7	0.7	0.2	15.1	0.3	0.1	4.1	1.0	0.1	92.5	1.7	
Delay (s)	40.4	22.4	20.1	44.3	17.0	15.4	31.5	22.1	18.2	121.5	23.2	
Level of Service	D	C	C	D	B	B	C	C	B	F	C	
Approach Delay (s)		22.6			24.7			22.9			51.7	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	67.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	130	180	320	110	110	100	710	570	90	770	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1720		1770	1723		1770	1863	1583	1770	3526	
Flt Permitted		0.98		0.47	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1687		879	1723		1770	1863	1583	1770	3526	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	130	180	320	110	110	100	710	570	90	770	20
RTOR Reduction (vph)	0	61	0	0	51	0	0	0	361	0	3	0
Lane Group Flow (vph)	0	269	0	320	169	0	100	710	209	90	787	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		26.1		26.1	26.1		5.4	25.1	25.1	5.4	25.1	
Effective Green, g (s)		26.1		26.1	26.1		5.4	25.1	25.1	5.4	25.1	
Actuated g/C Ratio		0.38		0.38	0.38		0.08	0.37	0.37	0.08	0.37	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		641		334	655		139	681	579	139	1290	
v/s Ratio Prot					0.10		c0.06	c0.38		0.05	0.22	
v/s Ratio Perm		0.16		c0.36					0.13			
v/c Ratio		0.42		0.96	0.26		0.72	1.04	0.36	0.65	0.61	
Uniform Delay, d1		15.7		20.7	14.6		30.9	21.7	15.9	30.7	17.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.4		37.8	0.2		16.3	46.1	0.4	9.9	0.9	
Delay (s)		16.1		58.5	14.8		47.2	67.8	16.3	40.6	18.6	
Level of Service		B		E	B		D	E	B	D	B	
Approach Delay (s)		16.1			40.7			45.0			20.9	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	68.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	40	180	300	40	90	110	1190	190	100	1040	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.90			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667			1749		1770	3466		1770	3529	
Flt Permitted		0.96			0.57		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1612			1035		1770	3466		1770	3529	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	40	180	300	40	90	110	1190	190	100	1040	20
RTOR Reduction (vph)	0	126	0	0	13	0	0	18	0	0	2	0
Lane Group Flow (vph)	0	114	0	0	417	0	110	1362	0	100	1058	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		20.2			20.2		6.1	29.4		6.1	29.4	
Effective Green, g (s)		20.2			20.2		6.1	29.4		6.1	29.4	
Actuated g/C Ratio		0.30			0.30		0.09	0.43		0.09	0.43	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		480			308		159	1505		159	1532	
v/s Ratio Prot							c0.06	c0.39		0.06	0.30	
v/s Ratio Perm		0.07			c0.40							
v/c Ratio		0.24			1.35		0.69	0.90		0.63	0.69	
Uniform Delay, d1		17.9			23.8		29.9	17.8		29.7	15.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			178.7		12.2	8.0		7.6	1.4	
Delay (s)		18.2			202.4		42.1	25.9		37.3	16.8	
Level of Service		B			F		D	C		D	B	
Approach Delay (s)		18.2			202.4			27.1			18.6	
Approach LOS		B			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	67.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	640	80	1410	720	70	1450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.98		0.95		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3402		3360		1770	3539
Flt Permitted	0.96		1.00		0.95	1.00
Satd. Flow (perm)	3402		3360		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	640	80	1410	720	70	1450
RTOR Reduction (vph)	13	0	60	0	0	0
Lane Group Flow (vph)	707	0	2070	0	70	1450
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	20.5		36.6		4.6	45.2
Effective Green, g (s)	20.5		36.6		4.6	45.2
Actuated g/C Ratio	0.28		0.50		0.06	0.61
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	946		1668		110	2170
v/s Ratio Prot	c0.21		c0.62		0.04	c0.41
v/s Ratio Perm						
v/c Ratio	0.75		1.24		0.64	0.67
Uniform Delay, d1	24.2		18.6		33.7	9.3
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	3.3		113.6		11.5	0.8
Delay (s)	27.5		132.2		45.2	10.1
Level of Service	C		F		D	B
Approach Delay (s)	27.5		132.2			11.7
Approach LOS	C		F			B

Intersection Summary			
HCM 2000 Control Delay	73.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	73.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	10	120	0	160	60	0	1100	180	30	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95		1.00	0.95
Frpb, ped/bikes		0.99		1.00	0.98			1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt		0.86		1.00	0.86			1.00	0.98		1.00	1.00
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)		1588		1618	1432			1703	3313		1703	3398
Flt Permitted		1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)		1588		1618	1432			1703	3313		1703	3398
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	10	120	0	160	60	0	1100	180	30	590
RTOR Reduction (vph)	0	10	0	0	137	0	0	0	10	0	0	1
Lane Group Flow (vph)	0	0	0	108	35	0	0	60	1270	0	30	599
Confl. Peds. (#/hr)			2			2				11	11	
Confl. Bikes (#/hr)						3				3		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type		NA		Split	NA		Prot	Prot	NA		Prot	NA
Protected Phases	4	4		8	8		5	5	2		1	6
Permitted Phases												
Actuated Green, G (s)		0.9		9.2	9.2			5.0	35.9		2.7	33.6
Effective Green, g (s)		0.9		9.2	9.2			5.0	35.9		2.7	33.6
Actuated g/C Ratio		0.01		0.14	0.14			0.08	0.55		0.04	0.52
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		22		230	203			131	1838		71	1764
v/s Ratio Prot		c0.00		c0.07	0.02			c0.04	c0.38		0.02	0.18
v/s Ratio Perm												
v/c Ratio		0.01		0.47	0.17			0.46	0.69		0.42	0.34
Uniform Delay, d1		31.5		25.5	24.4			28.6	10.4		30.2	9.1
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1		1.5	0.4			2.5	1.1		4.0	0.1
Delay (s)		31.6		27.0	24.8			31.1	11.5		34.3	9.2
Level of Service		C		C	C			C	B		C	A
Approach Delay (s)		31.6			25.7				12.4			10.4
Approach LOS		C			C				B			B

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	64.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	10
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	10
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	5
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	30	490	1420	30	20	180	2070	1550	30	120	160	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	0.99	0.95		1.00	0.98	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.96	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1719	6201			1752	5652	1204		1695	1433	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1719	6201			1752	5652	1204		1695	1433	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	490	1420	30	20	180	2070	1550	30	120	160	10
RTOR Reduction (vph)	0	0	2	0	0	0	43	352	0	0	138	0
Lane Group Flow (vph)	0	520	1448	0	0	200	2802	423	0	150	22	0
Confl. Peds. (#/hr)		18		2		2		18	96			
Confl. Bikes (#/hr)				2							2	
Heavy Vehicles (%)	5%	5%	5%	5%	3%	3%	3%	3%	11%	11%	11%	3%
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		26.0	54.9			21.2	50.1	50.1		20.5	20.5	
Effective Green, g (s)		26.0	54.9			21.2	50.1	50.1		20.5	20.5	
Actuated g/C Ratio		0.17	0.36			0.14	0.33	0.33		0.14	0.14	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		296	2260			246	1880	400		230	195	
v/s Ratio Prot		c0.30	c0.23			0.11	c0.50			c0.09		
v/s Ratio Perm								0.35			0.02	
v/c Ratio		1.76	0.64			0.81	1.49	1.06		0.65	0.11	
Uniform Delay, d1		62.3	39.7			62.8	50.2	50.2		61.7	57.1	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		354.1	0.5			17.4	223.6	60.7		5.0	0.1	
Delay (s)		416.4	40.1			80.1	273.9	111.0		66.6	57.2	
Level of Service		F	D			F	F	F		E	E	
Approach Delay (s)			139.5				230.7			61.7		
Approach LOS			F				F			E		

Intersection Summary			
HCM 2000 Control Delay	210.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	150.6	Sum of lost time (s)	21.0
Intersection Capacity Utilization	151.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	690	260	430
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.91	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.91	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3400	1524	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3400	1524	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	690	260	430
RTOR Reduction (vph)	0	37	0
Lane Group Flow (vph)	700	653	0
Confl. Peds. (#/hr)	2		96
Confl. Bikes (#/hr)			2
Heavy Vehicles (%)	3%	3%	3%
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	33.0	33.0	
Effective Green, g (s)	33.0	33.0	
Actuated g/C Ratio	0.22	0.22	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	745	333	
v/s Ratio Prot	0.21	c0.43	
v/s Ratio Perm			
v/c Ratio	0.94	1.96	
Uniform Delay, d1	57.8	58.8	
Progression Factor	1.00	1.00	
Incremental Delay, d2	19.2	442.6	
Delay (s)	77.1	501.4	
Level of Service	E	F	
Approach Delay (s)		287.7	
Approach LOS		F	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	630	40	160	1890	240	220	260	560	390	190	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	0.88	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1377	2756	1210	1719	4940	1505	1651	1743	2572	1752	1771	
Flt Permitted	0.17	1.00	1.00	0.95	1.00	1.00	0.60	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	240	2756	1210	1719	4940	1505	1050	1743	2572	1752	1771	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	630	40	160	1890	240	220	260	560	390	190	60
RTOR Reduction (vph)	0	0	29	0	0	122	0	0	208	0	1	0
Lane Group Flow (vph)	50	630	11	160	1890	118	220	260	352	390	249	0
Confl. Peds. (#/hr)	9		6	6		9	6					6
Confl. Bikes (#/hr)									2			
Heavy Vehicles (%)	31%	31%	31%	5%	5%	5%	9%	9%	9%	3%	3%	3%
Turn Type	Perm	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		6		5	2			4		3	8	
Permitted Phases	6		6			2	4		4			
Actuated Green, G (s)	24.2	24.2	24.2	7.1	35.3	35.3	25.1	25.1	25.1	13.1	42.2	
Effective Green, g (s)	24.2	24.2	24.2	7.1	35.3	35.3	25.1	25.1	25.1	13.1	42.2	
Actuated g/C Ratio	0.28	0.28	0.28	0.08	0.41	0.41	0.29	0.29	0.29	0.15	0.49	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	67	780	342	142	2039	621	308	511	755	268	874	
v/s Ratio Prot		0.23		0.09	c0.38			0.15		c0.22	0.14	
v/s Ratio Perm	0.21		0.01			0.08	c0.21		0.14			
v/c Ratio	0.75	0.81	0.03	1.13	0.93	0.19	0.71	0.51	0.47	1.46	0.29	
Uniform Delay, d1	27.9	28.5	22.2	39.2	23.9	16.0	27.0	25.1	24.7	36.2	12.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	35.8	6.2	0.0	113.6	7.9	0.1	7.6	0.8	0.5	224.4	0.2	
Delay (s)	63.7	34.6	22.2	152.8	31.8	16.1	34.6	25.9	25.2	260.6	12.9	
Level of Service	E	C	C	F	C	B	C	C	C	F	B	
Approach Delay (s)		36.0			38.6			27.4			163.9	
Approach LOS		D			D			C			F	

Intersection Summary			
HCM 2000 Control Delay	52.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	85.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1210	20	110	1570	670	50	300	150	300	70	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.98	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		5058		1752	5036	1548	1671	4445	1286	1480	2959	1324
Flt Permitted		0.70		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3539		1752	5036	1548	1671	4445	1286	1480	2959	1324
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	1210	20	110	1570	670	50	300	150	300	70	30
RTOR Reduction (vph)	0	1	0	0	0	303	0	20	89	0	0	21
Lane Group Flow (vph)	0	1309	0	110	1570	367	50	328	13	300	70	9
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	8%	8%	8%	22%	22%	22%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		43.9		11.7	59.6	59.6	7.7	14.9	14.9	26.5	33.7	33.7
Effective Green, g (s)		43.9		11.7	59.6	59.6	7.7	14.9	14.9	26.5	33.7	33.7
Actuated g/C Ratio		0.38		0.10	0.52	0.52	0.07	0.13	0.13	0.23	0.29	0.29
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1350		178	2609	802	111	575	166	341	867	387
v/s Ratio Prot				0.06	c0.31		0.03	c0.07		c0.20	0.02	
v/s Ratio Perm		c0.37				0.24			0.01			0.01
v/c Ratio		0.97		0.62	0.60	0.46	0.45	0.57	0.08	0.88	0.08	0.02
Uniform Delay, d1		34.9		49.5	19.4	17.5	51.6	47.0	44.0	42.7	29.4	28.9
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		18.2		6.3	1.0	1.9	2.9	1.4	0.2	21.8	0.0	0.0
Delay (s)		53.1		55.8	20.4	19.4	54.5	48.4	44.2	64.5	29.5	29.0
Level of Service		D		E	C	B	D	D	D	E	C	C
Approach Delay (s)		53.1			21.8			48.2			55.7	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1250	840	340	790	1340	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3326		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3326		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1250	840	340	790	1340	310
RTOR Reduction (vph)	194	0	0	0	0	0
Lane Group Flow (vph)	1896	0	340	790	1340	310
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		11.0	38.0	14.0	60.0
Effective Green, g (s)	23.0		11.0	38.0	14.0	60.0
Actuated g/C Ratio	0.38		0.18	0.63	0.23	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1274		324	2241	801	1583
v/s Ratio Prot	c0.57		c0.19	0.22	c0.39	
v/s Ratio Perm						0.20
v/c Ratio	1.49		1.05	0.35	1.67	0.20
Uniform Delay, d1	18.5		24.5	5.2	23.0	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	224.1		63.5	0.1	308.3	0.3
Delay (s)	242.6		88.0	5.3	331.3	0.3
Level of Service	F		F	A	F	A
Approach Delay (s)	242.6			30.2	269.1	
Approach LOS	F			C	F	

Intersection Summary			
HCM 2000 Control Delay	202.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	128.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1170	400	190	840	270	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1170	400	190	840	270	100
RTOR Reduction (vph)	0	206	0	0	0	83
Lane Group Flow (vph)	1170	194	190	840	270	17
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	29.5	29.5	8.8	42.3	10.5	10.5
Effective Green, g (s)	29.5	29.5	8.8	42.3	10.5	10.5
Actuated g/C Ratio	0.49	0.49	0.14	0.70	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1717	768	496	2462	592	273
v/s Ratio Prot	c0.33		0.06	c0.24	c0.08	
v/s Ratio Perm		0.12				0.01
v/c Ratio	0.68	0.25	0.38	0.34	0.46	0.06
Uniform Delay, d1	12.0	9.2	23.5	3.7	22.6	21.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.2	0.5	0.1	0.6	0.1
Delay (s)	13.2	9.4	24.0	3.8	23.1	21.1
Level of Service	B	A	C	A	C	C
Approach Delay (s)	12.2			7.5	22.6	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	120	50	20	100	100	1070	130	130	1410	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.88		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1649	1728	1553	1736	3037		3367	3409		1736	3467	
Flt Permitted	0.68	0.98	1.00	0.75	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1173	1698	1553	1370	3037		3367	3409		1736	3467	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	120	50	20	100	100	1070	130	130	1410	10
RTOR Reduction (vph)	0	0	95	0	79	0	0	6	0	0	1	0
Lane Group Flow (vph)	9	11	25	50	41	0	100	1194	0	130	1419	0
Confl. Peds. (#/hr)									5	5		
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.4	10.4	10.4	10.4	10.4		4.8	21.8		6.7	23.7	
Effective Green, g (s)	10.4	10.4	10.4	10.4	10.4		4.8	21.8		6.7	23.7	
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.10	0.43		0.13	0.47	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	242	350	320	282	626		320	1474		230	1630	
v/s Ratio Prot					0.01		0.03	0.35		c0.07	c0.41	
v/s Ratio Perm	0.01	0.01	0.02	c0.04								
v/c Ratio	0.04	0.03	0.08	0.18	0.06		0.31	0.81		0.57	0.87	
Uniform Delay, d1	16.0	16.0	16.1	16.5	16.1		21.3	12.5		20.5	12.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.1	0.2	0.6	0.1		0.2	3.2		1.9	5.2	
Delay (s)	16.1	16.0	16.3	17.0	16.2		21.5	15.7		22.4	17.2	
Level of Service	B	B	B	B	B		C	B		C	B	
Approach Delay (s)		16.3			16.4			16.1			17.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	11.5
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	0	0	10	280	1240	620	450	670	290	470	920
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91		0.97	0.95	1.00	0.97	0.95
Frpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes					1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt					1.00	0.95		1.00	1.00	0.85	1.00	1.00
Flt Protected					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)					1736	4715		3367	3471	1553	3367	3471
Flt Permitted					0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)					1736	4715		3367	3471	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	10	280	1240	620	450	670	290	470	920
RTOR Reduction (vph)	0	0	0	0	0	90	0	0	0	194	0	0
Lane Group Flow (vph)	0	0	0	0	290	1770	0	450	670	96	470	920
Confl. Peds. (#/hr)	2						2					
Confl. Bikes (#/hr)			5									
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	Perm	NA		Prot	NA	Perm	Prot	NA
Protected Phases						8		5	2		1	6
Permitted Phases				8	8					2		
Actuated Green, G (s)					39.0	39.0		15.7	33.2	33.2	15.8	33.3
Effective Green, g (s)					39.0	39.0		15.7	33.2	33.2	15.8	33.3
Actuated g/C Ratio					0.39	0.39		0.16	0.33	0.33	0.16	0.33
Clearance Time (s)					4.0	4.0		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					677	1838		528	1152	515	531	1155
v/s Ratio Prot						c0.38		0.13	0.19		c0.14	c0.27
v/s Ratio Perm					0.17					0.06		
v/c Ratio					0.43	0.96		0.85	0.58	0.19	0.89	0.80
Uniform Delay, d1					22.3	29.8		41.0	27.7	23.8	41.2	30.3
Progression Factor					1.00	1.00		0.86	1.35	5.10	1.00	1.00
Incremental Delay, d2					0.4	13.3		10.5	1.7	0.7	16.1	5.7
Delay (s)					22.8	43.0		45.5	39.1	122.0	57.3	36.0
Level of Service					C	D		D	D	F	E	D
Approach Delay (s)		0.0				40.3			58.2			41.4
Approach LOS		A				D			E			D

Intersection Summary			
HCM 2000 Control Delay	45.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	160
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1529
Flt Permitted	1.00
Satd. Flow (perm)	1529
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	160
RTOR Reduction (vph)	37
Lane Group Flow (vph)	123
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	5
Heavy Vehicles (%)	4%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	33.3
Effective Green, g (s)	33.3
Actuated g/C Ratio	0.33
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	509
v/s Ratio Prot	
v/s Ratio Perm	0.08
v/c Ratio	0.24
Uniform Delay, d1	24.2
Progression Factor	1.00
Incremental Delay, d2	1.1
Delay (s)	25.3
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	90	300	120	0	70	0	1210	350	30	1170	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00		1.00		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5085	1553	3367		1553		3343	1459	1770	3539	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5085	1553	3367		1553		3343	1459	1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	90	300	120	0	70	0	1210	350	30	1170	0
RTOR Reduction (vph)	0	0	149	0	0	64	0	0	160	0	0	0
Lane Group Flow (vph)	130	90	151	120	0	6	0	1210	190	30	1170	0
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)			5						9			5
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	8%	8%	8%	2%	2%	2%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	15.9	15.9	15.9	8.9		8.9		54.3	54.3	4.9	63.2	
Effective Green, g (s)	15.9	15.9	15.9	8.9		8.9		54.3	54.3	4.9	63.2	
Actuated g/C Ratio	0.16	0.16	0.16	0.09		0.09		0.54	0.54	0.05	0.63	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	281	808	246	299		138		1815	792	86	2236	
v/s Ratio Prot	0.07	0.02		c0.04				c0.36		0.02	c0.33	
v/s Ratio Perm			c0.10			0.00			0.13			
v/c Ratio	0.46	0.11	0.61	0.40		0.05		0.67	0.24	0.35	0.52	
Uniform Delay, d1	38.2	36.0	39.2	43.0		41.7		16.4	12.0	46.0	10.1	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.10	0.40	
Incremental Delay, d2	1.2	0.1	4.5	0.9		0.1		2.0	0.7	1.7	0.6	
Delay (s)	39.4	36.1	43.7	43.9		41.8		18.3	12.7	52.1	4.6	
Level of Service	D	D	D	D		D		B	B	D	A	
Approach Delay (s)		41.3			43.1			17.1			5.8	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	170	40	330	140	910	60	840	340	710	620	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1299	2516		3242	1759	1485	1671	4803	1479	3335	3400	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1299	2516		3242	1759	1485	1671	4803	1479	3335	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	170	40	330	140	910	60	840	340	710	620	50
RTOR Reduction (vph)	0	20	0	0	0	116	0	0	190	0	5	0
Lane Group Flow (vph)	70	190	0	330	140	794	60	840	150	710	665	0
Confl. Peds. (#/hr)			3	3					5	5		
Confl. Bikes (#/hr)						2			6			
Heavy Vehicles (%)	39%	39%	39%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	8.4	12.7		13.5	17.8	34.1	11.9	22.1	35.6	16.3	26.5	
Effective Green, g (s)	8.4	12.7		13.5	17.8	34.1	11.9	22.1	35.6	16.3	26.5	
Actuated g/C Ratio	0.10	0.16		0.17	0.22	0.42	0.15	0.27	0.44	0.20	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	135	396		543	388	701	246	1316	726	674	1117	
v/s Ratio Prot	0.05	0.08		c0.10	0.08	c0.23	0.04	c0.17	0.03	0.21	c0.20	
v/s Ratio Perm						0.31			0.07			
v/c Ratio	0.52	0.48		0.61	0.36	1.13	0.24	0.64	0.21	1.05	0.60	
Uniform Delay, d1	34.2	30.9		31.1	26.6	23.2	30.4	25.7	13.8	32.1	22.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.3	0.9		1.9	0.6	76.8	0.5	1.0	0.1	49.6	0.9	
Delay (s)	37.5	31.9		33.0	27.2	100.0	30.9	26.8	14.0	81.7	23.4	
Level of Service	D	C		C	C	F	C	C	B	F	C	
Approach Delay (s)		33.3			76.6			23.5			53.4	
Approach LOS		C			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	50.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	450	20	20	880	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1852			1861	1695	
Flt Permitted	1.00			0.99	0.98	
Satd. Flow (perm)	1852			1837	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	450	20	20	880	20	20
RTOR Reduction (vph)	2	0	0	0	19	0
Lane Group Flow (vph)	468	0	0	900	21	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	37.5			37.5	5.0	
Effective Green, g (s)	37.5			37.5	5.0	
Actuated g/C Ratio	0.50			0.50	0.07	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	926			918	113	
v/s Ratio Prot	0.25				c0.01	
v/s Ratio Perm				c0.49		
v/c Ratio	0.51			0.98	0.19	
Uniform Delay, d1	12.5			18.4	33.1	
Progression Factor	1.00			0.68	1.00	
Incremental Delay, d2	0.2			12.4	0.3	
Delay (s)	12.7			24.8	33.4	
Level of Service	B			C	C	
Approach Delay (s)	12.7			24.8	33.4	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	580	10	0	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1858			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1858			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	580	10	0	160
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	590	0	0	160
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.0		21.3			21.3
Effective Green, g (s)	1.0		21.3			21.3
Actuated g/C Ratio	0.01		0.28			0.28
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	23		518			520
v/s Ratio Prot	c0.01		c0.32			0.09
v/s Ratio Perm						
v/c Ratio	0.43		1.14			0.31
Uniform Delay, d1	37.4		27.5			21.7
Progression Factor	1.00		1.00			0.86
Incremental Delay, d2	12.6		83.8			0.0
Delay (s)	50.0		111.3			18.7
Level of Service	D		F			B
Approach Delay (s)	50.0		111.3			18.7
Approach LOS	D		F			B

Intersection Summary			
HCM 2000 Control Delay	91.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	76.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	120	50	590	70	40	20	40	300	80	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	120	50	590	70	40	20	40	300	80	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	760	130	420
Volume Left (vph)	120	70	40
Volume Right (vph)	590	20	80
Hadj (s)	-0.40	0.05	-0.06
Departure Headway (s)	5.1	6.4	6.0
Degree Utilization, x	1.0	0.23	0.70
Capacity (veh/h)	695	541	588
Control Delay (s)	79.8	11.2	21.7
Approach Delay (s)	79.8	11.2	21.7
Approach LOS	F	B	C

Intersection Summary				
Delay	54.4			
Level of Service	F			
Intersection Capacity Utilization	76.2%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	20	790	10	20	650
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	20	790	10	20	650
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1487	800			802	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1487	800			802	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	95			98	
cM capacity (veh/h)	133	383			820	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	30	800	670
Volume Left	10	0	20
Volume Right	20	10	0
cSH	236	1700	820
Volume to Capacity	0.13	0.47	0.02
Queue Length 95th (ft)	11	0	2
Control Delay (s)	22.5	0.0	0.6
Lane LOS	C		A
Approach Delay (s)	22.5	0.0	0.6
Approach LOS	C		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	670	290	50	20	700	20	0	0	10	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	0	670	290	50	20	700	20	0	0	10	20
Pedestrians		2										
Lane Width (ft)		12.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1477	1442	22	2110	1452	10	32			20		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1477	1442	22	2110	1452	10	32			20		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	63	100	36	0	32	98	56			100		
cM capacity (veh/h)	27	74	1051	7	73	1075	1583			1609		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1
Volume Total	680	290	70	700	10	10	30
Volume Left	10	290	0	700	0	0	0
Volume Right	670	0	20	0	0	0	20
cSH	678	7	100	1583	1700	1700	1700
Volume to Capacity	1.00	41.52	0.70	0.44	0.01	0.01	0.02
Queue Length 95th (ft)	402	Err	89	58	0	0	0
Control Delay (s)	60.0	Err	99.5	9.1	0.0	0.0	0.0
Lane LOS	F	F	F	A			
Approach Delay (s)	60.0	8074.1		8.8			0.0
Approach LOS	F	F					

Intersection Summary				
Average Delay	1650.2			
Intersection Capacity Utilization	113.5%	ICU Level of Service	H	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	630	510	50	0	0	0	30	90	40	510	120	340
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	630	510	50	0	0	0	30	90	40	510	120	340

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	885	305	160	510	460
Volume Left (vph)	630	0	30	510	0
Volume Right (vph)	0	50	40	0	340
Hadj (s)	0.37	-0.09	0.01	0.50	-0.48
Departure Headway (s)	7.6	7.2	7.5	7.6	6.6
Degree Utilization, x	1.0	0.61	0.34	1.0	0.85
Capacity (veh/h)	478	489	472	469	537
Control Delay (s)	418.6	19.4	14.3	90.3	35.0
Approach Delay (s)	316.3		14.3	64.1	
Approach LOS	F		B	F	

Intersection Summary				
Delay	190.0			
Level of Service	F			
Intersection Capacity Utilization	82.3%	ICU Level of Service	E	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	940	20	20	350	0	20	0	20	230	110	770
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	940	20	20	350	0	20	0	20	230	110	770
Pedestrians								5				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	350			965			2170	1345	485	880	1355	350
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	350			965			2170	1345	485	880	1355	350
tC, single (s)	4.1			4.8			7.5	6.5	7.1	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.5			3.5	4.0	3.4	3.5	4.0	3.3
p0 queue free %	100			96			0	100	96	0	23	0
cM capacity (veh/h)	1220			545			0	147	510	228	143	649

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	627	333	20	350	40	340	770
Volume Left	0	0	20	0	20	230	0
Volume Right	0	20	0	0	20	0	770
cSH	1700	1700	545	1700	0	191	649
Volume to Capacity	0.37	0.20	0.04	0.21	Err	1.78	1.19
Queue Length 95th (ft)	0	0	3	0	Err	598	654
Control Delay (s)	0.0	0.0	11.9	0.0	Err	412.1	121.1
Lane LOS			B		F	F	F
Approach Delay (s)	0.0		0.6		Err	210.3	
Approach LOS					F	F	

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	79.4%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	640	90	290	20	10	40	250	30	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			5.0	5.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	0.89			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1805	1662			1692	1509	1787	1900	1500			
Flt Permitted	0.95	1.00			0.59	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1805	1662			1033	1509	1787	1900	1500			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	640	90	290	20	10	40	250	30	30	0	0	0
RTOR Reduction (vph)	0	103	0	0	0	35	0	0	24	0	0	0
Lane Group Flow (vph)	640	277	0	0	30	5	250	30	6	0	0	0
Confl. Peds. (#/hr)						2			2			
Heavy Vehicles (%)	0%	2%	1%	13%	0%	4%	1%	0%	5%	0%	0%	0%
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases				6		6	4		4			
Actuated Green, G (s)	26.4	37.2			7.3	7.3	13.0	13.0	13.0			
Effective Green, g (s)	25.4	37.2			6.8	6.8	12.5	12.5	12.5			
Actuated g/C Ratio	0.44	0.64			0.12	0.12	0.22	0.22	0.22			
Clearance Time (s)	3.0	4.0			4.5	4.5	3.5	3.5	3.5			
Vehicle Extension (s)	3.0	4.0			2.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	794	1071			121	177	387	411	324			
v/s Ratio Prot	c0.35	c0.17						0.02				
v/s Ratio Perm					0.03	0.00	c0.14		0.00			
v/c Ratio	0.81	0.26			0.25	0.03	0.65	0.07	0.02			
Uniform Delay, d1	14.0	4.4			23.1	22.5	20.6	18.0	17.8			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	6.0	0.2			0.4	0.0	2.8	0.0	0.0			
Delay (s)	20.0	4.5			23.5	22.5	23.4	18.0	17.8			
Level of Service	C	A			C	C	C	B	B			
Approach Delay (s)		14.2			23.0			22.3			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	57.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	880	10	10	250	0	10	0	10	130	10	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.93
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			1.00			0.93			1.00	0.85
Flt Protected		1.00			1.00			0.98			0.96	1.00
Satd. Flow (prot)		1897			1878			1383			1638	1483
Flt Permitted		1.00			0.97			0.98			0.96	1.00
Satd. Flow (perm)		1897			1826			1383			1638	1483
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	880	10	10	250	0	10	0	10	130	10	510
RTOR Reduction (vph)	0	0	0	0	0	0	0	20	0	0	0	417
Lane Group Flow (vph)	0	890	0	0	260	0	0	0	0	0	140	93
Confl. Peds. (#/hr)	3					3						30
Confl. Bikes (#/hr)			2			2						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	50%	4%	100%	1%
Turn Type		NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases				6								4
Actuated Green, G (s)		33.7			33.7			0.9			10.4	10.4
Effective Green, g (s)		33.7			33.7			0.9			10.4	10.4
Actuated g/C Ratio		0.59			0.59			0.02			0.18	0.18
Clearance Time (s)		4.0			4.0			5.0			3.0	3.0
Vehicle Extension (s)		4.0			4.0			3.0			2.0	2.0
Lane Grp Cap (vph)		1121			1079			21			298	270
v/s Ratio Prot		c0.47						c0.00			c0.09	
v/s Ratio Perm					0.14							0.06
v/c Ratio		0.79			0.24			0.02			0.47	0.34
Uniform Delay, d1		9.0			5.6			27.6			20.8	20.3
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		4.2			0.2			0.3			0.4	0.3
Delay (s)		13.1			5.7			27.9			21.3	20.6
Level of Service		B			A			C			C	C
Approach Delay (s)		13.1			5.7			27.9			20.7	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	140	230	650	250	0	80	0	860	160	760	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0		5.0		6.0		5.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00		0.88		0.95	
Frpb, ped/bikes		1.00	0.98	1.00	1.00		1.00		1.00		0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00		1.00		1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85		0.99	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (prot)		1881	1553	3433	1881		1770		2814		3484	
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		0.99	
Satd. Flow (perm)		1881	1553	3433	1881		1770		2814		3484	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	140	230	650	250	0	80	0	860	160	760	60
RTOR Reduction (vph)	0	0	132	0	0	0	0	0	499	0	5	0
Lane Group Flow (vph)	0	140	98	650	250	0	80	0	361	0	975	0
Confl. Peds. (#/hr)			3			30			30			30
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	2%	0%	1%	1%	1%	0%
Turn Type		NA	Perm	Prot	NA		Prot		pt+ov	Split	NA	
Protected Phases		4		3	8		5		3 5	6	6	
Permitted Phases			4									
Actuated Green, G (s)		11.7	11.7	31.2	47.9		6.8		43.0		31.3	
Effective Green, g (s)		11.7	11.7	31.2	47.9		5.8		42.0		31.3	
Actuated g/C Ratio		0.12	0.12	0.31	0.48		0.06		0.42		0.31	
Clearance Time (s)		5.0	5.0	5.0	5.0		4.0				5.0	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0				2.0	
Lane Grp Cap (vph)		220	181	1071	900		102		1181		1090	
v/s Ratio Prot		c0.07		c0.19	0.13		c0.05		0.13		c0.28	
v/s Ratio Perm			0.06									
v/c Ratio		0.64	0.54	0.61	0.28		0.78		0.31		0.89	
Uniform Delay, d1		42.1	41.6	29.2	15.7		46.5		19.3		32.8	
Progression Factor		1.00	1.00	0.97	0.72		1.00		1.00		1.00	
Incremental Delay, d2		4.4	1.8	1.4	0.4		29.5		0.1		9.4	
Delay (s)		46.5	43.4	29.7	11.7		76.0		19.4		42.2	
Level of Service		D	D	C	B		E		B		D	
Approach Delay (s)		44.6			24.7			24.2			42.2	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	820	340	0	0	340	160	560	10	290	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Lane Util. Factor	0.97	1.00			1.00	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3467	1881			1810	1575		1811	1599			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3467	1881			1810	1575		1811	1599			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	820	340	0	0	340	160	560	10	290	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	120	0	0	163	0	0	0
Lane Group Flow (vph)	820	340	0	0	340	40	0	570	127	0	0	0
Confl. Peds. (#/hr)			5	5		2						
Heavy Vehicles (%)	1%	1%	0%	0%	5%	1%	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)	26.4	52.7			21.8	21.8		38.3	38.3			
Effective Green, g (s)	26.4	52.7			21.8	21.8		38.3	38.3			
Actuated g/C Ratio	0.26	0.53			0.22	0.22		0.38	0.38			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	5.0	5.0			5.0	5.0		5.0	5.0			
Lane Grp Cap (vph)	915	991			394	343		693	612			
v/s Ratio Prot	c0.24	0.18			c0.19							
v/s Ratio Perm						0.03		0.31	0.08			
v/c Ratio	0.90	0.34			0.86	0.12		0.82	0.21			
Uniform Delay, d1	35.5	13.7			37.7	31.4		27.8	20.7			
Progression Factor	0.96	1.20			1.00	1.00		1.00	1.00			
Incremental Delay, d2	10.4	0.4			18.8	0.3		10.6	0.8			
Delay (s)	44.5	16.8			56.4	31.7		38.4	21.4			
Level of Service	D	B			E	C		D	C			
Approach Delay (s)		36.3			48.5			32.7			0.0	
Approach LOS		D			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	37.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	940	440	290	1350
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	940	440	290	1350
Pedestrians	3					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						356
pX, platoon unblocked	0.79					
vC, conflicting volume	2418	693			943	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2260	693			943	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			60	
cM capacity (veh/h)	17	390			729	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	627	753	290	675	675
Volume Left	0	0	290	0	0
Volume Right	0	440	0	0	0
cSH	1700	1700	729	1700	1700
Volume to Capacity	0.37	0.44	0.40	0.40	0.40
Queue Length 95th (ft)	0	0	48	0	0
Control Delay (s)	0.0	0.0	13.2	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.3		
Approach LOS					

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	62.9%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	550	120	10	300	820	190	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		3.0	5.5	4.5	
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	0.93	
Flt Protected	1.00	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3539	1583		1767	3539	1665	
Flt Permitted	1.00	1.00		0.31	1.00	0.98	
Satd. Flow (perm)	3539	1583		572	3539	1665	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	550	120	10	300	820	190	230
RTOR Reduction (vph)	0	22	0	0	0	46	0
Lane Group Flow (vph)	550	98	0	310	820	374	0
Confl. Peds. (#/hr)		8		8			15
Turn Type	NA	pt+ov	custom	pm+pt	NA	Prot	
Protected Phases	2	2 4		1	6	4	
Permitted Phases			1	6			
Actuated Green, G (s)	16.1	40.8		30.9	30.9	19.2	
Effective Green, g (s)	16.1	40.8		30.9	30.9	19.2	
Actuated g/C Ratio	0.27	0.68		0.51	0.51	0.32	
Clearance Time (s)	5.5			3.0	5.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	948	1074		528	1819	531	
v/s Ratio Prot	0.16	0.06		c0.12	0.23	c0.22	
v/s Ratio Perm				c0.19			
v/c Ratio	0.58	0.09		0.59	0.45	0.71	
Uniform Delay, d1	19.1	3.3		9.1	9.2	18.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0		1.7	0.2	4.2	
Delay (s)	20.0	3.3		10.7	9.4	22.2	
Level of Service	B	A		B	A	C	
Approach Delay (s)	17.0				9.8	22.2	
Approach LOS	B				A	C	

