JACK LONDON SQUARE 4TH & MADISON PROJECT

Draft Environmental Impact Report

Case No. ER15-005
State Clearinghouse No. 2015042051

Prepared for:

City of Oakland

August 2015

URBAN
PLANNING
PARTNERS
INC.

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Prepared for the City of Oakland

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August 2015

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I. INTRODUCTION

A. PURPOSE OF EIR

In compliance with the California Environmental Quality Act (CEQA), this Draft Environmental Impact Report (EIR) describes the environmental consequences of the proposed Jack London Square 4th & Madison Project (project). This EIR is designed to inform City staff, the Planning Commission, City Council, other responsible and interested agencies, and the general public of: (1) the proposed project and the potential environmental consequences of the project; (2) Standard Conditions of Approval (SCAs) and mitigation measures necessary to lessen or avoid significant adverse impacts; and (3) a reasonable range of feasible alternatives to the project. The information contained in the EIR will be reviewed and considered by public agencies prior to making a decision to approve, reject, or modify the proposed project.

The City of Oakland (City) is the lead agency for environmental review of the proposed project and as such has made the Draft EIR available for public review for the period identified in the Notice of Availability published with this document. During this time, written comments may be submitted to the City Planning Division at the address indicated on the Notice of Availability. Responses to all comments received on the environmental analysis in the Draft EIR during the specified review period will be included in the Response to Comments/Final EIR document.

B. PROPOSED PROJECT

The project seeks to develop a multi-family residential development on an approximately 2-acre, 1.5-block site in the Jack London District in Oakland. Figure I-1 shows the project site in its regional and local context.

The 1.5-block site is comprised of two parcels: one whole block ("Block A") bounded by 5th and 4th Streets and Jackson and Madison Streets, and one half-block ("Block B") bounded by 3rd and 4th Streets to the north and south, Madison Street to the east, and an apartment building followed by Jackson Street to the west. The project site includes the 1.38-acre Block A parcels (APNs 001-0161-001 and 001-0161-002) and the 0.69-acre Block B parcel (APN 001-0161-007-07).

Two buildings located on the Block A parcel function currently as office space for Cost Plus World Market. One building is a 45,000-square-foot, single-story warehouse building and the other contains 15,000 square feet of office space. Both buildings currently house approximately 100 employees of back office and sales staff. Cost Plus World Market,

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Source: Urban Planning Partners, Inc., 2015

Figure I-1
Jack London Square 4th & Madison Project EIR
Project Location Map

however, was acquired by Bed Bath & Beyond in 2012, and as a result, operations at this location are being phased out within the next 1 to 3 years. The Block B parcel is a paved parking area currently used exclusively by Cost Plus World Market employees.

The proposed project would include construction of two buildings comprised of five levels of wood frame construction (potentially with an additional mezzanine) over two levels of concrete. The project would include approximately 330 residential apartment units, 3,000 square feet of ground-floor commercial space and 365 parking spaces. The unit mix for the proposed project would include approximately 30 studio, 168 one-bedroom, and 132 two-bedroom apartments. Residential units in both the Block A and Block B buildings would be organized around an interior central courtyard area. The maximum height of each building would be 85 feet.

C. EIR SCOPE

The City of Oakland circulated a Notice of Preparation (NOP) on April 17, 2015. The following topics are excluded from extensive discussion in the EIR because it was determined during the scoping period and through preliminary analysis that these impacts would be less than significant: Aesthetics, Shadow and Wind; Agriculture and Forest Resources; Biological Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Population and Housing; Mineral Resources; Public Services; Recreation; and Utilities and Service Systems. However, a brief description of the project's impacts related to each of these topics is provided in *Chapter V, Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval*.

The following environmental topics are addressed in greater detail in *Chapter IV, Setting, Impacts, Standard Conditions of Approval and Mitigation Measures*, of this EIR:

A. Land Use and Planning
B. Historic Resources
C. Traffic and Transportation
D. Air Quality
E. Greenhouse Gas Emissions
F. Noise and Vibration

The NOP was published on April 17, 2015, and the public comment period for the scope of the EIR lasted from April 17, 2015, to May 18, 2015. The NOP was sent to property owners within 300 feet of the project site as well as to responsible and trustee agencies, organizations, and interested individuals. Additionally, the NOP was sent to the State Clearinghouse.

Scoping sessions were held for the project on May 6, 2015 and May 11, 2015, before the Planning Commission and Landmarks Preservation Advisory Board, respectively. NOP comments regarding a wide range of issues were received by the City at the scoping sessions from public agencies, area property owners and concerned citizens and were taken into account during the preparation of this EIR. Topic areas that were most widely referenced in the NOP comment letters include historic resources and transportation. The NOP and written comments received are included in Appendix A. A short description of the non-CEQA topics addressed in the NOP comment letters is included in *Chapter II, Summary*.

D. REPORT ORGANIZATION

This EIR is organized into the following chapters:

Chapter I – Introduction: Discusses the overall EIR purpose; provides a summary of the proposed project; describes the EIR scope; and summarizes the organization of the EIR.

Chapter II – Summary: Provides a summary of the impacts that would result from implementation of the proposed project, and describes SCAs and mitigation measures recommended to avoid or reduce significant impacts.

Chapter III – Project Description: Provides a description of the project objectives, project site, site development history, the proposed development, and required approval process.

Chapter IV – Setting, Impacts, Standard Conditions of Approval and Mitigation Measures: Analyzes the following environmental topics: Land Use and Planning, Historic Resources, Traffic and Transportation, Air Quality, Greenhouse Gas Emissions, and Noise and Vibration. A description of the following is provided for each environmental technical topic: existing conditions (setting); SCAs; significance criteria; potential environmental impacts and their level of significance; SCAs relied upon to ensure significant impacts would not occur; and mitigation measures recommended when necessary to mitigate identified impacts. Cumulative impacts are also discussed in each technical topic section. Potential adverse impacts are identified by levels of significance, as follows: less-than-significant impact (LTS), significant impact (S), and significant and unavoidable impact (SU). The significance level is identified for each impact before and after implementation of the recommended mitigation measure(s).

CEQA requires the analysis of potential adverse effects of the project on the environment. Potential effects of the environment on the project are legally **not** required to be analyzed or mitigated under CEQA. However, this document nevertheless analyzes potential effects of the environment on the project in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City SCAs and/or project-specific non-CEQA recommendations or mitigation measures to address these issues.

Chapter V – Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval: Provides a brief analysis of the topic areas found through the NOP scoping process and preliminary analysis to have no impacts or less-than-significant environmental impacts with implementation of the City of Oakland's SCAs. These topic areas are as follows: Aesthetics, Shadow and Wind; Agriculture and Forest Resources; Biological Resources; Cultural Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Population and Housing; Mineral Resources; Public Services; Recreation; and Utilities and Service Systems.

Chapter VI – Alternatives: Provides an evaluation of four alternatives to the proposed project. The alternatives are included to meet the CEQA requirement that require an EIR to describe a range of reasonable alternatives to the project that would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project. The CEQA alternatives include the No Project/Preservation Alternative, Partial Preservation Alternative #1, Partial Preservation Alternative #2, and the Setback/Stepped Alternative.

Chapter VII – CEQA-Required Assessment Conclusions: Provides the required analysis of growth-inducing impacts; significant irreversible changes; and significant unavoidable and cumulative impacts. Effects found not to be significant are discussed in *Chapter V* as noted above.

Chapter VIII – Report Preparation: Identifies preparers of the EIR, references used, and the persons and organizations contacted.

Appendices: The appendices include the NOP and written comments received in response to the NOP; technical analyses and data for transportation, air quality and greenhouse gas emissions; and background information related to historic resources.

All supporting technical documents and the reference documents are available for public review at the City of Oakland Planning and Building Department, under case file ER15-005.

The Draft EIR is available for public review for the period identified in the Notice of Availability attached to the front of this document. During this time, written comments on the Draft EIR may be submitted to the City of Oakland Planning and Building Department at the address indicated on the Notice of Availability. Responses to all comments received on the environmental analysis in the Draft EIR during the specified review period will be included in the Response to Comments/Final EIR.

II. SUMMARY

A. OVERVIEW OF PROPOSED PROJECT

This EIR has been prepared to evaluate the potential environmental effects of the Jack London Square 4th & Madison Project (project). The approximately 2-acre project site is located in the Jack London Square District in Oakland. The project site is comprised of two parcels, the northern parcel being a full block ("Block A") with existing office/warehouse buildings, and the southern parcel being a half-block ("Block B") covered by a paved parking lot. The 1.5-block project site is bound by 3rd Street to the north, Madison Street to the east, 5th Street to the south, and Jackson Street to the west, as shown in Figure III-1.

The project seeks to construct a multi-family residential development on this site. The project would include the demolition of existing structures on the site and the construction of two buildings, each a five-level wood-frame building situated on podiums over a two-story concrete parking garage, with a maximum height of 85 feet. Key elements of the project include:

- 330 residential apartment units total, including a mix of studios, one-bedroom, and two-bedroom units;
- An interior courtyard in each building that would provide easily accessible, private open space for residents;
- Approximately 15,000 square feet of amenity and leasing office space;
- Approximately 3,000 square feet of ground floor commercial space across the two buildings; and
- Approximately 365 parking spaces.

B. SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

This summary provides an overview of the analysis contained in Chapters IV through VII of this EIR. CEQA requires a summary to include discussion of: (1) potential areas of controversy; (2) significant impacts, and proposed mitigation measures (Standard Conditions of Approval (SCAs) are also included in this summary); (3) cumulative impacts; (4) significant irreversible and unavoidable impacts; and (5) alternatives to the proposed project. Each of these topics is summarized below.

1. Potential Areas of Controversy

Letters and verbal comments received in response to the Notice of Preparation (NOP) dated April 17, 2015, raised a number of topics that the commenters wanted addressed in the EIR, including:

- Effects of increased traffic at and around the project site, and the appropriate guidelines to use when preparing a Transportation Impact Study;
- Consideration of partial preservation of the historic building on the project site and/or appropriate mitigations for impacts to historic resources;
- Noise impacts of construction;
- Regional requirements and recommendations for addressing water service, water recycling, wastewater service, and water conservation;
- And potential impacts relating to aesthetic resources, geology and soils, hazards and hazardous materials, hydrology and water quality, population and housing, and public services.

The issues raised by these comments are addressed in *Chapter IV, Setting, Impacts, Standard Conditions of Approval and Mitigation Measures* and *Chapter V, Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval*. In addition, some of the comments offered in the NOP comment letters and during the scoping session addressed the merits of the project itself and not the potential adverse environmental impacts that are the subject of this EIR, including comments on the proposed height and design of the project, the amount of parking proposed, the amount of retail proposed, and the treatment of underpasses in the vicinity of the project. The City staff and Planning Commission will consider these comments as part of its review of the requested project approvals, independent of the CEQA analysis. Copies of the NOP and written comments are included in Appendix A.

2. Significant and Significant Unavoidable Impacts

Under CEQA, a significant impact on the environment is defined as "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."[1]

As discussed in *Chapter IV, Setting, Impacts, Standard Conditions of Approval and Mitigation Measures* and *Chapter V, Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval*, and shown in Table II-1 below, the

[1] 14 California Code Regs. 15382; Public Resources Code 21068.

project would result in several potentially significant impacts. However, all of the impacts identified, with the exception of those related to Historic Resources, could be mitigated to a less-than-significant level with implementation of the identified SCAs and/or recommended mitigation measures. These impacts are identified for the following topics in this EIR and are evaluated in full detail *Chapter IV, Setting, Impacts, Standard Conditions of Approval and Mitigation Measures*, of this EIR:

- Land Use and Planning
- Historic Resources
- Traffic and Transportation
- Air Quality
- Greenhouse Gas Emissions
- Noise and Vibration

The environmental topics for which the project would result in no impact or a less-than-significant impact are described in *Chapter V, Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval*, of this EIR:

- Aesthetics, Shadow and Wind
- Agriculture and Forest Resources
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems

Cumulative impacts are discussed in each of the topic sections included in *Chapter IV, Setting, Impact, Standard Conditions of Approval and Mitigation Measures*. The proposed project would not significantly contribute to or be affected by any significant cumulative impacts.

3. Alternatives to the Proposed Project

Chapter VI, Alternatives, includes analysis of four alternatives to the proposed project to meet the CEQA requirements for analysis of a reasonable range of project alternatives. The three project alternatives analyzed in *Chapter VI* include:

- The **No Project/No Build Alternative,** which assumes that the proposed project would not be developed. Structures on the existing site would remain in their current state, with no new construction on the project site.
- **Partial Preservation Alternative #1,** which assumes Buildings A and B would be designed such that they provide the same number of residential units proposed project, yet partially preserve the original façades of the existing Block A building.
- **Partial Preservation Alternative #2**, which assumes Buildings A and B would be designed such that they provide the same number of residential units proposed project, yet partially preserve the original façades of the existing Block A building (in a manner different than Partial Preservation Alternative #1).
- The **Setback/Stepped Alternative**, which assumes construction similar to the proposed project with some modifications to Building A. Building B would have the same massing, height and unit count, while Building A would step down in height and massing toward the district. The façades of the existing Block A building would not be preserved.

C. SUMMARY TABLE

Information in Table II-1, Summary of Impacts, Standard Conditions of Approval and Mitigation Measures, has been organized to correspond with environmental issues discussed in *Chapter IV* and *Chapter V* of this EIR. The table is arranged in four columns: (1) impacts; (2) level of significance prior to mitigation measures, (3) mitigation measures/SCAs; and (4) level of significance after implementation of the SCAs or mitigation measures, which for each topic area except for Historic Resources is less than significant (LTS). The EIR found that all potentially significant impacts, with the exception of those related to Historic Resources, would be reduced to a less-than-significant level with implementation of SCAs and mitigation measures. All SCAs and mitigation measures necessary to ensure that no significant impacts would occur are included in Table II-1 for reference. For a complete description of environmental findings and required mitigation measures and SCAs, please refer to the specific discussions in *Chapter IV* and *Chapter V*.

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
A. LAND USE AND PLANNING			
Implementation of the proposed project would not result in any significant land use impacts.			
B. HISTORIC RESOURCES			
HIST-1: The proposed project would demolish a warehouse that is a contributor to a designated National Register Historic District and located within an Area of Primary Importance (API).	S	HIST-1: Implement the following four-part Mitigation Measure: HIST-1a: Prior to demolition of 180 4th Street warehouse, the project applicant shall provide HABS-Level III Documentation records that follow the specifications set by the Historic American Buildings Survey (HABS). The documentation shall include: ▪ Drawings – sketch floor plans of the buildings and a site plan. ▪ Photographs – digital photographs meeting the Digital Photography Specifications Checklist. ▪ Written data – a historical report with the history of the property, property description and historical significance. A qualified architectural historian meeting the qualifications in the Secretary of the Interior's Professional Qualification Standards shall oversee the preparation of the sketch plans, photographs and written data. The documentation shall be printed on archival paper. Digital photographs shall be burned to archival CD or DVD disks. The documentation shall be submitted to and reviewed by the City of Oakland and found to be adequate prior to issuance of the demolition permit. The documentation shall be deposited with the Oakland History Room in the Public Library and the Northwest Information Center at Sonoma State University, the repository for the California Historical Resources Information System. HIST-1b: Commemoration and Public Interpretation. The project applicant shall prepare a permanent exhibit/display, with the help of an experienced professional, of the history of the property including, but not limited to, historic and current condition photographs, interpretive text, drawings, video, or interactive	SU

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		media. The exhibit/display shall be placed in a suitable, publicly accessible location on the site, or in the lobby of the residential tower. This exhibit/display shall be in addition to the existing historic signage #6, S & W Fine Foods currently mounted on a trash receptacle within the historic district (see Mitigation Measure HIST-1c). <u>HIST-1c</u>: Historic District Signage Program. The project applicant shall provide a financial contribution to support the Jack London District Association's sidewalk and trash receptacles and historic signage program. The amount of the contribution shall be $10,786.88, which is equal to the association's maintenance costs for the historic signage program for 1 year. <u>HIST-1d</u>: Façade Improvement Program. Project applicant shall contribute to the City of Oakland's façade improvement program. The amount of the contribution shall be determined based on the following: ▪ $10,000 for the first 25 feet of two façades of a building and $2,500 per each additional 10 linear feet of those two same façades beyond 25 feet. ▪ There shall be a 20 percent increase for the buildings designated as Historic Resources under CEQA. ▪ Multiply the total by two times for being located within an API. For purposes of this mitigation, the two façades are along 4th Street and Jackson Street at 300 feet and 200 feet, respectively. The following calculation results in a total contribution of $318,000: 4th Street: $10,000 + $2,500 x 275/10 feet = $78,750 Jackson Street: $10,000 + $2,500 x 175/10 feet = $53,750 $78,750 + $53,750 = $132,500 Increase by 20%: $159,000 Increase by 2x: $318,000	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		The impact will remain significant and unavoidable, as this mitigation measure cannot lessen impacts to a less-than-significant level.	
HIST-2: The proposed project would involve construction of a new building within the boundaries of a designated National Register Historic District and an API. This, combined with the other past, current, and reasonably foreseeable new construction and other alterations to the OWWD, has the potential to materially impair the significance of the historic district in a manner that may be cumulatively significant if all of these projects are executed in the near future.	S		SU
C. TRAFFIC AND TRANSPORTATION			
No significant impacts to traffic and transportation would occur with implementation of the City's SCAs listed in this table.	S	**SCA TRA-1: Parking and Transportation Demand Management** *Prior to issuance of a final inspection of the building permit.* The project applicant shall submit a Transportation and Parking Demand Management (TDM) plan for review and approval by the City. The intent of the TDM plan shall be to reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable consistent with the potential traffic and parking impacts of the project. The goal of the TDM shall be to achieve the following project vehicle trip reductions (VTR): ▪ Projects generating 50 to 99 net new AM or PM peak hour vehicle trips: 10 percent VTR. ▪ Projects generating 100 or more net new AM or PM peak hour vehicle trips: 20 percent VTR. The TDM plan shall include strategies to increase pedestrian, bicycle, transit, and carpool use, and reduce parking demand. All four modes of	LTS

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		travel shall be considered, as appropriate. VTR strategies to consider include, but are not limited to, the following: a) Inclusion of additional long term and short term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan, and Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement. b) Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority Bikeway Projects, on-site signage and bike lane striping. c) Installation of safety elements per the Pedestrian Master Plan (such as cross walk striping, curb ramps, count-down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project. d) Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan. e) Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements. f) Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency). g) Provision of a transit subsidy to employees or residents, determined by the project sponsor and subject to review by the City, if the employees or residents use transit or commute by other alternative modes. h) Provision of an ongoing contribution to AC Transit service to the area between the development and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2)	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		Contribution to an existing area shuttle or streetcar service; and 3) Establishment of new shuttle or streetcar service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3). i) Guaranteed ride home program for employees, either through 511.org or through separate program. j) Pre-tax commuter benefits (commuter checks) for employees. k) Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants. l) On-site carpooling and/or vanpooling program that includes preferential (discounted or free) parking for carpools and vanpools. m) Distribution of information concerning alternative transportation options. n) Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties. o) Parking management strategies; including attendant/valet parking and shared parking spaces. p) Requiring tenants to provide opportunities and the ability to work off-site. q) Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week). r) Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours.	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		The TDM Plan shall indicate the estimated VTR for each strategy proposed based on published research or guidelines. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report. The project applicant shall implement the approved TDM Plan on an ongoing basis. For projects that generate 100 or more net new AM or PM peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved. **SCA TRA-2: Construction Traffic and Parking** *Prior to issuance of a demolition, grading, or building permit.* The project applicant and construction contractor shall meet with appropriate City of Oakland agencies to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. The project applicant shall develop a construction management plan for review and approval by the Planning	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		and Zoning Division, the Building Services Division, and the Transportation Services Division. The plan shall include at least the following items and requirements: a) A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. b) Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur. c) Location of construction staging areas for materials, equipment, and vehicles at an approved location. d) A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an on-site complaint manager. The manager shall determine the cause of the complaints and shall take prompt action to correct the problem. Planning and Zoning shall be informed who the Manager is prior to the issuance of the first permit issued by Building Services. e) Provision for accommodation of pedestrian flow. f) Provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on-street spaces. g) Any damage to the street caused by heavy equipment, or as a result of this construction, shall be repaired, at the project sponsor's expense, within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to issuance of a final inspection of the building permit. All damage that is a threat to public health or safety shall be repaired immediately. The street shall be restored to its condition prior to the new construction as established by the City Building Inspector and/or photo	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		documentation, at the project sponsor's expense, before the issuance of a Certificate of Occupancy. h) Any heavy equipment brought to the construction site shall be transported by truck, where feasible. i) No materials or equipment shall be stored on the traveled roadway at any time. j) Prior to construction, a portable toilet facility and a debris box shall be installed on the site, and properly maintained through project completion. k) All equipment shall be equipped with mufflers. l) Prior to the end of each work day during construction, the contractor or contractors shall pick up and properly dispose of all litter resulting from or related to the project, whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors.	
D. AIR QUALITY			
No significant impacts to air quality would occur with implementation of the City's SCAs listed in this table.	S	**SCA-A. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)** *Ongoing throughout demolition, grading, and/or construction.* During construction, the project applicant shall require the construction contractor to implement all of the following applicable measures recommended by the BAAQMD: **Basic** a) Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.	LTS

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. d) Pave all roadways, driveways, sidewalks, etc. as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. e) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). f) Limit vehicle speeds on unpaved roads to 15 miles per hour. g) Idling times shall be minimized either by shutting equipment off when not is use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations. Clear signage to this effect shall be provided for construction workers at all access points. h) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. i) Post a publicly visible sign that includes the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor shall respond and take corrective action within 48 hours. The telephone numbers of contacts at the City and the BAAQMD shall also be visible. This information may be posted on other required on-site signage.	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		Enhanced j) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. k) All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph. l) Install sandbags or other erosion control measures to prevent silt runoff to public roadways. m) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more). n) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. o) Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind-blown dust. Wind breaks must have a maximum 50 percent air porosity. p) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. q) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time. r) All trucks and equipment, including tires, shall be washed off prior to leaving the site. s) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch,	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		or gravel. t) Minimize the idling time of diesel-powered construction equipment to two minutes. u) The project applicant shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate matter (PM) reduction compared to the most recent California Air Resources Board (CARB) fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as they become available. v) Use low volatile-organic compound (VOC) (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings). w) All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM. x) Off-road heavy diesel engines shall meet the CARB's most recent certification standard. SCA-A is further supplemented by the following additional measure: y) If access to grid power is available, grid power electricity shall be used instead of diesel-powered generators. If grid power is not available, then propane or natural gas generators may be used, as feasible. Only if propane or natural gas generators prove infeasible shall portable diesel engines be allowed.	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		SCA-B: Exposure to Air Pollution (Toxic Air Contaminants) The SCA applies to all projects that meet all of the following criteria: 1) The project involves either of the following sensitive land uses: a) New residential facilities or new dwelling units; or b) New or expanded schools, daycare centers, parks, nursing homes, or medical facilities; and 2) The project is located within 1,000' of one or more of the following sources of air pollution: a) Freeway; b) Roadway with significant traffic (at least 10,000 vehicles/day); c) Rail line (except BART) with over 30 trains per day; d) Distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating Transportation Refrigeration Units (TRU) per day, or where the TRU unit operations exceed 300 hours per week; e) Major rail or truck yard (such as the Union Pacific rail yard adjacent to the Port of Oakland); f) Ferry terminal; g) Port of Oakland; or h) Stationary pollutant source requiring a permit from BAAQMD (such as a diesel generator); and 3) The project exceeds the health risk screening criteria after a screening analysis is conducted in accordance with the BAAQMD CEQA Guidelines. **Health Risk Measures** Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose **one** of the following methods:	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		a) The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with the California Air Resources Board (CARB) and the Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. b) The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: ▪ Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents, and other sensitive populations, in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required. ▪ Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible. ▪ The project shall be designed to locate sensitive receptors as far	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall not be located immediately adjacent to a loading dock or where trucks concentrate to deliver goods, if feasible. ▪ Sensitive receptors shall not be located on the ground floor, if feasible. ▪ Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid popular (*Populus deltoids X trichocarpa*), and Redwood (*Sequoia sempervirens*). ▪ Within the project site, sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible. ▪ Within the project site, existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible. ▪ Within the project site, emissions from diesel trucks shall be reduced through implementing the following measures, if feasible: ▪ Installing electrical hook-ups for diesel trucks at loading docks. ▪ Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards. ▪ Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels. ▪ Prohibiting trucks from idling for more than two minutes. ▪ Establishing truck routes to avoid sensitive receptors in the	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented. When Required: Prior to approval of construction-related permit Initial Approval: Planning and Zoning Division Monitoring/Inspection: Building Services Division **Maintenance of Health Risk Reduction Measures** Requirement: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter. When Required: Ongoing Initial Approval Authority: N/A Monitoring/Inspection/Enforcement: Building Services Division	
E. GREENHOUSE GAS EMISSIONS			
No significant impacts to greenhouse gas emissions would occur with implementation of the City's SCAs listed in this table.		**SCA-A. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)** *Ongoing throughout demolition, grading, and/or construction.* During construction, the project applicant shall require the construction contractor to implement all of the following applicable measures recommended by the BAAQMD: **Basic** a) Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible. b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. d) Pave all roadways, driveways, sidewalks, etc. as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. e) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). f) Limit vehicle speeds on unpaved roads to 15 miles per hour. g) Idling times shall be minimized either by shutting equipment off when not is use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations. Clear signage to this effect shall be provided for construction workers at all access points. h) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. i) Post a publicly visible sign that includes the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor shall respond and take corrective action within 48 hours. The telephone numbers of contacts at the City and the BAAQMD shall also be visible. This information may be posted	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		on other required on-site signage. **Enhanced** j) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. k) All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph. l) Install sandbags or other erosion control measures to prevent silt runoff to public roadways. m) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more). n) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust off-site. Their duties shall include holidays and weekend periods when work may not be in progress. o) Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind-blown dust. Wind breaks must have a maximum 50 percent air porosity. p) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. q) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time. r) All trucks and equipment, including tires, shall be washed off prior to leaving the site. s) Site accesses to a distance of 100 feet from the paved road shall be	

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Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. t) Minimize the idling time of diesel-powered construction equipment to two minutes. u) The project applicant shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate matter (PM) reduction compared to the most recent California Air Resources Board (CARB) fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as they become available. v) Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings). w) All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM. x) Off-road heavy diesel engines shall meet the CARB's most recent certification standard. SCA-A is further supplemented by the following additional measure: y) If access to grid power is available, grid power electricity shall be used instead of diesel-powered generators. If grid power is not available, then propane or natural gas generators may be used, as feasible. Only if propane or natural gas generators prove infeasible shall portable diesel engines be allowed.	

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Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		SCA-H. Compliance with the Green Building Ordinance, OMC Chapter 18.02 *Prior to issuance of a demolition, grading, or building permit* The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, OMC Chapter 18.02. a) The following information shall be submitted to the Building Services Division for review and approval with the application for a building permit: i. Documentation showing compliance with Title 24 of the 2013 California Building Energy Efficiency Standards. ii. Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. iii. Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit. iv. Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (b) below. v. Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance. vi. Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit. vii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. b) The set of plans in subsection (a) shall demonstrate compliance with the following:	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		i. CALGreen mandatory measures. ii. All pre-requisites per the LEED/GreenPoint Rated checklist approved during the review of the Planning and Zoning permit, or, if applicable, all the green building measures approved as part of the Unreasonable Hardship Exemption granted during the review of the Planning and Zoning permit. iii. Insert green building point level/certification requirement: (See Green Building Summary Table; for New Construction of Residential or Non-residential projects that remove a Historic Resource (as defined by the Green Building Ordinance) the point level certification requirement is 75 points for residential and LEED Gold for non-residential) per the appropriate checklist approved during the Planning entitlement process. iv. All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plancheck application is submitted and approved by the Planning and Zoning Division that shows the previously approved points that will be eliminated or substituted. v. The required green building point minimums in the appropriate credit categories. *During construction* The applicant shall comply with the applicable requirements CALGreen and the Green Building Ordinance, Chapter 18.02. a) The following information shall be submitted to the Building Inspections Division of the Building Services Division for review and approval: i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance. iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. **SCA-I. Compliance with the Green Building Ordinance, OMC Chapter 18.02, for Building and Landscape Projects Using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist** This SCA would apply to the projects listed below **AND** that are rated using the Small Commercial or Bay Friendly Basic Landscape Checklists: a) New Construction of Non-Residential Buildings between 5,000 and 25,000 sq. ft. of total floor area. b) Alterations/Alterations 5,000 and 25,000 sq. ft. of total floor area to a Non-Residential Building c) Additions/Alterations (not meeting the Major Alteration Definition) over 25,000 sq. ft. of total floor area to a Non-Residential Building d) Alterations/Alterations 5,000 and 25,000 sq. ft. of total floor area to a Historic Non-Residential Building e) Additions/Alterations (not meeting the Major Alteration Definition) over 25,000 sq. ft. of total floor area to a Historic Non-Residential Building f) Construction projects with over 25,000 sq. ft. of total floor area of new construction requiring a landscape plan. *Prior to issuance of a building permit* The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, (OMC Chapter 18.02.) for projects using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist. a) The following information shall be submitted to the Building	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		Services Division for review and approval with application for a Building permit: i. Documentation showing compliance with the 2013 Title 24, California Building Energy Efficiency Standards. ii. Completed copy of the green building checklist approved during the review of a Planning and Zoning permit. iii. Permit plans that show in general notes, detailed design drawings and specifications as necessary compliance with the items listed in subsection (b) below. iv. Other documentation to prove compliance. b) The set of plans in subsection (a) shall demonstrate compliance with the following: i. CALGreen mandatory measures. ii. All applicable green building measures identified on the StopWaste.Org checklist approved during the review of a Planning and Zoning permit, or submittal of a Request for Revision Plan-check application that shows the previously approved points that will be eliminated or substituted. *During construction* The applicant shall comply with the applicable requirements of CALGreen and Green Building Ordinance, Chapter 18.02 for projects using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist. a) The following information shall be submitted to the Building Inspections Division for review and approval: i. Completed copy of the green building checklists approved during review of the Planning and Zoning permit and during the review of the Building permit. ii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
F. NOISE AND VIBRATION			
No significant impacts related to noise would occur with implementation of the City's SCAs listed in this table.		**SCA Noise-1: Days/Hours of Construction Operation** *Ongoing throughout demolition, grading, and/or construction.* The project applicant shall require construction contractors to limit standard construction activities as follows: a) Construction activities are limited to between 7:00 AM and 7:00 PM Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday. b) Any construction activity proposed to occur outside of the standard hours of 7:00 am to 7:00 pm Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division. c) Construction activity shall not occur on Saturdays, with the following possible exceptions: i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and windows closed. d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions. e) No construction activity shall take place on Sundays or Federal holidays. f) Construction activities include but are not limited to: truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area. Applicant shall use temporary power poles instead of generators where feasible. **SCA NOISE-2: Noise Control** *Ongoing throughout demolition, grading, and/or construction.* To reduce noise impacts due to construction, the project applicant shall require construction contractors to implement a site-specific noise reduction program, subject to the Planning and Zoning Division and the Building Services Division review and approval, which includes the following measures: a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		b) Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. c) Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented. **SCA NOISE-3: Noise Complaint Procedures** *Ongoing throughout demolition, grading, and/or construction.* Prior to the issuance of each building permit, along with the submission of construction documents, the project applicant shall submit to the Building Services Division a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include: a) A procedure and phone numbers for notifying the Building Services Division staff and Oakland Police Department; (during regular construction hours and off-hours);	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		b) A sign posted on-site pertaining with permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours); c) The designation of an on-site construction complaint and enforcement manager for the project; d) Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities about the estimated duration of the activity; and e) A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed. **SCA NOISE-4: Interior Noise** *Prior to issuance of a building permit and Certificate of Occupancy.* If necessary to comply with the interior noise requirements of the City of Oakland's General Plan Noise Element and achieve an acceptable interior noise level, noise reduction in the form of sound-rated assemblies (i.e., windows, exterior doors, and walls), and/or other appropriate features/measures, shall be incorporated into project building design, based upon recommendations of a qualified acoustical engineer and submitted to the Building Services Division for review and approval prior to issuance of building permit. Final recommendations for sound-rated assemblies, and/or other appropriate features/measures, will depend on the specific building designs and layout of buildings on the site and shall be determined during the design phases. Written confirmation by the acoustical consultant, HVAC or HERS specialist, shall be submitted for City review and approval, prior to Certificate of Occupancy (or equivalent) that:	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		a) Quality control was exercised during construction to ensure all air-gaps and penetrations of the building shell are controlled and sealed; and b) Demonstrates compliance with interior noise standards based upon performance testing of a sample unit. c) Inclusion of a Statement of Disclosure Notice in the CC&R's on the lease or title to all new tenants or owners of the units acknowledging the noise generating activity and the single event noise occurrences. Potential features/measures to reduce interior noise could include, but are not limited to, the following: i. Installation of an alternative form of ventilation in all units identified in the acoustical analysis as not being able to meet the interior noise requirements due to adjacency to a noise generating activity, filtration of ambient make-up air in each unit and analysis of ventilation noise if ventilation is included in the recommendations by the acoustical analysis. ii. Prohibition of Z-duct construction. **SCA NOISE-5: Operational Noise-General** *Ongoing.* Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services. **SCA NOISE-6: Pile Driving and Other Extreme Noise Generators** *Ongoing throughout demolition, grading, and/or construction.* To further reduce potential pier drilling, pile driving and/or other extreme noise generating construction impacts greater than 90 dBA, a set of site-specific noise attenuation measures shall be completed under	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		the supervision of a qualified acoustical consultant. Prior to commencing construction, a plan for such measures shall be submitted for review and approval by the Planning and Zoning Division and the Building Services Division to ensure that maximum feasible noise attenuation will be achieved. This plan shall be based on the final design of the project. A third-party peer review, paid for by the project applicant, may be required to assist the City in evaluating the feasibility and effectiveness of the noise reduction plan submitted by the project applicant. The criterion for approving the plan shall be a determination that maximum feasible noise attenuation will be achieved. A special inspection deposit is required to ensure compliance with the noise reduction plan. The amount of the deposit shall be determined by the Building Official, and the deposit shall be submitted by the project applicant concurrent with submittal of the noise reduction plan. The noise reduction plan shall include, but not be limited to, an evaluation of implementing the following measures. These attenuation measures shall include as many of the following control strategies as applicable to the site and construction activity: a) Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; b) Implement “quiet” pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; c) Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; d) Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and e) Monitor the effectiveness of noise attenuation measures by taking noise measurements.	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
NOISE-1: The construction of the proposed project could result in the exposure of nearby receptors to excessive groundborne vibration.	S	NOISE-1: The structural engineer or other appropriate professional retained to prepare the vibration impact assessment shall undertake an existing conditions study (study) of the Allegro apartment building located east of Jackson Street. The study will establish the baseline condition of the building including, but not limited to, the location and extent of any visible cracks or spalls on the building. The study shall include written descriptions and photographs of the building. The study shall be reviewed and approved by the Building Services Division prior to issuance of a grading permit. Upon completion of the project, the building will be resurveyed, and any new cracks or other changes in the building shall be compared to pre-construction conditions and a determination shall be made as to whether the proposed project caused the damage. The findings shall be submitted to the Building Services Division for review. If it is determined that project construction has resulted in damage to the building, the damage shall be repaired to the pre-existing condition by the project sponsor, provided that the property owner approves of the repair.	LTS