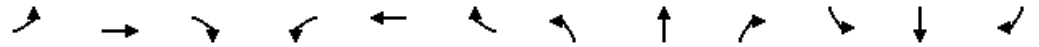
Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	60.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	380	20	160	610	240	30	260	100	190	410	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		1.00			0.95	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		1.00			1.00	0.85		0.96		1.00	0.95	
Flt Protected		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1824			3503	1583		3377		1770	1755	
Flt Permitted		0.99			0.99	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1824			3503	1583		3377		1770	1755	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	380	20	160	610	240	30	260	100	190	410	180
RTOR Reduction (vph)	0	1	0	0	0	52	0	33	0	0	13	0
Lane Group Flow (vph)	0	549	0	0	770	188	0	357	0	190	577	0
Confl. Peds. (#/hr)	5		17	17		5	18		2	2		18
Turn Type	Split	NA		Split	NA	Over	Split	NA		Split	NA	
Protected Phases	2	2		1	1	4	3	3		4	4	
Permitted Phases												
Actuated Green, G (s)		25.0			20.0	30.0		16.2		30.0	30.0	
Effective Green, g (s)		25.0			20.0	30.0		16.2		30.0	30.0	
Actuated g/C Ratio		0.24			0.19	0.29		0.16		0.29	0.29	
Clearance Time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		441			678	460		530		514	510	
v/s Ratio Prot		c0.30			c0.22	0.12		c0.11		0.11	c0.33	
v/s Ratio Perm												
v/c Ratio		1.25			1.14	0.41		0.67		0.37	1.13	
Uniform Delay, d1		39.1			41.6	29.5		41.0		29.1	36.6	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		128.3			78.4	0.6		3.4		0.5	81.4	
Delay (s)		167.4			120.0	30.0		44.4		29.5	118.0	
Level of Service		F			F	C		D		C	F	
Approach Delay (s)		167.4			98.6			44.4			96.5	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	104.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	103.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	660	180	80	530	60	300	840	130	170	440	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			0.99			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1736	1881	1568	1805	1835			3386			3409	1447
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1736	1881	1568	1805	1835			3386			3409	1447
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	660	180	80	530	60	300	840	130	170	440	170
RTOR Reduction (vph)	0	0	70	0	3	0	0	5	0	0	0	0
Lane Group Flow (vph)	190	660	110	80	587	0	0	1265	0	0	610	170
Confl. Peds. (#/hr)			3						26			6
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	4%	1%	1%	0%	2%	0%	7%	1%	0%	3%	5%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Free
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2									Free
Actuated Green, G (s)	16.0	52.0	52.0	7.0	43.0			52.0			25.0	155.5
Effective Green, g (s)	16.0	53.5	53.5	7.0	44.5			53.0			26.0	155.5
Actuated g/C Ratio	0.10	0.34	0.34	0.05	0.29			0.34			0.17	1.00
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			5.0			5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	178	647	539	81	525			1154			569	1447
v/s Ratio Prot	0.11	c0.35		0.04	c0.32			c0.37			c0.18	
v/s Ratio Perm			0.07									0.12
v/c Ratio	1.07	1.02	0.20	0.99	1.12			1.10			1.07	0.12
Uniform Delay, d1	69.8	51.0	36.0	74.2	55.5			51.2			64.8	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	86.5	40.5	0.2	95.0	76.0			56.7			58.5	0.2
Delay (s)	156.2	91.5	36.2	169.2	131.5			108.0			123.3	0.2
Level of Service	F	F	D	F	F			F			F	A
Approach Delay (s)		93.8			136.0			108.0			96.4	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	106.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	155.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	109.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	10	1060	40	20	70	770	210	20	20	20	320	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0				4.0			4.0			4.0
Lane Util. Factor		0.95				0.95			1.00			0.95
Frpb, ped/bikes		1.00				0.99			1.00			0.99
Flpb, ped/bikes		1.00				1.00			0.99			1.00
Frt		0.99				0.97			0.95			0.98
Flt Protected		1.00				1.00			0.98			0.96
Satd. Flow (prot)		3506				3395			1727			3283
Flt Permitted		0.95				0.77			0.83			0.74
Satd. Flow (perm)		3317				2611			1449			2520
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	1060	40	20	70	770	210	20	20	20	320	20
RTOR Reduction (vph)	0	4	0	0	0	30	0	0	16	0	0	23
Lane Group Flow (vph)	0	1106	0	0	0	1040	0	0	44	0	0	377
Confl. Peds. (#/hr)	42		86		86		42	63				
Confl. Bikes (#/hr)			14				2					
Turn Type	Perm	NA			Perm	NA		Perm	NA		Perm	NA
Protected Phases		1				1			2			2
Permitted Phases	1				1			2			2	
Actuated Green, G (s)		42.5				42.5			14.5			14.5
Effective Green, g (s)		42.5				42.5			14.5			14.5
Actuated g/C Ratio		0.65				0.65			0.22			0.22
Clearance Time (s)		4.0				4.0			4.0			4.0
Vehicle Extension (s)		3.0				3.0			3.0			3.0
Lane Grp Cap (vph)		2168				1707			323			562
v/s Ratio Prot												
v/s Ratio Perm		0.33				c0.40			0.03			c0.15
v/c Ratio		0.51				0.61			0.14			0.88dl
Uniform Delay, d1		5.8				6.5			20.2			23.1
Progression Factor		1.00				1.00			1.00			1.00
Incremental Delay, d2		0.9				1.6			0.2			3.1
Delay (s)		6.7				8.1			20.4			26.2
Level of Service		A				A			C			C
Approach Delay (s)		6.7				8.1			20.4			26.2
Approach LOS		A				A			C			C

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	60
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	60
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	63
Confl. Bikes (#/hr)	5
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	840	540	470	570	90	490	490	250	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.5		3.0			4.5				
Lane Util. Factor		0.95	1.00		0.95			0.95				
Frpb, ped/bikes		1.00	0.99		1.00			0.99				
Flpb, ped/bikes		1.00	1.00		1.00			1.00				
Frt		1.00	0.85		0.99			0.97				
Flt Protected		1.00	1.00		0.98			0.98				
Satd. Flow (prot)		3539	1566		3422			3317				
Flt Permitted		1.00	1.00		0.54			0.98				
Satd. Flow (perm)		3539	1566		1898			3317				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	840	540	470	570	90	490	490	250	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	840	540	0	1120	0	0	1195	0	0	0	0
Confl. Peds. (#/hr)	33								26			
Confl. Bikes (#/hr)			20			5			26			
Turn Type		NA	custom	Perm	NA		Perm	NA				
Protected Phases		2	4		6			4				
Permitted Phases			2	6			4					
Actuated Green, G (s)		36.0	57.5		36.0			21.5				
Effective Green, g (s)		36.0	57.5		36.0			21.5				
Actuated g/C Ratio		0.55	0.88		0.55			0.33				
Clearance Time (s)		3.0	4.5		3.0			4.5				
Vehicle Extension (s)		3.0	3.0		3.0			3.0				
Lane Grp Cap (vph)		1960	1493		1051			1097				
v/s Ratio Prot		0.24	0.12									
v/s Ratio Perm			0.23		c0.59			0.36				
v/c Ratio		0.43	0.36		1.60dl			1.09				
Uniform Delay, d1		8.5	0.6		14.5			21.8				
Progression Factor		0.79	1.24		1.00			1.00				
Incremental Delay, d2		0.1	0.1		47.1			54.9				
Delay (s)		6.9	0.9		61.6			76.7				
Level of Service		A	A		E			E				
Approach Delay (s)		4.5			61.6			76.7			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM 2000 Control Delay	45.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	370	90	30	220	190	40	970	30	130	530	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.98			0.97			1.00			0.93	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.94			1.00			0.94	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1778			1697			3504			3066	
Flt Permitted		0.93			0.95			0.69			0.52	
Satd. Flow (perm)		1669			1621			2406			1601	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	370	90	30	220	190	40	970	30	130	530	430
RTOR Reduction (vph)	0	12	0	0	37	0	0	3	0	0	143	0
Lane Group Flow (vph)	0	498	0	0	403	0	0	1037	0	0	947	0
Confl. Peds. (#/hr)	44		63	63		44	59		39	39		59
Confl. Bikes (#/hr)			17			5			14			24
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2 3			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		40.9			25.0			25.0			25.0	
Effective Green, g (s)		36.9			25.0			25.0			25.0	
Actuated g/C Ratio		0.49			0.33			0.33			0.33	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					2.0			2.0			2.0	
Lane Grp Cap (vph)		822			541			803			534	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			c0.25			0.43			c0.59	
v/c Ratio		0.61			0.75			1.29			1.77	
Uniform Delay, d1		13.7			22.1			25.0			25.0	
Progression Factor		0.44			1.00			1.00			1.00	
Incremental Delay, d2		0.5			4.9			140.6			355.4	
Delay (s)		6.5			27.0			165.5			380.4	
Level of Service		A			C			F			F	
Approach Delay (s)		6.5			27.0			165.5			380.4	
Approach LOS		A			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	195.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	74.9	Sum of lost time (s)	13.0
Intersection Capacity Utilization	115.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1040	280	30	350	110	150	880	40	70	390	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Lane Util. Factor		0.95			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.92			0.87		1.00	0.98		1.00	0.89	
Flpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.97		1.00	0.99		1.00	0.97	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3112			1574		1770	1821		1770	1605	
Flt Permitted		0.84			0.49		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2627			777		1770	1821		1770	1605	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	1040	280	30	350	110	150	880	40	70	390	100
RTOR Reduction (vph)	0	22	0	0	10	0	0	2	0	0	10	0
Lane Group Flow (vph)	0	1378	0	0	480	0	150	918	0	70	480	0
Confl. Peds. (#/hr)	230		128	128		230			324			204
Confl. Bikes (#/hr)			5			20			29			14
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)		42.8			42.8		10.2	37.7		4.0	31.5	
Effective Green, g (s)		42.8			42.8		10.2	37.7		4.0	31.5	
Actuated g/C Ratio		0.43			0.43		0.10	0.38		0.04	0.32	
Clearance Time (s)		5.5			5.5		4.5	5.5		4.5	5.5	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		1124			332		180	686		70	505	
v/s Ratio Prot							c0.08	c0.50		0.04	0.30	
v/s Ratio Perm		0.52			c0.62							
v/c Ratio		1.23			1.44		0.83	1.34		1.00	0.95	
Uniform Delay, d1		28.6			28.6		44.1	31.1		48.0	33.5	
Progression Factor		1.00			1.00		0.84	0.51		1.00	1.00	
Incremental Delay, d2		109.6			216.5		3.0	153.2		107.6	27.9	
Delay (s)		138.2			245.1		39.8	169.0		155.6	61.4	
Level of Service		F			F		D	F		F	E	
Approach Delay (s)		138.2			245.1			150.9			73.2	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	146.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	110	660	950	220	290	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.96	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1770	1863	1762		1717	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1770	1863	1762		1717	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	660	950	220	290	110
RTOR Reduction (vph)	0	0	5	0	15	0
Lane Group Flow (vph)	110	660	1165	0	385	0
Confl. Peds. (#/hr)	149			149	44	
Confl. Bikes (#/hr)				9		6
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Actuated Green, G (s)	5.5	65.1	55.1		26.4	
Effective Green, g (s)	5.5	65.1	55.1		26.4	
Actuated g/C Ratio	0.06	0.65	0.55		0.26	
Clearance Time (s)	4.5	4.5	4.5		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	97	1212	970		453	
v/s Ratio Prot	c0.06	0.35	c0.66		c0.22	
v/s Ratio Perm						
v/c Ratio	1.13	0.54	1.20		0.85	
Uniform Delay, d1	47.2	9.4	22.4		34.9	
Progression Factor	0.79	0.55	0.87		1.00	
Incremental Delay, d2	92.0	0.5	91.5		14.2	
Delay (s)	129.2	5.7	111.0		49.1	
Level of Service	F	A	F		D	
Approach Delay (s)		23.4	111.0		49.1	
Approach LOS		C	F		D	

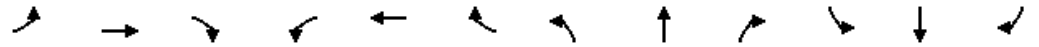
Intersection Summary			
HCM 2000 Control Delay	71.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	840	150	120	740	210	120	680	90	100	540	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frt		0.98			0.97			0.98		1.00	0.96	
Flt Protected		0.99			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1814			1803			3462		1770	3401	
Flt Permitted		0.53			0.72			0.63		0.19	1.00	
Satd. Flow (perm)		975			1312			2199		356	3401	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	840	150	120	740	210	120	680	90	100	540	190
RTOR Reduction (vph)	0	5	0	0	9	0	0	8	0	0	35	0
Lane Group Flow (vph)	0	1235	0	0	1061	0	0	882	0	100	695	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		50.0			50.0			40.0		40.0	40.0	
Effective Green, g (s)		50.0			50.0			40.0		40.0	40.0	
Actuated g/C Ratio		0.50			0.50			0.40		0.40	0.40	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		487			656			879		142	1360	
v/s Ratio Prot											0.20	
v/s Ratio Perm		c1.27			0.81			c0.40		0.28		
v/c Ratio		2.54			1.62			1.00		0.70	0.51	
Uniform Delay, d1		25.0			25.0			30.0		25.1	22.6	
Progression Factor		1.00			1.00			1.00		1.06	1.02	
Incremental Delay, d2		697.2			284.8			31.1		11.9	0.3	
Delay (s)		722.2			309.8			61.1		38.4	23.3	
Level of Service		F			F			E		D	C	
Approach Delay (s)		722.2			309.8			61.1			25.1	
Approach LOS		F			F			E			C	

Intersection Summary			
HCM 2000 Control Delay	323.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	170.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	310	70	90	240	60	40	660	110	90	630	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.99		0.95	1.00		0.98	1.00		0.99	1.00	
Frt		0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1744		1685	1767		1733	1805		1748	1801	
Flt Permitted		0.72		0.28	1.00		0.26	1.00		0.24	1.00	
Satd. Flow (perm)		1272		498	1767		477	1805		435	1801	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	310	70	90	240	60	40	660	110	90	630	100
RTOR Reduction (vph)	0	10	0	0	14	0	0	9	0	0	9	0
Lane Group Flow (vph)	0	440	0	90	286	0	40	761	0	90	721	0
Confl. Peds. (#/hr)	44		78	78		44	84		54	54		84
Confl. Bikes (#/hr)			17			6			11			15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		17.0		17.0	17.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.26		0.26	0.26		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		332		130	462		293	1110		267	1108	
v/s Ratio Prot					0.16			c0.42			0.40	
v/s Ratio Perm		c0.35		0.18			0.08			0.21		
v/c Ratio		1.32		0.69	0.62		0.14	0.69		0.34	0.65	
Uniform Delay, d1		24.0		21.6	21.1		5.2	8.3		6.1	8.0	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		165.5		14.8	2.5		1.0	3.4		3.4	3.0	
Delay (s)		189.5		36.4	23.6		6.2	11.8		9.5	11.0	
Level of Service		F		D	C		A	B		A	B	
Approach Delay (s)		189.5			26.6			11.5			10.8	
Approach LOS		F			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	290	110	10	170	70	280	620	30	90	500	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99			0.99		1.00	1.00		1.00	1.00	0.92
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96			0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1773			3351		1770	1846		1770	1863	1451
Flt Permitted	0.95	1.00			0.94		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1773			3142		1770	1846		1770	1863	1451
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	290	110	10	170	70	280	620	30	90	500	240
RTOR Reduction (vph)	0	15	0	0	43	0	0	2	0	0	0	172
Lane Group Flow (vph)	310	385	0	0	207	0	280	648	0	90	500	68
Confl. Peds. (#/hr)	6		9	9		6	59		29	29		59
Confl. Bikes (#/hr)			6						6			12
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		5	2		1	6	
Permitted Phases				4								6
Actuated Green, G (s)	16.0	42.0			21.0		16.0	36.0		5.0	27.0	27.0
Effective Green, g (s)	16.0	42.0			21.0		16.0	36.0		5.0	27.0	27.0
Actuated g/C Ratio	0.17	0.44			0.22		0.17	0.38		0.05	0.28	0.28
Clearance Time (s)	4.0	3.0			4.0		4.0	5.0		4.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0			2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	298	783			694		298	699		93	529	412
v/s Ratio Prot	c0.18	c0.22					c0.16	0.35		0.05	c0.27	
v/s Ratio Perm					0.07							0.05
v/c Ratio	1.04	0.49			0.30		0.94	0.93		0.97	0.95	0.17
Uniform Delay, d1	39.5	18.9			30.9		39.0	28.2		44.9	33.3	25.5
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	63.0	2.2			1.1		35.6	20.3		81.5	27.7	0.9
Delay (s)	102.5	21.1			32.0		74.6	48.5		126.4	60.9	26.4
Level of Service	F	C			C		E	D		F	E	C
Approach Delay (s)		56.6			32.0			56.4			58.0	
Approach LOS		E			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	54.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	820	140	160	660	20	170	790	260	30	460	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			1.00			0.97			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3404			3475			3370			3422	
Flt Permitted		0.56			0.55			0.76			0.69	
Satd. Flow (perm)		1903			1929			2594			2379	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	820	140	160	660	20	170	790	260	30	460	90
RTOR Reduction (vph)	0	15	0	0	2	0	0	30	0	0	19	0
Lane Group Flow (vph)	0	1085	0	0	838	0	0	1190	0	0	561	0
Confl. Peds. (#/hr)	77		68	68		77	27		14	14		27
Confl. Bikes (#/hr)			5			5			12			11
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			27.0			27.0			35.0	
Effective Green, g (s)		35.0			27.0			27.0			35.0	
Actuated g/C Ratio		0.44			0.34			0.34			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		907			651			875			1092	
v/s Ratio Prot		c0.06									c0.03	
v/s Ratio Perm		c0.46			0.43			c0.46			0.20	
v/c Ratio		1.20			1.40dl			1.36			0.51	
Uniform Delay, d1		22.5			26.5			26.5			16.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		99.3			140.7			169.2			1.7	
Delay (s)		121.8			167.2			195.7			18.1	
Level of Service		F			F			F			B	
Approach Delay (s)		121.8			167.2			195.7			18.1	
Approach LOS		F			F			F			B	

Intersection Summary			
HCM 2000 Control Delay	140.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	125.0%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Volume (vph)	80	10	470	90	40	670	120	20	40	730	10	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0			4.0			4.0	4.0	4.0	
Lane Util. Factor			1.00			1.00			1.00	1.00	1.00	
Frpb, ped/bikes			0.99			0.98			1.00	1.00	0.91	
Flpb, ped/bikes			1.00			1.00			0.99	1.00	1.00	
Frt			0.98			0.98			1.00	1.00	0.85	
Flt Protected			0.99			1.00			0.95	1.00	1.00	
Satd. Flow (prot)			1790			1783			1749	1863	1442	
Flt Permitted			0.80			0.95			0.22	1.00	1.00	
Satd. Flow (perm)			1434			1706			409	1863	1442	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	10	470	90	40	670	120	20	40	730	10	60
RTOR Reduction (vph)	0	0	8	0	0	1	0	0	0	0	51	0
Lane Group Flow (vph)	0	0	642	0	0	849	0	0	40	730	19	0
Confl. Peds. (#/hr)	24	54		56	56		24	54	18			35
Confl. Bikes (#/hr)				2			2					3
Turn Type	Perm	Perm	NA		Perm	NA			Perm	NA	Perm	
Protected Phases			2			6				8		
Permitted Phases	2	2			6				8		8	
Actuated Green, G (s)			33.0			33.0			18.0	18.0	18.0	
Effective Green, g (s)			33.0			33.0			18.0	18.0	18.0	
Actuated g/C Ratio			0.51			0.51			0.28	0.28	0.28	
Clearance Time (s)			4.0			4.0			4.0	4.0	4.0	
Vehicle Extension (s)			3.0			3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)			728			866			113	515	399	
v/s Ratio Prot										c0.39		
v/s Ratio Perm			0.45			c0.50			0.10		0.01	
v/c Ratio			0.88			0.98			0.35	1.42	0.05	
Uniform Delay, d1			14.3			15.7			18.8	23.5	17.2	
Progression Factor			0.62			1.00			1.00	1.00	1.00	
Incremental Delay, d2			11.6			26.2			1.9	199.1	0.1	
Delay (s)			20.5			41.9			20.7	222.6	17.3	
Level of Service			C			D			C	F	B	
Approach Delay (s)			20.5			41.9				195.8		
Approach LOS			C			D				F		

Intersection Summary			
HCM 2000 Control Delay	81.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	125.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Volume (vph)	20	60	350	110	10	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0		
Lane Util. Factor		1.00	1.00			1.00		
Frpb, ped/bikes		1.00	0.99			1.00		
Flpb, ped/bikes		1.00	1.00			1.00		
Frt		1.00	0.96			0.93		
Flt Protected		0.95	1.00			0.98		
Satd. Flow (prot)		1770	1771			1695		
Flt Permitted		0.22	1.00			1.00		
Satd. Flow (perm)		414	1771			1737		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	60	350	110	10	10	10	10
RTOR Reduction (vph)	0	0	17	0	0	0	0	0
Lane Group Flow (vph)	0	80	443	0	0	40	0	0
Confl. Peds. (#/hr)		35		18				
Confl. Bikes (#/hr)				3				
Turn Type	Perm	Perm	NA		Perm	Prot		
Protected Phases			4			9		
Permitted Phases	4	4			9			
Actuated Green, G (s)		18.0	18.0			2.0		
Effective Green, g (s)		18.0	18.0			2.0		
Actuated g/C Ratio		0.28	0.28			0.03		
Clearance Time (s)		4.0	4.0			4.0		
Vehicle Extension (s)		3.0	3.0			3.0		
Lane Grp Cap (vph)		114	490			53		
v/s Ratio Prot			0.25					
v/s Ratio Perm		0.19				c0.02		
v/c Ratio		0.70	0.90			0.75		
Uniform Delay, d1		21.1	22.7			31.3		
Progression Factor		1.00	1.00			1.00		
Incremental Delay, d2		17.7	19.8			45.2		
Delay (s)		38.8	42.5			76.5		
Level of Service		D	D			E		
Approach Delay (s)			41.9			76.5		
Approach LOS			D			E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	230	60	170	350	20	90	760	160	20	380	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	0.99			0.99	
Flpb, ped/bikes	0.98	1.00			1.00		0.99	1.00			1.00	
Frt	1.00	0.97			0.99		1.00	0.97			0.97	
Flt Protected	0.95	1.00			0.98		0.95	1.00			1.00	
Satd. Flow (prot)	1736	1788			3442		1758	1805			1794	
Flt Permitted	0.36	1.00			0.68		0.43	1.00			0.69	
Satd. Flow (perm)	664	1788			2391		790	1805			1241	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	230	60	170	350	20	90	760	160	20	380	110
RTOR Reduction (vph)	0	11	0	0	3	0	0	9	0	0	11	0
Lane Group Flow (vph)	70	279	0	0	537	0	90	911	0	0	499	0
Confl. Peds. (#/hr)	30		15	15		30	27		11	11		27
Confl. Bikes (#/hr)			3			3						5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	28.7	28.7			28.7		46.3	46.3			46.3	
Effective Green, g (s)	28.7	28.7			28.7		46.3	46.3			46.3	
Actuated g/C Ratio	0.34	0.34			0.34		0.54	0.54			0.54	
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	224	603			807		430	983			675	
v/s Ratio Prot		0.16						c0.50				
v/s Ratio Perm	0.11				c0.22		0.11				0.40	
v/c Ratio	0.31	0.46			0.67		0.21	0.93			0.74	
Uniform Delay, d1	20.8	22.1			24.0		9.9	17.8			14.7	
Progression Factor	0.50	0.46			1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.8	0.6			4.3		0.2	14.2			4.2	
Delay (s)	11.1	10.7			28.3		10.2	32.0			19.0	
Level of Service	B	B			C		B	C			B	
Approach Delay (s)		10.8			28.3			30.0			19.0	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	110.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	510	0	0	700	120	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	3539			3539	3204	
Flt Permitted	1.00			1.00	0.98	
Satd. Flow (perm)	3539			3539	3204	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	510	0	0	700	120	140
RTOR Reduction (vph)	0	0	0	0	49	0
Lane Group Flow (vph)	510	0	0	700	211	0
Confl. Bikes (#/hr)		3				2
Turn Type	NA			NA	Prot	
Protected Phases	2			6	8	
Permitted Phases						
Actuated Green, G (s)	41.2			41.2	9.3	
Effective Green, g (s)	41.2			41.2	9.3	
Actuated g/C Ratio	0.69			0.69	0.16	
Clearance Time (s)	4.5			4.5	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2430			2430	496	
v/s Ratio Prot	0.14			c0.20	c0.07	
v/s Ratio Perm						
v/c Ratio	0.21			0.29	0.43	
Uniform Delay, d1	3.4			3.7	22.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.2			0.3	0.6	
Delay (s)	3.6			4.0	23.5	
Level of Service	A			A	C	
Approach Delay (s)	3.6			4.0	23.5	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	1000	0	0	890	20	100	190	100	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			1.00			0.99				
Flpb, ped/bikes		1.00			1.00			0.99				
Frt		1.00			1.00			0.96				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3530			3524			3300				
Flt Permitted		0.87			1.00			0.99				
Satd. Flow (perm)		3087			3524			3300				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	1000	0	0	890	20	100	190	100	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	47	0	0	0	0
Lane Group Flow (vph)	0	1050	0	0	908	0	0	343	0	0	0	0
Confl. Peds. (#/hr)	47		92	92		47	23		33	33		23
Confl. Bikes (#/hr)			6			11			3			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		43.8			43.8			11.2				
Effective Green, g (s)		43.8			43.8			11.2				
Actuated g/C Ratio		0.67			0.67			0.17				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		2.0			2.0			2.0				
Lane Grp Cap (vph)		2080			2374			568				
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.34						0.10				
v/c Ratio		0.50			0.38			0.60				
Uniform Delay, d1		5.2			4.7			24.8				
Progression Factor		1.27			1.00			1.00				
Incremental Delay, d2		0.8			0.5			1.2				
Delay (s)		7.4			5.1			26.1				
Level of Service		A			A			C				
Approach Delay (s)		7.4			5.1			26.1			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	540	250	140	680	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	2.0		
Lane Util. Factor	0.95		1.00	0.95		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	0.95		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	3355		1770	3539		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	3355		1770	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	540	250	140	680	0	0
RTOR Reduction (vph)	135	0	0	0	0	0
Lane Group Flow (vph)	655	0	140	680	0	0
Confl. Peds. (#/hr)		3	3			2
Confl. Bikes (#/hr)		3				
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						
Actuated Green, G (s)	18.0		15.0	40.0		
Effective Green, g (s)	18.0		15.0	40.0		
Actuated g/C Ratio	0.45		0.38	1.00		
Clearance Time (s)	4.0		3.0	2.0		
Lane Grp Cap (vph)	1509		663	3539		
v/s Ratio Prot	c0.20		0.08	c0.19		
v/s Ratio Perm						
v/c Ratio	0.43		0.21	0.19		
Uniform Delay, d1	7.5		8.5	0.0		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.9		0.7	0.1		
Delay (s)	8.4		9.2	0.1		
Level of Service	A		A	A		
Approach Delay (s)	8.4			1.7	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1010	200	90	900	0	0	0	0	50	270	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.95			0.95						0.95	
Frpb, ped/bikes		0.99			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.98			1.00						0.97	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		3415			3520						3361	
Flt Permitted		1.00			0.73						0.99	
Satd. Flow (perm)		3415			2597						3361	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1010	200	90	900	0	0	0	0	50	270	70
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	0	0	30	0
Lane Group Flow (vph)	0	1186	0	0	990	0	0	0	0	0	360	0
Confl. Peds. (#/hr)	54		107	107		54	27		38	38		27
Confl. Bikes (#/hr)			14			3			2			6
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		43.5			43.5						11.5	
Effective Green, g (s)		43.5			43.5						11.5	
Actuated g/C Ratio		0.67			0.67						0.18	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2285			1737						594	
v/s Ratio Prot		0.35										
v/s Ratio Perm					c0.38						0.11	
v/c Ratio		0.52			0.57						0.61	
Uniform Delay, d1		5.4			5.7						24.7	
Progression Factor		1.00			1.04						1.00	
Incremental Delay, d2		0.8			1.3						1.8	
Delay (s)		6.3			7.3						26.4	
Level of Service		A			A						C	
Approach Delay (s)		6.3			7.3			0.0			26.4	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	500	60	150	630	50	90	590	40	80	450	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.99			0.99		1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1818			1820		1750	1838		1770	1854	
Flt Permitted		0.94			0.79		0.21	1.00		0.20	1.00	
Satd. Flow (perm)		1715			1451		392	1838		373	1854	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	500	60	150	630	50	90	590	40	80	450	10
RTOR Reduction (vph)	0	6	0	0	4	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	584	0	0	826	0	90	627	0	80	459	0
Confl. Peds. (#/hr)	12		42	42		12	15		15	15		15
Confl. Bikes (#/hr)						2			3			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		35.5			35.5		20.0	20.0		20.0	20.0	
Effective Green, g (s)		35.5			35.5		20.0	20.0		20.0	20.0	
Actuated g/C Ratio		0.55			0.55		0.31	0.31		0.31	0.31	
Clearance Time (s)		5.5			5.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		936			792		120	565		114	570	
v/s Ratio Prot								c0.34			0.25	
v/s Ratio Perm		0.34			c0.57		0.23			0.21		
v/c Ratio		0.62			1.04		0.75	1.11		0.70	0.80	
Uniform Delay, d1		10.2			14.8		20.2	22.5		19.9	20.7	
Progression Factor		1.00			0.59		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.1			33.8		22.8	71.3		17.7	8.1	
Delay (s)		13.3			42.4		43.1	93.8		37.6	28.8	
Level of Service		B			D		D	F		D	C	
Approach Delay (s)		13.3			42.4			87.5			30.1	
Approach LOS		B			D			F			C	

Intersection Summary			
HCM 2000 Control Delay	45.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	130.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	200	130	210	220	80	60	620	100	20	650	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0			5.0			5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes		0.97		1.00	0.95			0.99			0.99	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.96		1.00	0.96			0.98			0.98	
Flt Protected		0.99		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		1714		1770	1704			1808			1816	
Flt Permitted		0.99		0.95	1.00			0.89			0.97	
Satd. Flow (perm)		1714		1770	1704			1623			1769	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	200	130	210	220	80	60	620	100	20	650	90
RTOR Reduction (vph)	0	19	0	0	15	0	0	6	0	0	6	0
Lane Group Flow (vph)	0	401	0	210	285	0	0	774	0	0	754	0
Confl. Peds. (#/hr)	60		27	27		60	44		78	78		44
Confl. Bikes (#/hr)			3						3			3
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		6	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)		16.0		15.7	15.7			42.3			42.3	
Effective Green, g (s)		16.0		15.7	15.7			42.3			42.3	
Actuated g/C Ratio		0.19		0.18	0.18			0.50			0.50	
Clearance Time (s)		3.0		3.0	3.0			5.0			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		322		326	314			807			880	
v/s Ratio Prot		c0.23		0.12	c0.17							
v/s Ratio Perm								c0.48			0.43	
v/c Ratio		1.25		0.64	0.91			0.96			0.86	
Uniform Delay, d1		34.5		32.1	33.9			20.5			18.7	
Progression Factor		1.00		0.73	0.74			1.00			1.00	
Incremental Delay, d2		134.2		3.5	24.0			23.2			10.6	
Delay (s)		168.7		27.1	49.3			43.7			29.3	
Level of Service		F		C	D			D			C	
Approach Delay (s)		168.7			40.1			43.7			29.3	
Approach LOS		F			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	59.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	121.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	20	290	820	200	200	840	90	260	450	10	50	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes		1.00	1.00	0.93	1.00	1.00	0.91	1.00	1.00		1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.94
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)		1770	3539	1471	1770	3539	1436	1770	3523		1770	3258
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (perm)		1770	3539	1471	1770	3539	1436	1770	3523		1770	3258
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	290	820	200	200	840	90	260	450	10	50	590
RTOR Reduction (vph)	0	0	0	140	0	0	67	0	1	0	0	79
Lane Group Flow (vph)	0	310	820	60	200	840	23	260	459	0	50	871
Confl. Peds. (#/hr)		63		44	44		63	29		41	41	
Confl. Bikes (#/hr)				11			9			5		
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA
Protected Phases	5	5	2		1	6		7	4		3	8
Permitted Phases				2			6					
Actuated Green, G (s)		20.8	34.6	34.6	15.6	29.4	29.4	17.9	41.4		6.4	29.9
Effective Green, g (s)		20.8	34.6	34.6	15.6	29.4	29.4	17.9	41.4		6.4	29.9
Actuated g/C Ratio		0.18	0.30	0.30	0.13	0.25	0.25	0.15	0.36		0.06	0.26
Clearance Time (s)		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)		317	1055	438	238	896	363	273	1257		97	839
v/s Ratio Prot		c0.18	0.23		0.11	c0.24		c0.15	0.13		0.03	c0.27
v/s Ratio Perm				0.04			0.02					
v/c Ratio		0.98	0.78	0.14	0.84	0.94	0.06	0.95	0.36		0.52	1.04
Uniform Delay, d1		47.4	37.2	29.8	49.0	42.4	32.8	48.6	27.6		53.3	43.0
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2		43.9	3.3	0.1	21.8	18.3	0.3	41.1	0.1		1.9	41.5
Delay (s)		91.3	40.5	29.8	70.7	60.7	33.2	89.7	27.6		55.2	84.5
Level of Service		F	D	C	E	E	C	F	C		E	F
Approach Delay (s)			50.7			60.3			50.1			83.1
Approach LOS			D			E			D			F

Intersection Summary			
HCM 2000 Control Delay	60.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	360
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	360
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	29
Confl. Bikes (#/hr)	18
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	340	20	70	430	160	0	860	90	0	780	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.99			0.98	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1643			1601			3101			3090	
Flt Permitted		0.75			0.91			1.00			1.00	
Satd. Flow (perm)		1242			1471			3101			3090	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	340	20	70	430	160	0	860	90	0	780	100
RTOR Reduction (vph)	0	3	0	0	13	0	0	11	0	0	14	0
Lane Group Flow (vph)	0	467	0	0	647	0	0	939	0	0	866	0
Confl. Peds. (#/hr)	11		38	38		11	36		42	42		36
Confl. Bikes (#/hr)						3			17			15
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.4			32.4			24.6			24.6	
Effective Green, g (s)		32.4			32.4			24.6			24.6	
Actuated g/C Ratio		0.50			0.50			0.38			0.38	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		619			733			1173			1169	
v/s Ratio Prot								c0.30			0.28	
v/s Ratio Perm		0.38			c0.44							
v/c Ratio		0.76			0.88			0.80			0.74	
Uniform Delay, d1		13.1			14.6			18.0			17.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.2			12.2			5.8			4.2	
Delay (s)		18.3			26.8			23.8			21.7	
Level of Service		B			C			C			C	
Approach Delay (s)		18.3			26.8			23.8			21.7	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	1120	150	40	420	130	130	840	220	90	640	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.58		0.93		1.00	0.93		1.00	0.97	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	0.97		1.00	0.99	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3516	917		3188		1770	1686		1770	1777	
Flt Permitted		0.90	1.00		0.68		0.19	1.00		0.09	1.00	
Satd. Flow (perm)		3164	917		2174		358	1686		162	1777	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	1120	150	40	420	130	130	840	220	90	640	70
RTOR Reduction (vph)	0	0	37	0	22	0	0	2	0	0	4	0
Lane Group Flow (vph)	0	1170	113	0	568	0	130	1058	0	90	706	0
Confl. Peds. (#/hr)	140		203	203		140	234		228	228		234
Confl. Bikes (#/hr)			20			12			6			14
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.5	34.5		34.5		46.0	46.0		46.0	46.0	
Effective Green, g (s)		34.5	34.5		34.5		46.0	46.0		46.0	46.0	
Actuated g/C Ratio		0.38	0.38		0.38		0.51	0.51		0.51	0.51	
Clearance Time (s)		4.5	4.5		4.5		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1212	351		833		182	861		82	908	
v/s Ratio Prot								c0.63			0.40	
v/s Ratio Perm		c0.37	0.12		0.26		0.36			0.56		
v/c Ratio		0.97	0.32		0.68		0.71	1.23		1.10	0.78	
Uniform Delay, d1		27.2	19.5		23.2		16.9	22.0		22.0	17.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		18.0	0.5		2.3		21.2	113.2		128.4	6.5	
Delay (s)		45.1	20.1		25.5		38.2	135.2		150.4	24.3	
Level of Service		D	C		C		D	F		F	C	
Approach Delay (s)		42.3			25.5			124.6			38.5	
Approach LOS		D			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	64.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	131.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	540	140	50	510	120	270	1130	50	190	940	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3430		1770	3438		1770	3517		1770	3475	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3430		1770	3438		1770	3517		1770	3475	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	540	140	50	510	120	270	1130	50	190	940	130
RTOR Reduction (vph)	0	24	0	0	22	0	0	3	0	0	11	0
Lane Group Flow (vph)	250	656	0	50	608	0	270	1177	0	190	1059	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.0	31.2		6.2	25.4		17.9	34.7		11.4	28.2	
Effective Green, g (s)	12.0	31.2		6.2	25.4		17.9	34.7		11.4	28.2	
Actuated g/C Ratio	0.12	0.31		0.06	0.25		0.18	0.35		0.11	0.28	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	212	1070		109	873		316	1220		201	979	
v/s Ratio Prot	c0.14	0.19		0.03	c0.18		c0.15	0.33		0.11	c0.30	
v/s Ratio Perm												
v/c Ratio	1.18	0.61		0.46	0.70		0.85	0.96		0.95	1.08	
Uniform Delay, d1	44.0	29.3		45.3	33.8		39.8	32.0		44.0	35.9	
Progression Factor	1.00	1.00		1.00	1.00		1.27	0.74		1.00	1.00	
Incremental Delay, d2	118.6	1.0		3.0	2.8		14.0	14.2		47.6	53.6	
Delay (s)	162.6	30.3		48.3	36.6		64.4	38.0		91.6	89.5	
Level of Service	F	C		D	D		E	D		F	F	
Approach Delay (s)		65.9			37.5			42.9			89.8	
Approach LOS		E			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	60.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	830	80	90	720	160	100	1110	150	270	740	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.98		1.00	0.98		1.00	0.97	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3481			3436		1770	3476		1770	3450	
Flt Permitted		0.59			0.58		0.26	1.00		0.14	1.00	
Satd. Flow (perm)		2054			1986		476	3476		252	3450	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	830	80	90	720	160	100	1110	150	270	740	150
RTOR Reduction (vph)	0	6	0	0	17	0	0	11	0	0	17	0
Lane Group Flow (vph)	0	994	0	0	953	0	100	1249	0	270	873	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		36.0			36.0		55.5	55.5		55.5	55.5	
Effective Green, g (s)		36.0			36.0		55.5	55.5		55.5	55.5	
Actuated g/C Ratio		0.36			0.36		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		739			714		264	1929		139	1914	
v/s Ratio Prot								0.36			0.25	
v/s Ratio Perm		c0.48			0.48		0.21			c1.07		
v/c Ratio		1.34			1.34		0.38	0.65		1.94	0.46	
Uniform Delay, d1		32.0			32.0		12.5	15.5		22.2	13.3	
Progression Factor		1.00			1.00		1.00	1.00		0.91	0.26	
Incremental Delay, d2		164.0			160.3		4.1	1.7		433.2	0.3	
Delay (s)		196.0			192.3		16.6	17.2		453.5	3.7	
Level of Service		F			F		B	B		F	A	
Approach Delay (s)		196.0			192.3			17.1			108.4	
Approach LOS		F			F			B			F	