III. PROJECT DESCRIPTION

This chapter describes the proposed Jack London Square 4th & Madison Project (project), which is evaluated in this EIR. The chapter begins with a description of the project site, the regional and planning context, the project objectives, and a discussion of relevant project background. These are followed by a detailed description of the project, a discussion of the intended uses of the EIR, and an explanation of required project approvals and entitlements.

A. PROJECT SITE

1. Location and Site Characteristics

The project site comprises approximately 90,169 square feet, or 2.07 acres, in the Jack London District in the City of Oakland. Oakland is located in Alameda County, and is bordered by San Francisco Bay, the Oakland Estuary and the City of Alameda to the west; the cities of Berkeley and Emeryville to the north; unincorporated Contra Costa County and Alameda County to the east; and the City of San Leandro to the south.

The project site is located at 180 4th Street and 431 Madison Street and encompasses 1.5 city blocks. It is bounded by Jackson Street to the west, 5th Street to the north, Madison Street to the east, and 3rd Street to the south. The project site is within one-half mile of the Lake Merritt Bay Area Rapid Transit District (BART) station, and is located adjacent to (within a 200-foot radius of) Interstate 880 (I-880). Vehicular access to the site is provided via I-880 and the above-mentioned streets. Figure III-1 shows the project site's location in the local context.

The project site is composed of the following three Alameda County Assessor's Parcels:

- APN 001-0161-001
- APN 001-0161-002
- APN 001-0161-007-07

The northern, larger, 1.38-acre parcel (APNs 001-0161-001 and 001-0161-002) comprises the entire block between 4th and 5th Streets and Jackson and Madison Streets ("Block A"). Two connected buildings located on this parcel, at 430 Jackson Street and 425 Madison Street, currently function as the corporate office headquarters of Cost Plus World Market. One building is a 45,000 square-foot, single-story warehouse building and the other contains 15,000 square feet of office space. The buildings currently house approximately 100 employees working as back office and sales staff. Independent of the project, the Cost Plus World Market corporate offices will be vacating this location.

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Source: Urban Planning Partners, Inc., 2015

Figure III-1
Jack London Square 4th & Madison Project EIR
Project Location Map

Cost Plus World Market was acquired by Bed Bath & Beyond in 2012 and as a result, this office location is being phased out within the next 1 to 3 years.

The southern, smaller, 0.69-acre parcel comprises one-half block at 431 Madison Street, between 3rd and 4th Streets and along Madison Street ("Block B"). It is a paved parking area consisting of wheel blocks, a drainage channel, a picnic area, and pole-mounted spot lights. The parking lot is currently used exclusively by Cost Plus World Market employees.

2. Surrounding Land Uses

A range of residential, commercial, and industrial uses surround the project, including several 5- to 10-story multi-family residential developments and mixed commercial and industrial uses, as outlined below.

The project is bounded on the north by 5th Street, a local road parallel and adjacent to the I-880 elevated interstate highway. Lakeside Recycling, a non-ferrous scrap metal recycling facility occupying approximately ½-acre, lies to the east of Block A along Madison Street. The Sierra at Jack London Square, a 10-story multi-family residential community, lies to the east of Block B along Madison Street. The project is bounded on its southern side by 3rd Street. The Allegro is a 5-story multi-family residential community to the south of Blocks A and B along 3rd Street. The Allegro also lies to the west of the project site, with one of its three buildings immediately adjacent to and sharing a city block (between 3rd and 4th Streets and Jackson and Madison Streets) with Block B on its west side. Single-story commercial properties lie to the west of Block A and include a hair salon, hospitality supply, and meat warehouse, and a 7-story multi-family residential community beyond, located at 428 Alice Street.

3. Existing General Plan and Zoning Designation

The General Plan land use classification for the project site, as established by the City's *Estuary Policy Plan* adopted June 1999,[1] is Mixed Use District (MUD).[2] The intent of the MUD land use classification is to encourage the development of nontraditional higher density housing (work/live, lofts, artist studios) within a context of commercial and light industrial/manufacturing uses.[3] The MUD land use classification states that future development in this area should be primarily light industrial, warehousing, wholesale, retail, restaurant, office, residential, work/live, lofts units, parks, and public open spaces, with manufacturing, assembly, and other uses that are compatible with adjacent uses.

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[1] The *Estuary Policy Plan* is considered part of the General Plan and supersedes the General Plan for the Estuary shoreline, extending from Adeline Street to 66th Avenue, including all of the lands on water side of I-880 within Port and City of Oakland jurisdiction.

[2] City of Oakland Planning and Building Department, 2014. General Plan Designations Map, November 18.

[3] City of Oakland and Port of Oakland, 1999. *Estuary Policy Plan*, Section IV: Moving Forward, page 133, June.

The maximum intensity of building form allowed within the MUD land use district is capped at a floor area ratio (FAR) of 5.0 per parcel and 125 housing units per acre. The land use classifications for the project site are discussed in further detail in *Section IV.A, Land Use and Planning*.

The zoning designation for the project site, as established by Chapter 17.56 of the City of Oakland Municipal Code, is Community Shopping Commercial Zone (C-45). The C-45 zone is intended to create, preserve, and enhance areas with a wide range of both retail and wholesale establishments serving both long- and short-term needs in compact locations oriented toward pedestrian comparison shopping, and is typically appropriate to commercial clusters near intersections of major thoroughfares. The C-45 zone allows for a wide range of uses supportive to its stated intent, including a variety of commercial activities; residential activities, including single-family and multi-family dwellings; light industrial; and limited agricultural activities. The zoning designations of the project site are discussed in further detail in *Section IV.A, Land Use and Planning*.

B. PROJECT OBJECTIVES

The proposed project seeks to create a new multi-family residential development that incorporates residential amenities and ground-floor retail space. An overarching goal of the project is to create high quality multi-family residential development that fits with the fabric of surrounding neighborhood and the Jack London District as a whole. Specifically, the project proposes to:

- Develop a multi-family residential infill project that will complement and enhance existing adjacent residential and commercial neighborhoods.
- Include resident serving amenities and commercial space that benefits the community and activates portions of the ground level street frontage, primarily along 4th Street.
- Provide safe multimodal access for residents, guests, and commercial patrons that is adequate for all modes.
- Develop a project of quality design with an architectural character that balances relevance with the contextual district and contemporary style.
- Construct financially feasible developments with sufficient flexibility to adjust to market needs and to provide reasonable returns on investment so as to secure construction and long-term financing.

C. PROPOSED PROJECT

The project would construct approximately 330 apartments in two buildings consisting of five levels of wood frame construction (potentially with an additional mezzanine) over two levels of concrete. Further details regarding the proposed components of the project are provided in Table III-1 and the site plan for the first level of the building is shown in Figure III-2. The project would be approximately seven stories and 85 feet tall at the roofline.

1. Proposed Uses

The primary component of the project is the development of approximately 330 multi-family residential units. The unit mix would consist of approximately 21 studio, 185 one-bedroom, and 120 two-bedroom apartments. Residential units in both the Block A and Block B buildings would be organized around a central courtyard area. The Block A courtyard area would be larger than that of Block B and would house a pool and spa. Approximately 15,000 square feet of open space is proposed within the two courtyard areas.

Approximately 14,000 square feet of resident amenities would be provided by the project. In the Block A building; the amenity space would comprise approximately 10,000 square feet and includes a 2,805-square-foot fitness center and sport court or other activity area. The other, approximately 4,000 square feet of amenity space, would be housed in the Block B building and includes a resident lounge/clubhouse and/or fitness center. The leasing office for the project is included within the estimated square footage of amenity space noted for the Block A building.

Additionally, 3,000 square feet of retail is currently proposed in Buildings A and B, fronting on 4th Street (but up to 8,000 square feet of retail is considered in the analysis presented in this EIR).[4] The above-mentioned project components are summarized in Table III-1.

2. Circulation and Parking

The proposed project would provide approximately 365 parking spaces on the first and second levels of Block A and B buildings. Bicycle parking, and electric vehicle parking would be included per City requirements.

3. Construction Schedule

Development of the entire project site, as proposed, is anticipated to last approximately 26 months. Construction would begin after the current occupant has vacated the property. The building proposed for Block B is anticipated to be completed by month 19 of the schedule, and construction would be completed in month 26. As mentioned above,

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[4] The project is characterized throughout this document as proposing 3,000 square feet of retail. However, the analysis contained within this EIR remains valid for a retail component of up to 8,000 square feet within the structures proposed. If the proposed project were modified to include greater than 8,000 square feet of retail, the project would generate more than 100 trips in the PM peak hour and would thus require an additional Congestion Management Program (CMP) Land Use Analysis Program Transportation Impact Analysis.

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Source: CP V JLS, LLC, 2015

Figure III-2
Jack London Square 4th & Madison Project EIR
Conceptual Building Plan - Level 1

TABLE III-1 PROJECT COMPONENTS

Uses	
Residential Units	+/- 330
Studio (Standard Studios and Jr 1 Bedrooms)	+/- 21 (10%)
One-Bedroom	+/- 185 (50%)
Two-Bedroom	+/- 120 (40%)
Ground Floor Uses	
Residential Amenity Spaces	Lobby, Lounge, Fitness and Business Centers
Retail	+/- 3,000 sq.ft.
Parking	
Parking Spaces	+/- 365
Parking Ratio	1.2:1

Source: CP V JLS, LLC, 2015.

the project includes two buildings of Type IIIa construction, including five levels of wood frame construction (potentially with an additional mezzanine) over two levels of Type I concrete. It is anticipated that the proposed podium structures can be supported on a mat foundation or shallow spread footings. Pile installation would not be a component of the project's construction as proposed.

D. DISCRETIONARY ACTIONS

It is anticipated that this EIR will provide environmental review of all discretionary approvals and actions required for the proposed project. A number of permits and approvals would be required before development of the project could be initiated. As Lead Agency for the proposed project, the City of Oakland would be responsible for the majority of these approvals. Other agencies will have some authority related to the project and its approvals. A list of permits and approvals that may be required by the City without limitations, is provided in Table III-2.

TABLE III-2 REQUIRED DISCRETIONARY PERMITS AND APPROVALS

Lead Agency	**Permit/Approval**
City of Oakland	Conditional Use Permit Design Review Grading & Encroachment Permits Tentative Parcel Map for Condominiums

Source: Urban Planning Partners, Inc., 2015.

IV. SETTING, IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

This chapter contains an analysis of the environmental topics determined to be potentially significant relevant to the proposed Jack London Square 4th & Madison Project (the "project" or "proposed project") during the scoping period for the project. Sections IV.A through IV.F of this chapter describe the existing setting, the potential impacts that could result from implementation and buildout of the project, Standard Conditions of Approval (SCAs), and mitigation measures designed to reduce significant impacts of the project to a less-than-significant level.

The following provides an overview of the scope of the analysis included in this chapter, organization of the sections, and the methods for determining what impacts are significant.

ENVIRONMENTAL TOPICS

The following environmental topics are analyzed in this chapter:

A. Land Use and Planning
B. Historic Resources
C. Traffic and Transportation
D. Air Quality
E. Greenhouse Gas Emissions
F. Noise and Vibration

A brief analysis of each of the environmental topics for which effects from the project were found not to be significant or less than significant through the scoping process and preliminary review and for the project is included in *Chapter V, Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval*. These topics include: Aesthetics, Shadow and Wind; Agriculture and Forest Resources; Biological Resources; Cultural Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Population and Housing; Mineral Resources; Public Services; Recreation; and Utilities and Service Systems.

FORMAT OF TOPIC SECTIONS

Each environmental topic section generally includes two main subsections: (1) Setting, and (2) Impacts (construction, project and cumulative), Standard Conditions of Approval, and Mitigation Measures. Identified significant impacts are numbered and shown in bold type, and the corresponding mitigation measures are numbered and indented. Significant impacts and mitigation measures are numbered consecutively within each topic and begin with a shorthand abbreviation for the impact section (e.g., AIR for Air Quality). The following abbreviations are used for individual topics:

LU:	Land Use and Planning
HIST:	Historic Resources
TRANS:	Traffic and Transportation
AIR:	Air Quality
GHG:	Greenhouse Gas Emissions
NOISE:	Noise and Vibration

The following notations are provided after each identified significant impact and mitigation measure:

SU	= Significant and Unavoidable
S	= Significant
LTS	= Less than Significant

These notations indicate the significance of the impact with and without mitigation.

DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment.[1] Each impact evaluation in this chapter is prefaced by criteria of significance, which are the thresholds for determining whether an impact is significant.

This criteria of significance utilized in this EIR are from the City of Oakland's Thresholds/Criteria of Significance Guidelines. To help clarify and standardize analysis and decision making in the environmental review process in the City of Oakland, the City has established the Thresholds/Criteria of Significance Guidelines (which have been in general use since at least 2002 and were last updated in 2008, with supplemental SCAs introduced in 2011and modified in 2013). The Thresholds are offered as guidance in preparing environmental review documents. The City requires use of its thresholds unless the location of the project or other unique factors warrants the use of different thresholds. The thresholds are intended to implement and supplement provisions in the CEQA Guidelines for determining the significance of environmental effects, including Sections 15064, 15064.5, 15065, 15382 and Appendix G, and form the basis of the City's Initial Study and Environmental Review Checklist.

[1] Public Resources Code Section 21068.

The Thresholds are intended to be used in conjunction with the City's Uniformly Applied Development Standards and Conditions of Approval (see discussion below), which are incorporated into projects as Conditions of Approval regardless of the determination regarding a project's environmental impacts.

CEQA requires the analysis of potential adverse effects of the project on the environment. Potential effects of the environment on the project are legally not required to be analyzed or mitigated under CEQA. However, this document nevertheless analyzes potential effects of the environment on the project in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City SCAs and/or project-specific non-CEQA recommendations to address these issues.

CUMULATIVE ANALYSIS CONTEXT

CEQA defines cumulative as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. These impacts can result from a combination of the proposed project together with other projects causing related impacts. "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects."

The methodology used for assessing cumulative impacts typically varies depending on the specific topic being analyzed. For example, the geographic and temporal (time-related) parameters related to a cumulative analysis of air quality impacts are not necessarily the same as those for a cumulative analysis of noise or aesthetic impacts. This is because the geographic area that relates to air quality is much larger and regional in character than the geographic area that could be impacted by potential noise or aesthetic impacts from a proposed project and other cumulative projects/growth. The noise and aesthetic cumulative impacts are more localized than air quality and transportation impacts, which are more regional in nature. Accordingly, the parameters of the respective cumulative analyses in this document are determined by the degree to which impacts from this project are likely to occur in combination with other development projects.

UNIFORMLY APPLIED DEVELOPMENT STANDARDS AND CONDITIONS OF APPROVAL

The City's Uniformly Applied Development Standards and Conditions of Approval (referred to in the EIR as SCAs or COAs) are incorporated into projects as conditions of approval regardless of a project's environmental determination. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City and are designed to, and will, substantially mitigate environmental effects. For the Jack London Square 4th & Madison Project, all relevant standard conditions have been incorporated as part of the project.

In reviewing project applications, the City determines which SCAs are applied, based upon the zoning district, community plan, and the type(s) of permit(s)/approvals(s) required for the project. Depending on the specific characteristics of the project type and/or project site, the City will determine which SCAs apply to a specific project; for example, SCAs related to creek protection permits will only be applied to projects on creekside properties.

Because these SCAs are mandatory City requirements, the impact analysis assumes that these will be imposed and implemented by the project. If a SCA would reduce a potentially significant impact to less than significant, the impact will be determined to be less than significant and no mitigation is imposed.

The SCAs incorporate development policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection, Stormwater Water Management and Discharge Control Ordinance, Oakland Tree Protection Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System (NPDES) permit requirements, Housing Element-related mitigation measures, California Building Code, and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects. Where there are peculiar circumstances associated with a project or project site that will result in significant environmental impacts despite implementation of the SCAs, the City will determine whether there are feasible mitigation measures to reduce the impact to less-than-significant levels.

A. LAND USE AND PLANNING

This section describes existing land uses within and in the vicinity of the project site, and evaluates the proposed project's potential land use impacts and consistency with relevant planning policy including the General Plan.

1. Setting

The following section describes existing land uses within the project site and surrounding area. Applicable plans and major policies and regulations that pertain to the 4th and Madison project are listed.

a. Land Use

The project site, which is approximately 2.07 acres and comprised of one and a half blocks, is located within an area commonly referred to as the Jack London Square District neighborhood. It is within ⅓-mile of the Oakland Estuary waterfront, approximately ½-mile from Lower Broadway and downtown Oakland, one block from Oakland Chinatown, and immediately adjacent to 5th Street followed by Interstate 880 (I-880). Figure III-1 shows the location of the project site.

Although originally an industrial area with former warehouse and distribution activities, the neighborhood has seen a shift towards a number of residential uses, some office uses, food-related businesses, as well as a mixture of service and support uses over the past 25 years, with some warehouses and distribution activities maintained. Many former industrial and warehouse buildings in the neighborhood have been adapted for reuse as lofts, live-work units, offices, and miscellaneous wholesale distributors. Several new multi-family residential projects have been developed in the immediate vicinity of the project site in recent years, including the Allegro, the Sierra at Jack London Square, 428 Alice, and the New Market Lofts.

The City's policy documents that guide development in the project site area include the *General Plan* Land Use and Transportation Element (adopted March 24, 1998); the *Central District Urban Renewal Plan* (adopted on June 12, 1969, as amended up to October 27, 1998); the *General Plan* Open Space, Conservation, and Recreation Element (adopted June 11, 1996); the *General Plan* Historic Preservation Element (adopted March 8, 1994 and amended July 21, 1998); and the *Estuary Policy Plan* (adopted June 8, 1999), an element of the *General Plan*. This section describes the policies guiding development in the project site area, and the relationship of these policies to the proposed project. This section also identifies potential conflicts with existing land use regulations and how these conflicts would be addressed.

(1) Existing Land Uses within the Project Site

The 1.5-block project site is bounded by Jackson Street to the west, 5th Street followed by I-880 to the north, Madison Street to the east, and 3rd Street to the south. The site is comprised of three Alameda County Assessor's Parcels: APN 001-0161-001, 001-0161-002, and 001-0161-007-07. Block A, the northern, larger, 1.38-acre parcel (APNs 001-0161-001 and 001-0161-002), comprises the entire block between 4th and 5th Streets and Jackson and Madison Streets. Block B, the southern and smaller 0.69-acre parcel, comprises one-half block at 431 Madison Street, between 3rd and 4th Streets and fronting on Madison Street.

The main use of the project site is currently as office space. Two connected buildings located on Block A, and at addresses 430 Jackson Street and 425 Madison Street, function as one building that serves as the corporate office headquarters of Cost Plus World Market. One building is a 45,000 square-foot, single-story warehouse building and the other contains 15,000 square feet of office space. The buildings currently house approximately 100 employees working as back office and sales staff. (Independent of the project, the employment presence of Cost Plus World Market in this location will terminate. Cost Plus World Market was acquired by Bed Bath & Beyond and as a result, this office location will be phased out within the next 1 to 3 years.) Block B is a paved parking area consisting of wheel blocks, a drainage channel, a picnic area, and pole-mounted spot lights. The parking lot is currently used exclusively by Cost Plus World Market employees.

(2) Existing Land Uses in the Project Site Vicinity

The project site is located within an urban area surrounded by a mix of uses. West of the project site, uses include commercial and residential. A hair salon, a hospitality supply store and the Del Monte Meat Company are located immediately west of Block A across Jackson Street. 428 Alice Street, a seven-story multi-family residential community is located further west. Immediately west of Block B site, but within the same block (between 3rd and 4th Streets and Jackson and Madison Streets), is one of The Allegro multi-family residential buildings which is 5 stories. Further west of Block B and across Jackson Street are the New Market Loft and another of the three Allegro buildings.

The *Estuary Policy Plan*'s Waterfront Warehouse District lies immediately west of the project site and interior of the larger Mixed Use District. Buildings and uses in the area include residential developments such as the Brick House Lofts and Portico Lofts. Many restaurants and bars, including Chop Bar and Bicycle Coffee Co., occupy the area west of the project site, along with other small commercial, warehouse, and office businesses. Historic structures, such as the Harrison Street Portal of the Posey Tube, and historic buildings that have undergone adaptive reuse, such as the Safeway Building and Allied Paper Company Warehouse, also exist to the west of the project site.

To the south of the project site, residential and commercial uses exist. Another of the three Allegro buildings lies across 3rd Street immediately south (in addition to west) of Block B of the project site. Jack London Square and the marina lie further southwest of the project site. Many restaurants, such as Kincaid's and Bocanova, and entertainment businesses, such as Regal Cinemas and Plank, exist in this area. The Landing at Jack London Square is a large residential development that occupies the area further south of the project site between the Embarcadero and the Oakland Estuary. The Amtrak Station is located approximately a block or two southwest of the project site between the Embarcadero and 2nd Street.

East of the site of the uses include light industrial, commercial and residential. Lakeside Recycling, a non-ferrous scrap metal recycling facility occupying approximately ½-acre, lies east of Block A along Madison Street. The Sierra at Jack London Square, a 10-story multi-family residential community, lies across Madison Street immediately east of Block B. Many restaurant and food warehouse uses exist just beyond The Sierra at Jack London Square and Lakeside Recycling. Peerless Coffee & Tea and NIDO Kitchen & Bar are located a block away along Oak Street. A Shell gas station exists at the corner of Oak and 5th Streets. Two restaurant supply warehouses, Cash & Carry and East Bay Restaurant supply, are located along Oak and Fallon Streets, respectively. The Lake Merritt Channel lies further east, approximately ½-mile from the project site.

The northernmost portion of the project site (Block A) is located along 5th Street. I-880 is located immediately north of and adjacent to 5th Street. Madison Park and Harrison (Chinese Garden) Park are just north of I-880, approximately ¼-mile north of the project site, along with other residential uses and some small businesses, The Lake Merritt BART Station and Laney College are located within a ¼-mile radius and northeast of the project site, and Lake Merritt lies approximately one mile northeast of the project site.

b. Relevant Plans and Policies

The various plans and policies applicable to the project are described below. Although a discussion of the project is not typically included in the setting subsections for each environmental topic, such a discussion is provided here for ease of reference relative to the applicable policies discussed. A summary of the discussion is provided below in Section 2.b, Less-than-Significant Land Use and Planning Impacts.

The *General Plan* Land Use and Transportation Element designates the project site as "Mixed-Use Waterfront/Estuary Plan Area," the *Estuary Policy Plan* specifies the designation as "MUD – Mixed Use District," the Central Business Urban Renewal Plan designates the site as "Estuary Plan Area," and the project site falls within the C-45 (Community Shopping Commercial) zoning designation. These designations are defined, contextualized, and expanded upon below.

(1) City of Oakland General Plan

The *Oakland General Plan* ("General Plan") establishes comprehensive, long-term land use policy for the City. As required by state law, the General Plan includes the following elements: Land Use and Transportation; Housing; Environmental Hazards (seismic safety and other hazards); Noise; and Open Space, Conservation and Recreation. The General Plan also includes a Historic Preservation Element. The Plan further includes the Oakland Estuary Plan, which provides more specific objectives and policies for the area along the Estuary between Adeline Street, the Nimitz Freeway (I-880), and 66th Avenue. The project site is located within the Jack London District, which is a subarea of both Downtown and of the area covered by the *Estuary Policy Plan*. Therefore, the Land Use and Transportation Element and the *Estuary Policy Plan* are directly pertinent to the proposed project, and are discussed below. The Open Space, Conservation and Recreation Element (OSCAR) is less applicable, but is presented for informational purposes. The Historic Preservation Element is discussed in *Section IV.B, Historic Resources*, of this EIR.

Land Use and Transportation Element

The Land Use and Transportation Element of the General Plan identifies policies for utilizing Oakland's land as change takes place, and sets forth an action program to implement the land use policy through development controls and other strategies. As identified in the Land Use and Transportation Element, the project site is located within the "Mixed-Use Waterfront/Estuary Plan Area." This area is "intended to encourage, support, and enhance the transformation of the land adjacent to the shoreline into a vibrant mixed-use waterfront. More specific uses, densities/intensities and design guidelines [have been] adopted in an additional set of land use classifications for the area as part of the General Plan with the adoption of the Estuary Plan"[1] (see *Estuary Policy Plan*, below). The "Mixed-Use Waterfront/Estuary Plan Area" is considered by the General Plan to be part of "Downtown Oakland," an area defined by the Land Use and Transportation Element as "a series of distinct districts," that includes the Jack London Waterfront, and other parts of the "Mixed-Use Waterfront/Estuary Plan Area."

The policies in the Land Use and Transportation Element that apply to the proposed project include, but are not limited to, the following:

- **Policy D.1.1: Defining Characteristics of Downtown.** The characteristics that make downtown Oakland unique, including its strong core area; proximity to destinations such as the Jack London waterfront, Lake Merritt, historic areas, cultural, arts, and entertainment activities; and housing stock, should be enhanced and used to strengthen the downtown as a local and regional asset.

[1] City of Oakland*, 1996. General Plan,* Land Use and Transportation Element, page 148.

- **Policy D.1.9: Planning for the Jack London District.** Pedestrian-oriented entertainment, live-work enterprise, moderate-scale retail outlets, and office should be encouraged in the Jack London Waterfront area.
- **Policy D2.1: Enhancing the Downtown.** Downtown development should be visually interesting, harmonize with its surroundings, respect and enhance important views in and of the downtown, respect the character, history and pedestrian-orientation of the downtown, and contribute to an attractive skyline.
- **Policy D3.2: Incorporating Parking Facilities.** New parking facilities for cars and bicycles should be incorporated into the design of any project in a manner that encourages and promotes safe pedestrian activity.
- **Policy D10.1: Encouraging Housing.** Housing in the downtown should be encouraged as a vital component of a 24-hour community presence.
- **Policy D10.2: Locating Housing.** Housing in the downtown should be encouraged in identifiable districts, within walking distance of the 12th Street, 19th Street, City Center, and Lake Merritt BART stations to encourage transit use, and in other locations where compatible with surrounding uses.
- **Policy D10.3: Framework for Housing Densities.** Downtown residential areas should generally be within the Urban Density residential and Central Business District density range, where not otherwise specified. The height and bulk should reflect existing and desired district character, the overall city skyline, and the existence of historic structures or areas.
- **Policy D10.5: Designing Housing.** Housing in the downtown should be safe and attractive, of high quality design, and respect the downtown's distinct neighborhoods and its history.
- **Policy D10.6: Creating Infill Housing.** Infill housing that respects surrounding development and the streetscape should be encouraged in the downtown to strengthen or create distinct districts.
- **Policy W9.7: Supporting Existing Residential Communities Along the Estuary.** The existing residential communities within and adjacent to the waterfront should be supported and enhanced.
- **Policy W10.2: Defining Jack London Square Land Uses.** The area should reflect its current dominant use of commercial and entertainment uses and activities such as restaurants, retail, theater, hotel, farmers market, concert series, boat shows, and other entertainment and cultural activities. Other appropriate uses include office, live-work, and waterfront density residential development as described in the Land Use Classifications in Chapter 3.
- **Policy W10.4: Defining Jack London Square Mixed Use Characteristics.** The character of this area should be mixed use. Higher density housing, single use housing, and live-work lofts and units are appropriate within the area and developments. Mixed use should be sensitive to the surrounding character and design of existing buildings as well as the desire to have the shoreline fully accessible to the public.
- **Policy N3.1: Facilitating Housing Construction.** Facilitating the construction of housing units should be considered a high priority for the City of Oakland.

- **Policy N3.2: Encouraging Infill Development.** In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.
- **Policy N3.8: Requiring High Quality Design.** High quality design standards should be required of all new residential construction. Design requirements and permitting procedures should be developed and implemented in a manner that is sensitive to the added costs of those requirements and procedures.
- **Policy N3.9: Orienting Residential Development.** Residential developments should be encouraged to face the street, and orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings, respecting the privacy needs of residents of the development and surrounding properties, providing for sufficient conveniently located on-site open space, and avoiding undue noise exposure.
- **Policy N3.10: Guiding the Development of Parking.** Off-street parking for residential buildings should be adequate in amount and conveniently located and laid out, but its visual prominence should be minimized.
- **Policy N5.3: Supporting Live-Work Developments.** The City should support and encourage residents desiring to live and work at the same location where neither the residential use nor the work occupation adversely affects nearby properties and the character of the surrounding area.
- **Policy 6.2: Increased Home Ownership.** Housing developments that increase home ownership opportunities for households of all incomes are desirable.

The project would be generally consistent with the General Plan policies detailed above because it would provide new infill housing downtown that is relatively close to transit at densities consistent with the General Plan. The project would include retail and leasing office/amenity space on the ground floor along 4th Street between Jackson and Madison Streets. The project would include parking on the bottom two, concrete levels of each of the two proposed buildings (on Block A and Block B) which would be visually concealed within each building. On-site open space would be provided in each building by an enclosed, central courtyard located above the garage podiums. The project would draw upon elements of the neighborhood's industrial character including a design reflective of the industrial heritage of the Jack London District and building materials that include stucco with accents of metal and cement fiber panels. Building A also would include a rhythm of metal canopies or awnings along 4th Street and at the other ground level points of entry. The project would be part of the growing residential community in the Jack London District and support the revitalization efforts of the downtown, Lower Broadway, and Jack London Square areas.

Oakland Estuary Policy Plan

The *Estuary Policy Plan* was formally adopted by the City Council on June 8, 1999, as part of the Oakland General Plan to provide more specific guidance regarding the three distinct regions of the waterfront: Jack London Square area, Embarcadero Cove area, and the

Fruitvale Waterfront.[2] The *Estuary Policy Plan* provides a set of objectives, policies and implementation measures to guide development of 5.5 miles of waterfront along the Oakland Estuary. As the Plan states: "The *Estuary Policy Plan* presents recommendations related to land use, development, urban design, shoreline access, public spaces, regional circulation, and local street improvements for the entire waterfront and individual districts within it."[3]

The project site is located at the northeastern side of an area designated by the *Estuary Policy Plan* as the Jack London District, a 225-acre area between Adeline Street to the west and Oak Street to the east. Within the larger Jack London District, the project site lies within the Mixed Use District, an approximately 15- to 20-block area on the eastern side of the Central Jack London District area. The Mixed Use District surrounds the Waterfront Warehouse District, an approximately 9-block district located just south of 1-880 between Jackson and Webster Streets. The *Estuary Policy* Plan's Waterfront Warehouse District encompasses the majority, and is largely reflective of the boundaries, of the Oakland Waterfront Warehouse District (WWD). The WWD is a historic district listed in the National Register of Historic Places, California Register of Historical Resources and is also an Oakland Cultural Heritage Survey Area of Primary Importance (API). A portion of the WWD extends into the Mixed Use District and encompasses a portion (Block A) of the project site. This is discussed further in *Section IV.B, Cultural Resources.* The Mixed Use District land use classification, designated by the *Estuary Policy Plan*, is generally bounded by the Produce Market area and Franklin Street to the west, 5th Street and Interstate 880 to the north, Oak Street to the east, and the Embarcadero and the Union Pacific Railroad to the south.