Intersection Summary			
HCM 2000 Control Delay	118.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.5
Intersection Capacity Utilization	126.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	290	30	150	420	130	80	950	180	90	840	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.97	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1823		1710	1768		1770	1768		1770	1820	
Flt Permitted	0.15	1.00		0.32	1.00		0.15	1.00		0.06	1.00	
Satd. Flow (perm)	276	1823		579	1768		275	1768		116	1820	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	290	30	150	420	130	80	950	180	90	840	100
RTOR Reduction (vph)	0	4	0	0	11	0	0	7	0	0	4	0
Lane Group Flow (vph)	50	316	0	150	539	0	80	1123	0	90	936	0
Confl. Peds. (#/hr)	23		62	62		23	17		65	65		17
Confl. Bikes (#/hr)			3			5			17			15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.7	26.7		26.7	26.7		64.0	64.0		64.0	64.0	
Effective Green, g (s)	26.7	26.7		26.7	26.7		64.0	64.0		64.0	64.0	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.64	0.64		0.64	0.64	
Clearance Time (s)	4.3	4.3		4.3	4.3		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	73	486		154	472		176	1131		74	1164	
v/s Ratio Prot		0.17			c0.30			0.64			0.51	
v/s Ratio Perm	0.18			0.26			0.29			c0.77		
v/c Ratio	0.68	0.65		0.97	1.14		0.45	0.99		1.22	0.80	
Uniform Delay, d1	32.9	32.5		36.3	36.6		9.1	17.8		18.0	13.3	
Progression Factor	1.00	1.00		1.00	1.00		0.31	0.69		1.00	1.00	
Incremental Delay, d2	23.4	3.1		64.2	86.5		5.9	20.9		173.9	5.9	
Delay (s)	56.3	35.6		100.5	123.2		8.7	33.1		191.9	19.3	
Level of Service	E	D		F	F		A	C		F	B	
Approach Delay (s)		38.4			118.3			31.5			34.4	
Approach LOS		D			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	51.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.3
Intersection Capacity Utilization	122.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	380	310	280	800	720	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3278	
Flt Permitted	0.95	1.00	0.16	1.00	1.00	
Satd. Flow (perm)	1770	1583	290	3539	3278	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	380	310	280	800	720	170
RTOR Reduction (vph)	0	21	0	0	19	0
Lane Group Flow (vph)	380	289	280	800	871	0
Confl. Peds. (#/hr)	29					114
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	25.8	45.8	51.2	31.2	43.2	
Effective Green, g (s)	25.8	45.8	51.2	31.2	43.2	
Actuated g/C Ratio	0.26	0.46	0.51	0.31	0.43	
Clearance Time (s)	4.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.5	3.5	5.0	5.0	
Lane Grp Cap (vph)	456	772	444	1104	1416	
v/s Ratio Prot	c0.21	0.07	c0.13	c0.23	c0.27	
v/s Ratio Perm		0.11	0.20			
v/c Ratio	0.83	0.37	0.63	0.72	0.62	
Uniform Delay, d1	35.1	17.7	28.1	30.6	22.0	
Progression Factor	1.00	1.00	0.97	0.33	0.99	
Incremental Delay, d2	12.3	0.4	1.6	2.2	1.1	
Delay (s)	47.4	18.1	28.9	12.3	22.8	
Level of Service	D	B	C	B	C	
Approach Delay (s)	34.2			16.6	22.8	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	130	180	900	120	300	730
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		3.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3423		1770	3539
Flt Permitted	0.95	1.00	1.00		0.28	1.00
Satd. Flow (perm)	1770	1583	3423		523	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	180	900	120	300	730
RTOR Reduction (vph)	0	134	10	0	0	0
Lane Group Flow (vph)	130	46	1010	0	300	730
Confl. Peds. (#/hr)	41			54		
Confl. Bikes (#/hr)				5		
Turn Type	Prot	Perm	NA		custom	NA
Protected Phases	8		2			6
Permitted Phases		8			1	
Actuated Green, G (s)	25.8	25.8	31.2		32.0	43.2
Effective Green, g (s)	25.8	25.8	31.2		32.0	43.2
Actuated g/C Ratio	0.26	0.26	0.31		0.32	0.43
Clearance Time (s)	4.0	4.0	4.0		3.0	4.0
Vehicle Extension (s)	3.0	3.0	5.0		3.5	5.0
Lane Grp Cap (vph)	456	408	1067		167	1528
v/s Ratio Prot	c0.07		c0.30			0.21
v/s Ratio Perm		0.03			c0.57	
v/c Ratio	0.29	0.11	0.95		1.80	0.48
Uniform Delay, d1	29.7	28.4	33.6		34.0	20.3
Progression Factor	1.00	1.00	1.00		0.86	0.59
Incremental Delay, d2	0.3	0.1	17.4		377.8	0.9
Delay (s)	30.1	28.5	51.0		407.0	12.9
Level of Service	C	C	D		F	B
Approach Delay (s)	29.1		51.0			127.7
Approach LOS	C		D			F

Intersection Summary			
HCM 2000 Control Delay	81.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	1110	200	220	1050	190	200	580	150	170	430	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.85	1.00	1.00	0.78	1.00	0.99		1.00	0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1348	1770	3539	1232	1770	3385		1770	3203	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1348	1770	3539	1232	1770	3385		1770	3203	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	1110	200	220	1050	190	200	580	150	170	430	260
RTOR Reduction (vph)	0	0	138	0	0	102	0	19	0	0	79	0
Lane Group Flow (vph)	310	1110	62	220	1050	88	200	711	0	170	611	0
Confl. Peds. (#/hr)			93			144			51			84
Confl. Bikes (#/hr)			11			14			3			18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4						
Actuated Green, G (s)	22.2	34.3	34.3	17.7	30.3	30.3	16.1	27.9		15.0	26.8	
Effective Green, g (s)	22.2	34.3	34.3	17.7	30.3	30.3	16.1	27.9		15.0	26.8	
Actuated g/C Ratio	0.20	0.31	0.31	0.16	0.28	0.28	0.15	0.25		0.14	0.24	
Clearance Time (s)	3.5	4.0	4.0	3.5	3.5	3.5	3.5	4.0		3.5	4.0	
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	357	1587	420	285	975	339	259	859		241	781	
v/s Ratio Prot	c0.18	0.22		0.12	c0.30		c0.11	c0.21		0.10	0.19	
v/s Ratio Perm			0.05			0.07						
v/c Ratio	0.87	0.70	0.15	0.77	1.08	0.26	0.77	0.83		0.71	0.78	
Uniform Delay, d1	42.4	33.3	27.3	44.2	39.8	31.0	45.1	38.7		45.3	38.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	18.9	1.4	0.2	12.2	51.9	0.4	12.2	6.6		7.4	5.1	
Delay (s)	61.3	34.6	27.4	56.4	91.7	31.5	57.3	45.4		52.8	43.9	
Level of Service	E	C	C	E	F	C	E	D		D	D	
Approach Delay (s)		38.8			78.5			47.9			45.7	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	109.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	350	910	300	250	520	190	170	730	280	320	590	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.92	1.00	0.98		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3336		1770	3539	1461	1770	3327		1770	3305	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3336		1770	3539	1461	1770	3327		1770	3305	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	350	910	300	250	520	190	170	730	280	320	590	180
RTOR Reduction (vph)	0	25	0	0	0	121	0	32	0	0	21	0
Lane Group Flow (vph)	350	1185	0	250	520	69	170	979	0	320	749	0
Confl. Peds. (#/hr)			59			57			29			72
Confl. Bikes (#/hr)			9						12			12
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases						4						
Actuated Green, G (s)	25.5	42.5		17.5	34.5	34.5	16.4	32.0		20.0	35.6	
Effective Green, g (s)	25.5	42.5		17.5	34.5	34.5	16.4	32.0		20.0	35.6	
Actuated g/C Ratio	0.20	0.33		0.14	0.27	0.27	0.13	0.25		0.16	0.28	
Clearance Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	3.0	3.0	2.0	2.0		2.0	3.0	
Lane Grp Cap (vph)	352	1107		241	953	393	226	831		276	919	
v/s Ratio Prot	c0.20	c0.36		0.14	0.15		0.10	c0.29		c0.18	0.23	
v/s Ratio Perm						0.05						
v/c Ratio	0.99	1.07		1.04	0.55	0.17	0.75	1.18		1.16	0.82	
Uniform Delay, d1	51.2	42.8		55.2	40.0	35.8	53.8	48.0		54.0	43.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	46.1	48.1		68.0	0.6	0.2	11.8	92.3		104.3	7.9	
Delay (s)	97.3	90.9		123.3	40.7	36.1	65.6	140.3		158.3	51.0	
Level of Service	F	F		F	D	D	E	F		F	D	
Approach Delay (s)		92.3			61.3			129.6			82.5	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	93.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	128.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	111.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	680	560	40	310	50	540	870	120	70	610	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1758	3539	1482	1742	3455		1770	3452		1770	3474	
Flt Permitted	0.50	1.00	1.00	0.28	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	931	3539	1482	509	3455		1770	3452		1770	3474	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	680	560	40	310	50	540	870	120	70	610	60
RTOR Reduction (vph)	0	0	239	0	15	0	0	11	0	0	9	0
Lane Group Flow (vph)	180	680	321	40	345	0	540	979	0	70	661	0
Confl. Peds. (#/hr)	12		53	53		12			44			33
Confl. Bikes (#/hr)			8						8			18
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	27.3	27.3	27.3	27.3	27.3		15.5	29.7		6.8	21.0	
Effective Green, g (s)	27.3	27.3	27.3	27.3	27.3		15.5	29.7		6.8	21.0	
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.36		0.20	0.39		0.09	0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	335	1274	533	183	1244		361	1352		158	962	
v/s Ratio Prot		0.19			0.10		c0.31	0.28		0.04	c0.19	
v/s Ratio Perm	0.19		c0.22	0.08								
v/c Ratio	0.54	0.53	0.60	0.22	0.28		1.50	0.72		0.44	0.69	
Uniform Delay, d1	19.2	19.2	19.8	16.8	17.2		30.1	19.6		32.7	24.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.4	1.9	0.6	0.1		237.3	2.0		2.0	2.1	
Delay (s)	20.9	19.6	21.7	17.4	17.4		267.4	21.5		34.7	26.5	
Level of Service	C	B	C	B	B		F	C		C	C	
Approach Delay (s)		20.6			17.4			108.3			27.3	
Approach LOS		C			B			F			C	

Intersection Summary			
HCM 2000 Control Delay	54.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	75.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	190	50	200	100	200	110	1180	180	240	860	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.92		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.94	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.90		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	1792		1749	1537		1745	3437		1761	3436	
Flt Permitted	0.37	1.00		0.46	1.00		0.25	1.00		0.14	1.00	
Satd. Flow (perm)	646	1792		854	1537		450	3437		255	3436	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	190	50	200	100	200	110	1180	180	240	860	120
RTOR Reduction (vph)	0	11	0	0	56	0	0	13	0	0	12	0
Lane Group Flow (vph)	170	229	0	200	244	0	110	1347	0	240	968	0
Confl. Peds. (#/hr)	105		17	17		105	38		27	27		38
Confl. Bikes (#/hr)			3			5			6			8
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.5	24.5		24.5	24.5		56.1	56.1		56.1	56.1	
Effective Green, g (s)	24.5	24.5		24.5	24.5		56.1	56.1		56.1	56.1	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.63	0.63		0.63	0.63	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	495		236	425		284	2176		161	2175	
v/s Ratio Prot		0.13			0.16			0.39			0.28	
v/s Ratio Perm	c0.26			0.23			0.24			c0.94		
v/c Ratio	0.96	0.46		0.85	0.57		0.39	0.62		1.49	0.45	
Uniform Delay, d1	31.5	26.6		30.3	27.6		7.9	9.8		16.2	8.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	53.9	0.7		23.5	1.9		0.9	0.5		250.7	0.1	
Delay (s)	85.4	27.3		53.8	29.4		8.8	10.3		267.0	8.4	
Level of Service	F	C		D	C		A	B		F	A	
Approach Delay (s)		51.4			39.2			10.2			59.3	
Approach LOS		D			D			B			E	

Intersection Summary			
HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	88.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	90	760	420	1250	950	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.88	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	1770	3539	3492	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	1770	3539	3492	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	760	420	1250	950	80
RTOR Reduction (vph)	0	60	0	0	5	0
Lane Group Flow (vph)	90	700	420	1250	1025	0
Confl. Peds. (#/hr)	21					8
Confl. Bikes (#/hr)						6
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 9	9	2	6	
Permitted Phases						
Actuated Green, G (s)	15.6	49.6	30.0	71.6	37.6	
Effective Green, g (s)	15.6	49.6	30.0	71.6	37.6	
Actuated g/C Ratio	0.16	0.52	0.32	0.75	0.39	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	290	1452	557	2661	1379	
v/s Ratio Prot	0.05	c0.25	c0.24	0.35	c0.29	
v/s Ratio Perm						
v/c Ratio	0.31	0.48	0.75	0.47	0.74	
Uniform Delay, d1	35.1	14.6	29.3	4.5	24.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.3	5.7	0.1	2.2	
Delay (s)	35.7	14.8	35.0	4.7	26.9	
Level of Service	D	B	D	A	C	
Approach Delay (s)	17.0			12.3	26.9	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	95.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	400	130	50	290	20	50	330	80	20	550	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	0.98	1.00		0.98	1.00		0.98	1.00		0.99	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	1761		1740	1838		1730	1794		1753	1767	
Flt Permitted	0.46	1.00		0.22	1.00		0.20	1.00		0.43	1.00	
Satd. Flow (perm)	843	1761		404	1838		369	1794		790	1767	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	400	130	50	290	20	50	330	80	20	550	140
RTOR Reduction (vph)	0	18	0	0	4	0	0	13	0	0	14	0
Lane Group Flow (vph)	120	512	0	50	306	0	50	397	0	20	676	0
Confl. Peds. (#/hr)	26		36	36		26	78		18	18		78
Confl. Bikes (#/hr)			11						3			15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Effective Green, g (s)	25.0	25.0		25.0	25.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.51	0.51		0.51	0.51	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lane Grp Cap (vph)	324	677		155	706		187	910		401	897	
v/s Ratio Prot		c0.29			0.17			0.22			c0.38	
v/s Ratio Perm	0.14			0.12			0.14			0.03		
v/c Ratio	0.37	0.76		0.32	0.43		0.27	0.44		0.05	0.75	
Uniform Delay, d1	14.4	17.4		14.1	14.8		9.1	10.1		8.1	12.8	
Progression Factor	0.57	0.54		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	3.3		5.4	1.9		3.5	1.5		0.2	5.8	
Delay (s)	9.6	12.6		19.5	16.7		12.6	11.6		8.3	18.6	
Level of Service	A	B		B	B		B	B		A	B	
Approach Delay (s)		12.1			17.1			11.7			18.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	740	0	0	990	90	640	400	270	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.5	3.5				
Lane Util. Factor		0.91			0.95		1.00	0.95				
Frpb, ped/bikes		1.00			1.00		1.00	0.99				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.99		1.00	0.94				
Flt Protected		1.00			1.00		0.95	1.00				
Satd. Flow (prot)		5085			3495		1770	3288				
Flt Permitted		1.00			1.00		0.95	1.00				
Satd. Flow (perm)		5085			3495		1770	3288				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	740	0	0	990	90	640	400	270	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	55	0	0	0	0
Lane Group Flow (vph)	0	740	0	0	1069	0	640	615	0	0	0	0
Confl. Peds. (#/hr)									17			
Confl. Bikes (#/hr)									11			
Turn Type		NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases							8					
Actuated Green, G (s)		25.8			25.8		31.7	31.7				
Effective Green, g (s)		25.8			25.8		31.7	31.7				
Actuated g/C Ratio		0.40			0.40		0.49	0.49				
Clearance Time (s)		4.0			4.0		3.5	3.5				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)		2018			1387		863	1603				
v/s Ratio Prot		0.15			c0.31			0.19				
v/s Ratio Perm							c0.36					
v/c Ratio		0.37			0.77		0.74	0.38				
Uniform Delay, d1		13.8			17.0		13.4	10.5				
Progression Factor		0.65			1.00		1.00	1.00				
Incremental Delay, d2		0.1			0.3		5.7	0.7				
Delay (s)		9.1			17.3		19.1	11.2				
Level of Service		A			B		B	B				
Approach Delay (s)		9.1			17.3			15.0			0.0	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	450	50	110	460	20	210	960	230	0	1260	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			0.95	1.00
Frt	1.00	0.98			0.99		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1835			3489		1770	4938			3539	1583
Flt Permitted	0.19	1.00			0.75		0.95	1.00			1.00	1.00
Satd. Flow (perm)	349	1835			2656		1770	4938			3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	450	50	110	460	20	210	960	230	0	1260	510
RTOR Reduction (vph)	0	4	0	0	2	0	0	40	0	0	0	243
Lane Group Flow (vph)	340	496	0	0	588	0	210	1150	0	0	1260	267
Turn Type	pm+pt	NA		Perm	NA		Prot	NA			NA	Perm
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6								4
Actuated Green, G (s)	39.0	39.0			22.5		12.0	50.0			34.0	34.0
Effective Green, g (s)	39.0	39.0			22.5		12.0	50.0			34.0	34.0
Actuated g/C Ratio	0.39	0.39			0.22		0.12	0.50			0.34	0.34
Clearance Time (s)	4.0	6.0			5.5		4.0	5.0			5.0	5.0
Lane Grp Cap (vph)	320	715			597		212	2469			1203	538
v/s Ratio Prot	c0.14	0.27					c0.12	0.23			c0.36	
v/s Ratio Perm	c0.28				0.22							0.17
v/c Ratio	1.06	0.69			0.98		0.99	0.47			1.05	0.50
Uniform Delay, d1	25.0	25.5			38.6		43.9	16.3			33.0	26.2
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	67.8	5.5			33.2		59.4	0.6			39.3	3.3
Delay (s)	92.8	31.0			71.8		103.4	16.9			72.3	29.5
Level of Service	F	C			E		F	B			E	C
Approach Delay (s)		56.0			71.8			29.9			59.9	
Approach LOS		E			E			C			E	

Intersection Summary			
HCM 2000 Control Delay	51.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	106.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	10	10	10	410	10	140	10	10	1240	380	20	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		1.00			1.00				0.91			1.00
Frpb, ped/bikes		0.99			1.00				0.98			1.00
Flpb, ped/bikes		1.00			1.00				1.00			1.00
Frt		0.95			0.97				0.97			1.00
Flt Protected		0.98			0.96				1.00			0.95
Satd. Flow (prot)		1741			1727				4805			1770
Flt Permitted		0.86			0.76				0.90			0.10
Satd. Flow (perm)		1523			1369				4346			189
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	10	410	10	140	10	10	1240	380	20	180
RTOR Reduction (vph)	0	6	0	0	13	0	0	0	60	0	0	0
Lane Group Flow (vph)	0	24	0	0	547	0	0	0	1580	0	0	200
Confl. Peds. (#/hr)			2	2						20		5
Confl. Bikes (#/hr)						2						
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		custom	pm+pt
Protected Phases		4			8				2			1
Permitted Phases	4			8			2	2			1	6
Actuated Green, G (s)		35.5			35.5				35.0			46.0
Effective Green, g (s)		35.5			35.5				35.0			46.0
Actuated g/C Ratio		0.39			0.39				0.39			0.51
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		2.0			2.0				2.0			2.0
Lane Grp Cap (vph)		597			537				1680			209
v/s Ratio Prot												c0.07
v/s Ratio Perm		0.02			c0.40				0.36			c0.42
v/c Ratio		0.04			1.02				0.94			0.96
Uniform Delay, d1		17.0			27.5				26.7			19.8
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		0.0			43.4				11.8			49.2
Delay (s)		17.0			70.9				38.5			69.0
Level of Service		B			E				D			E
Approach Delay (s)		17.0			70.9				38.5			
Approach LOS		B			E				D			

Intersection Summary			
HCM 2000 Control Delay	36.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	109.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	1380	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	5085	
Flt Permitted	1.00	
Satd. Flow (perm)	5085	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	1380	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	1380	0
Confl. Peds. (#/hr)		2
Confl. Bikes (#/hr)		12
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	46.0	
Effective Green, g (s)	46.0	
Actuated g/C Ratio	0.51	
Clearance Time (s)	4.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	2584	
v/s Ratio Prot	0.27	
v/s Ratio Perm		
v/c Ratio	0.53	
Uniform Delay, d1	15.0	
Progression Factor	1.00	
Incremental Delay, d2	0.8	
Delay (s)	15.8	
Level of Service	B	
Approach Delay (s)	22.5	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	400	300	120	280	120	170	910	150	120	1110	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.94		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1743		1770	3380		1770	3539	1583	1770	3539	1583
Flt Permitted	0.49	1.00		0.15	1.00		0.25	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	916	1743		276	3380		460	3539	1583	584	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	400	300	120	280	120	170	910	150	120	1110	490
RTOR Reduction (vph)	0	32	0	0	57	0	0	0	93	0	0	184
Lane Group Flow (vph)	280	668	0	120	343	0	170	910	57	120	1110	306
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	27.0	27.0		27.0	27.0		25.9	25.9	25.9	26.7	24.7	24.7
Effective Green, g (s)	27.0	27.0		27.0	27.0		25.9	25.9	25.9	26.7	24.7	24.7
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.35	0.35	0.35	0.36	0.33	0.33
Clearance Time (s)	5.0	5.0		5.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	332	632		100	1226		330	1231	551	345	1174	525
v/s Ratio Prot		0.38			0.10		0.07	c0.26		0.04	c0.31	
v/s Ratio Perm	0.31			c0.43			0.11		0.04	0.09		0.19
v/c Ratio	0.84	1.06		1.20	0.28		0.52	0.74	0.10	0.35	0.95	0.58
Uniform Delay, d1	21.8	23.7		23.7	16.8		18.6	21.3	16.4	19.2	24.2	20.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.2	51.5		153.4	0.6		0.6	4.0	0.4	0.2	16.1	4.7
Delay (s)	44.0	75.2		177.1	17.4		19.2	25.3	16.8	19.5	40.3	25.3
Level of Service	D	E		F	B		B	C	B	B	D	C
Approach Delay (s)		66.3			54.2			23.4			34.5	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	830	950	170	70	430	100	130	220	60	340	400	890
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91			0.95		1.00	0.95		1.00	1.00	0.88
Frpb, ped/bikes	1.00	0.99			0.95		1.00	0.96		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98			0.97		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3279			3271		1770	3286		1770	1863	2787
Flt Permitted	0.95	0.57			0.65		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	1886			2143		1770	3286		1770	1863	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	830	950	170	70	430	100	130	220	60	340	400	890
RTOR Reduction (vph)	0	10	0	0	15	0	0	23	0	0	0	648
Lane Group Flow (vph)	639	1301	0	0	585	0	130	257	0	340	400	242
Confl. Peds. (#/hr)			29			201			116			
Confl. Bikes (#/hr)			2			21			12			
Turn Type	Prot	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases				8								6
Actuated Green, G (s)	28.0	60.0			28.0		9.0	21.7		15.0	27.7	27.7
Effective Green, g (s)	28.0	60.0			28.0		9.0	21.7		15.0	27.7	27.7
Actuated g/C Ratio	0.26	0.55			0.26		0.08	0.20		0.14	0.25	0.25
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	414	1399			552		146	655		244	474	710
v/s Ratio Prot	c0.40	0.24					0.07	0.08		c0.19	c0.21	
v/s Ratio Perm		0.27			c0.27							0.09
v/c Ratio	1.54	0.93			1.06		0.89	0.39		1.39	0.84	0.34
Uniform Delay, d1	40.4	22.4			40.4		49.4	37.8		46.9	38.4	33.1
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	256.3	11.2			55.2		43.7	0.4		200.2	12.9	0.3
Delay (s)	296.7	33.6			95.6		93.1	38.2		247.0	51.3	33.3
Level of Service	F	C			F		F	D		F	D	C
Approach Delay (s)		119.8			95.6			55.6			82.3	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	97.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	108.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	108.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	SEL	SER	SER2
Lane Configurations										
Volume (vph)	820	80	20	920	150	170	20	20	100	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0		3.0		3.0
Lane Util. Factor	0.95			0.95		0.91		1.00		0.95
Frt	0.99			1.00		0.99		0.87		0.85
Flt Protected	1.00			1.00		0.98		0.99		1.00
Satd. Flow (prot)	3492			3535		4932		1616		1504
Flt Permitted	1.00			0.92		0.98		0.99		1.00
Satd. Flow (perm)	3492			3272		4932		1616		1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	820	80	20	920	150	170	20	20	100	20
RTOR Reduction (vph)	8	0	0	0	0	0	0	47	0	15
Lane Group Flow (vph)	892	0	0	940	0	340	0	75	0	3
Turn Type	NA		Perm	NA	Perm	NA		Prot		Perm
Protected Phases	2			2		6		4		
Permitted Phases			2		6					4
Actuated Green, G (s)	38.0			38.0		29.0		17.0		17.0
Effective Green, g (s)	38.0			38.0		29.0		17.0		17.0
Actuated g/C Ratio	0.40			0.40		0.31		0.18		0.18
Clearance Time (s)	4.0			4.0		4.0		3.0		3.0
Lane Grp Cap (vph)	1396			1308		1505		289		269
v/s Ratio Prot	0.26							c0.05		
v/s Ratio Perm				c0.29		0.07				0.00
v/c Ratio	0.64			0.72		0.23		0.26		0.01
Uniform Delay, d1	23.0			24.0		24.6		33.6		32.1
Progression Factor	1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	2.3			3.4		0.3		2.2		0.1
Delay (s)	25.2			27.4		25.0		35.8		32.2
Level of Service	C			C		C		D		C
Approach Delay (s)	25.2			27.4		25.0		35.3		
Approach LOS	C			C		C		D		

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	420	30	20	320	50	30	120	30	190	290	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			0.99			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.96	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1827			1814			1795			1731	
Flt Permitted		0.84			0.97			0.87			0.86	
Satd. Flow (perm)		1540			1762			1571			1502	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	420	30	20	320	50	30	120	30	190	290	210
RTOR Reduction (vph)	0	3	0	0	8	0	0	11	0	0	24	0
Lane Group Flow (vph)	0	537	0	0	382	0	0	169	0	0	666	0
Confl. Peds. (#/hr)	11		5	5		11	15		6	6		15
Confl. Bikes (#/hr)			12			12			9			26
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		23.0			23.0			33.0			33.0	
Effective Green, g (s)		23.0			23.0			33.0			33.0	
Actuated g/C Ratio		0.35			0.35			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		544			623			797			762	
v/s Ratio Prot												
v/s Ratio Perm		c0.35			0.22			0.11			c0.44	
v/c Ratio		0.99			0.61			0.21			0.87	
Uniform Delay, d1		20.8			17.3			8.8			14.2	
Progression Factor		1.06			1.16			1.00			1.00	
Incremental Delay, d2		18.8			3.9			0.6			13.3	
Delay (s)		40.8			24.0			9.4			27.4	
Level of Service		D			C			A			C	
Approach Delay (s)		40.8			24.0			9.4			27.4	
Approach LOS		D			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	125.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	350	120	50	370	180	90	1190	10	160	1950	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.91	1.00
Frt		0.97			0.96		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1794			1780		1770	3535		1770	5085	1583
Flt Permitted		0.81			0.93		0.15	1.00		0.15	1.00	1.00
Satd. Flow (perm)		1472			1662		287	3535		287	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	350	120	50	370	180	90	1190	10	160	1950	240
RTOR Reduction (vph)	0	1	0	0	10	0	0	1	0	0	0	130
Lane Group Flow (vph)	0	569	0	0	590	0	90	1199	0	160	1950	110
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		31.0			31.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.48			0.48		0.40	0.40		0.40	0.40	0.40
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		702			792		114	1414		114	2034	633
v/s Ratio Prot								0.34			0.38	
v/s Ratio Perm		c0.39			0.35		0.31			c0.56		0.07
v/c Ratio		0.81			0.75		0.79	0.85		1.40	0.96	0.17
Uniform Delay, d1		14.5			13.8		17.1	17.7		19.5	19.0	12.6
Progression Factor		1.00			0.97		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		9.9			4.8		41.2	6.5		225.8	12.3	0.6
Delay (s)		24.4			18.1		58.3	24.2		245.3	31.3	13.2
Level of Service		C			B		E	C		F	C	B
Approach Delay (s)		24.4			18.1			26.6			44.0	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	280	1350	560	1110	0	0	0	200	430	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0				5.0	5.0	
Lane Util. Factor	1.00	0.76	0.97	1.00				1.00	0.95	
Frt	1.00	0.85	1.00	0.85				1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3610	3433	1583				1770	3516	
Flt Permitted	0.95	1.00	0.95	1.00				0.95	1.00	
Satd. Flow (perm)	1770	3610	3433	1583				1770	3516	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	1350	560	1110	0	0	0	200	430	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	280	1350	560	1110	0	0	0	200	445	0
Turn Type	Prot	Prot	Perm	Free				Split	NA	
Protected Phases	5	2						4	4	
Permitted Phases			6	Free						
Actuated Green, G (s)	14.8	33.9	14.1	65.0				21.1	21.1	
Effective Green, g (s)	14.8	33.9	14.1	65.0				21.1	21.1	
Actuated g/C Ratio	0.23	0.52	0.22	1.00				0.32	0.32	
Clearance Time (s)	5.0	5.0	5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)	403	1882	744	1583				574	1141	
v/s Ratio Prot	0.16	0.37						0.11	0.13	
v/s Ratio Perm			0.16	c0.70						
v/c Ratio	0.69	0.72	0.75	0.70				0.35	0.39	
Uniform Delay, d1	23.0	11.9	23.8	0.0				16.7	17.0	
Progression Factor	1.26	0.75	1.00	1.00				1.00	1.00	
Incremental Delay, d2	3.4	0.9	4.3	2.6				1.7	1.0	
Delay (s)	32.5	9.8	28.1	2.6				18.4	18.0	
Level of Service	C	A	C	A				B	B	
Approach Delay (s)	13.7		11.2			0.0			18.1	
Approach LOS	B		B			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1070	390	670	720	10	440	0	880	0	30	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00		0.95	
Frt		0.96		1.00	1.00		1.00		0.85		0.93	
Flt Protected		1.00		0.95	1.00		0.95		1.00		1.00	
Satd. Flow (prot)		3397		1770	3532		1770		1583		3274	
Flt Permitted		1.00		0.95	1.00		0.72		1.00		1.00	
Satd. Flow (perm)		3397		1770	3532		1333		1583		3274	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1070	390	670	720	10	440	0	880	0	30	30
RTOR Reduction (vph)	0	37	0	0	1	0	0	0	334	0	23	0
Lane Group Flow (vph)	0	1423	0	670	729	0	440	0	546	0	37	0
Turn Type		NA		Prot	NA		Perm		Perm		NA	
Protected Phases		6		5	2			4			4	
Permitted Phases	6						4		4	4		
Actuated Green, G (s)		41.0		24.5	69.5		22.0		22.0		22.0	
Effective Green, g (s)		41.0		24.5	69.5		22.0		22.0		22.0	
Actuated g/C Ratio		0.41		0.24	0.70		0.22		0.22		0.22	
Clearance Time (s)		4.0		4.0	4.0		4.5		4.5		4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)		1392		433	2454		293		348		720	
v/s Ratio Prot		c0.42		c0.38	0.21						0.01	
v/s Ratio Perm							0.33		c0.34			
v/c Ratio		1.02		1.55	0.30		1.50		1.57		0.05	
Uniform Delay, d1		29.5		37.8	5.9		39.0		39.0		30.8	
Progression Factor		1.00		1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2		29.9		257.5	0.1		242.9		269.8		0.0	
Delay (s)		59.4		295.3	5.9		281.9		308.8		30.8	
Level of Service		E		F	A		F		F		C	
Approach Delay (s)		59.4			144.4			299.8			30.8	
Approach LOS		E			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	161.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	120.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	620	150	140	690	110	170	1120	180	80	1120	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.98			0.98		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3424			3451		1770	3466		1770	3469	
Flt Permitted		0.56			0.58		0.12	1.00		0.12	1.00	
Satd. Flow (perm)		1945			2006		233	3466		233	3469	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	620	150	140	690	110	170	1120	180	80	1120	170
RTOR Reduction (vph)	0	21	0	0	14	0	0	18	0	0	17	0
Lane Group Flow (vph)	0	909	0	0	926	0	170	1282	0	80	1273	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		30.0			30.0		32.0	32.0		32.0	32.0	
Actuated g/C Ratio		0.42			0.42		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		810			835		103	1540		103	1541	
v/s Ratio Prot								0.37			0.37	
v/s Ratio Perm		c0.47			0.46		c0.73			0.34		
v/c Ratio		1.12			1.11		1.65	0.83		0.78	0.83	
Uniform Delay, d1		21.0			21.0		20.0	17.6		17.0	17.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		70.8			65.5		331.8	5.4		42.7	5.2	
Delay (s)		91.8			86.5		351.8	23.1		59.6	22.8	
Level of Service		F			F		F	C		E	C	
Approach Delay (s)		91.8			86.5			61.1			24.9	
Approach LOS		F			F			E			C	

Intersection Summary			
HCM 2000 Control Delay	61.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	115.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	330	60	100	130	60	30	1230	90	100	1520	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.99			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1803			1822	1551	1768	3495		1768	3507	
Flt Permitted		0.71			0.62	1.00	0.10	1.00		0.12	1.00	
Satd. Flow (perm)		1299			1154	1551	182	3495		217	3507	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	330	60	100	130	60	30	1230	90	100	1520	80
RTOR Reduction (vph)	0	5	0	0	0	32	0	7	0	0	5	0
Lane Group Flow (vph)	0	565	0	0	230	28	30	1313	0	100	1595	0
Confl. Peds. (#/hr)	5		3	3		5	11		6	6		11
Confl. Bikes (#/hr)			3			5			8			2
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		26.0			27.0	27.0	41.0	41.0		41.0	41.0	
Effective Green, g (s)		26.0			27.0	27.0	41.0	41.0		41.0	41.0	
Actuated g/C Ratio		0.34			0.36	0.36	0.54	0.54		0.54	0.54	
Clearance Time (s)		5.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		1.0			1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)		444			409	551	98	1885		117	1891	
v/s Ratio Prot								0.38			0.45	
v/s Ratio Perm		c0.43			0.20	0.02	0.17			c0.46		
v/c Ratio		1.27			0.56	0.05	0.31	0.70		0.85	0.84	
Uniform Delay, d1		25.0			19.7	16.1	9.7	12.9		15.0	14.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		139.1			1.1	0.0	7.9	2.2		50.9	4.8	
Delay (s)		164.1			20.8	16.1	17.6	15.1		65.8	19.6	
Level of Service		F			C	B	B	B		E	B	
Approach Delay (s)		164.1			19.8			15.1			22.3	
Approach LOS		F			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	40.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	76.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	10	350	10	210	10	1210	300	130	1640	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.95		1.00	0.97		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1723			1691		1752	3400		1752	3501	
Flt Permitted		0.86			0.79		0.10	1.00		0.10	1.00	
Satd. Flow (perm)		1513			1386		184	3400		184	3501	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	10	350	10	210	10	1210	300	130	1640	10
RTOR Reduction (vph)	0	6	0	0	27	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	24	0	0	543	0	10	1482	0	130	1650	0
Confl. Peds. (#/hr)	3					3	3					3
Confl. Bikes (#/hr)			6									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)		29.0			29.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio		0.38			0.38		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0			2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		569			522		95	1766		95	1818	
v/s Ratio Prot								0.44			0.47	
v/s Ratio Perm		0.02			c0.39		0.05			c0.70		
v/c Ratio		0.04			1.04		0.11	0.84		1.37	0.91	
Uniform Delay, d1		15.2			24.0		9.4	15.8		18.5	16.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			50.0		2.2	5.0		219.1	8.1	
Delay (s)		15.2			74.0		11.6	20.7		237.6	24.9	
Level of Service		B			E		B	C		F	C	
Approach Delay (s)		15.2			74.0			20.7			40.5	
Approach LOS		B			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	37.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	500	400	220	490	190	370	1080	430	190	1460	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Lane Util. Factor		0.95			1.00		1.00	0.95		1.00	0.95	
Frt		0.95			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3320			1788		1770	3388		1770	3444	
Flt Permitted		0.56			0.25		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1893			448		1770	3388		1770	3444	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	290	500	400	220	490	190	370	1080	430	190	1460	320
RTOR Reduction (vph)	0	57	0	0	9	0	0	38	0	0	17	0
Lane Group Flow (vph)	0	1133	0	0	891	0	370	1472	0	190	1763	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		51.0			51.0		10.0	35.0		10.0	35.0	
Effective Green, g (s)		51.0			51.0		10.0	35.0		10.0	35.0	
Actuated g/C Ratio		0.45			0.45		0.09	0.31		0.09	0.31	
Clearance Time (s)		6.0			6.0		4.0	6.5		4.0	6.5	
Vehicle Extension (s)		1.0			1.0		2.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		858			203		157	1054		157	1071	
v/s Ratio Prot							c0.21	0.43		0.11	c0.51	
v/s Ratio Perm		0.60			c1.99							
v/c Ratio		1.32			4.39		2.36	1.40		1.21	1.65	
Uniform Delay, d1		30.8			30.8		51.2	38.8		51.2	38.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		152.5			1537.1		629.8	184.3		139.4	295.2	
Delay (s)		183.2			1567.8		681.1	223.1		190.6	333.9	
Level of Service		F			F		F	F		F	F	
Approach Delay (s)		183.2			1567.8			313.2			320.1	
Approach LOS		F			F			F			F	