Land use objectives that apply to the project include, but are not limited to, the following:

- **Land Use Objective 1.** Provide for a broad mixture of activities within the Estuary area.
- **Land Use Objective 3.** Expand opportunities and enhance the attractiveness of the Estuary shoreline as a place to live.
- **Land Use Objective 5.** Provide for the orderly transformation of land uses while acknowledging and respecting cultural and historical resources when applicable and feasible.

[2] City of Oakland, 1996. *General Plan*, Land Use and Transportation Element, page 93.
[3] City of Oakland, 1999. *Oakland Estuary Policy Plan,* page 7.

Policy JL-5 of the *Estuary Policy Plan* addresses development in the Mixed Use District:[4]

- **Policy JL-5.** In areas outside the existing boundaries of the historic district (API) and east to the Lake Merritt channel, encourage the development of a mix of uses, including housing, within a context of commercial, light industrial/manufacturing uses, and ancillary parking.

As explained in the *Estuary Policy Plan*, the Mixed Use District is comprised of the area east of Broadway to the Lake Merritt Channel, between I-880, the Embarcadero and 2nd Street east of Oak Street, and is characterized by "a number of food-related businesses, warehouses used for storage and distribution of products, some office uses, as well as a mixture of service and support uses."[5] The Plan notes that, generally, "the development of non-traditional higher density housing within a context of commercial and light industrial/manufacturing uses" should be encouraged.[6] Specifically, "a mix of uses, including housing, should be encouraged in order to support the retail and entertainment uses in the adjacent districts, and to help promote a more secure and vital environment with a day and nighttime population," and "other uses, including light industrial, warehousing and distribution uses, should also be encouraged to remain within this area."[7] To accommodate the desired mixture of uses, new development should incorporate appropriate measures to minimize land use conflicts and provide buffers to adjacent land uses where necessary. The Plan states that "new development should maintain the character of the existing multistory warehouses and industrial buildings, including through the use of industrial materials (e.g., corrugated metal, glass, steel)."[8] To maintain the character of the existing multi-story warehouses and industrial buildings, the Plan states the following:

- Active, publicly oriented ground-level uses with windows and doors oriented toward the street, and build-to lines along streets are encouraged.
- Use of industrial materials (e.g. corrugated metal, glass, steel) should be encouraged.
- On-site parking and loading should be concealed from view from the street and/or encapsulated within the buildings. Surface parking lots should be well landscaped.

The project generally meets the land use objectives of the *Estuary Policy Plan* as the project would provide approximately 330 new residential units whose residents would

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[4] City of Oakland 1999. *Estuary Policy Plan*, Resolution 75037 C.M.S., revised by Planning Commission, February 10, adopted by City Council June 8, 1999.

[5] City of Oakland and Port of Oakland, 1999. *Estuary Policy Plan*, Section III: District Recommendations, page 62, June.

[6] City of Oakland and Port of Oakland, 1999. *Estuary Policy Plan*, Section IV: Moving Forward, page 133, June.

[7] City of Oakland and Port of Oakland, 1999. *Estuary Policy Plan*, Section III: District Recommendations, page 62, June.

[8] City of Oakland and Port of Oakland, 1999. *Estuary Policy Plan*, Section III: District Recommendations, page 62, June.

support the retail and entertainment uses in the adjacent districts and increase the day and nighttime population in the area. Although the project would demolish the warehouse (on Block A that currently serves as office space for Cost Plus World Market), rather than adaptively reuse the warehouse, the project would provide a new building that bases its architectural elements from the historic resources within the Mixed Use District and the adjacent Waterfront Warehouse District. The City's design review process, required for this project, would ensure that the design generally meets the intent of these policies.

The project also generally meets the aspect of Policy JL-5 that encourages new infill developments as it would construct retail and leasing/resident amenity space on the ground floor in the Mixed Use District. The project does not appear to meet the preservation intent of Policy JL-5 as the project entails demolition of the existing warehouse on-site that lies within the existing boundaries of the historic district (API). (See *Section IV.B, Historic Resources,* for discussion of potential project effects on historic resources.) However, as ensured by the City's design review process, the project would be designed to reflect an industrial character with elements of the neighborhood's industrial past by building to the street; providing active, habitable spaces on the ground floor; and incorporating the use architectural features reflective of the District's industrial heritage and building materials that would include metal accents and other industrial materials. Additionally, on-site parking and loading would be screened and visually concealed within the buildings by the ground floor retail and amenity spaces.

The *Estuary Policy Plan* allows a maximum density of 125 units per *gross* acre in the Mixed Use District and a maximum Floor Area Ratio (FAR)[9] of 5.0 per parcel for mixed-use projects.[10, 11] The maximum density in principal units per *net* acre is 166.66 units per net acre.[12, 13] The Land Use and Transportation Element and the *Estuary Policy Plan* do not establish a height limit for the project site (see Zoning Regulations, below).

Open Space, Conservation and Recreation Element

The Open Space, Conservation and Recreation Element (OSCAR) addresses the management of open land, natural resources and parks in Oakland. The OSCAR policies relevant to the proposed project include but are not limited to the following:

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[9] Floor area ratio is the square footage of total building floor area divided by the area of the lot. Floor area means areas of horizontal areas of all floors excluding areas used for parking or loading and related driveways and maneuvering aisles, per Section 17.09.040.

[10] City of Oakland and Port of Oakland, 1999. *Estuary Policy Plan*, Section IV: Moving Forward, page 133, June.

[11] Oakland City Council Resolution 75037 C.M.S. and Oakland City Council Ordinance 12349.

[12] City of Oakland and Port of Oakland, 1999. *Estuary Policy Plan*, Section IV: Moving Forward, page 133, June.

[13] Oakland City Planning Commission, May 6, 1998.

- **Policy OS-4.1: Provision of Useable Open Space.** Continue to require new multi-family development to provide useable outdoor open space for its residents.
- **Policy OS-10.2: Minimizing Adverse Visual Impacts.** Encourage site planning for new development which minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.
- **Policy OS-11.1: Access to Downtown Open Space.** Provide better access to attractive, sunlit open spaces for persons working or living in downtown Oakland. The development of rooftop gardens is encouraged, especially on parking garages

The project would be generally consistent with the above policies because it would provide accessible and useable open space for residents in the central courtyard areas within the proposed development. The project would also provide rooftop decks for residents that would provide opportunities for residents to take advantage of views of the Oakland hills and other surrounding vistas.

The project would incorporate architectural elements and be designed compatible with the surrounding area such that parking and loading would be screened from view. The project would cast a relatively small amount of new shadow on adjacent sidewalks and buildings during the morning and midday most of the year, with more significant shadows cast on buildings to the true north and northwest in the morning and mid-day during the winter months (see Figures IV.A-1a and IV.A-1b). However, the project would not cast shadows on any public open space. Although not a significant effect, the project would cast most shadow on 4th and 5th Streets (true north and west), and on properties west of Jackson Street and between 4th and 5th Streets, in the early morning during the winter months (see Figures IV.A-1a and IV.A-1b). The project site and vicinity is relatively flat. Although the project would be comparable in height to that of buildings immediately across 4th Street, some views of the Oakland hills from nearby residences may be affected. Some of these views on the lower units of nearby residences, however, are obstructed by the existing adjacent freeway.

(1) Oakland Bicycle Master Plan

In December 2007, the Oakland City Council adopted the Bicycle Master Plan as part of the Land Use and Transportation Element of the General Plan.[14] Among other things, the Bicycle Master Plan contains a series of recommendations for bicycle parking to be included in new developments, which were incorporated in the City's Planning Code as Chapter 17.117, "Bicycle Parking Regulations," in July 2008. The requirements as they relate to this site are discussed in the Zoning Regulations subsection below.

[14] Oakland City Council, 2008. Ordinance No. 12884. July 10.

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Source: KTGY, Inc.

Figure IV.A-1a
Jack London Square 4th & Madison Project EIR
Solar Study

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Source: KTGY, Inc.

Figure IV.A-1b
Jack London Square 4th & Madison Project EIR
Solar Study

(2) Central District Urban Renewal Plan

The *Central District Urban Renewal Plan* (CDURP) is a redevelopment plan to be implemented by the Oakland Redevelopment Agency in accordance with California Community Redevelopment Law. The City adopted the CDURP on June 12, 1969, as the primary policy document to guide development in the Central District along with the Land Use Element of the General Plan. The CDURP was amended through April 2012 to be consistent with the General Plan. The CDURP contains land use controls, including restrictions on uses and parking and loading requirements. However, absent specific action by the City Council, none of the Plan's land use controls are enforceable outside of specified "Action Areas," which are areas designated for property acquisition and/or rehabilitation. Outside these areas, standard City General Plan policies and zoning regulations apply. The project site is not within an Action Area.

(3) Zoning Regulations

The project site is mapped with the C-45 Commercial Shopping Zone. The C-45 zone is intended to "create, preserve, and enhance areas with a wide range of both retail and wholesale establishments serving both long-and short-term needs in compact locations oriented toward pedestrian comparison shopping," typically in commercial clusters near intersections of major thoroughfares.[15] Residential and general retail sales uses are permitted. Regulations for C-45 zone residential development permit approximately one regular dwelling unit for each 300 square feet of lot area, and the number of living units permitted may be exceeded by ten percent on any corner lot.[16] With three or more units on a lot, the project would also require design review.[17] Per Section 17.56.180, open space must be provided in the same amount as per the R-80 zone, which requires 150 square feet per unit.[18] Mixed-use projects in the Jack London District have a maximum FAR of 5.0 without a separate residential density calculation, provided that the maximum number of units is consistent with the residential density allowed in the *Estuary Policy Plan*.[19]

The Oakland Planning Code do not establish a height limit for the project site; however, the design review criteria in Planning Code Section 17.136.070 state that design review approval may be granted if a proposed project conforms to several criteria, including, for residential projects, "that the proposed design will create a building or set of buildings that are well related to the surrounding area in their setting, scale, bulk, height, materials, and textures." Zoning Regulations pertaining to density, setback, and open space apply to the project.

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[15] *City of Oakland Planning Code,* Section 17.56.010.
[16] *City of Oakland Planning Code,* Section 17.56.040.
[17] *City of Oakland Planning Code,* Section 17.56.030.
[18] *City of Oakland Planning Code,* Section 17.56.180.
[19] *City of Oakland Planning Code,* Section 17.56.030.

Section 17.117.090 of the Oakland Municipal code requires bicycle parking spaces for non-residential uses at a rate of one long-term space per 12,000 square feet, with a minimum of two spaces and one short-term space per 5,000 square feet, with a minimum of two spaces. The project would add about 3,000 square feet of non-residential area, requiring the minimum two long-term and two short-term bicycle parking spaces.

For multi-family residential uses (Section 17.117.110), the City of Oakland requires bicycle parking at a rate of one long-term space for every four dwelling units, with a minimum of two long-term spaces and one short-term space for every 20 dwelling units, with a minimum of two short-term spaces. Buildings A and B combined would add 330 dwelling units, requiring 84 long-term parking spaces and 17 short-term parking spaces.

As shown in Table IV.C-8 of *Section IV.C, Traffic and Transportation*, the project would exceed the City's minimum requirements for long-term bicycle parking. The required short-term bicycle parking can be accommodated by bicycle racks on the surrounding sidewalk near each lobby and retail space.

The project would also be required to provide open space as required by the Oakland Planning Code. The project includes approximately 15,088 square feet of common open space including the central courtyards and accessible rooftop terraces. Other open space would be provided in the form of private decks and mezzanine spaces on several floors. Private open space would total about 20,887 square feet, which would be the equivalent of 41,774 square feet of group open space.[20] Therefore, the overall effective open space would total about 56,862 square feet, which would exceed the project's requirement of 49,500 square feet of open space.[21]

2. Land Use Impacts, Standard Conditions of Approval, and Mitigation Measures

This section analyzes environmental impacts related to land use that could result from implementation of the proposed project. The section begins with criteria of significance, which establish the thresholds for determining whether an impact is significant. The latter part of the section discusses the potential impacts associated with the proposed project.

a. Significance Criteria

The project would result in a significant impact related to land use and planning if it would:

- Physically divide an established community;

[20] *Oakland Zoning Code Regulations,* Section 17.126.020.

[21] 330 units at 150 square feet per unit, per Oakland Planning Code, Section 17.30.180.

- Result in a fundamental conflict between adjacent or nearby land uses;
- Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and result in a physical change in the environment; or
- Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan.

The last of these three criteria is not applicable to the proposed project, as there is no habitat conservation plan or natural community conservation plan in place in the project vicinity.

b. Less-than-Significant Land Use and Planning Impacts

(1) Land Use Compatibility

The proposed project would be constructed at the northeastern edge of an area designated by the *Estuary Policy Plan* as the Waterfront Warehouse District. The Estuary Plan encourages new infill developments "to provide joint living and working quarters, residential, light industrial, wholesale, office, and compatible uses that preserve and respect the District's unique character."[22] In addition, the *Estuary Policy Plan* states that "the District is currently a viable warehouse district with a variety of industrial activities. The District is also home to new residents, artists/artisans, and professionals."[23] Similar residential and office developments exist in the vicinity of the proposed project, including: the Sierra at Jack London Square adjacent to the project at 3rd Street and Madison Street; the Fourth Street Lofts at the corner of Alice and 4th Streets; the renovated Safeway office building at the corner of Jackson and 4th Streets; the Allegro centered around 3rd and 4th

(2) Consistency with Plans and Policies

Conflicts with a General Plan do not inherently result in a significant effect on the environment within the context of CEQA. As stated in Section 15358(b) of the CEQA Guidelines, "Effects analyzed under CEQA must be related to a physical change." Section 15125(d) of the Guidelines states that EIRs shall discuss any inconsistencies between the proposed project and applicable General Plans in the Setting section of the document (not under Impacts). Further, Appendix G of the Guidelines (Environmental Checklist Form) makes explicit the focus on *environmental* policies and plans, asking if the project would "conflict with any applicable land use plan, policy, or regulation ...*adopted for the purpose of avoiding or mitigating an environmental effect*" (emphasis added). Even a response in

[22] *Oakland Estuary Policy Plan,* Policy JL-6.
[23] *Oakland Estuary Policy Plan,* Policy JL-6.

the affirmative, however, does not necessarily indicate the project would have a significant effect, unless a physical change would occur. To the extent that physical impacts may result from such conflicts, such physical impacts are analyzed in this EIR.

As noted above in the Setting section, specifically in the discussions of the Land Use and Transportation Element and the Open Space, Conservation and Recreational Element, the project would generally meet the applicable General Plan policies in that the project would provide for residential and retail uses in the Jack London District. Also noted above in the discussion of the *Estuary Policy Plan*, the project would generally meet the policies that encourage new infill developments to construct residential units; however, the project does not appear to meet the preservation and reuse intent of the policy as the project entails demolition of the existing warehouse on-site. The General Plan contains many policies, which may in some cases address different goals.

Neither consistency nor lack of consistency with a policy of the General Plan would, in and of itself, result in a direct or reasonably foreseeable indirect adverse physical effect on the environment. The Planning Commission, in deciding whether to approve the proposed Conditional Use Permit and Design Review application, and any other necessary discretionary actions, must decide whether, on balance, the project is consistent with the General Plan. The General Plan includes the Land Use and Transportation Element, the Open Space, Conservation, and Recreational Element, the Housing Element, Noise Element, Environmental Hazards Element, the *Estuary Policy Plan*, the Bicycle Master Plan, and the Historic Preservation Element. The General Plan and the *Estuary Policy Plan* allow a maximum density of 125 dwelling units per gross acre. The C-45 zoning designation for the project site permits one regular dwelling unit for each 300 square feet of lot area, and the number of living units permitted may be exceeded by ten percent on any corner lot.[24] The project sponsor proposes to construct 330 units, which is the maximum number of units permitted for the project site under the existing zoning. With a maximum of 330 residential units and a floor area ratio of 3.15:1,[25] the project would be within the maximum density permitted (FAR of 5.0) for a development located in the Mixed-Use District of the *Estuary Policy Plan* area and within the C-45 zone.

As neither consistency nor lack of consistency with a policy of the General Plan would, in and of itself, result in a direct or reasonably foreseeable indirect adverse physical effect on the environment, no impacts are identified.

[24] *City of Oakland Planning Code,* Section 17.56.040.
[25] Total floor area (excluding parking) of approximately 283,772 sq. ft. ÷ 90,169 sq. ft. of lot area = 3.15.

(1) Habitat Conservation Plan

The project is not located in or near an area guided by a habitat conservation plan or natural community conservation plan. As a result, the project would not have any impacts related to habitat conservation plans.

c. Significant Land Use and Planning Impacts

Implementation of the proposed project would not result in any significant land use impacts.

d. Cumulative Land Use Impacts

As analyzed throughout this section, the proposed project would not result in a significant land use impact by potentially physically dividing an established community; or conflicting with adjacent or nearby land uses; or conflicting with applicable land use plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The proposed project is consistent with the City's General Plan Land Use designation for the site. Thus, the proposed project would not combined with, or add to, any potential adverse land use impacts that may be associated with other cumulative development. A review of cumulative development in the area, including past, present, existing, pending and reasonably foreseeable future development does not reveal any significant adverse cumulative impacts in the area. Cumulative development in the area consists of residential, commercial, light industrial and other typical urban uses.

Cumulative development, in combination with the proposed project, has and would continue to result in the development and redevelopment of infill and underutilized or sites throughout the area. Infill projects in urban areas allow for the capitalization of existing transit system and infrastructure, and minimize impacts to sensitive resources that would likely be degraded in a development on a greenfield site. Additionally, by locating residential development near transit and employment centers and by incorporating a mix of uses, urban mixed-use projects reduce vehicle miles traveled. The proposed project would contribute to a higher density in the area, which is anticipated by the General Plan and Redevelopment Plan. The project is generally consistent with adopted plans and the overall vision for the area. Based on the information in this land use section and for the reasons summarized above, the project would not contribute to any significant adverse cumulative land use impacts when considered together with past, present and reasonably foreseeable future development.

B. HISTORIC RESOURCES

This section specifically evaluates the historic resources element of cultural resources. The baseline conditions for historic resources on the project site and within its vicinity are described, including the legal significance of identified historic architectural resources within the project area, followed by a description of the project's potential impacts to such resources. Mitigations to reduce significant impacts are also recommended.

Archaeological and paleontological resources are briefly evaluated in the Cultural Resources subsection of *Chapter V, Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval*.

1. Setting

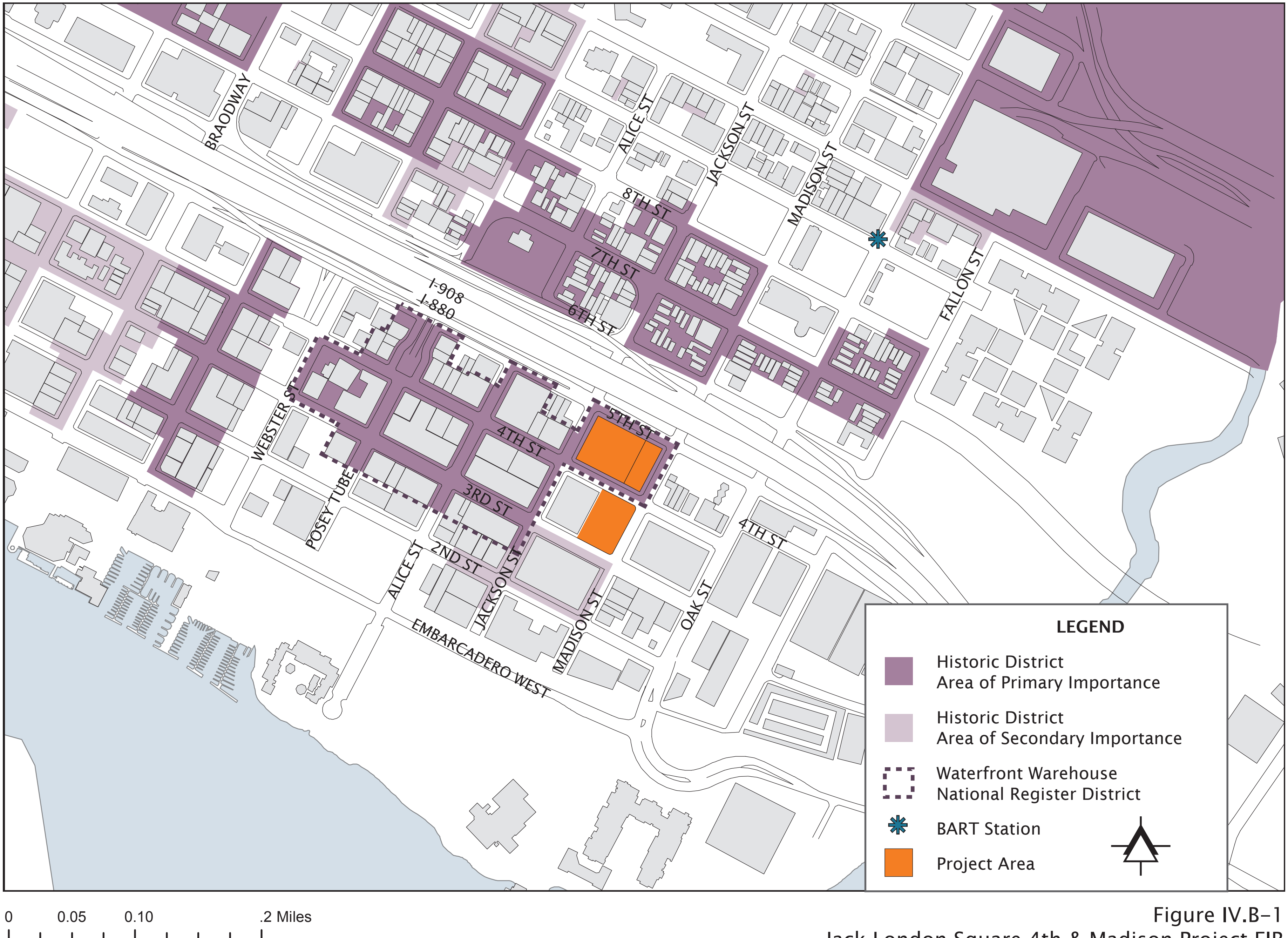
The project site, as described in *Chapter III, Project Description,* is comprised of two areas designated as Block A and Block B. Block A of the project site is situated within the boundaries of the Oakland Waterfront Warehouse District (WWD or District), which is listed in the National Register of Historic Places (National Register). The block is bounded by 4th, Madison, 5th, and Jackson Streets and contains two connected buildings that function as a single warehouse building covering the entire block with a current address of 180 4th Street. Figure IV.B-1 shows the project site in relation to the District. The property served initially as S & W Fine Foods, Inc.'s warehouse and is presently occupied by the Cost Plus World Market's International Headquarters. By virtue of its listing in the National Register, the WWD is also listed in the California Register of Historical Resources. It is also in an Oakland Cultural Heritage Survey Area of Primary Importance (API). The proposed project would demolish the warehouse on Block A and construct a seven-story building consisting of housing units and parking. The project also proposes to construct a seven-story residential building on Block B, which is adjacent to the WWD but not within its boundaries. Block B is currently a surface parking lot and does not include any historic architectural resources.

a. Historic Context

The following sub-section provides an overview of the historic context of the project vicinity. The description is adapted from the City Development, Project Vicinity and Waterfront Warehouse District sections of the 426 Alice Street DEIR, pages IV.E-1 to IV.E-5.

(1) City Development

Oakland's development as a city occurred in several stages that affected the city's population growth and the location of its downtown and waterfront buildings. Oakland was founded in the 1850s and sustained a community of around 1,544 residents by 1860. Its size and population remained essentially unchanged until 1869, when Oakland became the terminus of the Central Pacific Railroad. With an accessible harbor, Oakland was



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Source: City of Oakland, Urban Planning Partners, Inc., 2015

Figure IV.B-1
Jack London Square 4th & Madison Project EIR
Historic Districts Map

strategically located as the gateway to inland agricultural areas. The railroad terminus resulted in a period of rapid population growth, and the establishment of civic and commercial infrastructure and buildings along Oakland's Estuary and waterfront areas.

The 1906 earthquake sent refugees from San Francisco to Oakland, resulting in a wave of commercial and residential construction. World War I also increased the number of industrial establishments based in the downtown and waterfront areas. The Great Depression in the 1930s led to a period of financial instability for Oakland, followed again by a wave of new economic momentum at the outset of World War II. From 1940 to 1945, Oakland's population increased by one third and by 1950, the population was nearly 385,000. Between 1950 and 1980, Oakland's population steadily decreased, though it again began to increase in the 1980s. The City's population as of January 1, 2015 was 410, 603.[1]

Shifts in the economy and changes in manufacturing methods left many empty warehouses and office buildings along Oakland's waterfront and in the downtown area. In the late 1980s and 1990s, many of these buildings were reclaimed for office and residential uses.

(2) Project Vicinity

Early development in the project vicinity was directly linked to the development of Oakland's Port, changes made to the estuary to improve maritime operations, and the terminus of the transcontinental railroad lines. At the outset of World War II, the expansion of military installations near the Port—the Oakland Naval Supply Center, the Oakland Army Base, and the Alameda Naval Air Station—brought increased activity to the Port and areas near the Port.

The Western Pacific opened for service in 1910 . The passenger depot was located near the project site at 3rd and Washington Streets and the freight depot was at 3rd and Harrison. Western Pacific's tracks ran along 3rd Street; while Southern Pacific tracks ran along 1st Street (now Embarcadero). The warehouse and industrial neighborhood that was established in the project vicinity is attributed to the proximity of the waterfront and its associated rail yards and ferry docks. Until recent years, development near the project site remained primarily industrial and included scrap metal operations, breweries, a paper company, surface parking lots, and wholesale food distributors.

The Western Pacific tracks along 3rd Street were removed in 1996 following the merger of the Union Pacific (Western Pacific's successor) and the Southern Pacific. The Western Pacific Depot was designated a City of Oakland Landmark (Ord. 9032 C.M.S.) in 1974, and

[1] California Department of Finance, May 1, 2015. Demographic Research Unit. *New State Population Report*.

was the first landmark designated by the Landmarks Preservation Advisory Board (LM 74-176). In more recent years, as manufacturing and heavy industry has moved from urban areas, the area in the project vicinity began to include corporate headquarters, office space, some light industrial uses, and loft-style and live-work residences.

(3) Waterfront Warehouse District

The area in the vicinity of the project is known as the Waterfront Warehouse District (WWD or District), which is generally bounded by 5th Street to the north, 2nd Street to the south, the Produce Market (Webster Street) to the west, and Jackson Street to the east. The original District documentation noted that the District was a fine collection of early 20th century industrial building types. The District is significant as a concentration of well-preserved warehouse building types of the past, whose development is connected with significant themes in Oakland economic history, and as a currently viable warehouse District perpetuating many of its historic uses.[2]

The District was placed on the National Register of Historic Places and on the California Register of Historical Resources in April 2000 with revisions to the boundaries as originally identified by the Oakland Cultural Heritage Survey. The District boundaries were revised to include the block bounded by 4th Street, 5th Street, Jackson and Madison Streets (on which the building had become 50 years old) and to exclude the southernmost property at 2nd and Harrison Streets (the building on which had been demolished). The District qualified for listing on the National Register under two criteria of the Register, Criterion A and Criterion C.

Criterion A refers to property "...associated with events that have made a significant contribution to the broad patterns of our history." Under this criterion, the District is eligible for significance as the District is associated with Oakland's industrial development from World War I to shortly after World War II. Criterion C refers to property that "...embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction." The District is eligible as it contains an intact concentration of buildings and structures that convey the City's industrial past. The District is distinct in its unified architecture of early 20th Century utilitarian inspired elements as well as its physical layout of wide streets, buildings built to the city street, and buildings designed for access to the Western Pacific Railroad 3rd Street tracks.[3]

The National Register form indicates that of the 31 resources in the District, 24 are contributing buildings, one is an individually contributing structure, and one is an

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[2] Oakland Cultural Heritage Survey, 1985 Waterfront Warehouse District Assessment.
[3] 1999 National Register Nomination Registration Form Description.

individual building listed on the National Register of Historic Places. Four are considered individually eligible for listing on the National Register: (1) the Posey Tube at 415 4th Street; (2) the former Safeway Stores Corporate Headquarters at 201 4th Street; (3) the Western States Grocery Warehouse, otherwise known as Fourth Street Lofts, at 247 4th Street, and (4) the C.L. Greeno Building at 255 4th Street. The American Bag Building at 299 3rd Street was placed on the National Register of Historic Places in 1999.

The overall character of the Waterfront Warehouse District can be defined as low to medium-rise concrete or masonry warehouse construction. For the most part, the buildings have little decorative detailing, with the exception of the Posey Tube Portal structure on Harrison Street and the C.L. Greeno Building at 255 4th Street. Many of the warehouses have industrial sash and stepped or simply decorated parapets. The streets are wide and enclosed by buildings that have no setbacks and which are built to the lot lines; some occupy half or quarter blocks. The existing buildings are generally representative of the economic history of the Port of Oakland and many are excellent examples of warehouse construction during the period 1915 to 1950.

b. Resource Description

The Moderne style warehouse at 180 4th Street,[4] on Block A of the project site, is a one-story, rectangular plan building that covers a full city block.[5] The building is actually two connected structures—a 45,000 square-foot warehouse and a smaller, 15,000 square-foot office space--which together comprise the corporate headquarters of Cost Plus World Market. The warehouse on the Jackson Street side was built by builder John F. Tulloch in 1937. It is a reinforced concrete and wood post and beam structure. The brick warehouse on the Madison Street side was built by John J. Moore Co. in 1946. It is brick masonry with metal sash windows.

The loading docks on the Jackson Street side and those on the 4th Street side were filled in and converted to windows (exact date unknown but before mid-1980s). Other visible alterations to the property include some infilled doors and windows, and a recessed entrance on the Fourth Street elevation with four large multi-paned glass block windows on the rear wall. A landscaped entrance is located in front of this entrance.

[4] This report uses the current street address for the property: 180 4th Street. Other addresses for this property include 200 4th Street (Oakland Cultural Heritage Survey, National Register of Historic Places); 175 5th Street (National Register of Historic Places); 414, 426, and 430 Jackson Street and 425 Madison Street (City of Oakland Building Permit Records).

[5] Information for the following paragraphs was compiled from Oakland Cultural Heritage Survey, *400-430 Jackson Street Evaluation Tally Sheet,* March 21, 1983, re-evaluated January 10, 1995; Jack London District Association, *Oakland Waterfront Warehouse District, A Self-Guided Walking Tour,* 2007; Wilda L. White, *National Register of Historic Places Registration Form, Oakland Waterfront Warehouse District,* August 9, 1999; and updated after February 2015 site visit by the authors.

The original owner of the entire building, including the John J. Moore warehouse, was S & W Fine Foods which was founded in 1896 as Sussman, Wormser and Company. The company leased 217 Alice Street as their warehouse for ten years before moving to the subject property.[6] 180 4th Street served as company's shipping, receiving, and branch warehouse. Later, the building was used as offices by several companies including Safeway. See Appendix B for reproductions of building permit records.

c. Regulatory Setting

The regulatory background provided below offers an overview of federal, state and local criteria used to assess historic significance.

(1) Federal Criteria

National Register Bulletin Number 15, *How to Apply the National Register Criteria for Evaluation*, describes the Criteria for Evaluation as being composed of two factors. First, the property must be "associated with an important historic context."[7] The National Register identifies four possible context types, of which at least one must be applicable at the national, state, or local level. These are:

A. Property is associated with events that have made a significant contribution to the broad patterns of our history.

B. Property is associated with the lives of persons significant in our past.

C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

D. Property has yielded, or is likely to yield, information important to prehistory or history.[8]

Second, for a property to qualify under the National Register's Criteria for Evaluation, it must also retain "historic integrity of those features necessary to convey its significance."[9] While a property's significance relates to its role within a specific historic context, its integrity refers to "a property's physical features and how they relate to its significance."[10]

[6] "Sussman, Wormser and Co., wholesale grocer, 217 Alice Street," R. L. Polk & Co., *Polk's Oakland, Berkeley, Alameda Directory,* Oakland, Ca: R. L. Polk & Co., 1927-1937; "S & W Fine Foods Inc., wholesale grocer, 430 Jackson Street," R. L. Polk & Co., *Polk's Oakland, Berkeley, Alameda Directory,* Oakland, Ca: R.L. Polk & Co., 1938-1941.

[7] National Park Service, National Register Bulletin 15, page 3.