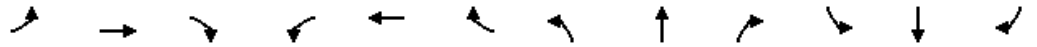
Intersection Summary			
HCM 2000 Control Delay	479.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	3.18		
Actuated Cycle Length (s)	112.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	174.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	30	170	80	60	100	160	1580	80	150	1760	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1729		1770	3514		1770	3492	
Flt Permitted	0.48	1.00	1.00		0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	896	1863	1583		1555		1770	3514		1770	3492	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	30	170	80	60	100	160	1580	80	150	1760	170
RTOR Reduction (vph)	0	0	117	0	30	0	0	3	0	0	6	0
Lane Group Flow (vph)	170	30	53	0	210	0	160	1657	0	150	1924	0
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	19.1	19.1	19.1		19.1		7.0	46.3		9.1	48.4	
Effective Green, g (s)	19.1	19.1	19.1		19.1		7.0	46.3		9.1	48.4	
Actuated g/C Ratio	0.22	0.22	0.22		0.22		0.08	0.53		0.10	0.55	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	195	406	345		339		141	1859		184	1931	
v/s Ratio Prot		0.02					c0.09	0.47		0.08	c0.55	
v/s Ratio Perm	c0.19		0.03		0.14							
v/c Ratio	0.87	0.07	0.15		0.62		1.13	0.89		0.82	1.00	
Uniform Delay, d1	33.0	27.2	27.7		30.9		40.2	18.4		38.4	19.5	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	31.2	0.0	0.1		2.5		116.6	5.7		22.4	19.4	
Delay (s)	64.2	27.2	27.7		33.5		156.8	24.1		60.8	38.9	
Level of Service	E	C	C		C		F	C		E	D	
Approach Delay (s)		44.5			33.5			35.7			40.5	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	87.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	390	1780	1570	440
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	2.0	4.0	
Lane Util. Factor			0.97	0.95	0.95	
Frt			1.00	1.00	0.97	
Flt Protected			0.95	1.00	1.00	
Satd. Flow (prot)			3433	3539	3423	
Flt Permitted			0.95	1.00	1.00	
Satd. Flow (perm)			3433	3539	3423	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	390	1780	1570	440
RTOR Reduction (vph)	0	0	0	0	20	0
Lane Group Flow (vph)	0	0	390	1780	1990	0
Turn Type			Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases						
Actuated Green, G (s)			10.4	58.4	40.0	
Effective Green, g (s)			10.4	58.4	40.0	
Actuated g/C Ratio			0.18	1.00	0.68	
Clearance Time (s)			4.0	2.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			611	3539	2344	
v/s Ratio Prot			0.11	c0.50	c0.58	
v/s Ratio Perm						
v/c Ratio			0.64	0.50	0.85	
Uniform Delay, d1			22.3	0.0	6.9	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			2.2	0.1	3.1	
Delay (s)			24.5	0.1	10.0	
Level of Service			C	A	B	
Approach Delay (s)	0.0			4.5	10.0	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	150	180	160	0	280	0	1610	360	320	1250	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00		1.00			0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.91			0.97		1.00	1.00	
Flt Protected	0.95	0.98	1.00		0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1681	1743	1583		1672			3442		1770	3539	
Flt Permitted	0.95	0.98	1.00		0.98			1.00		0.11	1.00	
Satd. Flow (perm)	1681	1743	1583		1672			3442		206	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	150	180	160	0	280	0	1610	360	320	1250	0
RTOR Reduction (vph)	0	0	142	0	65	0	0	20	0	0	0	0
Lane Group Flow (vph)	213	217	38	0	375	0	0	1950	0	320	1250	0
Turn Type	Split	NA	Perm	Split	NA			NA		Perm	NA	
Protected Phases	8	8		4	4			2			6	
Permitted Phases			8							6		
Actuated Green, G (s)	16.5	16.5	16.5		20.9			36.1		36.1	36.1	
Effective Green, g (s)	16.5	16.5	16.5		20.9			36.1		36.1	36.1	
Actuated g/C Ratio	0.19	0.19	0.19		0.24			0.42		0.42	0.42	
Clearance Time (s)	4.0	4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	324	336	305		408			1453		86	1494	
v/s Ratio Prot	c0.13	0.12			c0.22			0.57			0.35	
v/s Ratio Perm			0.02							c1.55		
v/c Ratio	0.66	0.65	0.12		0.92			1.34		3.72	0.84	
Uniform Delay, d1	31.9	31.8	28.5		31.5			24.7		24.7	22.1	
Progression Factor	1.00	1.00	1.00		1.00			1.00		1.00	1.00	
Incremental Delay, d2	4.8	4.2	0.2		25.3			158.6		1252.4	4.2	
Delay (s)	36.6	36.0	28.7		56.8			183.3		1277.1	26.3	
Level of Service	D	D	C		E			F		F	C	
Approach Delay (s)		34.1			56.8			183.3			281.3	
Approach LOS		C			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	184.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	2.22		
Actuated Cycle Length (s)	85.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	80	0	170	0	1780	80	150	1430	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frpb, ped/bikes					1.00			1.00		1.00	1.00	
Flpb, ped/bikes					1.00			1.00		1.00	1.00	
Frt					0.91			0.99		1.00	1.00	
Flt Protected					0.98			1.00		0.95	1.00	
Satd. Flow (prot)					1664			3513		1770	3539	
Flt Permitted					0.90			1.00		0.95	1.00	
Satd. Flow (perm)					1526			3513		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	80	0	170	0	1780	80	150	1430	0
RTOR Reduction (vph)	0	0	0	0	102	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	148	0	0	1856	0	150	1430	0
Confl. Peds. (#/hr)			2	2						5		
Confl. Bikes (#/hr)									3			
Turn Type				Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)					19.0			37.0		7.0	39.0	
Effective Green, g (s)					19.0			37.0		7.0	39.0	
Actuated g/C Ratio					0.25			0.49		0.09	0.52	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)					386			1733		165	1840	
v/s Ratio Prot								c0.53		c0.08	0.40	
v/s Ratio Perm					c0.10							
v/c Ratio					0.38			1.07		0.91	0.78	
Uniform Delay, d1					23.2			19.0		33.7	14.5	
Progression Factor					1.00			1.33		1.00	1.00	
Incremental Delay, d2					2.9			36.4		49.4	3.3	
Delay (s)					26.0			61.7		83.1	17.8	
Level of Service					C			E		F	B	
Approach Delay (s)		0.0			26.0			61.7			24.0	
Approach LOS		A			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	43.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	290	170	60	170	200	90	1440	120	180	1210	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1744			1692		1752	3456		1752	3441	
Flt Permitted		0.69			0.85		0.11	1.00		0.11	1.00	
Satd. Flow (perm)		1215			1443		211	3456		211	3441	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	290	170	60	170	200	90	1440	120	180	1210	120
RTOR Reduction (vph)	0	17	0	0	10	0	0	8	0	0	10	0
Lane Group Flow (vph)	0	623	0	0	420	0	90	1552	0	180	1320	0
Confl. Peds. (#/hr)	17					17	8		3	3		8
Confl. Bikes (#/hr)			2			3			3			11
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)		30.0			30.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio		0.40			0.40		0.47	0.47		0.47	0.47	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		486			577		98	1612		98	1605	
v/s Ratio Prot								0.45			0.38	
v/s Ratio Perm		c0.51			0.29		0.43			c0.85		
v/c Ratio		1.28			0.73		0.92	0.96		1.84	0.82	
Uniform Delay, d1		22.5			19.1		18.7	19.4		20.0	17.3	
Progression Factor		1.00			1.00		1.00	1.00		1.26	1.24	
Incremental Delay, d2		141.6			4.6		70.7	15.2		400.2	3.1	
Delay (s)		164.1			23.6		89.3	34.5		425.4	24.5	
Level of Service		F			C		F	C		F	C	
Approach Delay (s)		164.1			23.6			37.5			72.3	
Approach LOS		F			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	67.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	130.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	210	850	260	110	830	160	270	660	200	230	1070	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1543	1770	3453		1770	3405		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1543	1770	3453		1770	3405		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	210	850	260	110	830	160	270	660	200	230	1070	160
RTOR Reduction (vph)	0	0	112	0	15	0	0	26	0	0	0	104
Lane Group Flow (vph)	210	850	148	110	975	0	270	834	0	230	1070	56
Confl. Peds. (#/hr)			9						2			
Confl. Bikes (#/hr)			5									
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	13.0	32.3	32.3	10.7	30.0		16.0	34.0		15.0	33.0	33.0
Effective Green, g (s)	13.0	32.3	32.3	10.7	30.0		16.0	34.0		15.0	33.0	33.0
Actuated g/C Ratio	0.12	0.29	0.29	0.10	0.27		0.15	0.31		0.14	0.30	0.30
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	209	1039	453	172	941		257	1052		241	1061	474
v/s Ratio Prot	c0.12	0.24		0.06	c0.28		c0.15	0.25		0.13	c0.30	
v/s Ratio Perm			0.10									0.04
v/c Ratio	1.00	0.82	0.33	0.64	1.04		1.05	0.79		0.95	1.01	0.12
Uniform Delay, d1	48.5	36.1	30.3	47.8	40.0		47.0	34.8		47.2	38.5	27.9
Progression Factor	0.69	0.73	0.68	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	44.4	2.5	0.2	7.6	39.2		70.0	6.2		45.0	29.7	0.5
Delay (s)	77.9	29.1	20.9	55.4	79.2		117.0	40.9		92.2	68.2	28.4
Level of Service	E	C	C	E	E		F	D		F	E	C
Approach Delay (s)		35.2			76.8			59.1			67.6	
Approach LOS		D			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	59.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	180	1190	120	60	970
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	70	180	1190	120	60	970
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1855	655			1310	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1855	655			1310	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	56			89	
cM capacity (veh/h)	58	409			524	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	250	793	517	383	647
Volume Left	70	0	0	60	0
Volume Right	180	0	120	0	0
cSH	151	1700	1700	524	1700
Volume to Capacity	1.65	0.47	0.30	0.11	0.38
Queue Length 95th (ft)	441	0	0	10	0
Control Delay (s)	373.0	0.0	0.0	3.5	0.0
Lane LOS	F			A	
Approach Delay (s)	373.0	0.0		1.3	
Approach LOS	F				

Intersection Summary			
Average Delay	36.5		
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	150	230	1000	320	190	800
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	150	230	1000	320	190	800
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1940	660			1320	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1940	660			1320	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	43			63	
cM capacity (veh/h)	36	406			519	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	380	667	653	457	533
Volume Left	150	0	0	190	0
Volume Right	230	0	320	0	0
cSH	81	1700	1700	519	1700
Volume to Capacity	4.70	0.39	0.38	0.37	0.31
Queue Length 95th (ft)	Err	0	0	42	0
Control Delay (s)	Err	0.0	0.0	10.6	0.0
Lane LOS	F			B	
Approach Delay (s)	Err	0.0		4.9	
Approach LOS	F				

Intersection Summary				
Average Delay	1414.3			
Intersection Capacity Utilization	97.9%	ICU Level of Service	F	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	530	970	190	270	1230	120	270	810	210	330	660	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.96	1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3539	1491	3433	3539	1520	3433	3389		3433	3289	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3539	1491	3433	3539	1520	3433	3389		3433	3289	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	530	970	190	270	1230	120	270	810	210	330	660	330
RTOR Reduction (vph)	0	0	55	0	0	54	0	19	0	0	52	0
Lane Group Flow (vph)	530	970	135	270	1230	66	270	1001	0	330	938	0
Confl. Peds. (#/hr)			35			23			39			42
Confl. Bikes (#/hr)			9			2			3			8
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	18.0	45.3	45.3	13.7	41.0	41.0	10.0	34.0		11.0	35.0	
Effective Green, g (s)	18.0	45.3	45.3	13.7	41.0	41.0	10.0	34.0		11.0	35.0	
Actuated g/C Ratio	0.15	0.38	0.38	0.11	0.34	0.34	0.08	0.28		0.09	0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	514	1335	562	391	1209	519	286	960		314	959	
v/s Ratio Prot	c0.15	0.27		0.08	c0.35		0.08	c0.30		c0.10	0.29	
v/s Ratio Perm			0.09			0.04						
v/c Ratio	1.03	0.73	0.24	0.69	1.02	0.13	0.94	1.04		1.05	0.98	
Uniform Delay, d1	51.0	32.0	25.6	51.1	39.5	27.2	54.7	43.0		54.5	42.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	47.9	2.0	0.2	5.2	30.3	0.1	38.2	40.7		64.8	23.6	
Delay (s)	98.9	34.0	25.8	56.3	69.8	27.3	92.9	83.7		119.3	65.7	
Level of Service	F	C	C	E	E	C	F	F		F	E	
Approach Delay (s)		53.5			64.4			85.6			79.1	
Approach LOS		D			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	69.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	320	200	190	20	120	30	140	790	30	20	800	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98			0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	0.98	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1727	1700			1791		1770	3508		1770	3539	1500
Flt Permitted	0.62	1.00			0.94		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1120	1700			1692		1770	3508		1770	3539	1500
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	320	200	190	20	120	30	140	790	30	20	800	370
RTOR Reduction (vph)	0	29	0	0	6	0	0	2	0	0	0	232
Lane Group Flow (vph)	320	361	0	0	164	0	140	818	0	20	800	138
Confl. Peds. (#/hr)	39		14	14		39	11		27	27		11
Confl. Bikes (#/hr)			14			8			3			5
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	31.6	31.6			31.6		11.1	40.9		2.6	32.4	32.4
Effective Green, g (s)	31.6	31.6			31.6		11.1	40.9		2.6	32.4	32.4
Actuated g/C Ratio	0.36	0.36			0.36		0.13	0.47		0.03	0.37	0.37
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	406	616			613		225	1647		52	1316	557
v/s Ratio Prot		0.21					c0.08	0.23		0.01	c0.23	
v/s Ratio Perm	c0.29				0.10							0.09
v/c Ratio	0.79	0.59			0.27		0.62	0.50		0.38	0.61	0.25
Uniform Delay, d1	24.8	22.5			19.6		36.0	16.0		41.5	22.2	18.9
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.8	1.4			0.2		5.3	0.2		4.7	0.8	0.2
Delay (s)	34.5	23.9			19.8		41.3	16.2		46.1	23.0	19.1
Level of Service	C	C			B		D	B		D	C	B
Approach Delay (s)		28.7			19.8			19.9			22.2	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	87.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	480	580	440	10	230	50	240	410	30	90	770	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1859	1583	1770	3503		1770	3443	
Flt Permitted	0.95	1.00	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1798	1583	1770	3503		1770	3443	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	480	580	440	10	230	50	240	410	30	90	770	170
RTOR Reduction (vph)	0	0	196	0	0	42	0	4	0	0	15	0
Lane Group Flow (vph)	480	580	244	0	240	8	240	436	0	90	925	0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8						
Actuated Green, G (s)	29.0	53.8	53.8		19.8	19.8	15.0	38.5		9.6	33.1	
Effective Green, g (s)	29.0	53.8	53.8		19.8	19.8	15.0	38.5		9.6	33.1	
Actuated g/C Ratio	0.25	0.46	0.46		0.17	0.17	0.13	0.33		0.08	0.28	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	439	857	728		304	268	227	1153		145	974	
v/s Ratio Prot	c0.27	0.31					c0.14	0.12		0.05	c0.27	
v/s Ratio Perm			0.15		c0.13	0.01						
v/c Ratio	1.09	0.68	0.34		0.79	0.03	1.06	0.38		0.62	0.95	
Uniform Delay, d1	44.0	24.7	20.1		46.6	40.5	51.0	30.0		51.9	41.1	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	70.6	2.1	0.3		12.8	0.0	75.6	0.2		8.0	17.7	
Delay (s)	114.6	26.9	20.4		59.3	40.6	126.6	30.2		59.9	58.8	
Level of Service	F	C	C		E	D	F	C		E	E	
Approach Delay (s)		53.0			56.1			64.2			58.9	
Approach LOS		D			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	57.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	116.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	320	280	210	100	360	20	10	150	310	70	20	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00	0.95			1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			0.99
Frt	1.00	0.94		1.00	0.99			1.00	0.97			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	3433	3283		1770	3508			1767	3425			1761
Flt Permitted	0.95	1.00		0.95	1.00			0.35	1.00			0.35
Satd. Flow (perm)	3433	3283		1770	3508			653	3425			650
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	320	280	210	100	360	20	10	150	310	70	20	50
RTOR Reduction (vph)	0	121	0	0	4	0	0	0	20	0	0	0
Lane Group Flow (vph)	320	369	0	100	376	0	0	160	360	0	0	70
Confl. Peds. (#/hr)	3		11	11		3		5		14		14
Confl. Bikes (#/hr)						3				5		
Turn Type	Prot	NA		Prot	NA		custom	Prot	NA		custom	Prot
Protected Phases	7	4		3	8			5	2			1
Permitted Phases							5				1	
Actuated Green, G (s)	12.5	19.3		8.4	15.2			11.4	22.2			11.4
Effective Green, g (s)	12.5	19.3		8.4	15.2			11.4	22.2			11.4
Actuated g/C Ratio	0.16	0.25		0.11	0.20			0.15	0.29			0.15
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	555	819		192	689			96	983			95
v/s Ratio Prot	c0.09	0.11		0.06	c0.11				0.11			
v/s Ratio Perm								c0.25				0.11
v/c Ratio	0.58	0.45		0.52	0.55			1.67	0.37			0.74
Uniform Delay, d1	30.0	24.5		32.5	27.9			32.9	21.9			31.5
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	1.5	0.4		2.5	0.9			341.2	0.2			25.4
Delay (s)	31.4	24.9		35.1	28.8			374.2	22.2			56.9
Level of Service	C	C		D	C			F	C			E
Approach Delay (s)		27.5			30.1				126.5			
Approach LOS		C			C				F			

Intersection Summary			
HCM 2000 Control Delay	45.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	77.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	570	530
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.98
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3539	1555
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3539	1555
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	570	530
RTOR Reduction (vph)	0	307
Lane Group Flow (vph)	570	223
Confl. Peds. (#/hr)		5
Confl. Bikes (#/hr)		3
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	22.2	22.2
Effective Green, g (s)	22.2	22.2
Actuated g/C Ratio	0.29	0.29
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1016	446
v/s Ratio Prot	c0.16	
v/s Ratio Perm		0.14
v/c Ratio	0.56	0.50
Uniform Delay, d1	23.4	22.9
Progression Factor	1.00	1.00
Incremental Delay, d2	0.7	0.9
Delay (s)	24.1	23.8
Level of Service	C	C
Approach Delay (s)	26.0	
Approach LOS	C	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	10	160	10	80	10	240	350	260	270	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	10	10	160	10	80	10	240	350	260	270	0
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1135	1400	273	1068	1050	240	270			590		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1135	1400	273	1068	1050	240	270			590		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	90	99	0	94	90	99			73		
cM capacity (veh/h)	120	100	757	142	163	792	1276			971		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	30	250	250	350	530
Volume Left	10	160	10	0	260
Volume Right	10	80	0	350	0
cSH	153	194	1276	1700	971
Volume to Capacity	0.20	1.29	0.01	0.21	0.27
Queue Length 95th (ft)	18	346	1	0	27
Control Delay (s)	34.2	212.2	0.4	0.0	6.6
Lane LOS	D	F	A		A
Approach Delay (s)	34.2	212.2	0.2		6.6
Approach LOS	D	F			

Intersection Summary				
Average Delay	40.9			
Intersection Capacity Utilization	72.7%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	270	910	390	50	940	210	380	110	70	180	110	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91		0.91	0.91	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.99	0.85	1.00	0.97		1.00	1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (prot)	1736	3121	2631	1736	4833		1579	3223	1525		3105	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00		0.99	
Satd. Flow (perm)	1736	3121	2631	1736	4833		1579	3223	1525		3105	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	910	390	50	940	210	380	110	70	180	110	360
RTOR Reduction (vph)	0	2	174	0	29	0	0	0	57	0	176	0
Lane Group Flow (vph)	270	947	177	50	1121	0	190	300	13	0	474	0
Confl. Peds. (#/hr)	6					6			6	6		
Confl. Bikes (#/hr)			6			3						6
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Actuated Green, G (s)	20.6	46.0	46.0	7.1	32.5		18.7	18.7	18.7		17.6	
Effective Green, g (s)	20.6	46.0	46.0	7.1	32.5		18.7	18.7	18.7		17.6	
Actuated g/C Ratio	0.20	0.45	0.45	0.07	0.32		0.18	0.18	0.18		0.17	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	352	1415	1193	121	1549		291	594	281		538	
v/s Ratio Prot	c0.16	0.30		0.03	c0.23		c0.12	0.09			c0.15	
v/s Ratio Perm			0.07						0.01			
v/c Ratio	0.77	0.67	0.15	0.41	0.72		0.65	0.51	0.05		0.88	
Uniform Delay, d1	38.1	21.7	16.2	45.2	30.5		38.3	37.2	34.0		40.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	9.6	1.2	0.1	2.3	1.7		5.2	0.7	0.1		15.5	
Delay (s)	47.8	23.0	16.3	47.4	32.2		43.5	37.9	34.1		56.4	
Level of Service	D	C	B	D	C		D	D	C		E	
Approach Delay (s)		25.7			32.8			39.3			56.4	
Approach LOS		C			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	101.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	40	0	2060	110	210	2390	100	150	0	180	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Lane Util. Factor		1.00	0.86		1.00	0.86			1.00	1.00		
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	0.99		
Flpb, ped/bikes		1.00	1.00		1.00	1.00			0.99	1.00		
Frt		1.00	0.99		1.00	0.99			1.00	0.85		
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1767	6351		1770	6344			1746	1560		
Flt Permitted		0.37	1.00		0.95	1.00			0.76	1.00		
Satd. Flow (perm)		695	6351		1770	6344			1392	1560		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	0	2060	110	210	2390	100	150	0	180	0	0
RTOR Reduction (vph)	0	0	6	0	0	4	0	0	0	153	0	0
Lane Group Flow (vph)	0	40	2164	0	210	2486	0	0	150	27	0	0
Confl. Peds. (#/hr)		23		6	6		23	12				
Confl. Bikes (#/hr)				2			5			2		
Turn Type	custom	Prot	NA		Prot	NA		Perm	NA	Perm		
Protected Phases		5	2		1	6			3			3
Permitted Phases	5							3	3	3	3	3
Actuated Green, G (s)		10.7	63.8		14.4	67.5			15.8	15.8		
Effective Green, g (s)		10.7	63.8		14.4	67.5			15.8	15.8		
Actuated g/C Ratio		0.10	0.60		0.14	0.64			0.15	0.15		
Clearance Time (s)		3.0	4.0		3.0	4.0			5.0	5.0		
Vehicle Extension (s)		2.0	2.0		2.0	2.0			2.0	2.0		
Lane Grp Cap (vph)		70	3822		240	4039			207	232		
v/s Ratio Prot			0.34		c0.12	c0.39						
v/s Ratio Perm		0.06							c0.11	0.02		
v/c Ratio		0.57	0.57		0.88	0.62			0.72	0.12		
Uniform Delay, d1		45.5	12.7		44.9	11.5			43.0	39.1		
Progression Factor		1.25	0.25		1.00	1.00			1.00	1.00		
Incremental Delay, d2		2.9	0.3		27.1	0.7			10.2	0.1		
Delay (s)		59.5	3.4		72.0	12.2			53.2	39.1		
Level of Service		E	A		E	B			D	D		
Approach Delay (s)			4.4			16.9			45.5			0.0
Approach LOS			A			B			D			A

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	12
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	1690	180	170	2300	110	470	250	500	70	20	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Lane Util. Factor	0.97	0.91		1.00	0.86		0.91	0.91			0.95	0.95
Frt	1.00	0.99		1.00	0.99		1.00	0.91			0.91	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	3433	5012		1770	6364		1610	3062			1589	1504
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (perm)	3433	5012		1770	6364		1610	3062			1589	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	1690	180	170	2300	110	470	250	500	70	20	330
RTOR Reduction (vph)	0	10	0	0	5	0	0	288	0	0	56	176
Lane Group Flow (vph)	340	1860	0	170	2405	0	423	509	0	0	159	29
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases												4
Actuated Green, G (s)	11.0	43.0		11.0	43.0		20.0	20.0			15.0	15.0
Effective Green, g (s)	11.0	43.0		11.0	43.0		20.0	20.0			15.0	15.0
Actuated g/C Ratio	0.10	0.41		0.10	0.41		0.19	0.19			0.14	0.14
Clearance Time (s)	3.0	4.0		3.0	4.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	356	2033		183	2581		303	577			224	212
v/s Ratio Prot	0.10	c0.37		0.10	c0.38		c0.26	0.17			c0.10	
v/s Ratio Perm												0.02
v/c Ratio	0.96	0.91		0.93	0.93		1.40	0.88			0.71	0.14
Uniform Delay, d1	47.3	29.8		47.1	30.1		43.0	41.9			43.4	39.8
Progression Factor	1.00	1.00		0.81	0.73		1.00	1.00			1.00	1.00
Incremental Delay, d2	35.5	7.9		39.7	6.4		197.1	14.4			8.5	0.1
Delay (s)	82.7	37.7		77.7	28.2		240.1	56.2			52.0	39.9
Level of Service	F	D		E	C		F	E			D	D
Approach Delay (s)		44.6			31.5			120.0			46.1	
Approach LOS		D			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	53.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	110	1230	180	60	1060	110	10	220	220	110	10	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00			1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99			1.00	0.99			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.98		1.00	0.99			1.00	0.95			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	1752	3416		1752	3422			1752	1730			1719
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (perm)	1752	3416		1752	3422			1752	1730			1719
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	1230	180	60	1060	110	10	220	220	110	10	140
RTOR Reduction (vph)	0	9	0	0	6	0	0	0	19	0	0	0
Lane Group Flow (vph)	110	1401	0	60	1164	0	0	230	311	0	0	150
Confl. Peds. (#/hr)	27		9	9		27		29		24		24
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	5%	5%
Turn Type	Prot	NA		Prot	NA		Prot	Prot	NA		Prot	Prot
Protected Phases	5	2		1	6		3	3	8		7	7
Permitted Phases												
Actuated Green, G (s)	9.3	50.4		6.4	47.5			14.0	24.2			9.0
Effective Green, g (s)	9.3	50.4		6.4	47.5			14.0	24.2			9.0
Actuated g/C Ratio	0.08	0.46		0.06	0.43			0.13	0.22			0.08
Clearance Time (s)	4.0	6.0		4.0	6.0			5.0	5.0			5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)	148	1565		101	1477			222	380			140
v/s Ratio Prot	0.06	c0.41		0.03	c0.34			c0.13	c0.18			c0.09
v/s Ratio Perm												
v/c Ratio	0.74	0.90		0.59	0.79			1.04	0.82			1.07
Uniform Delay, d1	49.2	27.4		50.5	26.9			48.0	40.8			50.5
Progression Factor	1.09	1.07		0.75	0.48			1.00	1.00			1.00
Incremental Delay, d2	9.2	4.0		2.1	1.5			70.1	12.3			96.4
Delay (s)	62.8	33.4		39.8	14.3			118.1	53.1			146.9
Level of Service	E	C		D	B			F	D			F
Approach Delay (s)		35.5			15.5				79.8			
Approach LOS		D			B				E			

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	100	150
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.97	
Flpb, ped/bikes	1.00	
Frt	0.91	
Flt Protected	1.00	
Satd. Flow (prot)	1600	
Flt Permitted	1.00	
Satd. Flow (perm)	1600	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	100	150
RTOR Reduction (vph)	56	0
Lane Group Flow (vph)	194	0
Confl. Peds. (#/hr)		29
Confl. Bikes (#/hr)		3
Heavy Vehicles (%)	5%	5%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	19.2	
Effective Green, g (s)	19.2	
Actuated g/C Ratio	0.17	
Clearance Time (s)	5.0	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	279	
v/s Ratio Prot	0.12	
v/s Ratio Perm		
v/c Ratio	0.69	
Uniform Delay, d1	42.6	
Progression Factor	1.00	
Incremental Delay, d2	5.9	
Delay (s)	48.6	
Level of Service	D	
Approach Delay (s)	85.5	
Approach LOS	F	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	730	0	0	980	450	30	1230	610	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95			0.95	1.00			
Frt	1.00	1.00			0.95			1.00	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	1770	3539			3372			3535	1583			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	1770	3539			3372			3535	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	730	0	0	980	450	30	1230	610	0	0	0
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	126	0	0	0
Lane Group Flow (vph)	130	730	0	0	1414	0	0	1260	484	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	7.0	50.0			39.0			32.0	32.0			
Effective Green, g (s)	7.0	50.0			39.0			32.0	32.0			
Actuated g/C Ratio	0.08	0.56			0.43			0.36	0.36			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	137	1966			1461			1256	562			
v/s Ratio Prot	c0.07	0.21			c0.42							
v/s Ratio Perm								0.36	0.31			
v/c Ratio	0.95	0.37			0.97			1.00	0.86			
Uniform Delay, d1	41.3	11.2			24.9			29.0	26.9			
Progression Factor	1.08	0.15			1.00			1.00	1.00			
Incremental Delay, d2	43.5	0.3			17.0			26.2	12.8			
Delay (s)	88.1	2.0			41.9			55.2	39.8			
Level of Service	F	A			D			E	D			
Approach Delay (s)		15.0			41.9			50.1			0.0	
Approach LOS		B			D			D			A	

Intersection Summary			
HCM 2000 Control Delay	40.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	710	50	580	430	0	0	0	0	150	820	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0						4.0	
Lane Util. Factor		0.95		0.95	0.95						0.91	
Frt		0.99		1.00	1.00						0.96	
Flt Protected		1.00		0.95	0.99						0.99	
Satd. Flow (prot)		3504		1681	1755						4868	
Flt Permitted		1.00		0.95	0.63						0.99	
Satd. Flow (perm)		3504		1681	1121						4868	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	710	50	580	430	0	0	0	0	150	820	320
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	66	0
Lane Group Flow (vph)	0	754	0	493	517	0	0	0	0	0	1224	0
Turn Type		NA		Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases												
Actuated Green, G (s)		25.4		29.6	59.0						23.0	
Effective Green, g (s)		25.4		29.6	59.0						23.0	
Actuated g/C Ratio		0.28		0.33	0.66						0.26	
Clearance Time (s)		4.0		4.0	4.0						4.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		988		552	943						1244	
v/s Ratio Prot		c0.22		c0.29	0.18						c0.25	
v/s Ratio Perm					0.18							
v/c Ratio		0.76		0.89	0.55						0.98	
Uniform Delay, d1		29.6		28.7	8.3						33.3	
Progression Factor		1.00		0.78	0.78						1.00	
Incremental Delay, d2		5.6		5.8	0.2						21.5	
Delay (s)		35.1		28.1	6.7						54.8	
Level of Service		D		C	A						D	
Approach Delay (s)		35.1			17.1			0.0			54.8	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	37.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	660	320	440	50	590	460	270	750	700	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	1.00				
Frt	1.00	0.91		1.00	0.93		1.00	0.93				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	3433	3232		1770	3307		1770	1728				
Flt Permitted	0.95	1.00		0.36	1.00		0.95	1.00				
Satd. Flow (perm)	3433	3232		677	3307		1770	1728				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	660	320	440	50	590	460	270	750	700	0	0	0
RTOR Reduction (vph)	0	206	0	0	45	0	0	35	0	0	0	0
Lane Group Flow (vph)	660	554	0	50	1005	0	270	1415	0	0	0	0
Turn Type	Prot	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases				6			8					
Actuated Green, G (s)	23.0	50.5		23.0	23.0		35.5	35.5				
Effective Green, g (s)	23.0	50.5		23.0	23.0		35.5	35.5				
Actuated g/C Ratio	0.24	0.53		0.24	0.24		0.37	0.37				
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5				
Vehicle Extension (s)	4.0	2.0		2.0	2.0		2.0	2.0				
Lane Grp Cap (vph)	831	1718		163	800		661	645				
v/s Ratio Prot	c0.19	0.17			c0.30			c0.82				
v/s Ratio Perm				0.07			0.15					
v/c Ratio	0.79	0.32		0.31	1.26		0.41	2.19				
Uniform Delay, d1	33.8	12.6		29.5	36.0		22.0	29.8				
Progression Factor	0.50	0.05		1.00	1.00		1.00	1.00				
Incremental Delay, d2	0.5	0.0		4.8	125.6		0.2	542.2				
Delay (s)	17.4	0.7		34.3	161.6		22.1	572.0				
Level of Service	B	A		C	F		C	F				
Approach Delay (s)		8.4			155.8			485.7			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM 2000 Control Delay	240.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	143.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1010	500	350	510	0	170	0	220	190	1100	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Lane Util. Factor		0.91		0.97	0.95			1.00		0.91	0.91	1.00
Frt		0.95		1.00	1.00			0.92		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00			0.98		0.95	1.00	1.00
Satd. Flow (prot)		4833		3433	3539			1684		1610	3387	1583
Flt Permitted		1.00		0.95	1.00			0.24		0.52	0.95	1.00
Satd. Flow (perm)		4833		3433	3539			409		879	3205	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1010	500	350	510	0	170	0	220	190	1100	160
RTOR Reduction (vph)	0	36	0	0	0	0	0	49	0	0	0	80
Lane Group Flow (vph)	0	1474	0	350	510	0	0	341	0	171	1119	80
Turn Type		NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases							8			4		4
Actuated Green, G (s)		27.5		7.5	38.5			47.5		47.5	47.5	47.5
Effective Green, g (s)		27.5		7.5	38.5			47.5		47.5	47.5	47.5
Actuated g/C Ratio		0.29		0.08	0.41			0.50		0.50	0.50	0.50
Clearance Time (s)		4.5		3.5	4.5			4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0		2.0	2.0			2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		1399		271	1434			204		439	1602	791
v/s Ratio Prot		c0.31		c0.10	0.14							
v/s Ratio Perm								c0.83		0.19	0.35	0.05
v/c Ratio		1.05		1.29	0.36			1.67		0.39	0.70	0.10
Uniform Delay, d1		33.8		43.8	19.6			23.8		14.7	18.2	12.5
Progression Factor		1.00		0.67	1.34			1.00		1.00	1.00	1.00
Incremental Delay, d2		39.7		138.6	0.2			322.8		0.2	1.1	0.0
Delay (s)		73.4		168.1	26.5			346.5		15.0	19.3	12.5
Level of Service		E		F	C			F		B	B	B
Approach Delay (s)		73.4			84.1			346.5			18.1	
Approach LOS		E			F			F			B	

Intersection Summary			
HCM 2000 Control Delay	81.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	108.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	690	0	0	1220	160	880
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.91			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	5085			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	5085			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	690	0	0	1220	160	880
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	690	0	0	1220	160	880
Turn Type	NA			NA	Prot	Prot
Protected Phases	2			6	4	4
Permitted Phases						
Actuated Green, G (s)	21.0			21.0	31.0	31.0
Effective Green, g (s)	21.0			21.0	31.0	31.0
Actuated g/C Ratio	0.35			0.35	0.52	0.52
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1779			1238	914	817
v/s Ratio Prot	0.14			c0.34	0.09	c0.56
v/s Ratio Perm						
v/c Ratio	0.39			0.99	0.18	1.08
Uniform Delay, d1	14.7			19.3	7.7	14.5
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			21.9	0.1	54.3
Delay (s)	14.8			41.3	7.8	68.8
Level of Service	B			D	A	E
Approach Delay (s)	14.8			41.3	59.5	
Approach LOS	B			D	E	

Intersection Summary			
HCM 2000 Control Delay	41.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	
Volume (vph)	0	870	640	0	440	520
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		0.97	
Frt		1.00	1.00		0.92	
Flt Protected		1.00	1.00		0.98	
Satd. Flow (prot)		3539	3539		3246	
Flt Permitted		1.00	1.00		0.98	
Satd. Flow (perm)		3539	3539		3246	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	870	640	0	440	520
RTOR Reduction (vph)	0	0	0	0	93	0
Lane Group Flow (vph)	0	870	640	0	867	0
Turn Type		NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases		2				
Actuated Green, G (s)		18.3	18.3		17.6	
Effective Green, g (s)		18.3	18.3		17.6	
Actuated g/C Ratio		0.42	0.42		0.40	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1475	1475		1301	
v/s Ratio Prot		c0.25	0.18		c0.27	
v/s Ratio Perm						
v/c Ratio		0.59	0.43		0.67	
Uniform Delay, d1		9.9	9.1		10.7	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		0.6	0.2		1.3	
Delay (s)		10.5	9.3		12.1	
Level of Service		B	A		B	
Approach Delay (s)		10.5	9.3		12.1	
Approach LOS		B	A		B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	43.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	970	190	170	960	180	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		4.0			4.0
Lane Util. Factor	0.97		1.00			1.00
Frpb, ped/bikes	1.00		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.98		0.89			1.00
Flt Protected	0.96		1.00			0.98
Satd. Flow (prot)	3351		1633			1813
Flt Permitted	0.96		1.00			0.11
Satd. Flow (perm)	3351		1633			211
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	970	190	170	960	180	330
RTOR Reduction (vph)	16	0	152	0	0	0
Lane Group Flow (vph)	1144	0	978	0	0	510
Confl. Peds. (#/hr)	3					
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot		NA		Perm	NA
Protected Phases	6		8			4
Permitted Phases					4	
Actuated Green, G (s)	18.0		44.0			44.0
Effective Green, g (s)	18.0		44.0			44.0
Actuated g/C Ratio	0.26		0.63			0.63
Clearance Time (s)	3.5		4.0			4.0
Vehicle Extension (s)	2.2		2.0			2.0
Lane Grp Cap (vph)	867		1033			133
v/s Ratio Prot	c0.34		0.60			
v/s Ratio Perm						c2.42
v/c Ratio	1.32		0.95			3.83
Uniform Delay, d1	25.8		11.7			12.8
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	151.7		16.4			1293.6
Delay (s)	177.5		28.0			1306.4
Level of Service	F		C			F
Approach Delay (s)	177.5		28.0			1306.4
Approach LOS	F		C			F