[8] National Park Service, National Register Bulletin 16A, page 75.

[9] National Park Service, National Register Bulletin 15, page 3.

[10] National Park Service, National Register Bulletin 15, page 44.

To determine if a property retains the physical characteristics corresponding to its historic context, the National Register has identified seven aspects of integrity:

1. Location is the place where the historic property was constructed or the place where the historic event occurred.
2. Design is the combination of elements that create the form, plan, space, structure, and style of a property.
3. Setting is the physical environment of a historic property.
4. Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
6. Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.
7. Association is the direct link between an important historic event or person and a historic property.[11]

Since integrity is based on a property's significance within a specific historic context, an evaluation of a property's integrity can only occur after historic significance has been established.[12]

(2) State Criteria

California Office of Historic Preservation's Technical Assistance Series #6, *California Register and National Register: A Comparison*, outlines the differences between the federal and state processes. It includes the following context types to establish the significance of a property for listing on the California Register:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values; or

[11] National Park Service, National Register Bulletin 15, pages 44-45.
[12] National Park Service, National Register Bulletin 15, page 45.

4. It has yielded, or is likely to yield, information important to prehistory or history of the local area, California, or the nation.[13]

Like the NRHP, evaluation for eligibility to the California Register requires an establishment of historic significance before integrity is considered. However, California's integrity threshold is slightly lower than the federal level. California's list of special considerations is shorter and more lenient than the NRHP. As a result, some resources that are historically significant but do not meet NRHP integrity standards may be eligible for listing on the California Register.[14]

In addition to separate evaluations for eligibility to the California Register, the state will automatically list resources if they are listed or determined eligible for the NRHP through a complete evaluation process.[15]

California Historical Resource Status Codes

The California Historic Resource Status Codes (status codes) are ratings created by the California Office of Historic Preservation (OHP) to identify the historic status of resources listed in the state's historic properties database. The following are the seven major status code headings:

1. Properties listed in the National Register or the California Register.
2. Properties determined eligible for listing in the National Register or the California Register.
3. Appears eligible for National Register or California Register through Survey Evaluation.
4. Appears eligible for National Register or California Register through other evaluation.
5. Properties recognized as historically significant by local government.
6. Not eligible for listing or designation.
7. Not evaluated for National Register or California Register or needs revaluation.

(3) City of Oakland, Local Register of Historical Resources

For purposes of CEQA, a "'local register of historical resources' means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution."[16]

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[13] California Office of Historic Preservation, Technical Assistance Series 6, page 1.
[14] California Office of Historic Preservation, Technical Assistance Series 6, page 1.
[15] All State Historical Landmarks from number 770 onward are also automatically listed on the California Register. (California Office of Historic Preservation, Technical Assistance Series 5, 1.)
[16] Public Resources Code, Section 5020.1(k).

In March 1994, the Oakland City Council adopted a Historic Preservation Element of the City's General Plan. The Element, amended July 21, 1998, sets out a graduated system of ratings and designations resulting from the Oakland Cultural Heritage Survey (OCHS) (see below) and Oakland Zoning Regulations. The Element provides the following definition of the City's Local Register of Historical Resources, or properties considered significant for purposes of environmental review under CEQA.

1. All Designated Historic Properties, and
2. Those Potential Designated Historic Properties that have an existing rating of "A" or "B" or are located within an Area of Primary Importance.

(4) Oakland Cultural Heritage Survey (OCHS)

Block A of the project site was assessed by the OCHS, a project of the Oakland City Planning Department, in March 1983. The OCHS is intended to provide an inventory of historic resources throughout the city.

The OCHS's Individual Property Rating system for individual properties ranges from "A" (highest importance) to "E" (of no particular interest). It is based on the following criteria:

- **Visual Quality/Design:** Evaluation of exterior design, interior design, materials and construction, style or type, supporting elements, feelings of association, and importance of designer.
- **History/Association:** Association of person or organization, the importance of any event, association with patterns, and the age of the building.
- **Context:** Continuity and familiarity of the building within the district.
- **Integrity/Reversibility:** Evaluation of the building's condition, its exterior and interior alterations, and any structural removals.

Properties with conditions or circumstances that could change substantially in the future are assigned both an "existing" and a "contingency" rating. The existing rating is denoted by an upper case letter, and the contingency rating, if any, is denoted in lower case. Properties are also given a Multiple Property Rating (1, 2, or 3) based on an assessment of the significance of the area in which the property is located: properties within an Area of Primary Importance (an area that appears eligible for the National Register) are rated "1;" those in an Area of Secondary Importance are rated "2;" and those outside an identified district are rated "3." A plus (+) or minus (-) sign indicates whether the property contributes or not to the API or ASI.

An Area of Primary Importance (API) is a historically or visually cohesive area that contains a "high proportion of individual properties with ratings of 'C' or higher and appears eligible for the National Register of Historic Places either as a district or as a historically-related complex." At least two-thirds of the properties must be "contributors" to the API, reflecting the API's principal historical or architectural themes, and must not have undergone major alterations. An Area of Secondary Importance (ASI) is "similar" to an API, however "potential contributors to the ASI are counted for purposes of the two-thirds threshold as well as contributors; [and] ASIs do not appear eligible for the National Register."

(5) Historic Preservation Element Policies

Policies in the Historic Preservation Element of the General Plan provide the basis for preservation, restoration, and protection of historic properties and other cultural resources. The following objectives and policies are particularly relevant to proposed project.

- **Objective 3: Historic Preservation and Ongoing City Activities.** This objective seeks to establish administrative procedures and criteria to promote preservation of significant older properties as a routine part of City-sponsored or assisted projects, programs and regulatory activities.
- **Policy 3.5.** "For any project involving complete demolition of Heritage Properties or Potential Designated Historic Properties requiring discretionary City permits, the City will make a finding that: (1) the design quality of the proposed project is at least equal to that of the original structure and is compatible with the character of the neighborhood; or (2) the public benefits of the proposed project outweigh the benefit of retaining the original structure; or (3) the existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood."
- **Policy 3.7.** As a condition of approval for all discretionary projects involving demolition of existing or Potential Designated Historic Properties, the City will normally require that reasonable efforts be made to relocate the properties to an acceptable site. Actions associated with this policy include preparation of relocation procedures and design guidelines, investigation of assistance programs, and review of permit regulations for both City-sponsored or assisted projects and discretionary permit approvals.
- ***Policy 3.8.*** Definition of "Local Register of Historic Resources" and historic preservation "Significant Effects" for environmental review purposes. This policy defines the minimum set of historical resources that require consideration in environmental review: "Complete demolition of a Historical Resource will normally be considered a significant effect that cannot be mitigated to a level less than significant and will, in most cases, require preparation of an Environmental Impact Report." Properties included on the National Register and in an API are included in this definition.

Measures appropriate to mitigate significant effects to a Historical Resource may include one or more of the following measures depending on the extent of the proposed addition or alterations:

1. Modification of the project design to avoid adversely affecting the character defining elements of the property.

2. Relocation of the affected Historical Resource to a location consistent with its historical or architectural character.

If the above measures are not feasible, then other measures may be considered including, but not limited to the following:

3. Modification of the project design to include restoration of the remaining historic character of the property.

4. Modification of the project design to incorporate or replicate elements of the building's original architectural design.

5. Salvage and preservation of significant features and materials of the structure in a local museum or within the new project.

6. Measures to protect the Historical Resource from effects of on-site or other construction activities.

7. Documentation in a Historic American Buildings Survey report or other appropriate format: photographs, oral history, video, etc.

8. Placement of a plaque, commemorative, marker, or artistic or interpretive display on the site providing information on the historical significance of the resource.

9. Contribution to a Facade Improvement Fund, the Historic Preservation Revolving Loan Fund, the Oakland Cultural Heritage Survey, or other program appropriate to the character of the resource.

(6) Estuary Policy Plan (Estuary Plan)

Formally adopted by the City Council on June 8, 1999, the *Estuary Policy Plan* provides an initial set of objectives, policies and implementation measures to guide development of the waterfront along the Oakland Estuary. The following objectives and policy are relevant to the proposed project:

- **Land Use Objective 1.** Provide for a broad mixture of activities within the Estuary area.
- **Land Use Objective 3.** Expand opportunities and enhance the attractiveness of the Estuary shoreline as a place to live.
- **Land Use Objective 5.** Provide for the orderly transformation of land uses while acknowledging and respecting cultural and historical resources, when applicable and feasible.
- **Estuary Policy Plan Policy JL-5.** In areas outside the existing boundaries of the Historic District (API) and east to the Lake Merritt Channel, encourage the development of a mix of

uses, including housing, within a context of commercial, light industrial/manufacturing uses, and ancillary parking.

Text supporting the policy provides further guidance for the development of the Mixed-Use District includes the following:

- New development should maintain the character of the existing multistory warehouses and industrial buildings.
- Active, publicly oriented ground-level uses with windows and doors oriented toward the street, and build-to lines along streets are encouraged.
- Use of industrial materials (e.g., corrugated metal, glass, steel) should be encouraged.
- On-site parking and loading should be concealed from view from the street and/or encapsulated within the buildings. Surface parking lots should be well landscaped.

(7) California Environmental Quality Act

When a proposed project has an effect that may cause a substantial adverse change in the significance of a historical resource, CEQA requires a city or county to carefully consider the possible impacts before proceeding (Public Resources Code Sections 21084 and 21084.1). CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (Section 21084.1). It defines "substantial adverse change" as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." The Act explicitly prohibits the use of a CEQA categorical exemption for projects which may cause such a change (Section 21084).

CEQA effectively requires preparation of a mitigated Negative Declaration or an EIR whenever a project has an effect that may cause a substantial adverse change in the significance of a historic resource. Current CEQA law provides that an EIR must be prepared whenever it can be fairly argued, on the basis of substantial evidence in the administrative record, that a project may have a significant effect on a historical resource (Guidelines Section 15064). A mitigated Negative Declaration may be used where all potentially significant effects can be mitigated to a level of insignificance (Section 21080). For example, a mitigated Negative Declaration may be adopted for a project which meets the Secretary of Interior's Standards for Rehabilitation and local historic preservation regulations, and so will not adversely affect the resource.

For the purposes of CEQA (Guidelines Section 15064.5), the term "historical resources" shall include the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in, the California Register of Historical Resources.[17]
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR,[18] as follows:
   A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
   B. Is associated with the lives of persons important in our past;
   C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
   D. Has yielded, or may be likely to yield, information important in prehistory or history.

d. Evaluation

(1) National Register of Historic Places

Block A of the proposed project site is identified as a contributing resource to the Oakland Waterfront Warehouse District, which was listed in the National Register of Historic Places on April 24, 2000.

(2) California Register of Historical Resources

All resources listed in the National Register are also listed in the California Register of Historical Resources (California Register). As such, the Oakland Waterfront Warehouse District and all its contributors are also listed on the California Register.

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[17] Public Resources Code Section 5024.1, Title 14 CCR, Section 4850 et.seq.
[18] Public Resources Code Section 5024.1, Title 14 CCR, Section 4800.3.

(3) City of Oakland, Local Register of Historical Resources

The Oakland Waterfront Warehouse District was listed in the National Register on April 24, 2000, and the project site was identified as contributing resource to the District at that time. The National Register listing was noted on the Evaluation Tally Sheet with a handwritten note: "On NR [National Register] as part of Wf. W'h Dist [Waterfront Warehouse District], as 200 4th St. – listed 4/24/00." If API contributor, it's Dc."[19]Based on Policy 3.8 (noted above), the property is a Potential Designated Historic Property within an Area of Primary Importance and is a historic resource under CEQA.

2. Historic Resources Impacts, Standard Conditions of Approval, and Mitigation Measures

a. Significance Criteria

As noted above under Regulatory Setting, above, CEQA Section 21084.1 states that "a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment."

CEQA Guidelines Section 15064 (i)(1) states that "an EIR must be prepared if the cumulative impact may be significant and the project's incremental effect, through individually limited, is cumulatively considerable." CEQA defines cumulatively considerable as incremental effects of an individual project that are considerable when viewed in connection with the effects of past projects, and the effects of probable future projects.

The Public Resources Code states that an historic district such as the WWD is a "definable unified geographic entity that possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development"[20]

In order for a property to be listed on the National Register, it must meet the National Register criteria and must have integrity, as integrity is the ability of a property to convey its significance. For a district to retain integrity as a whole, the majority of the components that make up the district's historic character must possess integrity even if they are individually undistinguished. In addition, the relationships among the district's components must be substantially unchanged since the period of significance. When evaluating the impact of intrusions upon the district's integrity, the relative number, size,

[19] Handwritten note on Oakland Cultural Heritage Survey Evaluation Tally Sheet, 400-430 Jackson Street/175 5th Street, page1, undated.

[20] California Public Resources Code Section 5020.1(h).

scale, design, and location of the components that do not contribute to the significance should be considered.[21]

Under OCHS criteria, at least two-thirds of the properties within the Area of Primary Importance must be contributors to the Area of Primary Importance and reflect the historical or architectural themes of the area and have not undergone major alterations.[22]

To help clarify and standardize analysis and decision-making in the environmental review process in the City of Oakland, the City has established CEQA Thresholds of Significance Guidelines. These Thresholds are offered as guidance in preparing all environmental review documents. The following significance guideline applies to historic resources:

The project would have a significant impact on the environment if it would:

- Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5.14 Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." The significance of an historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historical Resources, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5).

b. Less-than-Significant Impacts

The project's less-than-significant impacts are discussed below.

(1) Impacts of Demolition to Significance of Historic District

The proposed project would demolish 180 4th Street property, a contributor to both the National Register-listed WWD and to an API. However the demolition of a single, contributing building, among 23 others and located in the northeast corner of the WWD, would not significantly affect the overall historic character of the District. The WWD would retain the valuable sense of place—the Oakland estuary waterfront area, and time--the early-mid 20th century. The removal of this building would not in and of itself materially alter the District's integrity or eligibility for the National Register.

[21] National Register Bulletin 15, VIII. How to Evaluate the Integrity of a Property.

[22] *Oakland General Plan, Historic Preservation Element.*

Following the removal of 180 4th Street warehouse, the total number of contributing resources in the District would remain above the two-thirds of the total resources, as a general measure for recognition as an API. Additionally, as the warehouse is located at the very northeastern corner of the District, the loss of this building would not materially alter the integrity of the cohesiveness of contributor resources or relationships of those resources to one another within the District. The loss of 180 4th Street would not destroy the District's character such that it would be likely to be removed from the National Register. Thus, it would not result in a significant effect upon the District.

(2) Impacts of New Construction to the Historic District

The proposed project would result in the construction of two new buildings: one on Block A that is within the District and the other on Block B which is immediately adjacent to the historic District.

Building A

The project would introduce a new seven-story building into a National Register-listed historic district and an API. Building A would have parking on the first two levels and residential units on the upper five levels, with one-story double height commercial and amenity spaces facing 4th Street. The building would be constructed of concrete at the lower podium levels with wood frame on the upper levels. At the upper levels the units will face both outward to the surrounding streets and inward to a central courtyard with a swimming pool. The building would be built to the property lines with a rectangular footprint, approximately 200 by 300 feet. An entrance/exit to the parking garage would be located on Jackson Street with loading off of 5th Street.

At seven stories (approximately 85 feet), Building A is similar in height to the development at 428 Alice Street, which has eight levels but a similar height. Building A is taller than the Allegro Project (five stories) and 288 3rd Street project (formerly 300 Harrison Street) at six stories. These three buildings were constructed in 2006, 2002 and 2007 respectively. The Safeway Building at 201 4th Street stands diagonally across the street to the southwest of the proposed project. It was the subject of a roof top addition bringing its height to six stories with the addition set back from all four existing elevations.

The *Estuary Policy Plan* of Oakland states that, in the Mixed Use District, "New development should maintain the character of the existing multistory warehouses and industrial buildings," and also "Use of industrial materials (e.g., corrugated metal, glass, steel) should be encouraged." Similarly, a National Register evaluation criterion for maintaining the integrity of a historic district is that new structures introduced to historically significant district should be complementary to the integrity and original design features of the historic district. The exterior of Building A will be clad in a variety of materials including stucco, fiber cement panels, and metal windows, awnings, balcony railings, and grilles at the garage openings, which will achieve elements of visual coordination and prevent the building from total visual inconsistency.