Intersection Summary			
HCM 2000 Control Delay	322.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	3.28		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	11.0
Intersection Capacity Utilization	139.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	880	0	190	0	0	0	260	180	0	0	250	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					6.0			6.0	
Lane Util. Factor	0.97		1.00					0.95			1.00	
Frpb, ped/bikes	1.00		1.00					1.00			1.00	
Flpb, ped/bikes	1.00		1.00					1.00			1.00	
Frt	1.00		0.85					1.00			0.98	
Flt Protected	0.95		1.00					0.97			1.00	
Satd. Flow (prot)	3367		1553					3372			1793	
Flt Permitted	0.95		1.00					0.97			1.00	
Satd. Flow (perm)	3367		1553					3372			1793	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	880	0	190	0	0	0	260	180	0	0	250	40
RTOR Reduction (vph)	0	0	125	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	880	0	65	0	0	0	0	440	0	0	286	0
Confl. Peds. (#/hr)									2	2		
Confl. Bikes (#/hr)									2			
Heavy Vehicles (%)	4%	2%	4%	2%	2%	2%	4%	4%	2%	2%	4%	4%
Turn Type	Prot		Perm				Split	NA			NA	
Protected Phases	4				8		2	2			6	
Permitted Phases			4	8						6		
Actuated Green, G (s)	27.7		27.7					16.7			20.2	
Effective Green, g (s)	27.7		27.7					16.7			20.2	
Actuated g/C Ratio	0.34		0.34					0.21			0.25	
Clearance Time (s)	4.0		4.0					6.0			6.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1157		533					698			449	
v/s Ratio Prot	c0.26							c0.13			c0.16	
v/s Ratio Perm			0.04									
v/c Ratio	0.76		0.12					0.63			0.64	
Uniform Delay, d1	23.5		18.1					29.1			26.9	
Progression Factor	1.00		1.00					1.00			1.00	
Incremental Delay, d2	3.0		0.1					1.9			3.0	
Delay (s)	26.5		18.2					31.0			29.9	
Level of Service	C		B					C			C	
Approach Delay (s)		25.0			0.0			31.0			29.9	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↑		↰↰	↱↱
Volume (vph)	0	2280	1740	0	360	1350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.86		0.97	0.88
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5767	5767		3090	2508
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5767	5767		3090	2508
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	2280	1740	0	360	1350
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	2280	1740	0	360	1350
Confl. Peds. (#/hr)	12			12		12
Confl. Bikes (#/hr)				5		
Turn Type		NA	NA		Prot	custom
Protected Phases		2	6		4	4 5
Permitted Phases						
Actuated Green, G (s)		38.0	29.0		42.9	51.9
Effective Green, g (s)		38.0	29.0		42.9	51.9
Actuated g/C Ratio		0.43	0.33		0.48	0.58
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		2465	1881		1491	1464
v/s Ratio Prot		c0.40	0.30		0.12	c0.54
v/s Ratio Perm						
v/c Ratio		0.92	0.93		0.24	0.92
Uniform Delay, d1		24.1	28.9		13.5	16.7
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		6.6	8.3		0.1	9.9
Delay (s)		30.7	37.2		13.6	26.5
Level of Service		C	D		B	C
Approach Delay (s)		30.7	37.2		23.8	
Approach LOS		C	D		C	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	88.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1060	800	0	1190	330	860	0	630	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.91	0.91		0.91		0.97		1.00			
Frt		0.97	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3235	1413		4825		3367		1553			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3235	1413		4825		3367		1553			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1060	800	0	1190	330	860	0	630	0	0	0
RTOR Reduction (vph)	0	16	0	0	45	0	0	0	71	0	0	0
Lane Group Flow (vph)	0	1276	568	0	1475	0	860	0	559	0	0	0
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type		NA	Free		NA		Prot		Perm			
Protected Phases		2			6		4					
Permitted Phases			Free						4			
Actuated Green, G (s)		66.0	110.0		66.0		36.0		36.0			
Effective Green, g (s)		66.0	110.0		66.0		36.0		36.0			
Actuated g/C Ratio		0.60	1.00		0.60		0.33		0.33			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Lane Grp Cap (vph)		1941	1413		2895		1101		508			
v/s Ratio Prot		c0.39			0.31		0.26					
v/s Ratio Perm			0.40						c0.36			
v/c Ratio		0.66	0.40		0.51		0.78		1.10			
Uniform Delay, d1		14.5	0.0		12.7		33.4		37.0			
Progression Factor		1.00	1.00		1.76		1.00		1.00			
Incremental Delay, d2		1.8	0.9		0.4		5.5		70.4			
Delay (s)		16.3	0.9		22.7		39.0		107.4			
Level of Service		B	A		C		D		F			
Approach Delay (s)		11.6			22.7			67.9			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1490	1300	0	1700	0	0	0	0	370	0	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.86	0.86		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		0.99
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		0.95	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4499	1335		4988					3367		1530
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4499	1335		4988					3367		1530
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1490	1300	0	1700	0	0	0	0	370	0	250
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	25
Lane Group Flow (vph)	0	2140	650	0	1700	0	0	0	0	370	0	225
Confl. Peds. (#/hr)							8					3
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	4%	4%	4%
Turn Type		NA	Prot		NA					Perm		Perm
Protected Phases		2	2		6							
Permitted Phases										4		4
Actuated Green, G (s)		64.8	64.8		64.8					18.9		18.9
Effective Green, g (s)		64.8	64.8		64.8					18.9		18.9
Actuated g/C Ratio		0.71	0.71		0.71					0.21		0.21
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3179	943		3524					693		315
v/s Ratio Prot		0.48	c0.49		0.34							
v/s Ratio Perm										0.11		c0.15
v/c Ratio		0.67	0.69		0.48					0.53		0.72
Uniform Delay, d1		7.5	7.7		6.0					32.5		33.9
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.6	2.1		0.1					0.8		7.5
Delay (s)		8.1	9.8		6.1					33.3		41.4
Level of Service		A	A		A					C		D
Approach Delay (s)		8.5			6.1			0.0			36.6	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1360	680	0	1210	540	570
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	0.97	0.91
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.96	0.85
Flt Protected	1.00	1.00		1.00	0.97	1.00
Satd. Flow (prot)	3471	1517		3471	3275	1413
Flt Permitted	1.00	1.00		1.00	0.97	1.00
Satd. Flow (perm)	3471	1517		3471	3275	1413
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1360	680	0	1210	540	570
RTOR Reduction (vph)	0	0	0	0	40	40
Lane Group Flow (vph)	1360	680	0	1210	717	313
Confl. Peds. (#/hr)		6	6			
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	38.4	68.5		38.4	22.1	22.1
Effective Green, g (s)	38.4	68.5		38.4	22.1	22.1
Actuated g/C Ratio	0.56	1.00		0.56	0.32	0.32
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1945	1517		1945	1056	455
v/s Ratio Prot	c0.39			0.35	0.22	
v/s Ratio Perm		0.45				c0.22
v/c Ratio	0.70	0.45		0.62	0.68	0.69
Uniform Delay, d1	10.9	0.0		10.2	20.1	20.2
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	1.0		0.6	1.8	4.3
Delay (s)	12.0	1.0		10.8	21.9	24.5
Level of Service	B	A		B	C	C
Approach Delay (s)	8.3			10.8	22.7	
Approach LOS	A			B	C	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Volume (vph)	0	1610	490	0	1310	440	0	0	0	430	0	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.95	1.00				0.95	0.91	0.95
Frt		1.00	0.85		1.00	0.85				1.00	0.90	0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95	0.98	1.00
Satd. Flow (prot)		5085	1583		3539	1583				1681	1504	1504
Flt Permitted		1.00	1.00		1.00	1.00				0.95	0.98	1.00
Satd. Flow (perm)		5085	1583		3539	1583				1681	1504	1504
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1610	490	0	1310	440	0	0	0	430	0	500
RTOR Reduction (vph)	0	0	192	0	0	172	0	0	0	0	48	48
Lane Group Flow (vph)	0	1610	298	0	1310	268	0	0	0	322	260	252
Turn Type		NA	Perm		NA	Perm				Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases			4			8				6		6
Actuated Green, G (s)		47.2	47.2		47.2	47.2				22.3	22.3	22.3
Effective Green, g (s)		47.2	47.2		47.2	47.2				22.3	22.3	22.3
Actuated g/C Ratio		0.61	0.61		0.61	0.61				0.29	0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)		3096	964		2155	964				483	432	432
v/s Ratio Prot		0.32			c0.37							
v/s Ratio Perm			0.19			0.17				c0.19	0.17	0.17
v/c Ratio		0.52	0.31		0.61	0.28				0.67	0.60	0.58
Uniform Delay, d1		8.7	7.3		9.4	7.1				24.3	23.8	23.6
Progression Factor		1.00	1.00		1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2		0.2	0.2		0.5	0.2				3.5	2.4	2.0
Delay (s)		8.8	7.5		9.9	7.3				27.8	26.1	25.6
Level of Service		A	A		A	A				C	C	C
Approach Delay (s)		8.5			9.2			0.0			26.6	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	77.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	990	340	120	1070	540	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.0	3.0	3.0	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.96		1.00	1.00	0.96	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3404		1770	3539	3352	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3404		1770	3539	3352	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	990	340	120	1070	540	180
RTOR Reduction (vph)	31	0	0	0	35	0
Lane Group Flow (vph)	1299	0	120	1070	685	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases						
Actuated Green, G (s)	37.9		8.1	50.0	21.9	
Effective Green, g (s)	37.9		8.1	50.0	21.9	
Actuated g/C Ratio	0.49		0.10	0.64	0.28	
Clearance Time (s)	4.0		3.0	3.0	3.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	1656		184	2271	942	
v/s Ratio Prot	c0.38		c0.07	0.30	c0.20	
v/s Ratio Perm						
v/c Ratio	0.78		0.65	0.47	0.73	
Uniform Delay, d1	16.6		33.5	7.2	25.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.3		6.2	0.1	2.4	
Delay (s)	18.9		39.7	7.2	27.7	
Level of Service	B		D	A	C	
Approach Delay (s)	18.9			10.5	27.7	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	77.9	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	1250	40	20	1470	360	30	70	150	190	50	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.97			0.92			0.98	
Flt Protected		1.00			1.00			0.99			0.97	
Satd. Flow (prot)		3520			3413			1659			1727	
Flt Permitted		0.80			0.93			0.95			0.51	
Satd. Flow (perm)		2808			3178			1583			915	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	1250	40	20	1470	360	30	70	150	190	50	30
RTOR Reduction (vph)	0	3	0	0	23	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	1307	0	0	1827	0	0	250	0	0	265	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	5%	5%	5%	5%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		46.1			46.1			21.1			21.1	
Effective Green, g (s)		46.1			46.1			21.1			21.1	
Actuated g/C Ratio		0.57			0.57			0.26			0.26	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1612			1824			415			240	
v/s Ratio Prot												
v/s Ratio Perm		0.47			c0.57			0.16			c0.29	
v/c Ratio		0.81			1.00			0.60			1.10	
Uniform Delay, d1		13.6			17.1			25.9			29.6	
Progression Factor		1.00			1.00			0.12			1.00	
Incremental Delay, d2		3.2			21.5			2.1			88.6	
Delay (s)		16.8			38.6			5.2			118.2	
Level of Service		B			D			A			F	
Approach Delay (s)		16.8			38.6			5.2			118.2	
Approach LOS		B			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	650	200	380	850	350	120	450	220	330	490	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.96		1.00	0.96			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1770	3414		1770	3384			1843	1583		1826	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (perm)	1770	3414		1770	3384			1843	1583		1826	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	650	200	380	850	350	120	450	220	330	490	100
RTOR Reduction (vph)	0	32	0	0	43	0	0	0	90	0	0	79
Lane Group Flow (vph)	50	818	0	380	1157	0	0	570	130	0	820	21
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases									6			2
Actuated Green, G (s)	5.5	25.8		14.0	34.3			16.0	16.0		19.0	19.0
Effective Green, g (s)	5.5	25.8		14.0	34.3			16.0	16.0		19.0	19.0
Actuated g/C Ratio	0.06	0.28		0.15	0.38			0.18	0.18		0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	107	970		272	1278			324	278		382	331
v/s Ratio Prot	0.03	0.24		c0.21	c0.34			c0.31			c0.45	
v/s Ratio Perm									0.08			0.01
v/c Ratio	0.47	0.84		1.40	0.91			1.76	0.47		2.15	0.06
Uniform Delay, d1	41.2	30.6		38.4	26.7			37.4	33.6		35.9	28.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.2	6.8		199.5	9.3			354.1	1.2		524.6	0.1
Delay (s)	44.4	37.4		237.9	36.0			391.5	34.8		560.5	28.8
Level of Service	D	D		F	D			F	C		F	C
Approach Delay (s)		37.8			84.6			292.2			502.8	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	205.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	110	430	20	270	620	0	310	10	380	240	380	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Lane Util. Factor		1.00		1.00	1.00	1.00			0.95		1.00	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.96			1.00		1.00	0.99
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.94		1.00	0.97
Flt Protected		0.99		0.95	1.00	1.00			1.00		0.95	1.00
Satd. Flow (prot)		1832		1770	1863	1523			3334		1764	1791
Flt Permitted		0.78		0.95	1.00	1.00			0.85		0.30	1.00
Satd. Flow (perm)		1437		1770	1863	1523			2850		558	1791
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	430	20	270	620	0	310	10	380	240	380	470
RTOR Reduction (vph)	0	1	0	0	0	141	0	0	96	0	0	0
Lane Group Flow (vph)	0	559	0	270	620	169	0	0	534	0	380	600
Confl. Peds. (#/hr)	9		3	3		9					6	
Turn Type	Perm	NA		Prot	NA	Perm		Perm	NA		Perm	NA
Protected Phases		4		3	8				2			6
Permitted Phases	4					8		2			6	
Actuated Green, G (s)		23.0		14.0	41.0	41.0			26.0		26.0	26.0
Effective Green, g (s)		23.0		14.0	41.0	41.0			26.0		26.0	26.0
Actuated g/C Ratio		0.31		0.19	0.55	0.55			0.35		0.35	0.35
Clearance Time (s)		4.0		4.0	4.0	4.0			4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		440		330	1018	832			988		193	620
v/s Ratio Prot				c0.15	0.33							0.33
v/s Ratio Perm		c0.39				0.11			0.19		c0.68	
v/c Ratio		1.27		0.82	0.61	0.20			0.54		1.97	0.97
Uniform Delay, d1		26.0		29.3	11.6	8.7			19.7		24.5	24.1
Progression Factor		1.00		1.00	1.00	1.00			1.00		1.00	1.00
Incremental Delay, d2		138.2		14.5	1.0	0.1			0.6		454.2	27.9
Delay (s)		164.2		43.8	12.6	8.8			20.3		478.7	52.0
Level of Service		F		D	B	A			C		F	D
Approach Delay (s)		164.2			18.6				20.3			217.4
Approach LOS		F			B				C			F

Intersection Summary			
HCM 2000 Control Delay	101.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	127.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR	SEL	SER2
Lane Configurations			
Volume (vph)	130	0	0
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)			
Lane Util. Factor			
Frpb, ped/bikes			
Flpb, ped/bikes			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	130	0	0
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	0	0
Confl. Peds. (#/hr)	6		
Turn Type		Prot	Perm
Protected Phases		10	
Permitted Phases			4
Actuated Green, G (s)			
Effective Green, g (s)			
Actuated g/C Ratio			
Clearance Time (s)			
Vehicle Extension (s)			
Lane Grp Cap (vph)			
v/s Ratio Prot			
v/s Ratio Perm			
v/c Ratio			
Uniform Delay, d1			
Progression Factor			
Incremental Delay, d2			
Delay (s)			
Level of Service			
Approach Delay (s)		0.0	
Approach LOS		A	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	590	10	390	660	20	10	210	250	60	250	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt		1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	1.00
Satd. Flow (prot)		3515		1770	3524			1859	1583		1845	1583
Flt Permitted		1.00		0.95	1.00			0.98	1.00		0.88	1.00
Satd. Flow (perm)		3515		1770	3524			1828	1583		1631	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	590	10	390	660	20	10	210	250	60	250	60
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	184	0	0	40
Lane Group Flow (vph)	0	659	0	390	678	0	0	220	66	0	310	20
Turn Type	Split	NA		Split	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8		8	4		4
Actuated Green, G (s)		21.2		24.4	24.4			20.8	20.8		20.8	20.8
Effective Green, g (s)		21.2		24.4	24.4			20.8	20.8		20.8	20.8
Actuated g/C Ratio		0.27		0.31	0.31			0.27	0.27		0.27	0.27
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		950		550	1096			484	419		432	419
v/s Ratio Prot		c0.19		c0.22	0.19							
v/s Ratio Perm								0.12	0.04		c0.19	0.01
v/c Ratio		0.69		0.71	0.62			0.45	0.16		0.72	0.05
Uniform Delay, d1		25.7		23.9	23.0			24.1	22.1		26.1	21.4
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2		2.2		4.2	1.0			0.7	0.2		5.6	0.0
Delay (s)		27.9		28.0	24.1			24.7	22.3		31.8	21.5
Level of Service		C		C	C			C	C		C	C
Approach Delay (s)		27.9			25.5			23.4			30.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	78.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	740	110	60	890	90	180	390	90	170	340	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.98		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3430		1766	3484		1748	3414		1745	3539	1533
Flt Permitted		0.76		0.23	1.00		0.53	1.00		0.42	1.00	1.00
Satd. Flow (perm)		2614		433	3484		974	3414		770	3539	1533
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	740	110	60	890	90	180	390	90	170	340	120
RTOR Reduction (vph)	0	15	0	0	11	0	0	28	0	0	0	65
Lane Group Flow (vph)	0	915	0	60	969	0	180	452	0	170	340	55
Confl. Peds. (#/hr)	75		66	11		12	23		33	33		23
Confl. Bikes (#/hr)			21									
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Effective Green, g (s)		36.0		36.0	36.0		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.51		0.51	0.51		0.37	0.37		0.37	0.37	0.37
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1344		222	1791		361	1268		286	1314	569
v/s Ratio Prot					0.28			0.13			0.10	
v/s Ratio Perm		c0.35		0.14			0.18			c0.22		0.04
v/c Ratio		0.68		0.27	0.54		0.50	0.36		0.59	0.26	0.10
Uniform Delay, d1		12.7		9.6	11.4		17.0	15.9		17.7	15.3	14.3
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		2.8		3.0	1.2		4.9	0.8		8.8	0.5	0.3
Delay (s)		15.5		12.6	12.6		21.8	16.7		26.5	15.8	14.7
Level of Service		B		B	B		C	B		C	B	B
Approach Delay (s)		15.5			12.6			18.1			18.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	240	160	150	390	160	210	690	150	300	790	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3514	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3514	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	240	160	150	390	160	210	690	150	300	790	40
RTOR Reduction (vph)	0	0	0	0	0	102	0	0	61	0	3	0
Lane Group Flow (vph)	30	240	160	150	390	58	210	690	89	300	827	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	4.6	22.7	22.7	14.6	32.7	32.7	17.7	30.4	30.4	21.8	34.5	
Effective Green, g (s)	4.6	22.7	22.7	14.6	32.7	32.7	17.7	30.4	30.4	21.8	34.5	
Actuated g/C Ratio	0.04	0.22	0.22	0.14	0.31	0.31	0.17	0.29	0.29	0.21	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	77	400	340	244	577	490	296	1019	456	365	1149	
v/s Ratio Prot	0.02	0.13		c0.08	c0.21		0.12	0.19		c0.17	c0.24	
v/s Ratio Perm			0.10			0.04			0.06			
v/c Ratio	0.39	0.60	0.47	0.61	0.68	0.12	0.71	0.68	0.19	0.82	0.72	
Uniform Delay, d1	49.1	37.3	36.2	42.8	31.8	26.1	41.5	33.2	28.3	40.0	31.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.2	2.4	1.0	4.5	3.1	0.1	7.6	1.8	0.2	13.8	2.2	
Delay (s)	52.3	39.7	37.2	47.3	34.9	26.2	49.1	35.0	28.5	53.8	33.5	
Level of Service	D	D	D	D	C	C	D	D	C	D	C	
Approach Delay (s)		39.7			35.6			36.9			38.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	100	120	340	170	140	150	810	440	190	860	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt		0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1730		1770	1737		1770	1863	1583	1770	3527	
Flt Permitted		0.96		0.55	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1672		1030	1737		1770	1863	1583	1770	3527	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	100	120	340	170	140	150	810	440	190	860	20
RTOR Reduction (vph)	0	53	0	0	43	0	0	0	279	0	3	0
Lane Group Flow (vph)	0	187	0	340	267	0	150	810	161	190	877	0
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		24.5		24.5	24.5		7.0	25.0	25.0	7.0	25.0	
Effective Green, g (s)		24.5		24.5	24.5		7.0	25.0	25.0	7.0	25.0	
Actuated g/C Ratio		0.36		0.36	0.36		0.10	0.36	0.36	0.10	0.36	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		598		368	621		180	679	577	180	1287	
v/s Ratio Prot					0.15		0.08	c0.43		c0.11	0.25	
v/s Ratio Perm		0.11		c0.33					0.10			
v/c Ratio		0.31		0.92	0.43		0.83	1.19	0.28	1.06	0.68	
Uniform Delay, d1		15.9		21.1	16.7		30.2	21.8	15.4	30.8	18.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3		28.3	0.5		26.8	100.9	0.3	82.5	1.5	
Delay (s)		16.2		49.4	17.2		57.0	122.7	15.6	113.3	19.9	
Level of Service		B		D	B		E	F	B	F	B	
Approach Delay (s)		16.2			34.1			82.0			36.5	
Approach LOS		B			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	30	190	220	70	120	150	1310	110	120	1120	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.89			0.96		1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1651			1742		1770	3498		1770	3525	
Flt Permitted		0.98			0.63		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1627			1125		1770	3498		1770	3525	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	30	190	220	70	120	150	1310	110	120	1120	30
RTOR Reduction (vph)	0	135	0	0	21	0	0	9	0	0	3	0
Lane Group Flow (vph)	0	95	0	0	389	0	150	1411	0	120	1147	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		20.0			20.0		7.9	30.9		6.3	29.3	
Effective Green, g (s)		20.0			20.0		7.9	30.9		6.3	29.3	
Actuated g/C Ratio		0.29			0.29		0.11	0.45		0.09	0.42	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		470			325		202	1561		161	1492	
v/s Ratio Prot							c0.08	c0.40		0.07	0.33	
v/s Ratio Perm		0.06			c0.35							
v/c Ratio		0.20			1.20		0.74	0.90		0.75	0.77	
Uniform Delay, d1		18.6			24.6		29.7	17.8		30.7	17.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			114.2		13.7	7.7		17.0	2.4	
Delay (s)		18.8			138.8		43.4	25.5		47.7	19.5	
Level of Service		B			F		D	C		D	B	
Approach Delay (s)		18.8			138.8			27.2			22.2	
Approach LOS		B			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	69.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1000	30	1540	960	50	1480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frpb, ped/bikes	1.00		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		1.00	1.00
Frt	1.00		0.94		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	3429		3318		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	3429		3318		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1000	30	1540	960	50	1480
RTOR Reduction (vph)	3	0	99	0	0	0
Lane Group Flow (vph)	1027	0	2401	0	50	1480
Confl. Peds. (#/hr)		2				
Confl. Bikes (#/hr)		5		3		
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	29.3		36.7		3.2	43.9
Effective Green, g (s)	29.3		36.7		3.2	43.9
Actuated g/C Ratio	0.36		0.45		0.04	0.54
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1237		1499		69	1913
v/s Ratio Prot	c0.30		c0.72		0.03	c0.42
v/s Ratio Perm						
v/c Ratio	0.83		1.60		0.72	0.77
Uniform Delay, d1	23.7		22.2		38.6	14.7
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	4.9		274.0		31.2	2.0
Delay (s)	28.6		296.3		69.7	16.7
Level of Service	C		F		E	B
Approach Delay (s)	28.6		296.3			18.5
Approach LOS	C		F			B

Intersection Summary			
HCM 2000 Control Delay	157.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	10	10	90	660	0	30	70	0	450	210	10	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Lane Util. Factor		1.00		0.95	0.95			1.00	0.95			1.00
Frpb, ped/bikes		0.99		1.00	1.00			1.00	0.98			1.00
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00			0.99
Frt		0.89		1.00	0.99			1.00	0.95			1.00
Flt Protected		1.00		0.95	0.96			0.95	1.00			0.95
Satd. Flow (prot)		1630		1618	1605			1703	3186			1690
Flt Permitted		1.00		0.95	0.96			0.95	1.00			0.30
Satd. Flow (perm)		1630		1618	1605			1703	3186			535
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	90	660	0	30	70	0	450	210	10	30
RTOR Reduction (vph)	0	83	0	0	90	0	0	0	61	0	0	0
Lane Group Flow (vph)	0	27	0	350	250	0	0	70	599	0	0	40
Confl. Peds. (#/hr)			2	2						14		14
Confl. Bikes (#/hr)						2				3		
Heavy Vehicles (%)	2%	2%	2%	6%	2%	6%	6%	2%	6%	6%	6%	6%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA			Prot
Protected Phases	4	4		8	8		5	5	2			1
Permitted Phases												
Actuated Green, G (s)		5.8		13.3	13.3			7.0	26.5			13.3
Effective Green, g (s)		5.8		13.3	13.3			7.0	26.5			13.3
Actuated g/C Ratio		0.08		0.18	0.18			0.09	0.35			0.18
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		126		287	285			159	1127			95
v/s Ratio Prot		c0.02		c0.22	0.16			0.04	0.19			
v/s Ratio Perm												c0.07
v/c Ratio		0.21		1.22	0.88			0.44	0.53			0.42
Uniform Delay, d1		32.4		30.8	30.0			32.1	19.3			27.4
Progression Factor		1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2		0.9		126.1	24.9			1.9	0.5			3.0
Delay (s)		33.3		156.9	54.9			34.0	19.7			30.4
Level of Service		C		F	D			C	B			C
Approach Delay (s)		33.3			106.6				21.1			
Approach LOS		C			F				C			

Intersection Summary			
HCM 2000 Control Delay	45.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	74.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	1350	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3406	
Flt Permitted	1.00	
Satd. Flow (perm)	3406	
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	1350	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	1350	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		2
Heavy Vehicles (%)	6%	2%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	32.8	
Effective Green, g (s)	32.8	
Actuated g/C Ratio	0.44	
Clearance Time (s)	4.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1491	
v/s Ratio Prot	c0.40	
v/s Ratio Perm		
v/c Ratio	0.91	
Uniform Delay, d1	19.6	
Progression Factor	1.00	
Incremental Delay, d2	8.1	
Delay (s)	27.8	
Level of Service	C	
Approach Delay (s)	27.8	
Approach LOS	C	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	10	240	1610	20	50	140	2080	820	30	100	200	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Lane Util. Factor		1.00	0.86			1.00	0.81	0.81		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	0.98	0.87		1.00	0.98	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.98	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1770	6396			1770	5824	1119		1841	1558	
Flt Permitted		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		1770	6396			1770	5824	1119		1841	1558	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	240	1610	20	50	140	2080	820	30	100	200	10
RTOR Reduction (vph)	0	0	1	0	0	0	15	294	0	0	81	0
Lane Group Flow (vph)	0	250	1629	0	0	190	2368	223	0	130	119	0
Confl. Peds. (#/hr)		53						53	44			
Confl. Bikes (#/hr)								3			2	
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		4	4		8
Permitted Phases								6			4	
Actuated Green, G (s)		15.0	45.5			17.6	48.1	48.1		15.8	15.8	
Effective Green, g (s)		15.0	45.5			17.6	48.1	48.1		15.8	15.8	
Actuated g/C Ratio		0.10	0.31			0.12	0.33	0.33		0.11	0.11	
Clearance Time (s)		5.0	6.0			5.0	6.0	6.0		5.0	5.0	
Vehicle Extension (s)		2.0	2.0			2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		181	1993			213	1918	368		199	168	
v/s Ratio Prot		c0.14	0.25			0.11	c0.41			0.07		
v/s Ratio Perm								0.20			c0.08	
v/c Ratio		1.38	0.82			0.89	1.23	0.60		0.65	0.71	
Uniform Delay, d1		65.5	46.4			63.3	49.0	41.0		62.5	62.9	
Progression Factor		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		202.1	2.6			33.2	110.2	1.9		5.8	10.6	
Delay (s)		267.6	49.0			96.5	159.2	42.9		68.2	73.4	
Level of Service		F	D			F	F	D		E	E	
Approach Delay (s)			78.1				135.9			71.4		
Approach LOS			E				F			E		

Intersection Summary			
HCM 2000 Control Delay	147.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	146.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	114.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	1490	240	520
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	5.0	5.0	
Lane Util. Factor	0.97	1.00	
Frpb, ped/bikes	1.00	0.96	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	0.90	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	3433	1609	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	3433	1609	
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	1490	240	520
RTOR Reduction (vph)	0	49	0
Lane Group Flow (vph)	1500	711	0
Confl. Peds. (#/hr)			44
Confl. Bikes (#/hr)			2
Turn Type	Split	NA	
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)	46.1	46.1	
Effective Green, g (s)	46.1	46.1	
Actuated g/C Ratio	0.32	0.32	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	2.0	2.0	
Lane Grp Cap (vph)	1083	508	
v/s Ratio Prot	0.44	c0.44	
v/s Ratio Perm			
v/c Ratio	1.39	1.40	
Uniform Delay, d1	49.9	49.9	
Progression Factor	1.00	1.00	
Incremental Delay, d2	179.1	191.8	
Delay (s)	229.0	241.8	
Level of Service	F	F	
Approach Delay (s)		233.3	
Approach LOS		F	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	950	100	460	2260	260	230	130	410	340	120	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	0.88	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1718	3438	1511	1719	4940	1485	1714	1810	2707	1719	1710	
Flt Permitted	0.11	1.00	1.00	0.95	1.00	1.00	0.64	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	195	3438	1511	1719	4940	1485	1162	1810	2707	1719	1710	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	950	100	460	2260	260	230	130	410	340	120	60
RTOR Reduction (vph)	0	0	54	0	0	76	0	0	319	0	1	0
Lane Group Flow (vph)	30	950	46	460	2260	184	230	130	91	340	179	0
Confl. Peds. (#/hr)	12		3	3		12	3					3
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		6		5	2			4		3	8	
Permitted Phases	6		6			2	4		4			
Actuated Green, G (s)	37.1	37.1	37.1	33.0	74.1	74.1	31.3	31.3	31.3	24.0	59.3	
Effective Green, g (s)	37.1	37.1	37.1	33.0	74.1	74.1	31.3	31.3	31.3	24.0	59.3	
Actuated g/C Ratio	0.26	0.26	0.26	0.23	0.52	0.52	0.22	0.22	0.22	0.17	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	51	902	396	401	2588	778	257	400	599	291	717	
v/s Ratio Prot		c0.28		c0.27	0.46			0.07		c0.20	0.10	
v/s Ratio Perm	0.15		0.03			0.12	c0.20		0.03			
v/c Ratio	0.59	1.05	0.12	1.15	0.87	0.24	0.89	0.33	0.15	1.17	0.25	
Uniform Delay, d1	45.5	52.2	39.7	54.2	29.5	18.3	53.5	46.2	44.4	58.7	26.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.1	45.0	0.1	91.5	3.6	0.2	30.1	0.5	0.1	106.4	0.2	
Delay (s)	61.6	97.1	39.8	145.7	33.1	18.4	83.5	46.7	44.5	165.1	26.8	
Level of Service	E	F	D	F	C	B	F	D	D	F	C	
Approach Delay (s)		90.8			49.2			56.5			117.2	
Approach LOS		F			D			E			F	

Intersection Summary			
HCM 2000 Control Delay	65.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	141.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	1800	10	190	1160	520	30	200	340	280	200	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.86	0.86	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85	1.00	0.93	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		4966		1736	4988	1531	1736	4389	1335	1736	3471	1553
Flt Permitted		0.71		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3523		1736	4988	1531	1736	4389	1335	1736	3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	1800	10	190	1160	520	30	200	340	280	200	90
RTOR Reduction (vph)	0	0	0	0	0	183	0	139	139	0	0	72
Lane Group Flow (vph)	0	1950	0	190	1160	337	30	231	31	280	200	18
Confl. Peds. (#/hr)	2					2						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6			8			4
Actuated Green, G (s)		66.9		10.0	80.9	80.9	4.7	14.1	14.1	16.0	25.4	25.4
Effective Green, g (s)		66.9		10.0	80.9	80.9	4.7	14.1	14.1	16.0	25.4	25.4
Actuated g/C Ratio		0.54		0.08	0.65	0.65	0.04	0.11	0.11	0.13	0.20	0.20
Clearance Time (s)		5.0		4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1885		138	3228	990	65	495	150	222	705	315
v/s Ratio Prot				c0.11	0.23		0.02	c0.05		c0.16	0.06	
v/s Ratio Perm		c0.55				0.22			0.02			0.01
v/c Ratio		1.03		1.38	0.36	0.34	0.46	0.47	0.20	1.26	0.28	0.06
Uniform Delay, d1		29.0		57.5	10.1	10.0	58.9	51.9	50.4	54.5	42.1	40.2
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		30.1		208.4	0.3	0.9	5.1	0.7	0.7	148.5	0.2	0.1
Delay (s)		59.2		265.9	10.4	10.9	64.0	52.6	51.0	203.0	42.3	40.2
Level of Service		E		F	B	B	E	D	D	F	D	D
Approach Delay (s)		59.2			36.5			52.7			120.9	
Approach LOS		E			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	57.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	970	1510	340	1590	910	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.91		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3216		1770	3539	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3216		1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	970	1510	340	1590	910	340
RTOR Reduction (vph)	402	0	0	0	0	0
Lane Group Flow (vph)	2078	0	340	1590	910	340
Turn Type	NA		Prot	NA	Prot	Free
Protected Phases	4		3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	23.0		11.0	38.0	14.0	60.0
Effective Green, g (s)	23.0		11.0	38.0	14.0	60.0
Actuated g/C Ratio	0.38		0.18	0.63	0.23	1.00
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1232		324	2241	801	1583
v/s Ratio Prot	c0.65		c0.19	0.45	c0.27	
v/s Ratio Perm						0.21
v/c Ratio	1.69		1.05	0.71	1.14	0.21
Uniform Delay, d1	18.5		24.5	7.3	23.0	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	312.5		63.5	1.1	76.3	0.3
Delay (s)	331.0		88.0	8.4	99.3	0.3
Level of Service	F		F	A	F	A
Approach Delay (s)	331.0			22.4	72.4	
Approach LOS	F			C	E	

Intersection Summary			
HCM 2000 Control Delay	168.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	130.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1170	130	140	1270	640	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1170	130	140	1270	640	140
RTOR Reduction (vph)	0	72	0	0	0	100
Lane Group Flow (vph)	1170	58	140	1270	640	40
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	30.4	30.4	6.4	40.8	19.7	19.7
Effective Green, g (s)	30.4	30.4	6.4	40.8	19.7	19.7
Actuated g/C Ratio	0.44	0.44	0.09	0.60	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1570	702	320	2107	987	455
v/s Ratio Prot	c0.33		0.04	c0.36	c0.19	
v/s Ratio Perm		0.04				0.03
v/c Ratio	0.75	0.08	0.44	0.60	0.65	0.09
Uniform Delay, d1	15.8	11.0	29.3	8.7	21.4	17.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.1	1.0	0.5	1.5	0.1
Delay (s)	17.8	11.0	30.3	9.2	22.8	17.9
Level of Service	B	B	C	A	C	B
Approach Delay (s)	17.1			11.3	22.0	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	30	140	50	20	170	90	1340	50	90	1560	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.87		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1661	1749	1568	1752	2996		3400	3484		1752	3501	
Flt Permitted	0.63	0.99	1.00	0.74	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1106	1735	1568	1357	2996		3400	3484		1752	3501	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	30	140	50	20	170	90	1340	50	90	1560	10
RTOR Reduction (vph)	0	0	110	0	134	0	0	2	0	0	1	0
Lane Group Flow (vph)	9	31	30	50	56	0	90	1388	0	90	1569	0
Confl. Peds. (#/hr)	5											
Confl. Bikes (#/hr)						2			5			6
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	10.5	10.5	10.5	10.5	10.5		4.6	21.8		5.7	22.9	
Effective Green, g (s)	10.5	10.5	10.5	10.5	10.5		4.6	21.8		5.7	22.9	
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.09	0.44		0.12	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	4.7	4.7		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	234	368	332	287	635		315	1534		201	1619	
v/s Ratio Prot					0.02		0.03	0.40		c0.05	c0.45	
v/s Ratio Perm	0.01	0.02	0.02	c0.04								
v/c Ratio	0.04	0.08	0.09	0.17	0.09		0.29	0.91		0.45	0.97	
Uniform Delay, d1	15.5	15.6	15.7	16.0	15.7		20.9	12.9		20.4	13.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2	0.2	0.5	0.1		0.2	7.8		0.6	15.4	
Delay (s)	15.6	15.8	15.9	16.5	15.8		21.1	20.6		21.0	28.4	
Level of Service	B	B	B	B	B		C	C		C	C	
Approach Delay (s)		15.8			15.9			20.7			28.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	49.5	Sum of lost time (s)	11.5
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	0	0	0	10	480	1230	720	10	220	720	260	630
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor					1.00	0.91			0.97	0.95	1.00	0.97
Frpb, ped/bikes					1.00	0.99			1.00	1.00	0.99	1.00
Flpb, ped/bikes					1.00	1.00			1.00	1.00	1.00	1.00
Frt					1.00	0.94			1.00	1.00	0.85	1.00
Flt Protected					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (prot)					1752	4726			3400	3505	1546	3400
Flt Permitted					0.95	1.00			0.95	1.00	1.00	0.95
Satd. Flow (perm)					1752	4726			3400	3505	1546	3400
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	10	480	1230	720	10	220	720	260	630
RTOR Reduction (vph)	0	0	0	0	0	106	0	0	0	0	174	0
Lane Group Flow (vph)	0	0	0	0	490	1844	0	0	230	720	86	630
Confl. Peds. (#/hr)							3					
Confl. Bikes (#/hr)							3				3	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm	Perm	NA		Prot	Prot	NA	Perm	Prot
Protected Phases						8		5	5	2		1
Permitted Phases				8	8						2	
Actuated Green, G (s)					39.0	39.0			12.0	33.0	33.0	16.0
Effective Green, g (s)					39.0	39.0			12.0	33.0	33.0	16.0
Actuated g/C Ratio					0.39	0.39			0.12	0.33	0.33	0.16
Clearance Time (s)					4.0	4.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)					3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					683	1843			408	1156	510	544
v/s Ratio Prot						c0.39			0.07	0.21		c0.19
v/s Ratio Perm					0.28						0.06	
v/c Ratio					0.72	1.00			0.56	0.62	0.17	1.16
Uniform Delay, d1					25.8	30.5			41.5	28.3	23.8	42.0
Progression Factor					1.00	1.00			0.68	1.33	4.97	1.00
Incremental Delay, d2					3.6	21.2			1.5	2.1	0.6	90.2
Delay (s)					29.4	51.7			29.6	39.5	118.7	132.2
Level of Service					C	D			C	D	F	F
Approach Delay (s)		0.0				47.2				54.6		
Approach LOS		A				D				D		

Intersection Summary			
HCM 2000 Control Delay	55.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	930	200
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frpb, ped/bikes	1.00	0.98
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3505	1543
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3505	1543
Peak-hour factor, PHF	1.00	1.00
Adj. Flow (vph)	930	200
RTOR Reduction (vph)	0	39
Lane Group Flow (vph)	930	161
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		6
Heavy Vehicles (%)	3%	3%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	37.0	37.0
Effective Green, g (s)	37.0	37.0
Actuated g/C Ratio	0.37	0.37
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1296	570
v/s Ratio Prot	c0.27	
v/s Ratio Perm		0.10
v/c Ratio	0.72	0.28
Uniform Delay, d1	27.0	22.2
Progression Factor	1.00	1.00
Incremental Delay, d2	3.4	1.2
Delay (s)	30.5	23.4
Level of Service	C	C
Approach Delay (s)	66.1	
Approach LOS	E	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	250	420	310	0	90	0	940	270	30	1390	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97		1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.97		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	5036	1568	3400		1523		3505	1539	1752	3505	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	5036	1568	3400		1523		3505	1539	1752	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	250	420	310	0	90	0	940	270	30	1390	0
RTOR Reduction (vph)	0	0	74	0	0	77	0	0	161	0	0	0
Lane Group Flow (vph)	180	250	346	310	0	13	0	940	109	30	1390	0
Confl. Peds. (#/hr)						8			3	3		
Confl. Bikes (#/hr)									6			5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm	Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	8	8		4				6		5	2	
Permitted Phases			8			4			6			
Actuated Green, G (s)	24.5	24.5	24.5	14.3		14.3		40.3	40.3	4.9	49.2	
Effective Green, g (s)	24.5	24.5	24.5	14.3		14.3		40.3	40.3	4.9	49.2	
Actuated g/C Ratio	0.24	0.24	0.24	0.14		0.14		0.40	0.40	0.05	0.49	
Clearance Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	429	1233	384	486		217		1412	620	85	1724	
v/s Ratio Prot	0.10	0.05		c0.09				0.27		0.02	c0.40	
v/s Ratio Perm			c0.22			0.01			0.07			
v/c Ratio	0.42	0.20	0.90	0.64		0.06		0.67	0.18	0.35	0.81	
Uniform Delay, d1	31.8	30.0	36.6	40.4		37.0		24.4	19.2	46.0	21.4	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.78	0.80	
Incremental Delay, d2	0.7	0.1	23.5	2.7		0.1		2.5	0.6	1.7	2.9	
Delay (s)	32.4	30.1	60.1	43.2		37.2		26.9	19.8	37.5	20.1	
Level of Service	C	C	E	D		D		C	B	D	C	
Approach Delay (s)		45.4			41.8			25.3			20.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	110	50	400	130	640	40	500	350	830	1290	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1504	2851		3242	1759	1495	1671	4803	1483	3335	3403	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1504	2851		3242	1759	1495	1671	4803	1483	3335	3403	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	110	50	400	130	640	40	500	350	830	1290	80
RTOR Reduction (vph)	0	44	0	0	0	131	0	0	180	0	3	0
Lane Group Flow (vph)	100	116	0	400	130	509	40	500	170	830	1367	0
Confl. Peds. (#/hr)			2	2			3		2	2		3
Confl. Bikes (#/hr)			3									2
Heavy Vehicles (%)	20%	20%	20%	8%	8%	8%	8%	8%	8%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	9.1	10.4		15.1	16.4	32.7	4.7	25.1	40.2	16.3	36.7	
Effective Green, g (s)	9.1	10.4		15.1	16.4	32.7	4.7	25.1	40.2	16.3	36.7	
Actuated g/C Ratio	0.11	0.13		0.18	0.20	0.39	0.06	0.30	0.48	0.20	0.44	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	165	357		590	347	661	94	1454	790	655	1506	
v/s Ratio Prot	0.07	0.04		c0.12	0.07	c0.15	0.02	c0.10	0.04	c0.25	c0.40	
v/s Ratio Perm						0.19			0.08			
v/c Ratio	0.61	0.33		0.68	0.37	0.77	0.43	0.34	0.21	1.27	0.91	
Uniform Delay, d1	35.2	33.1		31.6	28.8	21.8	37.8	22.5	12.3	33.3	21.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.2	0.5		3.1	0.7	5.4	3.1	0.1	0.1	132.1	8.2	
Delay (s)	41.4	33.6		34.7	29.5	27.2	40.9	22.6	12.4	165.4	29.8	
Level of Service	D	C		C	C	C	D	C	B	F	C	
Approach Delay (s)		36.6			30.0			19.4			80.9	
Approach LOS		D			C			B			F	

Intersection Summary			
HCM 2000 Control Delay	53.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	82.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	490	20	20	670	20	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1853			1860	1695	
Flt Permitted	1.00			0.81	0.98	
Satd. Flow (perm)	1853			1501	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	490	20	20	670	20	20
RTOR Reduction (vph)	2	0	0	0	17	0
Lane Group Flow (vph)	508	0	0	690	23	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	3	
Permitted Phases			6			
Actuated Green, G (s)	25.0			25.0	11.9	
Effective Green, g (s)	25.0			25.0	11.9	
Actuated g/C Ratio	0.33			0.33	0.16	
Clearance Time (s)	4.5			4.5	4.0	
Vehicle Extension (s)	2.0			2.0	2.0	
Lane Grp Cap (vph)	618			501	269	
v/s Ratio Prot	0.27				c0.01	
v/s Ratio Perm				c0.46		
v/c Ratio	0.82			1.38	0.09	
Uniform Delay, d1	22.9			25.0	26.9	
Progression Factor	1.00			1.12	1.00	
Incremental Delay, d2	8.2			170.9	0.1	
Delay (s)	31.2			198.9	26.9	
Level of Service	C			F	C	
Approach Delay (s)	31.2			198.9	26.9	
Approach LOS	C			F	C	

Intersection Summary			
HCM 2000 Control Delay	124.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	74.9	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	0	250	10	0	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		1.00			1.00
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		1853			1863
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		1853			1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	250	10	0	110
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	10	0	260	0	0	110
Turn Type	Prot		NA			NA
Protected Phases	10		2			6
Permitted Phases						
Actuated Green, G (s)	1.1		21.1			21.1
Effective Green, g (s)	1.1		21.1			21.1
Actuated g/C Ratio	0.01		0.26			0.26
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	24		486			489
v/s Ratio Prot	c0.01		c0.14			0.06
v/s Ratio Perm						
v/c Ratio	0.42		0.53			0.22
Uniform Delay, d1	39.3		25.4			23.2
Progression Factor	1.00		1.00			0.88
Incremental Delay, d2	11.3		1.1			0.1
Delay (s)	50.6		26.5			20.4
Level of Service	D		C			C
Approach Delay (s)	50.6		26.5			20.4
Approach LOS	D		C			C

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix N
CMP Analysis Calculations

FEHR PEERS

Coliseum City
MTS Roadway System Analysis Summary - 2020 PM - Coliseum Site

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Freeway Segments										
I-580 Eastbound										
Between	MacArthur Blvd	Seminary Ave	6,526	6,596	0.82	0.82	D	D	No	-
Between	Seminary Ave	Edwards Ave	6,519	6,569	0.81	0.82	D	D	No	-
Between	Edwards Ave	Keller Ave	8,689	8,719	1.09	1.09	F	F	-	No
Between	Keller Ave	Golf Links Road	7,930	7,960	0.99	0.99	E	E	No	-
Between	Golf Links Road	106th Avenue	8,040	8,060	1.01	1.01	F	F	-	No
I-580 Westbound										
Between	106th Avenue	Golf Links Road	8,032	8,092	1.00	1.01	F	F	-	No
Between	Golf Links Road	Keller Ave	8,948	9,008	1.12	1.13	F	F	-	No
Between	Keller Ave	Edwards Ave	8,405	8,465	1.05	1.06	F	F	-	No
Between	Edwards Ave	Seminary Ave	9,555	9,645	1.19	1.21	F	F	-	No
Between	Seminary Ave	MacArthur Blvd	5,924	5,984	0.74	0.75	C	C	No	-
I-880 Northbound										
Between	Marina Blvd	Davis St	9,641	10,131	1.07	1.13	F	F	-	Yes
Between	Davis St	98th Ave	9,140	9,650	1.14	1.21	F	F	-	Yes
Between	98th Ave	Hegenberger Road	8,481	9,001	0.94	1.00	E	F	Yes	-
Between	Hegenberger Road	66th Ave	8,469	8,839	0.94	0.98	E	E	No	-
Between	66th Ave	High St	9,569	9,849	1.06	1.09	F	F	-	No
Between	High St	29th Avenue	8,685	9,015	1.09	1.13	F	F	-	Yes
I-880 Southbound										
Between	29th Avenue	High St	8,386	8,696	1.05	1.09	F	F	-	Yes
Between	High St	66th Ave	7,793	8,073	0.97	1.01	E	F	Yes	-
Between	66th Ave	Hegenberger Road	8,135	8,425	1.02	1.05	F	F	-	No
Between	Hegenberger Road	98th Ave	7,640	8,240	0.85	0.92	D	E	No	-
Between	98th Ave	Davis St	7,213	7,853	0.90	0.98	D	E	No	-
Between	Davis St	Marina Blvd	7,440	8,070	0.83	0.90	D	D	No	-
SR-13 Northbound										
Between	I-580 WB Ramp	Mountain Blvd/Carson St	4,268	4,278	1.07	1.07	F	F	-	No
SR-13 Southbound										
Between	Mountain Blvd/Carson St	I-580 EB Ramp	3,749	3,759	0.94	0.94	E	E	No	-
Arterials										
Doolittle Drive (SR-61) Northbound										
Between	Davis St	Airport Dr	2,132	2,172	1.33	1.36	F	F	-	No
Between	Airport Dr	Hegenberger Rd	1,918	1,948	1.20	1.22	F	F	-	No
Between	Hegenberger Rd	Swan Way	1,530	1,580	0.96	0.99	E	E	No	-
Between	Swan Way	Harbor Bay Pkwy	1,535	1,575	0.96	0.98	E	E	No	-
Between	Harbor Bay Pkwy	Otis Dr/Island Dr	1,660	1,690	1.04	1.06	F	F	-	No
Doolittle Drive (SR-61) Southbound										
Between	Otis Dr/Island Dr	Harbor Bay Pkwy	819	829	0.51	0.52	B	B	No	-
Between	Harbor Bay Pkwy	Swan Way	820	830	0.51	0.52	B	B	No	-
Between	Swan Way	Hegenberger Rd	1,086	1,096	0.68	0.68	C	C	No	-
Between	Hegenberger Rd	Airport Dr	1,154	1,184	0.72	0.74	C	C	No	-
Between	Airport Dr	Davis St	2,074	2,114	1.30	1.32	F	F	-	No
Hegenberger Drive/73rd Avenue Eastbound										
Between	Doolittle Dr	Airport Access Dr	2,240	2,270	0.93	0.95	E	E	No	-
Between	Airport Access Dr	Edgewater Dr	2,672	2,732	1.11	1.14	F	F	-	No
Between	Edgewater Dr	I-880 SB Off-ramp	3,185	3,275	1.00	1.02	F	F	-	No

Coliseum City
MTS Roadway System Analysis Summary - 2020 PM - Coliseum Site

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Between	I-880 SB Off-ramp	Coliseum Way/Edes Ave	2,733	2,843	1.14	1.18	F	F	-	Yes
Between	Coliseum Way/Edes Ave	Baldwin St	2,313	2,463	0.72	0.77	C	D	No	-
Between	Baldwin St	San Leandro St	2,368	2,518	0.74	0.79	C	D	No	-
Between	San Leandro St	14th St/International Blvd	1,848	1,938	0.77	0.81	D	D	No	-
Between	14th St/International Blvd	Bancroft	1,847	1,927	0.77	0.80	D	D	No	-
Between	Bancroft	Foothill Blvd/McArthur Blvd	1,140	1,190	0.71	0.74	C	C	No	-
Hegenberger Drive/73rd Avenue Westbound										
Between	Foothill Blvd/McArthur Blvd	Bancroft	546	616	0.34	0.38	A	B	No	-
Between	Bancroft	14th St/International Blvd	1,001	1,121	0.42	0.47	B	B	No	-
Between	14th St/International Blvd	San Leandro St	911	1,031	0.38	0.43	B	B	No	-
Between	San Leandro St	Baldwin St	1,719	1,889	0.54	0.59	B	C	No	-
Between	Baldwin St	Coliseum Way/Edes Ave	1,719	1,879	0.54	0.59	B	C	No	-
Between	Coliseum Way/Edes Ave	I-880 SB Off-ramp	1,709	2,129	0.53	0.67	B	C	No	-
Between	I-880 SB Off-ramp	Edgewater Dr	2,178	2,318	0.68	0.72	C	C	No	-
Between	Edgewater Dr	Airport Access Dr	2,096	2,236	0.87	0.93	D	E	No	-
Between	Airport Access Dr	Doolittle Dr	1,899	1,999	0.79	0.83	D	D	No	-
San Leandro Street Northbound										
Between	Washington Ave	Marina Blvd	713	723	0.45	0.45	B	B	No	-
Between	Marina Blvd	Williams St	734	774	0.46	0.48	B	B	No	-
Between	Williams St	Davis St	1,116	1,156	0.47	0.48	B	B	No	-
Between	Davis St	Park St (east)	1,339	1,349	0.84	0.84	D	D	No	-
Between	Park St (east)	Park St (west)	1,433	1,443	0.90	0.90	D	D	No	-
Between	Park St (west)	98th Ave	1,431	1,441	0.89	0.90	D	D	No	-
Between	98th Ave	85th Ave	1,062	1,102	0.66	0.69	C	C	No	-
Between	85th Ave	81st Ave	1,253	1,303	0.78	0.81	D	D	No	-
Between	81st Ave	Hegenberger Rd Off-Ramp	1,353	1,443	0.85	0.90	D	D	No	-
Between	Hegenberger Rd Off-Ramp	73rd Ave On-Ramp	1,303	1,463	0.81	0.91	D	E	No	-
Between	73rd Ave On-Ramp	69th Ave	2,063	2,183	1.29	1.36	F	F	-	Yes
Between	69th Ave	66th Ave	2,084	2,264	1.30	1.42	F	F	-	Yes
Between	66th Ave	Seminary Ave	2,067	2,167	1.29	1.35	F	F	-	Yes
Between	Seminary Ave	50th Ave	1,980	2,040	1.24	1.27	F	F	-	No
Between	50th Ave	High St	2,076	2,136	1.30	1.34	F	F	-	Yes
Between	High St	Fruitvale Ave	1,795	1,835	1.12	1.15	F	F	-	No
San Leandro Street Southbound										
Between	Fruitvale Ave	High St	1,809	1,849	1.13	1.16	F	F	-	No
Between	High St	50th Ave	1,889	1,929	1.18	1.21	F	F	-	No
Between	50th Ave	Seminary Ave	1,861	1,911	1.16	1.19	F	F	-	No
Between	Seminary Ave	66th Ave	2,028	2,108	1.27	1.32	F	F	-	Yes
Between	66th Ave	69th Ave	1,917	2,107	1.20	1.32	F	F	-	Yes
Between	69th Ave	73rd Ave On-Ramp	1,913	2,113	1.20	1.32	F	F	-	Yes
Between	73rd Ave On-Ramp	Hegenberger Rd Off-Ramp	896	986	0.56	0.62	B	C	No	-
Between	Hegenberger Rd Off-Ramp	81st Ave	896	956	0.56	0.60	B	C	No	-
Between	81st Ave	85th Ave	860	880	0.54	0.55	B	B	No	-
Between	85th Ave	98th Ave	882	912	0.55	0.57	B	B	No	-
Between	98th Ave	Park St (west)	1,282	1,312	0.80	0.82	D	D	No	-
Between	Park St (west)	Park St (east)	1,039	1,069	0.65	0.67	C	C	No	-
Between	Park St (east)	Davis St	1,084	1,124	0.68	0.70	C	C	No	-
Between	Davis St	Williams St	951	961	0.59	0.60	C	C	No	-

Coliseum City
MTS Roadway System Analysis Summary - 2020 PM - Coliseum Site

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Between	Williams St	Marina Blvd	794	804	0.50	0.50	B	B	No	-
Between	Marina Blvd	Washington Ave	836	836	0.52	0.52	B	B	No	-
International Boulevard (SR-185) Northbound										
Between	San Leandro St	Estudillo Ave	1,069	1,089	0.67	0.68	C	C	No	-
Between	Estudillo Ave	Davis St	1,389	1,409	0.87	0.88	D	D	No	-
Between	Davis St	98th Ave	790	800	0.49	0.50	B	B	No	-
Between	98th Ave	73rd Ave	1,490	1,500	1.86	1.88	F	F	-	No
Between	73rd Ave	Havenscourt Blvd	1,711	1,741	2.14	2.18	F	F	-	Yes
Between	Havenscourt Blvd	66th Ave	1,707	1,747	1.07	1.09	F	F	-	No
Between	66th Ave	Seminary Ave	1,664	1,674	2.08	2.09	F	F	-	No
Between	Seminary Ave	High St	1,319	1,329	1.65	1.66	F	F	-	No
Between	High St	42nd Ave	1,839	1,849	1.15	1.16	F	F	-	No
Between	42nd Ave	Fruitvale Ave	1,325	1,345	1.66	1.68	F	F	-	No
Between	Fruitvale Ave	23rd Ave	1,737	1,747	2.17	2.18	F	F	-	No
International Boulevard (SR-185) Southbound										
Between	23rd Ave	Fruitvale Ave	1,566	1,586	1.96	1.98	F	F	-	No
Between	Fruitvale Ave	42nd Ave	1,730	1,740	2.16	2.18	F	F	-	No
Between	42nd Ave	High St	1,588	1,608	0.99	1.01	E	F	Yes	-
Between	High St	Seminary Ave	1,999	2,019	2.50	2.52	F	F	-	No
Between	Seminary Ave	66th Ave	1,559	1,579	1.95	1.97	F	F	-	No
Between	66th Ave	Havenscourt Blvd	1,590	1,620	0.99	1.01	E	F	Yes	-
Between	Havenscourt Blvd	73rd Ave	1,625	1,635	2.03	2.04	F	F	-	No
Between	73rd Ave	98th Ave	1,714	1,724	2.14	2.15	F	F	-	No
Between	98th Ave	Davis St	1,149	1,149	0.72	0.72	C	C	No	-
Between	Davis St	Estudillo Ave	1,550	1,550	0.97	0.97	E	E	No	-
Between	Estudillo Ave	San Leandro St	927	927	0.58	0.58	B	B	No	-
98th Avenue Eastbound										
Between	Airport Access Dr	I-880 SB ramps	2,195	2,265	0.91	0.94	E	E	No	-
Between	I-880 SB ramps	I-880 NB ramps	1,910	1,990	0.80	0.83	D	D	No	-
Between	I-880 NB ramps	Edes Ave	1,410	1,450	0.88	0.91	D	E	No	-
Between	Edes Ave	San Leandro St	1,169	1,269	0.73	0.79	C	D	No	-
Between	San Leandro St	International Blvd	812	882	0.51	0.55	B	B	No	-
Between	International Blvd	I-580 EB On-Ramp	962	1,022	0.60	0.64	C	C	No	-
Between	I-580 EB On-Ramp	I-580 WB Ramp	448	518	0.28	0.32	A	A	No	-
98th Avenue Westbound										
Between	I-580 WB Ramp	I-580 EB On-Ramp	681	711	0.43	0.44	B	B	No	-
Between	I-580 EB On-Ramp	International Blvd	503	523	0.63	0.65	C	C	No	-
Between	International Blvd	San Leandro St	381	401	0.24	0.25	A	A	No	-
Between	San Leandro St	Edes Ave	739	759	0.46	0.47	B	B	No	-
Between	Edes Ave	I-880 NB ramps	911	961	0.57	0.60	B	C	No	-
Between	I-880 NB ramps	I-880 SB ramps	2,148	2,228	0.90	0.93	D	E	No	-
Between	I-880 SB ramps	Airport Access Dr	1,781	1,851	0.74	0.77	C	D	No	-

Fehr & Peers, 2014.

Coliseum City
MTS Roadway System Analysis Summary - 2020 PM - Specific Plan Buildout

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Freeway Segments										
I-580 Eastbound										
Between	MacArthur Blvd	Seminary Ave	6,526	6,666	0.82	0.83	D	D	No	-
Between	Seminary Ave	Edwards Ave	6,519	6,649	0.81	0.83	D	D	No	-
Between	Edwards Ave	Keller Ave	8,689	8,739	1.09	1.09	F	F	-	No
Between	Keller Ave	Golf Links Road	7,930	7,980	0.99	1.00	E	F	Yes	-
Between	Golf Links Road	106th Avenue	8,040	8,080	1.01	1.01	F	F	-	No
I-580 Westbound										
Between	106th Avenue	Golf Links Road	8,032	8,142	1.00	1.02	F	F	-	No
Between	Golf Links Road	Keller Ave	8,948	9,058	1.12	1.13	F	F	-	No
Between	Keller Ave	Edwards Ave	8,405	8,515	1.05	1.06	F	F	-	No
Between	Edwards Ave	Seminary Ave	9,555	9,725	1.19	1.22	F	F	-	No
Between	Seminary Ave	MacArthur Blvd	5,924	6,004	0.74	0.75	C	C	No	-
I-880 Northbound										
Between	Marina Blvd	Davis St	9,641	10,411	1.07	1.16	F	F	-	Yes
Between	Davis St	98th Ave	9,140	9,940	1.14	1.24	F	F	-	Yes
Between	98th Ave	Hegenberger Road	8,481	9,281	0.94	1.03	E	F	Yes	-
Between	Hegenberger Road	66th Ave	8,469	9,329	0.94	1.04	E	F	Yes	-
Between	66th Ave	High St	9,569	10,379	1.06	1.15	F	F	-	Yes
Between	High St	29th Avenue	8,685	9,585	1.09	1.20	F	F	-	Yes
I-880 Southbound										
Between	29th Avenue	High St	8,386	9,216	1.05	1.15	F	F	-	Yes
Between	High St	66th Ave	7,793	8,553	0.97	1.07	E	F	Yes	-
Between	66th Ave	Hegenberger Road	8,135	8,685	1.02	1.09	F	F	-	Yes
Between	Hegenberger Road	98th Ave	7,640	8,700	0.85	0.97	D	E	No	-
Between	98th Ave	Davis St	7,213	8,373	0.90	1.05	D	F	Yes	-
Between	Davis St	Marina Blvd	7,440	8,580	0.83	0.95	D	E	No	-
SR-13 Northbound										
Between	I-580 WB Ramp	Mountain Blvd/Carson St	4,268	4,298	1.07	1.07	F	F	-	No
SR-13 Southbound										
Between	Mountain Blvd/Carson St	I-580 EB Ramp	3,749	3,779	0.94	0.94	E	E	No	-
Arterials										
Doolittle Drive (SR-61) Northbound										
Between	Davis St	Airport Dr	2,132	2,292	1.33	1.43	F	F	-	Yes
Between	Airport Dr	Hegenberger Rd	1,918	2,018	1.20	1.26	F	F	-	Yes
Between	Hegenberger Rd	Swan Way	1,530	1,620	0.96	1.01	E	F	Yes	-
Between	Swan Way	Harbor Bay Pkwy	1,535	1,595	0.96	1.00	E	F	Yes	-
Between	Harbor Bay Pkwy	Otis Dr/Island Dr	1,660	1,700	1.04	1.06	F	F	-	No
Doolittle Drive (SR-61) Southbound										
Between	Otis Dr/Island Dr	Harbor Bay Pkwy	819	849	0.51	0.53	B	B	No	-
Between	Harbor Bay Pkwy	Swan Way	820	840	0.51	0.53	B	B	No	-
Between	Swan Way	Hegenberger Rd	1,086	1,096	0.68	0.68	C	C	No	-
Between	Hegenberger Rd	Airport Dr	1,154	1,304	0.72	0.81	C	D	No	-
Between	Airport Dr	Davis St	2,074	2,294	1.30	1.43	F	F	-	Yes
Hegenberger Drive/73rd Avenue Eastbound										
Between	Doolittle Dr	Airport Access Dr	2,240	2,310	0.93	0.96	E	E	No	-
Between	Airport Access Dr	Edgewater Dr	2,672	2,902	1.11	1.21	F	F	-	Yes
Between	Edgewater Dr	I-880 SB Off-ramp	3,185	3,985	1.00	1.25	F	F	-	Yes

Coliseum City
MTS Roadway System Analysis Summary - 2020 PM - Specific Plan Buildout

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Between	I-880 SB Off-ramp	Coliseum Way/Edes Ave	2,733	3,163	1.14	1.32	F	F	-	Yes
Between	Coliseum Way/Edes Ave	Baldwin St	2,313	2,723	0.72	0.85	C	D	No	-
Between	Baldwin St	San Leandro St	2,368	2,818	0.74	0.88	C	D	No	-
Between	San Leandro St	14th St/International Blvd	1,848	2,128	0.77	0.89	D	D	No	-
Between	14th St/International Blvd	Bancroft	1,847	2,037	0.77	0.85	D	D	No	-
Between	Bancroft	Foothill Blvd/McArthur Blvd	1,140	1,240	0.71	0.77	C	D	No	-
Hegenberger Drive/73rd Avenue Westbound										
Between	Foothill Blvd/McArthur Blvd	Bancroft	546	726	0.34	0.45	A	B	No	-
Between	Bancroft	14th St/International Blvd	1,001	1,311	0.42	0.55	B	B	No	-
Between	14th St/International Blvd	San Leandro St	911	1,201	0.38	0.50	B	B	No	-
Between	San Leandro St	Baldwin St	1,719	2,389	0.54	0.75	B	C	No	-
Between	Baldwin St	Coliseum Way/Edes Ave	1,719	2,279	0.54	0.71	B	C	No	-
Between	Coliseum Way/Edes Ave	I-880 SB Off-ramp	1,709	2,559	0.53	0.80	B	D	No	-
Between	I-880 SB Off-ramp	Edgewater Dr	2,178	2,718	0.68	0.85	C	D	No	-
Between	Edgewater Dr	Airport Access Dr	2,096	2,616	0.87	1.09	D	F	Yes	-
Between	Airport Access Dr	Doolittle Dr	1,899	2,209	0.79	0.92	D	E	No	-
San Leandro Street Northbound										
Between	Washington Ave	Marina Blvd	713	723	0.45	0.45	B	B	No	-
Between	Marina Blvd	Williams St	734	804	0.46	0.50	B	B	No	-
Between	Williams St	Davis St	1,116	1,196	0.47	0.50	B	B	No	-
Between	Davis St	Park St (east)	1,339	1,359	0.84	0.85	D	D	No	-
Between	Park St (east)	Park St (west)	1,433	1,453	0.90	0.91	D	E	No	-
Between	Park St (west)	98th Ave	1,431	1,451	0.89	0.91	D	E	No	-
Between	98th Ave	85th Ave	1,062	1,102	0.66	0.69	C	C	No	-
Between	85th Ave	81st Ave	1,253	1,503	0.78	0.94	D	E	No	-
Between	81st Ave	Hegenberger Rd Off-Ramp	1,353	1,803	0.85	1.13	D	F	Yes	-
Between	Hegenberger Rd Off-Ramp	73rd Ave On-Ramp	1,303	1,843	0.81	1.15	D	F	Yes	-
Between	73rd Ave On-Ramp	69th Ave	2,063	2,523	1.29	1.58	F	F	-	Yes
Between	69th Ave	66th Ave	2,084	2,674	1.30	1.67	F	F	-	Yes
Between	66th Ave	Seminary Ave	2,067	2,397	1.29	1.50	F	F	-	Yes
Between	Seminary Ave	50th Ave	1,980	2,290	1.24	1.43	F	F	-	Yes
Between	50th Ave	High St	2,076	2,326	1.30	1.45	F	F	-	Yes
Between	High St	Fruitvale Ave	1,795	2,005	1.12	1.25	F	F	-	Yes
San Leandro Street Southbound										
Between	Fruitvale Ave	High St	1,809	1,939	1.13	1.21	F	F	-	Yes
Between	High St	50th Ave	1,889	2,059	1.18	1.29	F	F	-	Yes
Between	50th Ave	Seminary Ave	1,861	2,081	1.16	1.30	F	F	-	Yes
Between	Seminary Ave	66th Ave	2,028	2,308	1.27	1.44	F	F	-	Yes
Between	66th Ave	69th Ave	1,917	2,347	1.20	1.47	F	F	-	Yes
Between	69th Ave	73rd Ave On-Ramp	1,913	2,353	1.20	1.47	F	F	-	Yes
Between	73rd Ave On-Ramp	Hegenberger Rd Off-Ramp	896	1,096	0.56	0.69	B	C	No	-
Between	Hegenberger Rd Off-Ramp	81st Ave	896	1,056	0.56	0.66	B	C	No	-
Between	81st Ave	85th Ave	860	970	0.54	0.61	B	C	No	-
Between	85th Ave	98th Ave	882	1,012	0.55	0.63	B	C	No	-
Between	98th Ave	Park St (west)	1,282	1,352	0.80	0.85	D	D	No	-
Between	Park St (west)	Park St (east)	1,039	1,109	0.65	0.69	C	C	No	-
Between	Park St (east)	Davis St	1,084	1,164	0.68	0.73	C	C	No	-
Between	Davis St	Williams St	951	991	0.59	0.62	C	C	No	-

Coliseum City
MTS Roadway System Analysis Summary - 2020 PM - Specific Plan Buildout

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Between	Williams St	Marina Blvd	794	824	0.50	0.52	B	B	No	-
Between	Marina Blvd	Washington Ave	836	856	0.52	0.53	B	B	No	-
International Boulevard (SR-185) Northbound										
Between	San Leandro St	Estudillo Ave	1,069	1,099	0.67	0.69	C	C	No	-
Between	Estudillo Ave	Davis St	1,389	1,419	0.87	0.89	D	D	No	-
Between	Davis St	98th Ave	790	810	0.49	0.51	B	B	No	-
Between	98th Ave	73rd Ave	1,490	1,510	1.86	1.89	F	F	-	No
Between	73rd Ave	Havenscourt Blvd	1,711	1,751	2.14	2.19	F	F	-	Yes
Between	Havenscourt Blvd	66th Ave	1,707	1,757	1.07	1.10	F	F	-	No
Between	66th Ave	Seminary Ave	1,664	1,684	2.08	2.11	F	F	-	No
Between	Seminary Ave	High St	1,319	1,339	1.65	1.67	F	F	-	No
Between	High St	42nd Ave	1,839	1,859	1.15	1.16	F	F	-	No
Between	42nd Ave	Fruitvale Ave	1,325	1,355	1.66	1.69	F	F	-	No
Between	Fruitvale Ave	23rd Ave	1,737	1,757	2.17	2.20	F	F	-	Yes
International Boulevard (SR-185) Southbound										
Between	23rd Ave	Fruitvale Ave	1,566	1,586	1.96	1.98	F	F	-	No
Between	Fruitvale Ave	42nd Ave	1,730	1,750	2.16	2.19	F	F	-	No
Between	42nd Ave	High St	1,588	1,618	0.99	1.01	E	F	Yes	-
Between	High St	Seminary Ave	1,999	2,029	2.50	2.54	F	F	-	Yes
Between	Seminary Ave	66th Ave	1,559	1,589	1.95	1.99	F	F	-	Yes
Between	66th Ave	Havenscourt Blvd	1,590	1,650	0.99	1.03	E	F	Yes	-
Between	Havenscourt Blvd	73rd Ave	1,625	1,645	2.03	2.06	F	F	-	Yes
Between	73rd Ave	98th Ave	1,714	1,724	2.14	2.15	F	F	-	No
Between	98th Ave	Davis St	1,149	1,159	0.72	0.72	C	C	No	-
Between	Davis St	Estudillo Ave	1,550	1,620	0.97	1.01	E	F	Yes	-
Between	Estudillo Ave	San Leandro St	927	977	0.58	0.61	B	C	No	-
98th Avenue Eastbound										
Between	Airport Access Dr	I-880 SB ramps	2,195	2,355	0.91	0.98	E	E	No	-
Between	I-880 SB ramps	I-880 NB ramps	1,910	2,020	0.80	0.84	D	D	No	-
Between	I-880 NB ramps	Edes Ave	1,410	1,460	0.88	0.91	D	E	No	-
Between	Edes Ave	San Leandro St	1,169	1,269	0.73	0.79	C	D	No	-
Between	San Leandro St	International Blvd	812	932	0.51	0.58	B	B	No	-
Between	International Blvd	I-580 EB On-Ramp	962	1,072	0.60	0.67	C	C	No	-
Between	I-580 EB On-Ramp	I-580 WB Ramp	448	558	0.28	0.35	A	B	No	-
98th Avenue Westbound										
Between	I-580 WB Ramp	I-580 EB On-Ramp	681	721	0.43	0.45	B	B	No	-
Between	I-580 EB On-Ramp	International Blvd	503	573	0.63	0.72	C	C	No	-
Between	International Blvd	San Leandro St	381	421	0.24	0.26	A	A	No	-
Between	San Leandro St	Edes Ave	739	759	0.46	0.47	B	B	No	-
Between	Edes Ave	I-880 NB ramps	911	991	0.57	0.62	B	C	No	-
Between	I-880 NB ramps	I-880 SB ramps	2,148	2,278	0.90	0.95	D	E	No	-
Between	I-880 SB ramps	Airport Access Dr	1,781	1,901	0.74	0.79	C	D	No	-

Fehr & Peers, 2014.

Coliseum City
MTS Roadway System Analysis Summary - 2035 PM - Coliseum Site

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Freeway Segments										
I-580 Eastbound										
Between	MacArthur Blvd	Seminary Ave	6,609	6,679	0.83	0.83	D	D	No	-
Between	Seminary Ave	Edwards Ave	6,596	6,646	0.82	0.83	D	D	No	-
Between	Edwards Ave	Keller Ave	8,743	8,773	1.09	1.10	F	F	-	No
Between	Keller Ave	Golf Links Road	7,972	8,002	1.00	1.00	F	F	-	No
Between	Golf Links Road	106th Avenue	7,964	7,984	1.00	1.00	F	F	-	No
I-580 Westbound										
Between	106th Avenue	Golf Links Road	9,152	9,212	1.14	1.15	F	F	-	No
Between	Golf Links Road	Keller Ave	9,766	9,826	1.22	1.23	F	F	-	No
Between	Keller Ave	Edwards Ave	9,217	9,277	1.15	1.16	F	F	-	No
Between	Edwards Ave	Seminary Ave	10,588	10,678	1.32	1.33	F	F	-	No
Between	Seminary Ave	MacArthur Blvd	6,865	6,925	0.86	0.87	D	D	No	-
I-880 Northbound										
Between	Marina Blvd	Davis St	10,453	10,943	1.16	1.22	F	F	-	**Yes**
Between	Davis St	98th Ave	10,242	10,752	1.28	1.34	F	F	-	**Yes**
Between	98th Ave	Hegenberger Road	9,449	9,969	1.05	1.11	F	F	-	**Yes**
Between	Hegenberger Road	66th Ave	9,323	9,693	1.04	1.08	F	F	-	**Yes**
Between	66th Ave	High St	10,441	10,721	1.16	1.19	F	F	-	No
Between	High St	29th Avenue	9,653	9,983	1.21	1.25	F	F	-	**Yes**
I-880 Southbound										
Between	29th Avenue	High St	8,773	9,083	1.10	1.14	F	F	-	**Yes**
Between	High St	66th Ave	8,127	8,407	1.02	1.05	F	F	-	No
Between	66th Ave	Hegenberger Road	8,388	8,678	1.05	1.08	F	F	-	No
Between	Hegenberger Road	98th Ave	7,574	8,174	0.84	0.91	D	E	No	-
Between	98th Ave	Davis St	6,971	7,611	0.87	0.95	D	E	No	-
Between	Davis St	Marina Blvd	7,356	7,986	0.82	0.89	D	D	No	-
SR-13 Northbound										
Between	I-580 WB Ramp	Mountain Blvd/Carson St	4,691	4,701	1.17	1.18	F	F	-	No
SR-13 Southbound										
Between	Mountain Blvd/Carson St	I-580 EB Ramp	4,006	4,016	1.00	1.00	F	F	-	No
Arterials										
Doolittle Drive (SR-61) Northbound										
Between	Davis St	Airport Dr	2,319	2,359	1.45	1.47	F	F	-	No
Between	Airport Dr	Hegenberger Rd	2,076	2,106	1.30	1.32	F	F	-	No
Between	Hegenberger Rd	Swan Way	1,672	1,722	1.05	1.08	F	F	-	No
Between	Swan Way	Harbor Bay Pkwy	1,667	1,707	1.04	1.07	F	F	-	No
Between	Harbor Bay Pkwy	Otis Dr/Island Dr	2,076	2,106	1.30	1.32	F	F	-	No
Doolittle Drive (SR-61) Southbound										
Between	Otis Dr/Island Dr	Harbor Bay Pkwy	1,187	1,197	0.74	0.75	C	C	No	-
Between	Harbor Bay Pkwy	Swan Way	1,412	1,422	0.88	0.89	D	D	No	-
Between	Swan Way	Hegenberger Rd	1,657	1,667	1.04	1.04	F	F	-	No
Between	Hegenberger Rd	Airport Dr	1,501	1,531	0.94	0.96	E	E	No	-
Between	Airport Dr	Davis St	2,135	2,175	1.33	1.36	F	F	-	No
Hegenberger Drive/73rd Avenue Eastbound										
Between	Doolittle Dr	Airport Access Dr	2,662	2,692	1.11	1.12	F	F	-	No
Between	Airport Access Dr	Edgewater Dr	3,166	3,226	1.32	1.34	F	F	-	No
Between	Edgewater Dr	I-880 SB Off-ramp	3,497	3,587	1.09	1.12	F	F	-	No

Coliseum City
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Between	I-880 SB Off-ramp	Coliseum Way/Edes Ave	3,072	3,182	1.28	1.33	F	F	-	Yes
Between	Coliseum Way/Edes Ave	Baldwin St	2,215	2,365	0.69	0.74	C	C	No	-
Between	Baldwin St	San Leandro St	2,279	2,429	0.71	0.76	C	D	No	-
Between	San Leandro St	14th St/International Blvd	2,443	2,533	1.02	1.06	F	F	-	Yes
Between	14th St/International Blvd	Bancroft	2,254	2,334	0.94	0.97	E	E	No	-
Between	Bancroft	Foothill Blvd/McArthur Blvd	1,450	1,500	0.91	0.94	E	E	No	-
Hegenberger Drive/73rd Avenue Westbound										
Between	Foothill Blvd/McArthur Blvd	Bancroft	680	750	0.42	0.47	B	B	No	-
Between	Bancroft	14th St/International Blvd	1,428	1,548	0.60	0.65	C	C	No	-
Between	14th St/International Blvd	San Leandro St	1,732	1,852	0.72	0.77	C	D	No	-
Between	San Leandro St	Baldwin St	2,380	2,550	0.74	0.80	C	D	No	-
Between	Baldwin St	Coliseum Way/Edes Ave	2,379	2,539	0.74	0.79	C	D	No	-
Between	Coliseum Way/Edes Ave	I-880 SB Off-ramp	2,238	2,658	0.70	0.83	C	D	No	-
Between	I-880 SB Off-ramp	Edgewater Dr	3,050	3,190	0.95	1.00	E	F	Yes	-
Between	Edgewater Dr	Airport Access Dr	3,090	3,230	1.29	1.35	F	F	-	Yes
Between	Airport Access Dr	Doolittle Dr	2,848	2,948	1.19	1.23	F	F	-	Yes
San Leandro Street Northbound										
Between	Washington Ave	Marina Blvd	814	824	0.51	0.51	B	B	No	-
Between	Marina Blvd	Williams St	1,230	1,270	0.77	0.79	D	D	No	-
Between	Williams St	Davis St	1,591	1,631	0.66	0.68	C	C	No	-
Between	Davis St	Park St (east)	1,965	1,975	1.23	1.23	F	F	-	No
Between	Park St (east)	Park St (west)	1,894	1,904	1.18	1.19	F	F	-	No
Between	Park St (west)	98th Ave	2,097	2,107	1.31	1.32	F	F	-	No
Between	98th Ave	85th Ave	1,716	1,756	1.07	1.10	F	F	-	No
Between	85th Ave	81st Ave	2,027	2,077	1.27	1.30	F	F	-	No
Between	81st Ave	Hegenberger Rd Off-Ramp	2,076	2,166	1.30	1.35	F	F	-	Yes
Between	Hegenberger Rd Off-Ramp	73rd Ave On-Ramp	2,037	2,197	1.27	1.37	F	F	-	Yes
Between	73rd Ave On-Ramp	69th Ave	2,109	2,229	1.32	1.39	F	F	-	Yes
Between	69th Ave	66th Ave	2,102	2,282	1.31	1.43	F	F	-	Yes
Between	66th Ave	Seminary Ave	2,111	2,211	1.32	1.38	F	F	-	Yes
Between	Seminary Ave	50th Ave	2,023	2,083	1.26	1.30	F	F	-	Yes
Between	50th Ave	High St	2,108	2,168	1.32	1.35	F	F	-	No
Between	High St	Fruitvale Ave	2,018	2,058	1.26	1.29	F	F	-	No
San Leandro Street Southbound										
Between	Fruitvale Ave	High St	2,001	2,041	1.25	1.28	F	F	-	No
Between	High St	50th Ave	2,067	2,107	1.29	1.32	F	F	-	No
Between	50th Ave	Seminary Ave	2,015	2,065	1.26	1.29	F	F	-	No
Between	Seminary Ave	66th Ave	2,068	2,148	1.29	1.34	F	F	-	Yes
Between	66th Ave	69th Ave	2,100	2,290	1.31	1.43	F	F	-	Yes
Between	69th Ave	73rd Ave On-Ramp	2,071	2,271	1.29	1.42	F	F	-	Yes
Between	73rd Ave On-Ramp	Hegenberger Rd Off-Ramp	1,078	1,168	0.67	0.73	C	C	No	-
Between	Hegenberger Rd Off-Ramp	81st Ave	1,078	1,138	0.67	0.71	C	C	No	-
Between	81st Ave	85th Ave	1,069	1,089	0.67	0.68	C	C	No	-
Between	85th Ave	98th Ave	1,117	1,147	0.70	0.72	C	C	No	-
Between	98th Ave	Park St (west)	1,401	1,431	0.88	0.89	D	D	No	-
Between	Park St (west)	Park St (east)	1,177	1,207	0.74	0.75	C	C	No	-
Between	Park St (east)	Davis St	1,236	1,276	0.77	0.80	D	D	No	-
Between	Davis St	Williams St	1,118	1,128	0.70	0.71	C	C	No	-

Coliseum City
MTS Roadway System Analysis Summary - 2035 PM - Coliseum Site

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Between	Williams St	Marina Blvd	834	844	0.52	0.53	B	B	No	-
Between	Marina Blvd	Washington Ave	879	879	0.55	0.55	B	B	No	-
International Boulevard (SR-185) Northbound										
Between	San Leandro St	Estudillo Ave	1,815	1,835	1.13	1.15	F	F	-	No
Between	Estudillo Ave	Davis St	1,955	1,975	1.22	1.23	F	F	-	No
Between	Davis St	98th Ave	1,148	1,158	0.72	0.72	C	C	No	-
Between	98th Ave	73rd Ave	1,850	1,860	2.31	2.32	F	F	-	No
Between	73rd Ave	Havenscourt Blvd	2,066	2,096	2.58	2.62	F	F	-	**Yes**
Between	Havenscourt Blvd	66th Ave	1,994	2,034	1.25	1.27	F	F	-	No
Between	66th Ave	Seminary Ave	2,064	2,074	2.58	2.59	F	F	-	No
Between	Seminary Ave	High St	2,043	2,053	2.55	2.57	F	F	-	No
Between	High St	42nd Ave	2,068	2,078	1.29	1.30	F	F	-	No
Between	42nd Ave	Fruitvale Ave	2,031	2,051	2.54	2.56	F	F	-	No
Between	Fruitvale Ave	23rd Ave	1,942	1,952	2.43	2.44	F	F	-	No
International Boulevard (SR-185) Southbound										
Between	23rd Ave	Fruitvale Ave	1,809	1,829	2.26	2.29	F	F	-	**Yes**
Between	Fruitvale Ave	42nd Ave	1,975	1,985	2.47	2.48	F	F	-	No
Between	42nd Ave	High St	1,898	1,918	1.19	1.20	F	F	-	No
Between	High St	Seminary Ave	2,080	2,100	2.60	2.63	F	F	-	No
Between	Seminary Ave	66th Ave	2,021	2,041	2.53	2.55	F	F	-	No
Between	66th Ave	Havenscourt Blvd	2,067	2,097	1.29	1.31	F	F	-	No
Between	Havenscourt Blvd	73rd Ave	2,091	2,101	2.61	2.63	F	F	-	No
Between	73rd Ave	98th Ave	1,859	1,869	2.32	2.34	F	F	-	No
Between	98th Ave	Davis St	1,326	1,326	0.83	0.83	D	D	No	-
Between	Davis St	Estudillo Ave	1,718	1,718	1.07	1.07	F	F	-	No
Between	Estudillo Ave	San Leandro St	1,103	1,103	0.69	0.69	C	C	No	-
98th Avenue Eastbound										
Between	Airport Access Dr	I-880 SB ramps	2,663	2,733	1.11	1.14	F	F	-	No
Between	I-880 SB ramps	I-880 NB ramps	2,222	2,302	0.93	0.96	E	E	No	-
Between	I-880 NB ramps	Edes Ave	1,746	1,786	1.09	1.12	F	F	-	No
Between	Edes Ave	San Leandro St	1,596	1,696	1.00	1.06	F	F	-	**Yes**
Between	San Leandro St	International Blvd	1,151	1,221	0.72	0.76	C	D	No	-
Between	International Blvd	I-580 EB On-Ramp	1,081	1,141	0.68	0.71	C	C	No	-
Between	I-580 EB On-Ramp	I-580 WB Ramp	683	753	0.43	0.47	B	B	No	-
98th Avenue Westbound										
Between	I-580 WB Ramp	I-580 EB On-Ramp	909	939	0.57	0.59	B	C	No	-
Between	I-580 EB On-Ramp	International Blvd	650	670	0.81	0.84	D	D	No	-
Between	International Blvd	San Leandro St	645	665	0.40	0.42	B	B	No	-
Between	San Leandro St	Edes Ave	1,048	1,068	0.66	0.67	C	C	No	-
Between	Edes Ave	I-880 NB ramps	1,311	1,361	0.82	0.85	D	D	No	-
Between	I-880 NB ramps	I-880 SB ramps	2,619	2,699	1.09	1.12	F	F	-	No
Between	I-880 SB ramps	Airport Access Dr	2,389	2,459	1.00	1.02	F	F	-	No

Fehr & Peers, 2014.

Coliseum City
MTS Roadway System Analysis Summary - 2035 PM - Specific Plan Buildout

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Freeway Segments										
I-580 Eastbound										
Between	MacArthur Blvd	Seminary Ave	6,609	6,749	0.83	0.84	D	D	No	-
Between	Seminary Ave	Edwards Ave	6,596	6,726	0.82	0.84	D	D	No	-
Between	Edwards Ave	Keller Ave	8,743	8,793	1.09	1.10	F	F	-	No
Between	Keller Ave	Golf Links Road	7,972	8,022	1.00	1.00	F	F	-	No
Between	Golf Links Road	106th Avenue	7,964	8,004	1.00	1.00	F	F	-	No
I-580 Westbound										
Between	106th Avenue	Golf Links Road	9,152	9,262	1.14	1.16	F	F	-	No
Between	Golf Links Road	Keller Ave	9,766	9,876	1.22	1.23	F	F	-	No
Between	Keller Ave	Edwards Ave	9,217	9,327	1.15	1.17	F	F	-	No
Between	Edwards Ave	Seminary Ave	10,588	10,758	1.32	1.34	F	F	-	No
Between	Seminary Ave	MacArthur Blvd	6,865	6,945	0.86	0.87	D	D	No	-
I-880 Northbound										
Between	Marina Blvd	Davis St	10,453	11,223	1.16	1.25	F	F	-	Yes
Between	Davis St	98th Ave	10,242	11,042	1.28	1.38	F	F	-	Yes
Between	98th Ave	Hegenberger Road	9,449	10,249	1.05	1.14	F	F	-	Yes
Between	Hegenberger Road	66th Ave	9,323	10,183	1.04	1.13	F	F	-	Yes
Between	66th Ave	High St	10,441	11,251	1.16	1.25	F	F	-	Yes
Between	High St	29th Avenue	9,653	10,553	1.21	1.32	F	F	-	Yes
I-880 Southbound										
Between	29th Avenue	High St	8,773	9,603	1.10	1.20	F	F	-	Yes
Between	High St	66th Ave	8,127	8,887	1.02	1.11	F	F	-	Yes
Between	66th Ave	Hegenberger Road	8,388	8,938	1.05	1.12	F	F	-	Yes
Between	Hegenberger Road	98th Ave	7,574	8,634	0.84	0.96	D	E	No	-
Between	98th Ave	Davis St	6,971	8,131	0.87	1.02	D	F	Yes	-
Between	Davis St	Marina Blvd	7,356	8,496	0.82	0.94	D	E	No	-
SR-13 Northbound										
Between	I-580 WB Ramp	Mountain Blvd/Carson St	4,691	4,721	1.17	1.18	F	F	-	No
SR-13 Southbound										
Between	Mountain Blvd/Carson St	I-580 EB Ramp	4,006	4,036	1.00	1.01	F	F	-	No
Arterials										
Doolittle Drive (SR-61) Northbound										
Between	Davis St	Airport Dr	2,319	2,479	1.45	1.55	F	F	-	Yes
Between	Airport Dr	Hegenberger Rd	2,076	2,176	1.30	1.36	F	F	-	Yes
Between	Hegenberger Rd	Swan Way	1,672	1,762	1.05	1.10	F	F	-	Yes
Between	Swan Way	Harbor Bay Pkwy	1,667	1,727	1.04	1.08	F	F	-	Yes
Between	Harbor Bay Pkwy	Otis Dr/Island Dr	2,076	2,116	1.30	1.32	F	F	-	No
Doolittle Drive (SR-61) Southbound										
Between	Otis Dr/Island Dr	Harbor Bay Pkwy	1,187	1,217	0.74	0.76	C	D	No	-
Between	Harbor Bay Pkwy	Swan Way	1,412	1,432	0.88	0.90	D	D	No	-
Between	Swan Way	Hegenberger Rd	1,657	1,667	1.04	1.04	F	F	-	No
Between	Hegenberger Rd	Airport Dr	1,501	1,651	0.94	1.03	E	F	Yes	-
Between	Airport Dr	Davis St	2,135	2,355	1.33	1.47	F	F	-	Yes
Hegenberger Drive/73rd Avenue Eastbound										
Between	Doolittle Dr	Airport Access Dr	2,662	2,732	1.11	1.14	F	F	-	No
Between	Airport Access Dr	Edgewater Dr	3,166	3,396	1.32	1.41	F	F	-	Yes
Between	Edgewater Dr	I-880 SB Off-ramp	3,497	4,297	1.09	1.34	F	F	-	Yes

Coliseum City
MTS Roadway System Analysis Summary - 2035 PM - Specific Plan Buildout

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Between	I-880 SB Off-ramp	Coliseum Way/Edes Ave	3,072	3,502	1.28	1.46	F	F	-	Yes
Between	Coliseum Way/Edes Ave	Baldwin St	2,215	2,625	0.69	0.82	C	D	No	-
Between	Baldwin St	San Leandro St	2,279	2,729	0.71	0.85	C	D	No	-
Between	San Leandro St	14th St/International Blvd	2,443	2,723	1.02	1.13	F	F	-	Yes
Between	14th St/International Blvd	Bancroft	2,254	2,444	0.94	1.02	E	F	Yes	-
Between	Bancroft	Foothill Blvd/McArthur Blvd	1,450	1,550	0.91	0.97	E	E	No	-
Hegenberger Drive/73rd Avenue Westbound										
Between	Foothill Blvd/McArthur Blvd	Bancroft	680	860	0.42	0.54	B	B	No	-
Between	Bancroft	14th St/International Blvd	1,428	1,738	0.60	0.72	C	C	No	-
Between	14th St/International Blvd	San Leandro St	1,732	2,022	0.72	0.84	C	D	No	-
Between	San Leandro St	Baldwin St	2,380	3,050	0.74	0.95	C	E	No	-
Between	Baldwin St	Coliseum Way/Edes Ave	2,379	2,939	0.74	0.92	C	E	No	-
Between	Coliseum Way/Edes Ave	I-880 SB Off-ramp	2,238	3,088	0.70	0.97	C	E	No	-
Between	I-880 SB Off-ramp	Edgewater Dr	3,050	3,590	0.95	1.12	E	F	Yes	-
Between	Edgewater Dr	Airport Access Dr	3,090	3,610	1.29	1.50	F	F	-	Yes
Between	Airport Access Dr	Doolittle Dr	2,848	3,158	1.19	1.32	F	F	-	Yes
San Leandro Street Northbound										
Between	Washington Ave	Marina Blvd	814	824	0.51	0.51	B	B	No	-
Between	Marina Blvd	Williams St	1,230	1,300	0.77	0.81	D	D	No	-
Between	Williams St	Davis St	1,591	1,671	0.66	0.70	C	C	No	-
Between	Davis St	Park St (east)	1,965	1,985	1.23	1.24	F	F	-	No
Between	Park St (east)	Park St (west)	1,894	1,914	1.18	1.20	F	F	-	No
Between	Park St (west)	98th Ave	2,097	2,117	1.31	1.32	F	F	-	No
Between	98th Ave	85th Ave	1,716	1,756	1.07	1.10	F	F	-	No
Between	85th Ave	81st Ave	2,027	2,277	1.27	1.42	F	F	-	Yes
Between	81st Ave	Hegenberger Rd Off-Ramp	2,076	2,526	1.30	1.58	F	F	-	Yes
Between	Hegenberger Rd Off-Ramp	73rd Ave On-Ramp	2,037	2,577	1.27	1.61	F	F	-	Yes
Between	73rd Ave On-Ramp	69th Ave	2,109	2,569	1.32	1.61	F	F	-	Yes
Between	69th Ave	66th Ave	2,102	2,692	1.31	1.68	F	F	-	Yes
Between	66th Ave	Seminary Ave	2,111	2,441	1.32	1.53	F	F	-	Yes
Between	Seminary Ave	50th Ave	2,023	2,333	1.26	1.46	F	F	-	Yes
Between	50th Ave	High St	2,108	2,358	1.32	1.47	F	F	-	Yes
Between	High St	Fruitvale Ave	2,018	2,228	1.26	1.39	F	F	-	Yes
San Leandro Street Southbound										
Between	Fruitvale Ave	High St	2,001	2,131	1.25	1.33	F	F	-	Yes
Between	High St	50th Ave	2,067	2,237	1.29	1.40	F	F	-	Yes
Between	50th Ave	Seminary Ave	2,015	2,235	1.26	1.40	F	F	-	Yes
Between	Seminary Ave	66th Ave	2,068	2,348	1.29	1.47	F	F	-	Yes
Between	66th Ave	69th Ave	2,100	2,530	1.31	1.58	F	F	-	Yes
Between	69th Ave	73rd Ave On-Ramp	2,071	2,511	1.29	1.57	F	F	-	Yes
Between	73rd Ave On-Ramp	Hegenberger Rd Off-Ramp	1,078	1,278	0.67	0.80	C	D	No	-
Between	Hegenberger Rd Off-Ramp	81st Ave	1,078	1,238	0.67	0.77	C	D	No	-
Between	81st Ave	85th Ave	1,069	1,179	0.67	0.74	C	C	No	-
Between	85th Ave	98th Ave	1,117	1,247	0.70	0.78	C	D	No	-
Between	98th Ave	Park St (west)	1,401	1,471	0.88	0.92	D	E	No	-
Between	Park St (west)	Park St (east)	1,177	1,247	0.74	0.78	C	D	No	-
Between	Park St (east)	Davis St	1,236	1,316	0.77	0.82	D	D	No	-
Between	Davis St	Williams St	1,118	1,158	0.70	0.72	C	C	No	-

Coliseum City
MTS Roadway System Analysis Summary - 2035 PM - Specific Plan Buildout

Link Location	Segment Limits		No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Between	Williams St	Marina Blvd	834	864	0.52	0.54	B	B	No	-
Between	Marina Blvd	Washington Ave	879	899	0.55	0.56	B	B	No	-
International Boulevard (SR-185) Northbound										
Between	San Leandro St	Estudillo Ave	1,815	1,845	1.13	1.15	F	F	-	No
Between	Estudillo Ave	Davis St	1,955	1,985	1.22	1.24	F	F	-	No
Between	Davis St	98th Ave	1,148	1,168	0.72	0.73	C	C	No	-
Between	98th Ave	73rd Ave	1,850	1,870	2.31	2.34	F	F	-	No
Between	73rd Ave	Havenscourt Blvd	2,066	2,106	2.58	2.63	F	F	-	Yes
Between	Havenscourt Blvd	66th Ave	1,994	2,044	1.25	1.28	F	F	-	No
Between	66th Ave	Seminary Ave	2,064	2,084	2.58	2.60	F	F	-	No
Between	Seminary Ave	High St	2,043	2,063	2.55	2.58	F	F	-	Yes
Between	High St	42nd Ave	2,068	2,088	1.29	1.30	F	F	-	No
Between	42nd Ave	Fruitvale Ave	2,031	2,061	2.54	2.58	F	F	-	Yes
Between	Fruitvale Ave	23rd Ave	1,942	1,962	2.43	2.45	F	F	-	No
International Boulevard (SR-185) Southbound										
Between	23rd Ave	Fruitvale Ave	1,809	1,829	2.26	2.29	F	F	-	Yes
Between	Fruitvale Ave	42nd Ave	1,975	1,995	2.47	2.49	F	F	-	No
Between	42nd Ave	High St	1,898	1,928	1.19	1.20	F	F	-	No
Between	High St	Seminary Ave	2,080	2,110	2.60	2.64	F	F	-	Yes
Between	Seminary Ave	66th Ave	2,021	2,051	2.53	2.56	F	F	-	Yes
Between	66th Ave	Havenscourt Blvd	2,067	2,127	1.29	1.33	F	F	-	Yes
Between	Havenscourt Blvd	73rd Ave	2,091	2,111	2.61	2.64	F	F	-	Yes
Between	73rd Ave	98th Ave	1,859	1,869	2.32	2.34	F	F	-	No
Between	98th Ave	Davis St	1,326	1,336	0.83	0.83	D	D	No	-
Between	Davis St	Estudillo Ave	1,718	1,788	1.07	1.12	F	F	-	Yes
Between	Estudillo Ave	San Leandro St	1,103	1,153	0.69	0.72	C	C	No	-
98th Avenue Eastbound										
Between	Airport Access Dr	I-880 SB ramps	2,663	2,823	1.11	1.18	F	F	-	Yes
Between	I-880 SB ramps	I-880 NB ramps	2,222	2,332	0.93	0.97	E	E	No	-
Between	I-880 NB ramps	Edes Ave	1,746	1,796	1.09	1.12	F	F	-	No
Between	Edes Ave	San Leandro St	1,596	1,696	1.00	1.06	F	F	-	Yes
Between	San Leandro St	International Blvd	1,151	1,271	0.72	0.79	C	D	No	-
Between	International Blvd	I-580 EB On-Ramp	1,081	1,191	0.68	0.74	C	C	No	-
Between	I-580 EB On-Ramp	I-580 WB Ramp	683	793	0.43	0.50	B	B	No	-
98th Avenue Westbound										
Between	I-580 WB Ramp	I-580 EB On-Ramp	909	949	0.57	0.59	B	C	No	-
Between	I-580 EB On-Ramp	International Blvd	650	720	0.81	0.90	D	D	No	-
Between	International Blvd	San Leandro St	645	685	0.40	0.43	B	B	No	-
Between	San Leandro St	Edes Ave	1,048	1,068	0.66	0.67	C	C	No	-
Between	Edes Ave	I-880 NB ramps	1,311	1,391	0.82	0.87	D	D	No	-
Between	I-880 NB ramps	I-880 SB ramps	2,619	2,749	1.09	1.15	F	F	-	Yes
Between	I-880 SB ramps	Airport Access Dr	2,389	2,509	1.00	1.05	F	F	-	Yes

Fehr & Peers, 2014.

APPENDIX 4.13

Traffic Appendices

D: Intersection Queuing Analysis

Appendix O
Queuing Analysis Calculations

FEHR PEERS

Int #	Street 1	Street 2	Movement/Lane Group	Storage Length	Existing		Existing Plus Project		Existing Plus Project (Mitigations)	
					AM	PM	AM	PM	AM	PM
58	San Leandro St	66th Ave								
58			EBL	150	0	0	0	0	110	**#300**
58			EBT	450	120	#500	180	**#630**	130	270
58			EBR	100	0	0	0	0	40	90
58			WBL	25	0	0	0	0	**60**	**120**
58			WBT	25	270	#790	**#450**	**#920**	220	320
58			NBL	300	170	170	230	#280	#280	#300
58			NBT	750	190	230	270	270	230	260
58			SBL	200	200	90	220	90	**#290**	80
58			SBT	2000	120	310	160	350	140	#330
59	San Leandro St	69th Ave								
59			EBL	200	0	0	90	150	90	150
59			EBT	200	0	0	20	40	20	40
59			EBR	200	0	0	30	50	30	50
59			WBT	25	40	10	**80**	**120**	**80**	**120**
59			NBL	90	10	30	90	**140**	90	**140**
59			NBT	1400	100	100	190	190	190	190
59			SBL	110	30	20	50	60	50	60
59			SBT	800	60	160	170	390	170	390
60	San Leandro St	Hegenberger Rd On-Ramp								
60			NBL	150	10	30	20	40	20	40
60			SBT	1050	20	70	30	90	30	90
61	San Leandro St	Hegenberger Rd Off-Ramp/75th Ave								
61			EBL	1000	60	120	70	150	70	150
61			EBT	1000	70	130	90	160	90	160
61			EBR	225	30	40	30	40	30	40
61			WBT	25	60	#280	80	**#320**	80	**#320**
61			NBT	1100	120	200	150	240	150	240
61			SBL	90	20	#180	20	**#280**	20	**#280**
61			SBT	400	60	150	80	170	80	170
72	Coliseum Way	66th Ave								
72			EBL	200	170	90	**230**	150	**230**	150
72			EBT	350	80	150	140	270	140	270
72			EBR	350	10	0	20	30	20	30
72			WBL	160	20	10	40	60	40	60
72			WBT	750	110	100	160	160	160	160
72			NBL	300	10	50	120	190	120	190
72			NBT	300	0	20	90	130	90	130
72			NBR	300	0	0	10	30	10	30
72			SBT	600	40	50	70	140	70	140
73	Baldwin St/Coliseum Parking Lot	Hegenberger Rd								
73			EBL	350	m50	m50	m50	m30	m50	m30
73			EBT	930	90	160	170	270	170	270
73			WBL	160	90	#190	#130	**#270**	#130	**#270**
73			WBT	1200	120	120	150	150	150	150
73			NBT	450	100	100	120	120	120	120
73			NBR	450	40	40	40	50	40	50
74	Edes Avenue/Coliseum Way	Hegenberger Rd								
74			EBL	650	20	20	50	60	50	60
74			EBT	1800	120	240	140	#320	140	#320
74			WBL	100	50	110	60	80	60	80
74			WBT	900	120	40	170	190	170	190
74			NBL	250	240	310	**320**	**#450**	**320**	**#450**
74			NBT	250	110	90	170	130	170	130
74			SBT	1600	10	0	90	150	90	150
74			SBR	1600	0	0	60	60	60	60

Int #	Street 1	Street 2	Movement/Lane Group	Storage Length	Existing		Existing Plus Project		Existing Plus Project (Mitigations)	
					AM	PM	AM	PM	AM	PM
80	Coliseum Way	Zhone Way/66th Ave								
80			EBT	370	30	50	50	60	50	60
80			WBT	800	50	80	90	130	90	130
80			NBL	800	40	20	60	30	60	30
80			NBR	800	80	120	130	#350	130	#350
81	Zhone Way	I-880 SB Off-Ramp								
81			EBT	300	10	50	20	70	20	70
81			WBT	850	30	10	40	30	40	30
81			SBL	1700	20	30	40	70	40	70
82	Oakport St	Zhone Way								
82			WBL	300	70	70	90	110	90	110
82			NBT	3000	40	110	50	#340	50	#340
82			SBT	2200	50	60	60	#220	60	#220
83	Edes Ave	I-880 Off-Ramp								
83			EBL	550	210	140	280	220	280	220
83			EBR	250	30	30	30	30	30	30
83			NBT	900	110	90	150	110	150	110
83			SBT	900	120	100	150	130	150	130
84	Hegenberger Rd	I-880 SB Off-Ramp								
84			EBT	750	40	60	40	60	40	60
84			WBT	1900	100	70	100	80	100	80
84			SBL	1700	100	60	100	60	100	60
84			SBR	1700	#260	60	#260	80	#260	80
99	Edgewater Dr	Oakport St								
99			EBT	100	0	20	0	20	0	20
99			WBL	340	20	#160	20	#160	20	#160
99			WBT	500	30	100	30	100	30	100
99			NBL	160	30	30	30	30	30	30
99			NBT	450	90	40	90	50	90	50
99			SBL	160	10	20	10	#60	10	#60
99			SBT	1300	30	90	30	90	30	90
100	Hegenberger Ct/Edgewater Dr	Hegenberger Rd								
100			EBL	170	#410	110	#410	110	#410	110
100			EBT	900	170	170	180	180	180	180
100			WBL	280	210	150	210	160	210	160
100			WBT	700	330	200	340	230	340	230
100			WBR	700	90	70	90	70	90	70
100			NBT	450	110	80	110	90	110	90
100			NBR	450	60	60	60	60	60	60
100			SBL	250	170	#470	170	**#500**	170	**#500**
100			SBT	680	#330	#230	#330	#240	#330	#240
101	Airport Access Rd/Pardee Dr	Hegenberger Rd								
101			EBL	160	20	30	20	30	20	30
101			EBT	1000	170	240	190	260	190	260
101			EBR	1000	0	30	0	30	0	30
101			WBL	220	80	210	90	**240**	90	**240**
101			WBT	600	190	230	200	260	200	260
101			WBR	250	40	40	40	40	40	40
101			NBL	180	150	180	150	190	150	190
101			NBT	700	170	140	170	140	170	140
101			NBR	700	30	40	40	40	40	40
101			SBL	700	290	270	310	280	310	280
101			SBT	700	90	70	100	70	100	70

Int #	Street 1	Street 2	Movement/Lane Group	Storage Length	Existing		Existing Plus Project		Existing Plus Project (Mitigations)	
					AM	PM	AM	PM	AM	PM
105	Doolittle Dr	Swan Way								
105			EBL	120	10	10	10	10	10	10
105			EBT	120	10	20	10	20	10	20
105			EBR	120	30	30	30	30	30	30
105			WBL	260	20	20	20	20	20	20
105			WBT	1300	20	20	20	20	20	20
105			NBL	370	30	20	30	20	30	20
105			NBT	1900	130	160	140	170	140	170
105			SBL	300	30	40	30	40	30	40
105			SBT	1900	120	170	120	170	120	170

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	389	357	197	507	240	323
v/c Ratio	0.48	0.62	0.66	0.54	0.71	0.32
Control Delay	21.0	28.7	41.9	28.0	41.9	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	28.7	41.9	28.0	41.9	23.4
Queue Length 50th (ft)	65	142	90	106	109	61
Queue Length 95th (ft)	123	265	169	190	197	116
Internal Link Dist (ft)	1379	844		727		1923
Turn Bay Length (ft)			300		200	
Base Capacity (vph)	1005	725	472	1652	584	1870
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.49	0.42	0.31	0.41	0.17

Intersection Summary

Lane Group	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	144	10	602	40	380
v/c Ratio	0.34	0.03	0.32	0.11	0.20
Control Delay	7.6	13.6	7.1	13.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	13.6	7.1	13.3	6.5
Queue Length 50th (ft)	3	1	23	4	14
Queue Length 95th (ft)	42	12	95	28	58
Internal Link Dist (ft)	478		992		727
Turn Bay Length (ft)		90		110	
Base Capacity (vph)	1383	945	3331	945	3384
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.10	0.01	0.18	0.04	0.11

Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	87	99	81	211	594	26	267
v/c Ratio	0.26	0.28	0.21	0.49	0.45	0.10	0.20
Control Delay	18.3	18.5	6.9	10.8	12.3	12.6	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	18.5	6.9	10.8	12.3	12.6	11.3
Queue Length 50th (ft)	17	20	0	11	52	4	22
Queue Length 95th (ft)	60	66	28	64	116	21	55
Internal Link Dist (ft)		339		352	1155		319
Turn Bay Length (ft)			240			90	
Base Capacity (vph)	883	924	870	941	3063	634	3137
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.11	0.09	0.22	0.19	0.04	0.09

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	283	403	63	9	615	2	3	4	178
v/c Ratio	0.53	0.20	0.04	0.04	0.43	0.01	0.01	0.02	0.34
Control Delay	18.4	4.9	2.2	24.3	14.9	25.5	25.0	0.0	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	4.9	2.2	24.3	14.9	25.5	25.0	0.0	10.4
Queue Length 50th (ft)	53	12	0	2	39	0	0	0	4
Queue Length 95th (ft)	168	81	9	17	108	7	4	0	35
Internal Link Dist (ft)		285			1379		415		446
Turn Bay Length (ft)	200		200	160		200			
Base Capacity (vph)	1058	2536	2145	1068	3981	1107	2214	1075	1122
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.16	0.03	0.01	0.15	0.00	0.00	0.00	0.16

Intersection Summary

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	906	548	169	708	72	823
v/c Ratio	1.07	1.70	0.66	0.56	0.43	0.81
Control Delay	77.5	349.7	49.0	23.6	48.0	35.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	349.7	49.0	23.6	48.0	35.4
Queue Length 50th (ft)	~266	~437	87	158	37	211
Queue Length 95th (ft)	#504	#786	170	226	90	308
Internal Link Dist (ft)	1379	844		727		1923
Turn Bay Length (ft)			300		200	
Base Capacity (vph)	849	323	425	1499	526	1664
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	1.70	0.40	0.47	0.14	0.49

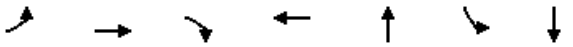
Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	41	34	764	24	1035
v/c Ratio	0.12	0.11	0.26	0.08	0.37
Control Delay	4.0	18.9	3.5	19.1	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.0	18.9	3.5	19.1	5.7
Queue Length 50th (ft)	0	6	0	4	0
Queue Length 95th (ft)	13	29	104	23	156
Internal Link Dist (ft)	478		992		727
Turn Bay Length (ft)		90		110	
Base Capacity (vph)	1318	777	3078	777	3086
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.03	0.04	0.25	0.03	0.34

Intersection Summary



Lane Group	EBL	EBT	EBR	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	134	138	113	361	739	158	563
v/c Ratio	0.48	0.47	0.32	0.77	0.51	0.74	0.39
Control Delay	36.1	35.7	9.0	34.0	16.9	43.2	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	35.7	9.0	34.0	16.9	43.2	16.1
Queue Length 50th (ft)	65	67	0	126	121	58	90
Queue Length 95th (ft)	123	125	42	#277	203	#180	154
Internal Link Dist (ft)		339		352	1155		319
Turn Bay Length (ft)			240			90	
Base Capacity (vph)	530	553	576	587	1883	281	1915
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.25	0.20	0.61	0.39	0.56	0.29

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

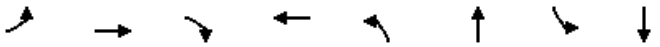
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	137	604	22	5	575	42	47	19	330
v/c Ratio	0.34	0.41	0.02	0.02	0.40	0.16	0.09	0.06	0.44
Control Delay	22.1	10.2	1.1	25.0	16.2	23.6	22.1	1.6	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.1	10.2	1.1	25.0	16.2	23.6	22.1	1.6	9.7
Queue Length 50th (ft)	34	52	0	1	48	12	6	0	13
Queue Length 95th (ft)	92	148	2	11	96	45	23	4	51
Internal Link Dist (ft)		285			1379		415		446
Turn Bay Length (ft)	200		200	160		200			
Base Capacity (vph)	1066	2409	2032	1066	3768	1018	2050	1004	1447
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.25	0.01	0.00	0.15	0.04	0.02	0.02	0.23

Intersection Summary

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	479	427	237	667	240	433
v/c Ratio	0.55	0.77	0.75	0.74	0.73	0.47
Control Delay	22.8	37.0	50.5	36.2	48.1	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	37.0	50.5	36.2	48.1	28.9
Queue Length 50th (ft)	88	196	123	176	124	104
Queue Length 95th (ft)	176	#445	228	266	219	157
Internal Link Dist (ft)	1379	844		727		1923
Turn Bay Length (ft)			300		200	
Base Capacity (vph)	874	557	419	1463	519	1657
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.77	0.57	0.46	0.46	0.26

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	150	20	150	194	100	652	40	560
v/c Ratio	0.43	0.04	0.27	0.37	0.30	0.45	0.14	0.56
Control Delay	19.4	13.8	4.5	11.2	24.8	13.4	26.2	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	13.8	4.5	11.2	24.8	13.4	26.2	17.8
Queue Length 50th (ft)	31	4	0	22	22	40	9	56
Queue Length 95th (ft)	94	19	33	79	90	186	48	166
Internal Link Dist (ft)		74		478		992		727
Turn Bay Length (ft)					90		110	
Base Capacity (vph)	1027	1593	1375	1415	720	2957	360	2496
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.01	0.11	0.14	0.14	0.22	0.11	0.22

Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	87	119	81	261	684	26	347
v/c Ratio	0.25	0.32	0.20	0.55	0.52	0.11	0.26
Control Delay	19.8	20.6	7.2	11.1	13.4	13.5	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	20.6	7.2	11.1	13.4	13.5	11.8
Queue Length 50th (ft)	18	26	0	13	65	4	31
Queue Length 95th (ft)	66	85	30	77	149	22	76
Internal Link Dist (ft)		339		352	1155		319
Turn Bay Length (ft)			240			90	
Base Capacity (vph)	873	916	861	952	2834	492	2893
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.13	0.09	0.27	0.24	0.05	0.12

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	283	449	207	29	675	112	193	24	258
v/c Ratio	0.64	0.29	0.15	0.16	0.55	0.42	0.35	0.08	0.53
Control Delay	31.5	12.2	2.7	36.7	24.8	35.0	30.4	2.7	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	12.2	2.7	36.7	24.8	35.0	30.4	2.7	20.1
Queue Length 50th (ft)	102	48	0	11	83	46	39	0	24
Queue Length 95th (ft)	232	139	22	44	163	121	90	7	74
Internal Link Dist (ft)		285			1379		415		446
Turn Bay Length (ft)	200		200	160		200			
Base Capacity (vph)	702	1776	1587	709	2738	735	1503	731	816
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.25	0.13	0.04	0.25	0.15	0.13	0.03	0.32

Intersection Summary

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	1016	598	249	808	72	903
v/c Ratio	1.32	3.99	0.79	0.56	0.46	0.86
Control Delay	180.1	1377.7	57.6	22.7	53.2	39.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	180.1	1377.7	57.6	22.7	53.2	39.3
Queue Length 50th (ft)	~413	~604	147	191	43	265
Queue Length 95th (ft)	#626	#924	#275	265	94	352
Internal Link Dist (ft)	1379	844		727		1923
Turn Bay Length (ft)			300		200	
Base Capacity (vph)	769	150	391	1479	484	1533
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.32	3.99	0.64	0.55	0.15	0.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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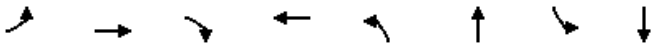
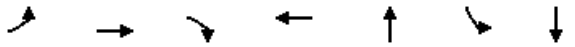
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	170	30	170	151	134	784	44	1205
v/c Ratio	0.61	0.07	0.34	0.39	0.50	0.41	0.25	0.76
Control Delay	37.1	24.4	6.7	25.8	39.6	11.2	40.8	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	24.4	6.7	25.8	39.6	11.2	40.8	20.6
Queue Length 50th (ft)	66	10	0	48	53	105	18	217
Queue Length 95th (ft)	152	35	47	116	136	190	61	392
Internal Link Dist (ft)		74		478		992		727
Turn Bay Length (ft)					90		110	
Base Capacity (vph)	632	992	923	864	383	2581	176	2281
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.03	0.18	0.17	0.35	0.30	0.25	0.53

Intersection Summary



Lane Group	EBL	EBT	EBR	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	173	179	123	391	829	208	603
v/c Ratio	0.58	0.58	0.32	0.86	0.53	1.03	0.38
Control Delay	39.4	39.0	8.2	42.7	18.5	101.0	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	39.0	8.2	42.7	18.5	101.0	17.2
Queue Length 50th (ft)	88	91	0	145	158	~123	110
Queue Length 95th (ft)	153	157	42	#319	243	#277	173
Internal Link Dist (ft)		339		352	1155		319
Turn Bay Length (ft)			240			90	
Base Capacity (vph)	438	453	503	507	1558	202	1581
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.40	0.24	0.77	0.53	1.03	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	147	669	337	45	645	187	292	59	460
v/c Ratio	0.50	0.55	0.27	0.24	0.50	0.55	0.42	0.16	0.65
Control Delay	38.7	22.1	3.2	40.7	25.3	35.5	29.1	9.4	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	22.1	3.2	40.7	25.3	35.5	29.1	9.4	23.2
Queue Length 50th (ft)	63	147	0	20	88	85	64	0	60
Queue Length 95th (ft)	150	270	31	63	161	191	128	32	142
Internal Link Dist (ft)		285			1379		415		446
Turn Bay Length (ft)	200		200	160		200			
Base Capacity (vph)	691	1701	1589	691	2682	675	1379	687	928
Starvation Cap Reductn	0	33	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.40	0.21	0.07	0.24	0.28	0.21	0.09	0.50

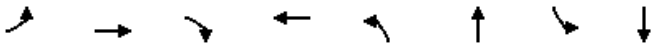
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	130	196	153	81	346	237	667	240	433
v/c Ratio	0.42	0.28	0.22	0.18	0.49	1.00	0.63	1.01	0.41
Control Delay	25.8	20.6	4.1	20.0	23.7	99.9	29.6	102.8	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	20.6	4.1	20.0	23.7	99.9	29.6	102.8	25.4
Queue Length 50th (ft)	53	75	0	30	143	136	166	~140	98
Queue Length 95th (ft)	106	127	37	63	224	#284	225	#289	141
Internal Link Dist (ft)		1379			844		727		1923
Turn Bay Length (ft)						300		200	
Base Capacity (vph)	308	707	696	438	702	237	1081	237	1080
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.28	0.22	0.18	0.49	1.00	0.62	1.01	0.40

Intersection Summary

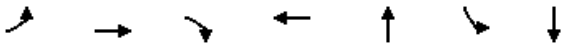
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	150	20	150	194	100	652	40	560
v/c Ratio	0.43	0.04	0.27	0.37	0.30	0.45	0.14	0.56
Control Delay	19.4	13.8	4.5	11.2	24.8	13.4	26.2	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	13.8	4.5	11.2	24.8	13.4	26.2	17.8
Queue Length 50th (ft)	31	4	0	22	22	40	9	56
Queue Length 95th (ft)	94	19	33	79	90	186	48	166
Internal Link Dist (ft)		74		478		992		727
Turn Bay Length (ft)					90		110	
Base Capacity (vph)	1027	1593	1375	1415	720	2957	360	2496
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.01	0.11	0.14	0.14	0.22	0.11	0.22

Intersection Summary



Lane Group	EBL	EBT	EBR	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	87	119	81	261	684	26	347
v/c Ratio	0.25	0.32	0.20	0.55	0.52	0.11	0.26
Control Delay	19.8	20.6	7.2	11.1	13.4	13.5	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	20.6	7.2	11.1	13.4	13.5	11.8
Queue Length 50th (ft)	18	26	0	13	65	4	31
Queue Length 95th (ft)	66	85	30	77	149	22	76
Internal Link Dist (ft)		339		352	1155		319
Turn Bay Length (ft)			240			90	
Base Capacity (vph)	873	916	861	952	2834	492	2893
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.13	0.09	0.27	0.24	0.05	0.12

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	283	449	207	29	675	112	193	24	258
v/c Ratio	0.64	0.29	0.15	0.16	0.55	0.42	0.35	0.08	0.53
Control Delay	31.5	12.2	2.7	36.7	24.8	35.0	30.4	2.7	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	12.2	2.7	36.7	24.8	35.0	30.4	2.7	20.1
Queue Length 50th (ft)	102	48	0	11	83	46	39	0	24
Queue Length 95th (ft)	232	139	22	44	163	121	90	7	74
Internal Link Dist (ft)		285			1379		415		446
Turn Bay Length (ft)	200		200	160		200			
Base Capacity (vph)	702	1776	1587	709	2738	735	1503	731	816
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.25	0.13	0.04	0.25	0.15	0.13	0.03	0.32

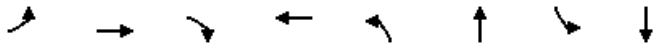
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	233	404	379	131	467	249	808	72	903
v/c Ratio	1.13	0.57	0.48	0.51	0.67	1.06	0.62	0.47	0.85
Control Delay	129.8	26.1	6.9	30.1	28.3	113.3	24.9	49.4	36.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	129.8	26.1	6.9	30.1	28.3	113.3	24.9	49.4	36.8
Queue Length 50th (ft)	~154	179	27	56	210	~156	190	40	240
Queue Length 95th (ft)	#298	272	94	117	321	#304	260	82	#328
Internal Link Dist (ft)		1379			844		727		1923
Turn Bay Length (ft)						300		200	
Base Capacity (vph)	207	705	789	257	695	236	1306	177	1076
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.57	0.48	0.51	0.67	1.06	0.62	0.41	0.84

Intersection Summary

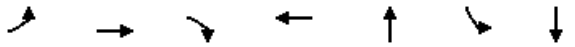
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	170	30	170	151	134	784	44	1205
v/c Ratio	0.61	0.07	0.34	0.39	0.50	0.41	0.25	0.76
Control Delay	37.1	24.4	6.7	25.8	39.6	11.2	40.8	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	24.4	6.7	25.8	39.6	11.2	40.8	20.6
Queue Length 50th (ft)	66	10	0	48	53	105	18	217
Queue Length 95th (ft)	152	35	47	116	136	190	61	392
Internal Link Dist (ft)		74		478		992		727
Turn Bay Length (ft)					90		110	
Base Capacity (vph)	632	992	923	864	383	2581	176	2281
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.03	0.18	0.17	0.35	0.30	0.25	0.53

Intersection Summary



Lane Group	EBL	EBT	EBR	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	173	179	123	391	829	208	603
v/c Ratio	0.58	0.58	0.32	0.86	0.53	1.03	0.38
Control Delay	39.4	39.0	8.2	42.7	18.5	101.0	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	39.0	8.2	42.7	18.5	101.0	17.2
Queue Length 50th (ft)	88	91	0	145	158	~123	110
Queue Length 95th (ft)	153	157	42	#319	243	#277	173
Internal Link Dist (ft)		339		352	1155		319
Turn Bay Length (ft)			240			90	
Base Capacity (vph)	438	453	503	507	1558	202	1581
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.40	0.24	0.77	0.53	1.03	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	147	669	337	45	645	187	292	59	460
v/c Ratio	0.50	0.55	0.27	0.24	0.50	0.55	0.42	0.16	0.65
Control Delay	38.7	22.1	3.2	40.7	25.3	35.5	29.1	9.4	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	22.1	3.2	40.7	25.3	35.5	29.1	9.4	23.2
Queue Length 50th (ft)	63	147	0	20	88	85	64	0	60
Queue Length 95th (ft)	150	270	31	63	161	191	128	32	142
Internal Link Dist (ft)		285			1379		415		446
Turn Bay Length (ft)	200		200	160		200			
Base Capacity (vph)	691	1701	1589	691	2682	675	1379	687	928
Starvation Cap Reductn	0	33	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.40	0.21	0.07	0.24	0.28	0.21	0.09	0.50

Intersection Summary

Appendix P
Collisions Analysis Summary

FEHR PEERS

Appendix P
Collision Analysis Summary (2008-2011)

Location	Vehicle/Vehicle [1]			Vehicle/Bicycle			Vehicle/Pedestrian			Total
	Total	Injured	Killed	Total	Injured	Killed	Total	Injured	Killed	
66th Ave										
66th/I-880	8	3	0	0	0	0	0	0	0	8
66th (I-880 to Coliseum Wy)	11	0	0	0	0	0	0	0	0	11
66th/Coliseum Way	7	0	0	0	0	0	0	0	0	7
66th (Coliseum Way to San Leandro St)	23	2	0	0	0	0	1	1	0	24
66th/San Leandro St	12	7	0	0	0	0	1	1	0	13
Capwell Dr										
Capwell (Pendleton to Roland)	1	1	0	0	0	0	0	0	0	1
Coliseum Way										
Coliseum (66th to Hergenberger)	9	0	0	0	0	0	0	0	0	9
Doolittle Dr										
Doolittle/Swan Way	3	1	0	0	0	0	0	0	0	3
Doolittle (Swan Way to Hegenberger Rd)	16	17	0	0	0	0	0	0	0	16
Edgewater Dr										
Edgewater (Loop to Hassler)	3	2	0	0	0	0	0	0	0	3
Edgewater/Hassler	3	0	0	1	1	0	0	0	0	4
Edgewater (Hassler to Pardee Ln)	1	1	0	0	0	0	0	0	0	1
Edgewater (Pardee to Roland Wy)	1	0	0	0	0	0	0	0	0	1
Edgewater/Roland Wy	3	1	0	0	0	0	0	0	0	3
Edgewater (Roland Wy to Oakport St)	2	2	0	0	0	0	0	0	0	2
Edgewater (Oakport St to Pendleton Wy)	4	3	0	0	0	0	0	0	0	4
Edgewater/Pendleton	1	0	0	0	0	0	0	0	0	1
Edgewater (Oakport St to Hegeneberger)	15	2	0	0	0	0	1	1	0	16
Hassler Way										
Hassler (Edgewater to Oakport St)	2	2	0	0	0	0	0	0	0	2
Hegenberger Rd										
Hegenberger/Doolittle	12	4	0	0	0	0	0	0	0	12
Hegenberger (Doolittle to Pardee St/Airport Access)	10	5	0	0	0	0	0	0	0	10
Hegenberger/Pardee Dr/Airport Access	5	0	0	0	0	0	1	1	0	6
Hegenberger (Pardee Dr to Hegenberger Pl)	1	0	0	0	0	0	0	0	0	1
Hegenberger/Hegenberger Pl	1	1	0	0	0	0	0	0	0	1
Hegenberger/Leet Dr	5	2	1	1	1	0	0	0	0	6
Hegenberger (Leet Dr to Hegenberger Loop)	8	2	0	0	0	0	1	0	1	9
Hegenberger/Hegenberger Loop	1	0	0	0	0	0	1	1	0	2
Hegenberger (Hegeberger Loop to Edgewater)	35	13	0	0	0	0	1	1	0	36
Hegenberger/Edgewater	10	2	0	1	0	0	0	0	0	11
Hegenberger (Edgewater to I-880)	16	8	0	1	0	0	0	0	0	17
Hegenberger/I-880	45	24	0	0	0	0	0	0	0	45
Hegenberger (I-880 to Edes Ave/Coliseum Wy)	30	13	0	0	0	0	0	0	0	30
Hegenberger/Edes Ave/Coliseum Wy	18	6	0	0	0	0	0	0	0	18
Hegenberger (Edes Ave to Collins Dr)	6	5	0	0	0	0	0	0	0	6
Hegenberger/Collins Dr	15	10	0	0	0	0	0	0	0	15
Hegenberger (Collins Dr to Baldwin St)	31	17	0	1	1	0	1	1	0	33
Hegenberger/Baldwin St	9	3	0	1	0	0	0	0	0	10
Hegenberger (Baldwin St to San Leandro)	10	1	0	0	0	0	0	0	0	10
Hegenberger/San Leandro	3	0	0	0	0	0	1	1	0	4
Leet										
Hegenberger	1	0	0	0	0	0	0	0	0	1
Oakport Ave										
Oakport (Zhone Wy to Hassler)	10	3	0	0	0	0	0	0	0	10
Oakport (Hassler to Roland Wy)	2	1	0	0	0	0	0	0	0	2
Oakport/Roland Wy	1	0	0	0	0	0	0	0	0	1
Oakport (Roland Wy to Edgewater Dr)	3	0	0	0	0	0	0	0	0	3
Pardee Ln										
Pardee (Loop to Edgewater Dr)	0	0	0	1	1	0	0	0	0	1
Pardee Dr										
Pardee (Swan Wy to Hegenberger)	4	0	0	0	0	0	0	0	0	4
Roland Way										
Roland (Edgewater to Oakport)	1	0	0	0	0	0	0	0	0	1
San Leandro St										
San Leandro (66th to 69th)	20	5	0	0	0	0	0	0	0	20
San Leandro/69th	6	6	0	0	0	0	0	0	0	6

Appendix P
Collision Analysis Summary (2008-2011)

Location	Vehicle/Vehicle [1]			Vehicle/Bicycle			Vehicle/Pedestrian			Total
	Total	Injured	Killed	Total	Injured	Killed	Total	Injured	Killed	
Zhone Way										
Zhone/Oakport	7	5	0	0	0	0	0	0	0	7
Zhone (Oakport to I-880)	4	3	0	0	0	0	0	0	0	4
Zhone/I-880	1	0	0	0	0	0	0	0	0	1
Zhone (I-880 to 66th)	1	1	0	0	0	0	0	0	0	1

1. Vehicle/Vehicle collisions also include single vehicle collisions hitting fixed objects or parked vehicles.
Source: Statewide Integrated Traffic Records System, summarized by Fehr & Peers, 2014.

APPENDIX 4.14

Water Supply Assessment

APPENDIX 4.14

Water Supply Assessment

EAST BAY
MUNICIPAL UTILITY DISTRICT

January 28, 2014

Devan Reiff, AICP, Planner III
City of Oakland
Planning, Building and Neighborhood Preservation Department
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612

Re: Water Supply Assessment – Oakland Coliseum Area Specific Plan

Dear Mr. Reiff:

This letter responds to the City of Oakland's (City) request on November 7, 2013, for water agency consultation concerning the Oakland Coliseum Area Specific Plan (Enclosure 1) located in Oakland, which is within the East Bay Municipal Utility District's (EBMUD) Ultimate Service Boundary. EBMUD appreciates the opportunity to provide this response.

Pursuant to Sections 10910-10915 (SB-610) of the California Water Code, the project meets the threshold requirement for an assessment of water supply availability based on the amount of water this project would require, a mixed-use project that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project.

Please note that this assessment addresses the issue of water supply only and is not a guarantee of service, and future water service is subject to rates and regulations in effect at the time.

Project Demand

The water demand for the Oakland Coliseum Area Specific Plan area is accounted for in EBMUD's water demand projections as published in EBMUD's 2010 Urban Water Management Plan (UWMP/Enclosure 2). EBMUD's water demand projections account for anticipated future water demands within EBMUD's service boundaries and for variations in demand-attributed changes in development patterns. The proposed project site currently consists of mixed-use office, light industrial, business, hotel, retail, restaurant, and sport event venue space, including the existing Oakland Coliseum and Arena and the Oakland Airport Edgewater Business Park. Current average annual water use is about 700,000 gallons per day (gpd). The increase in the projected average annual water demand for the project at build out is approximately 3,000,000 gpd.

EBMUD's demand projections indicate both densification and land use changes in a few existing land use classifications, including commercial and residential land use areas, thus increasing EBMUD's overall demand. EBMUD's 2010 UWMP projects water demands over time, accounting for estimated variations in demand usage less conservation and recycled supply

sources as noted in Table 4-1, Water Demand Projections for Each Water Use Sector, of the 2010 UWMP. EBMUD's water demand projections are based on the 2040 Demand Study (Demand Study), which was completed in 2009. For planning purposes, the demands are estimated in five year increments, but it is recognized that actual incremental amounts may occur stepwise in shorter time increments. An increase in usage by one customer in a particular customer class does not require a strict gallon-for-gallon increase in conservation by other customers in that class as, in actuality, EBMUD-wide, the amount of potable demand, conservation and recycled water use will vary somewhat. Future versions of the UWMP, which is updated every five years, will include an updated assessment of customer demand and water supply.

Project Area

The Oakland Coliseum Area Specific Plan Project consists of approximately 800 acres bounded by 66th Avenue on the north, San Leandro Street on the east, Hegenberger Road on the south, and San Leandro Bay and Oakland International Airport on the west. As described in the City's WSA request, the Oakland Coliseum Area Specific Plan will provide for up to three new sport venues, significant transportation and transit enhancements, and development of new retail, housing and employment space; this will include approximately 5,750 new housing units and 7,900,000 square feet of new non-residential space within the Area Specific Plan.

EBMUD Water Demand Projections

Since the 1970s, water demand within EBMUD's service area has ranged from 200 to 220 million gallons per day (mgd) in non-drought years. The 2040 water demand forecast of 312 mgd for EBMUD's service area can be reduced to 230 mgd with the successful implementation of water recycling and conservation programs, as outlined in the 2010 UWMP. Although current demand is lower than estimated in the Demand Study, as a result of the recent multi-year drought and the downturn in the economy, the Demand Study still reflects a reasonable expectation for growth over the long term for demand in year 2040. The Oakland Coliseum Area Specific Plan will not change EBMUD's 2040 demand projection.

EBMUD Water Supply and Water Rights

EBMUD has water rights permits and licenses that allow for delivery of up to a maximum of 325 mgd from the Mokelumne River, subject to the availability of Mokelumne River runoff and the senior water rights of other users. EBMUD's position in the hierarchy of Mokelumne River water users is determined by a variety of agreements between Mokelumne River water right holders, and the terms of the appropriative water rights permits and licenses, which have been issued by the State, pre-1914 rights, and riparian rights.

Conditions that could, depending on hydrology, restrict EBMUD's ability to receive its full entitlement include:

- Upstream water use by prior right holders.
- Downstream water use by riparian and senior appropriators and other downstream obligations, including protection of public trust resources.
- Variability in rainfall and runoff.

During prolonged droughts, the Mokelumne River supply cannot meet EBMUD's projected customer demands. To address this, EBMUD has completed construction of the Freeport Regional Water Facility and the Bayside Groundwater Facility, which are discussed below in the Supplemental Water Supply and Demand Management section of this assessment. EBMUD has obtained and continues to seek supplemental supplies.

EBMUD UWMP

The 2010 UWMP, adopted on June 28, 2011, by EBMUD's Board of Directors by Resolution No. 33832-11, is a long-range planning document used to assess current and projected water usage, water supply planning and conservation and recycling efforts. A summary of EBMUD's demand and supply projections, in 5-year increments for a 25-year planning horizon is provided in Table 4-3, EBMUD Demand and Supply Projections of the 2010 UWMP (Enclosure 3).

EBMUD's evaluation of water supply availability accounts for the diversions of both upstream and downstream water right holders and fishery releases on the Mokelumne River. Fishery releases are based on the requirements of a 1998 Joint Settlement Agreement (JSA) between EBMUD, United States (U.S.) Fish and Wildlife Service, and the California Department of Fish and Game. The JSA requires EBMUD to make minimum flow releases from its reservoirs to the lower Mokelumne River to protect and enhance the fishery resources and ecosystem of the river. As this water is released downriver, it is, therefore, not available for use by EBMUD's customers.

The available supply shown in the attached table (Enclosure 3) was derived from EBMUD's hydrologic model with the following assumptions:

- EBMUD Drought Planning Sequence is used for 1976, 1977 and 1978;
- Total system storage is depleted by the end of the third year of the drought;
- EBMUD will implement its Drought Management Program when necessary;
- The diversions by Amador and Calaveras Counties upstream of Pardee Reservoir will increase over time, eventually reaching the full extent of their senior rights;
- Releases are made to meet the requirements of senior downstream water right holders and fishery releases are made according to the JSA;
- Dry-year supply of Central Valley Project (CVP) water, through the Freeport Regional Water Facility, is available; and
- Bayside Groundwater Project, Phase 1, is available.

As discussed under the Drought Management Program section in Chapter 3 of the 2010 UWMP, EBMUD's system storage generally allows it to continue serving its customers during dry-year events. EBMUD imposes rationing based on the projected storage available at the end of September. By imposing rationing in the first dry year of potential drought periods, EBMUD attempts to minimize rationing in subsequent years if a drought persists while continuing to meet its current and subsequent-year fishery flow release requirements and obligations to downstream agencies. Table 3-2, Long-Term Drought Management Program Guidelines, in the 2010 UWMP summarizes the Drought Management Program guidelines for consumer water reduction goals based on projected system storage.

In Table 4-3, EBMUD Demand and Supply Projections (Enclosure 3), "Single Dry Water Year" (or Year 1 of "Multiple Dry Water Years") is determined to be a year that EBMUD would implement Drought Management Program elements at the "moderate" stage with the goal of achieving a reduction between 0 to 10 percent in customer demand. Year 2 of "Multiple Dry Years" is determined to be a year that EBMUD would implement Drought Management Program elements at the "severe" stage with the goal of achieving between 10 to 15 percent reduction in customer demand. Year 3 of "Multiple Dry Years" is a year in which EBMUD would implement Drought Management Program elements at the "critical" stage. Despite water savings from EBMUD's aggressive conservation and recycling programs and rationing of up to 15 percent, additional supplemental supplies beyond those provided through the Freeport Regional Water Facility and the Bayside Groundwater Facility will be needed during Years 2 and 3 of a three-year drought. Therefore, supplemental supplies are needed in a multiple-year drought period while continuing to meet the requirements of senior downstream water right holders and the provisions of the 1998 JSA.

Supplemental Water Supply and Demand Management

The goals of meeting projected water needs and increased water reliability rely on supplemental supplies, improving reliability of existing water supply facilities, water conservation and recycled water programs.

By 2011, EBMUD completed construction of the Freeport Regional Water Facility and the Bayside Groundwater Facility to augment its water supply during drought periods. However, additional supplemental supplies beyond those provided through these facilities will still be needed, as noted above. Chapter 2 of the 2010 UWMP describes potential supplemental water supply projects that could be implemented to meet projected long-term water demands during multi-year drought periods.

The Freeport Regional Water Facility became operational in February 2011. EBMUD's ability to take delivery of water through the Freeport facility is based on its Long Term Renewal Contract (LTRC) with the U.S. Bureau of Reclamation. The LTRC provides for up to 133,000 acre-feet in a single dry-year, not to exceed a total of 165,000 acre-feet in three consecutive dry years. Under

the LTRC, the CVP supply is available to EBMUD only in dry years when EBMUD's total stored water supply is forecast to be below 500,000 total acre feet on September 30 of each year.

Construction of the Bayside Groundwater Project, Phase 1, was completed in 2010. A permit from the Department of Public Health, which is pending, is required before the groundwater can be extracted and treated for municipal use. The project is designed to yield 2 mgd over a 6-month period, resulting in an average annual production capacity of 1 mgd per year.

Chapter 2 of the 2010 UWMP also lists other potential supplemental water projects, including northern California water transfers, Bayside Groundwater Project Expansion, Los Vaqueros Expansion and others that could be implemented as necessary to meet the projected long-term water supplemental need during multi-year drought periods. The 2010 UWMP identifies a broad mix of projects, with inherent scalability and the ability to adjust implementation schedules for a particular component, so that EBMUD will be able to continue to pursue the additional supplemental supplies that are projected to be necessary, while also minimizing the risks associated with future uncertainties such as project implementation challenges and global climate change. The Environmental Impact Report that EBMUD certified for the Water Supply Management Program 2040 examined the impacts of pursuing these supplemental supply projects at a program level. Separate project-level environmental documentation will be prepared, as appropriate, for specific components as they are developed in further detail and implemented in accordance with EBMUD's water supply needs.

In addition to pursuing supplemental water supply sources, EBMUD also maximizes resources through continuous improvements in the delivery and transmission of available water supplies, and investments in ensuring the safety of its existing water supply facilities. These programs, along with emergency interties and planned water recycling and conservation efforts, would ensure a reliable water supply to meet projected demands for current and future EBMUD customers within the current service area.

Individual developments within the project area may present opportunities to incorporate water conservation measures. EBMUD requests that the City include in its conditions of approval a requirement that the project sponsors comply with the California Model Water Efficient Landscape Ordinance (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495). EBMUD staff would appreciate the opportunity to meet with the project sponsor to discuss water conservation programs and best management practices applicable to the integrated projects. A key objective of this discussion will be to explore timely opportunities to expand water conservation via early consideration of EBMUD's conservation programs and best management practices applicable to the project.

The Area Specific Plan is located within EBMUD's San Leandro Recycled Water Project serving Alameda's Golf Courses and other sites. The size and nature of the proposed development will present several opportunities for the use of recycled water for landscape irrigation, commercial and industrial process uses, toilet and urinal flushing in sports arenas and

other applications. As part of the long term water supply planning, EBMUD will investigate expanding the existing recycled water infrastructure or constructing a localized satellite facility that treats onsite wastewater to provide recycled water to the project. The existing San Leandro Recycled Water Project could potentially expand in the future should the treatment level be upgraded to a tertiary level and if additional distribution pipelines are extended towards the project's area. EBMUD recommends that the City and their developers maintain continued coordination and consultation with EBMUD as they plan and implement the various projects as identified within the Area Specific Plan regarding the feasibility of providing recycled water for appropriate non-potable uses.

The project sponsor should contact David J. Rehnstrom, Senior Civil Engineer, at (510) 287 1365 for further information.

Sincerely,

William R. Kirkpatrick
Manager of Water Distribution Planning Division

WRK:KSG:sb
sb13_277a

Enclosures:
1. Letter of Request for Water Supply Assessment dated November 7, 2013
2. EBMUD 2010 Urban Water Management Plan
3. EBMUD Demand and Supply Projections Table

cc: Board of Directors w/o Enclosure 2

Enclosure 1

CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA, SUITE 3315 • OAKLAND, CALIFORNIA 94612-2032

Department of Planning, Building and Neighborhood Preservation
Planning & Zoning Services Division

(510) 238-3941
FAX (510) 238-6538
TDD (510) 238-3254

November 7, 2013

RECEIVED
NOV 13 2013
WATER SERVICE PLANNING

Mr. David Rehnstrom
East Bay Municipal Utility District
Water Distribution Planning Division
375 11th Street, MS 701
Oakland, CA 94607

Re: Request for Water Supply Assessment for the Proposed Oakland Coliseum Area Specific Plan

Dear Mr. Rehnstrom:

Pursuant to Section 10910 and 10912 of the California Water Code implemented by Senate Bill 610, the City of Oakland is submitting this request to EBMUD for a Water Supply Assessment (WSA). The assessment is required in order to determine whether adequate water supply is available to meet the projected water demand of the proposed Oakland Coliseum Area Specific Plan. A Notice of Preparation (NOP) for an Environment Impact Report (EIR) was sent to you on April 19, 2013.

The proposed Oakland Coliseum Specific Plan would provide for up to three new sport venues (totaling approximately 130,000 seats), approximately 5,750 net new housing units and 7,900,000 square feet of net new non-residential space within the Planning Area. This development would result in an estimated +/-10,400 new residents and roughly 20,000 new jobs. Although development facilitated by the Specific Plan would occur incrementally over many years, the EIR conservatively assumes that all of this projected growth would occur by 2035. The attached Notice of Preparation contains more detailed existing land use information, build-out projections by land use type, and associated population and employment estimates. To aid in the assessment, proposed water demand for the Plan Area has been estimated. An electronic file of the proposed demands will be provided for your use.

The City respectfully requests that EBMUD prepare a Water Supply Assessment for the project. The City acknowledges that this request for a Water Supply Assessment is a required part of the environmental documentation for the project. We appreciate your prompt response to this request.

Please contact me at (510) 238-3550 or at dreiff@oaklandnet.com, or the City's planning and environmental consultant, Scott Gregory at Lamphier-Gregory at (510) 535-6690, if you require additional information in regard to this request. Thank you for your cooperation in this matter.

Sincerely,

Devan Reiff, AICP
Planner III

Attachments:
Notice of Preparation (April 19, 2013)

Attachment 1

Coliseum Area Specific Plan -- WSA Support

Proposed Water Demand -- Sub Areas A, AA, B, C, D, and E

22-Oct-13

Projected Water Demand Summary					
Land Use [1]	Quantity [1]	Units	Water Demand Factor [3] (gal/unit/day)	Water Demand (gallons/year)	Water Demand (acre ft/year)
NFL Football	1,715,000	Seat Days [2]	3.0	5,145,000	15.8
MLB Ball Park	2,025,000	Seat Days	3.0	6,075,000	18.6
NBA Arena	1,505,500	Seat Days	3.0	4,516,500	13.9
Office	1,067,573	SF	0.17	47,368,214	145.4
Science & Tech	4,714,780	SF	0.17	209,194,789	642.0
Science & Tech Industrial Support	4,658,321	SF	0.17	206,689,703	634.3
Light Industrial Support	26,300	SF	0.088	604,058	1.9
Airport-related Warehouse/Logistics	1,142,213	SF	0.03	8,943,528	27.4
Government/Utility	4,000	SF	0.05	52,200	0.2
Government/Transp	12,900	SF	0.05	168,345	0.5
Institutional	0	SF	0.17	0	0.0
Auto-Related	209,500	SF	0.17	9,295,515	28.5
Hotel	1,383	Rooms	300	151,438,500	464.7
Retail/Restaurant	731,884	SF	0.11	29,385,143	90.2
Residential	5,750	DU	190	398,762,500	1,223.8
Parking spaces [5]	26,939	Spaces	0	0	0.0
Irrigation [4]	3,163,253	SF	0.06	46,120,224	141.5
			TOTAL	1,123,760,000	3,448.7

Notes:

1 Land Use designations and quantities are based on the upper limit values provided in the "Updated COL Area Development Progaram Summary 10-02-13" workbook. Irrigation quantities based on landscaping shown in the conceptual plan.

2 "Seat Days" represent units of single event attendance at the specified sports venue. Attendance quantities (projected attendance and number of days during the year) are based on "Stadium Revenue Buildup Scenario 7" provided by the City of Oakland, August 29, 2013.

3 Demand Factors are based on industry standards, comparable studies provided by EBMUD, and information contained in the 49er Stadium DEIR.

4 Irrigation quantities assumes: 30' landscaped buffers around open space and creek restoration areas, park areas as shown on the master plan, 4% of impervious areas for stormwater treatment, and required landscape for parking and roadways. Water demand assumes 21 gal/SF/year based on "Guidelines for Estimating Unmetered Landscaping Water Use" by FEMP, July 2010, and industry standards for Oakland area.

5 Parking water demands are included in the irrigation section and are associated with SF of parking, not number of spaces.

EAST BAY MUNICIPAL UTILITY DISTRICT DEMAND AND SUPPLY PROJECTIONS
(Reference: Table 4-3, UWMP 2010 – EBMUD)

	2010	2015	2020	2025	2030	2035[1]	2040
PROJECTED DEMAND (MGD)							
CUSTOMER DEMAND [2]	251	266	280	291	304	308	312
ADJUSTED FOR CUMULATIVE CONSERVATION [3]	(26)	(32)	(43)	(49)	(56)	(59)	(62)
ADJUSTED FOR RECYCLED WATER [4]	(9)	(11)	(16)	(18)	(19)	(20)	(20)
PLANNING LEVEL OF DEMAND	216	223	221	224	229	229	230
PROJECTED AVAILABLE SUPPLY AND NEED FOR SUPPLEMENTAL SUPPLY (MGD)[5]							
NORMAL YEAR	>216	>223	>221	>224	>229	>229	>230
SUPPLEMENTAL SUPPLY NEED	0	0	0	0	0	0	0
SINGLE DRY YEAR (MULTIPLE DRY YEARS – YEAR 1)							
AVAILABLE SUPPLY	211	217	215	218	223	222	222
CUSTOMER RATIONING [6]	2%	3%	3%	3%	3%	3%	4%
SUPPLEMENTAL SUPPLY NEED [7]	5	6	6	7	7	8	8
MULTIPLE DRY YEARS – YEAR 2							
AVAILABLE SUPPLY	183	189	188	190	194	194	195
CUSTOMER RATIONING [6]	15%	15%	15%	15%	15%	15%	15%
SUPPLEMENTAL SUPPLY NEED [7]	21	21	21	21	22	22	22
MULTIPLE DRY YEARS – YEAR 3							
AVAILABLE SUPPLY	183	189	188	190	183	164	144
CUSTOMER RATIONING [6]	15%	15%	15%	15%	15%	15%	15%
SUPPLEMENTAL SUPPLY NEED [7]	21	21	21	21	33	53	73
THREE-YEAR DROUGHT							
TOTAL SUPPLEMENTAL SUPPLY NEED (TAF)[7]	53	54	54	55	69	93	115

[1] Projected demand for 2035 is interpolated.

[2] Customer demand values are based on the demand projections from the "2040 Demand Study," Feb 2009. These projected water demands are based on land use in EBMUD's ultimate service area and is unadjusted for conservation and non-potable water. The values are also unadjusted for the current suppressed demand due to the 2007-2010 rationing period and the economic downturn.

[3] Existing conservation saving from the "1994 Water Conservation Master Plan" and planned conservation program savings based on the "2011 Water Conservation Master Plan".

[4] Existing recycled water achieved per the "1993 Water Supply Management Program" and planned recycled water program savings as outlined in Chapter 5 of the UWMP 2010.

[5] Projected available supply data includes dry year supply deliveries from the Freeport Regional Water Project (FRWP) and Bayside Groundwater Project, Phase 1. Delivery rules for the FRWP follow the rules as developed in the Freeport EIR, 2003.

[6] Rationing reduction goals are determined according to projected system storage levels in the Long-Term Drought Management Program guidelines per Table 3-2 in Chapter 3 of the UWMP 2010.

[7] The supplemental supply need is based on EBMUDSIM modeling studies. It is the amount of water needed based on EBMUD's updated demand projections, the provisions of the 1998 Joint Settlement Agreement and the rationing policy stated in Table 3-2, Chapter 3 of the UWMP 2010. The actual need will be dependent on antecedent conditions and the severity of actual drought conditions. Supplemental supply stored during the initial year of the drought could be later released, diminishing supplemental supply needs. During the drought that continued into 2010, the combined effects of water rationing and an economic downturn suppressed demand below the planning level of demand to maintain a sufficient water supply and deferred the need for supplemental water. However, if the drought had continued into its second year, most likely supplemental supplies would have been obtained from the Freeport Regional Water Facility as anticipated in the Interim Drought Management Program Guidelines discussed in Appendix G-2.