A variety of heights exist within the historic district, with the contributors in the District ranging from one story to six stories and newer construction ranging up to eight stories. Upon completion, Building A would match in height the tallest structure in the district, 428 Alice Street. The most comparably scaled buildings in the District occupy the blocks to the west and south of the project site: the former Safeway Headquarters Building, at approximately 82 feet in height; the Fourth Street Lofts Building, at about 60 feet in height; the new Allegro Building, at about 57 feet in height; and the 428 Alice Street project, 85 feet. Building A would be about 3 feet taller than the Safeway Headquarters Building (a contributor building to the District). The Posey Tube Portal, one of more prominent features of the District is 55 feet in height, but is also two blocks to the west and now obscured from view from the proposed project site by the 428 Alice Street development.

Given the location of the proposed project at the far northeast corner of the District, its height in relationship to both nearby contributing resources and newer developments, and the use of varied industrially-themed materials to achieve elements of visual coordination and prevent overall visual impact, the proposed project would not result in effects that would impair the historic district's eligibility for listing in the National Register, California Register, local register, or historical resource survey. The construction of Building A, in and of itself, would not significantly alter the physical characteristics of the Historic District that convey its historic significance. Thus, construction of Building A would have a less-than-significant effect to the Historic District.

Building B

The project will construct another building directly across 4th Street to the south at 431 Madison Street. The U-shaped building will face 4th Street, Madison Street and 3rd Street. On the west it will abut the Allegro at Jack London Square. Building B is located a half a block outside the Oakland Waterfront Warehouse District. The Allegro at Jack London Square is located between Building B and the eastern boundary of the historic district.

Building B is proposed to be seven stories high, or about 85 feet. Given its height, it could have visual effects on the setting of the Historic District. The physical features that constitute the setting of a historic property can be either natural or manmade. These features and their relationships should be examined not only within the exact boundaries of the property, but also between the property and its surroundings. This is particularly important for districts.

Any effects related to the height of the Building B would be mitigated by the presence of the Allegro project which, at five stories and approximately 60 feet high would visually obscure Building B. In effect, Building B would be "set back" about 190 feet from the Historic District boundary (middle of Jackson Street). The construction of Building B, in and of itself, would not significantly alter the physical characteristics of the Historic District that convey its historic significance. Thus, construction of Building B would have a less-than-significant effect to the Historic District.

c. Significant Impacts

The project's significant impact to a historic resource is discussed below.

Impact HIST-1: The proposed project would demolish a warehouse that is a contributor to a designated National Register Historic District and located within an Area of Primary Importance (API). (S)

Block A of the proposed project site contains the Cost Plus World Market International Headquarters, previously the headquarters of S & W Fine Foods, Inc., which is a contributor to a designated National Register Historic District. However, the warehouse has not been individually listed on, or determined eligible for, the National or California Registers. As a contributor, the warehouse is significant "as a reflection of Oakland's waterfront industrial development and the District's strong ties to food processing and distribution" but not individually significant under the National or California Registers.[23]

Historic Preservation Element Policy 3.8 states that the City's Local Register of Historic Resources includes all Designated Historic Properties and those Potential Designated Historic Properties that have an existing rating of "A" or "B" or are located within an API. From the evaluation above for the Local Register of Historical Resources (see d. Evaluation, (3) City of Oakland, Local Register of Historical Resources), the property is considered a historic resource. Therefore, the demolition of the warehouse would result in an individually significant effect under CEQA.

The following measure to mitigate this impact references the Historic American Buildings Survey (HABS). HABS is recognized as the standard for documenting historic resources. *HABS-Level III Documentation*, included in the measure, usually consists of a written history of the property, plans and drawings of the historic resource, and photographs.[24]

Mitigation Measure HIST-1: Implement the following four-part Mitigation Measure:

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[23] Wilda L. White, 1999. *Oakland Waterfront Warehouse District, National Register of Historic Places Registration Form,* page 13, August 9.

[24] United States National Park Service, Department of Interior, "Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines." http://www.cr.nps.gov/local-law/arch_stnds_6.htm, accessed July 1, 2014.

HIST-1a: Prior to demolition of 180 4th Street, the project applicant shall provide *HABS-Level III Documentation* records that follow the specifications set by the Historic American Buildings Survey (HABS). The documentation shall include:

- Drawings – sketch floor plans of the buildings and a site plan.
- Photographs – digital photographs meeting the Digital Photography Specifications Checklist.
- Written data – a historical report with the history of the property, property description and historical significance.

A qualified architectural historian meeting the qualifications in the *Secretary of the Interior's Professional Qualification Standards* shall oversee the preparation of the sketch plans, photographs and written data. The documentation shall be printed on archival paper. Digital photographs shall be burned to archival CD or DVD disks.

The documentation shall be submitted to and reviewed by the City of Oakland and found to be adequate prior to issuance of the demolition permit. The documentation shall be deposited with the Oakland History Room in the Public Library, Oakland City Planning Department, and the Northwest Information Center at Sonoma State University, the repository for the California Historical Resources Information System.

HIST-1b: *Commemoration and Public Interpretation.* The project applicant shall prepare a permanent exhibit/display, with the help of an experienced professional, of the history of the property including, but not limited to, historic and current condition photographs, interpretive text, drawings, video, or interactive media. The exhibit/display shall be placed in a suitable, publicly accessible location on the site, or in the lobby of the residential tower. This exhibit/display shall be in addition to the existing historic signage #6, S & W Fine Foods currently mounted on a trash receptacle within the historic district (see Mitigation Measure HIST-1c).

HIST-1c: *Historic District Signage Program*. The project applicant shall provide a financial contribution to support the Jack London District Association's sidewalk and trash receptacles and historic signage program.[25] The amount of the contribution shall be $10,786.88,[26] which is equal to the association's maintenance costs for the historic signage program for 1 year.

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[25] Jack London District Association, 2015. http://www.jlda.org/search/label/trashcan, accessed April 2.

[26] Provided by the Jack London District Association. E-mail, 4th and Madison Project EIR, from Savlan Hauser, Jack London District Association to Hisashi Sugaya, Carey & Co., Inc., July 2, 2015. Attachment: Jack London Maintenance of Historical Warehouse District Markers.pdf.

HIST-1d: Contribution to *Façade Improvement Program.* Project applicant shall contribute to the City of Oakland's facade improvement program. The amount of the contribution shall be based on the following:

- $10,000 for the first 25 feet of two facades of a building and $2,500 per each 10 additional linear feet of those two same facades beyond 25 feet.
- There shall be a 20 percent increase for the buildings designated as Historic Resources under CEQA.
- Multiply the total by two times for being located within an API.

For purposes of this mitigation, the two facades are along 4th Street and Jackson Street at 300 feet and 200 feet, respectively. The following calculation results in a total contribution of $318,000:

4th Street: $10,000 + $2,500 x 275/10 feet = $78,750

Jackson Street: $10,000 + $2,500 x 175/10 feet = $53,750

$78,750 + $53,750 = $132,500

Increase by 20%: $159,000

Increase by 2x: $318,000

The impact will remain significant and unavoidable, as this mitigation measure cannot lessen impacts to a less-than-significant level. (SU)

d. Cumulative Impacts

The project's contribution to cumulative impacts on historic resources is discussed below.

Impact HIST-2: The proposed project would involve construction of a new building within the boundaries of a designated National Register Historic District and an API. This, combined with the other past, current, and reasonably foreseeable demolition, new construction and other alterations to the WWD, has the potential to materially impair the significance of the historic district in a manner that may be cumulatively significant if all of these projects are executed in the near future. (S)

The 1999 National Register Registration form for the WWD states that alterations to the District area occurred before the District was formed. These include: the demolition of the Western Pacific's main Oakland freight depot on 3rd Street between Alice and Harrison around 1970, the demolition of the Cudahy Packing Company Meat Warehouse on 3rd Street between Alice and Jackson Streets in the late 1980s, the removal of the 3rd Street Western Pacific Railroad tracks in 1996, and construction of the elevated Interstate 880

(Nimitz Freeway). Still, the nomination noted that the District appeared in 1999 much as the same as it did in 1954, the end of the District's period of significance.

Three buildings within the District have non-contributor status in the 1999 nomination because their character defining elements were materially altered during recent (1980s-90s) renovations.

- The W.P. Fuller & Company Warehouse (recently known as Brick House Lofts) at 201 3rd Street, has been significantly altered. Built in 1914, the District's oldest warehouse was converted to live-work loft condominiums in 1997. The building received a one-story and mezzanine, wood-frame rooftop addition, the loading dock doors on 3rd Street were replaced with aluminum and glass storefront, and a concrete and brick entry stair/handicapped ramp was added to the main entry.
- The Porthole Building at 220 4th Street is a one-story brick-fronted concrete block warehouse built in 1947-1948. A mid-1980s remodel converted this warehouse to offices. A postmodern stucco cornice partially covered the brickwork and an over-scaled pediment with abstract keystone was added onto the façade. The existing openings were enlarged, new openings were added, and the original industrial sash and roll up door was replaced with contemporary aluminum sash windows.
- The Saroni Wholesale Sugar and Rice Warehouse at 318 Harrison Street is a three-story brick building built in 1922. Originally, the building was built in two sections. During the 1980s remodel, the two warehouses were joined into one office building with an entrance on the center of the Harrison Street façade. A postmodern stucco tower capped off with a pyramidal green metal roof rises above the entrance. Additional bands of stucco were added at the base and first floors, the historic metal canopy and all loading doors onto Harrison Street were removed, and a loading dock was infilled with brick.

There are two buildings that have non-contributor status due to their recent construction dates.

- The Portico Lofts at 311 4th Street is a one-story and mezzanine building that was built in 1998 on the storage yard for the adjacent Oakland Plumbing Supply/P.E. O'Hair Company. The building houses live-work lofts and the front elevation is divided into four parts by 15 foot setbacks at each loft. The façade of each loft has a band of stucco above aluminum framed windows and vertically mounted corrugated metal.
- Prime Smoked Meats Inc. at 220 Alice Street is a one-story concrete and concrete-block warehouse with flat roof and irregularly distributed doors and windows. It was constructed in 1953 with an addition in 1967. The building is compatible with the District in terms of scale and use but its recent date and dissimilar appearance resulted in a non-contributor status.

There are two adaptive use projects within the District.

- The Safeway Building at 201 4th Street was modified to include an additional story above the building. The project was completed in 2001 according to the Secretary of the Interior's Standards and maintains its status as a contributor to the District.
- The Allied Paper Company Warehouse at 283 4th Street was also rehabilitated to the Secretary of the Interior's Standards and maintained its status as a contributor to the District.

There are three new developments that were constructed after the 1999 nomination.

- The Allegro Project, located on a half city block on 3rd Street from Alice to Jackson Street, is new construction and the sixth non-contributor building in the District. The site was formerly the site of Cudahy Packing Company Meat Warehouse which was demolished in the 1980s. There are two more Allegro buildings located right outside the District boundaries at 3rd and Jackson Streets. The buildings are five stories high (approximately 60 feet tall), wood-frame construction residential buildings with commercial use on the first floor. The façade is stuccoed to give it a concrete-like appearance. These buildings are not characteristic of the District and detract from the District setting. Their visual impact on the District impairs, to a certain extent, its significance and integrity.
- 428 Alice Street project (formerly 426 Alice Street) is an eight-story building with residential units and retail/office space. The United Grocers Ltd Warehouse was demolished in 2005 to make way for new construction which was completed in 2006. The exposed concrete frame building has stucco infill panels and aluminum windows. The seventh and eight stories are set back and use different materials to diminish the overall height and mass.
- The 288 3rd Street project (formerly 300 Harrison Street) is another new construction completed in 2007 that is located on a half city block surrounded by Harrison, 3rd, and Alice Streets. The site was previously the Western Pacific’s main Oakland freight depot which was demolished in the 1970s. Thus in the District documents, it appears as a vacant parcel. The new addition to the District is a six-story-high concrete residential building with mixed use retail on ground level.

(1) Discussion of Integrity[27]

The National Register defines integrity as the ability of a property to convey its significance. The California Register defines integrity as the authenticity of an historical

[27] This section and definitions of seven aspects of integrity on the following pages are excerpted from United States Department of the Interior, National Park Service, Cultural Resources, *How to Apply the National Register Criteria for Evaluation*, National Register Bulletin, No. 15. http://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_8.htm, accessed on March 3, 2015.

resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance.[28] To determine if a property retains the physical characteristics corresponding to its historic context, the National Register of Historic Places has identified seven aspects of integrity, which the California Register of Historic Places closely follows: location, design, setting, materials, workmanship, feeling, and association.

Integrity is assessed with reference to the particular criteria for which the resource is eligible for listing. In the case of the Waterfront Warehouse, the District is significant at the local level under both Criterion A and C. For Criterion A, a property is significant for its historic association with events that have made a significant contribution to the broad patterns of our history. The District is significant for its association with Oakland's industrial development from World War I to shortly after World War II. For Criterion C, a property is significant if it embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction. The District is significant for its intact concentration of buildings that architecturally convey the City's industrial past.

The steps in assessing integrity in properties are:

- Define the essential physical features that must be present for a property to represent its significance.
- Determine whether the essential physical features are visible enough to convey their significance.
- Determine whether the property needs to be compared with similar properties.
- Determine, based on the significance and essential physical features, which aspects of integrity are particularly vital to the property being nominated and if they are present.

For a district to retain integrity as a whole, the majority of the components that make up the district's historic character must possess integrity even if they are individually undistinguished. In addition, the relationships among the district's components must be substantially unchanged since the period of significance.

When evaluating the impact of intrusions upon the district's integrity, take into consideration the relative number, size, scale, design, and location of the components that do not contribute to the significance. A district is not eligible if it contains so many

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[28] California Office of Historic Preservation, 2001. *California Register and National Register: A Comparison*, Technical Assistance Series 6, page 1.

alterations or new intrusions that it no longer conveys the sense of a historic environment.

A component of a district cannot contribute to the significance if:

- It has been substantially altered since the period of the district's significance, or
- It does not share the historic associations of the district.

The aspects of integrity, as defined and applied to the proposed intrusions upon the Oakland Waterfront Warehouse District, are as follows:

Location

Location is the place where the historic property was constructed or the place where the historic event occurred. The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons.

The Oakland Waterfront Warehouse District remains in the location where it was first developed. The proposed project would not have an impact on the location of the District.

Design

Design is the combination of elements that create the form, plan, space, structure, and style of a property. It results from conscious decisions made during the original conception and planning of a property (or its significant alteration) and applies to activities as diverse as community planning, engineering, architecture, and landscape architecture. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials. Design can also apply to districts, whether they are important primarily for historic association, architectural value, information potential, or a combination thereof. For districts significant primarily for historic association or architectural value, design concerns more than just the individual buildings or structures located within the boundaries. It also applies to the way in which buildings, sites, or structures are related.

The Waterfront Warehouse District has been subject to a number of design alterations since its nomination in 1999. Most significantly, the Allegro Project, 428 Alice Street and 288 3rd Street projects have impacted the overall scale and pattern of the District. Further, the Safeway Building has received a roof top addition increasing its height and altering its original design, but it does retain its status as a contributing resource. The additional construction of a large scale project within the historic district and the demolition of a contributing resource will have a combined negative effect on the District's overall design as the scale and height together with the other newer developments will dominate the other design components of the historic district.

Setting

Setting is the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historical role. It involves how, not just where, the property is situated and its relationship to surrounding features and open space. Setting often reflects the basic physical conditions under which a property was built and the functions it was intended to serve. In addition, the way in which a property is positioned in its environment can reflect the designer's concept of nature and aesthetic preferences. The physical features that constitute the setting of a historic property can be either natural or manmade. These features and their relationships should be examined not only within the exact boundaries of the property, but also between the property and its surroundings. This is particularly important for districts.

The setting of the Oakland Waterfront Warehouse District has been changed since it was nominated. The Allegro, 428 Alice Street and 288 3rd Street projects altered the setting through their scale, massing and placement within the District. If constructed, the proposed project will further alter the setting through its greater scale, massing and height and by the removal of a District contributor.

Materials

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. The choice and combination of materials reveal the preferences of those who created the property and indicate the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place. A property must retain the key exterior materials dating from the period of its historic significance. If the property has been rehabilitated, the historic materials and significant features must have been preserved.

The most common material of the Waterfront Warehouse District is concrete or masonry construction. The Allegro project resulted in the construction of a large wood frame structure in the District and several others just outside the boundary. While these wood frame buildings are stuccoed they read as wood frame and detract from the simple masonry structures within the District. Unlike the Allegro, both 428 Alice Street and 288 3rd Street projects are concrete constructions which are compatible with the District's material use. The proposed project would feature five-story wood frame construction over two levels of concrete. As previously noted, "The exterior of Building A will be clad in a variety of materials including stucco, fiber cement panels, and metal windows, awnings, balcony railings, and grills at the garage openings." Although not the original materials, these varied materials are compatible with the character of the historic district.

Workmanship

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site. Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. It can be based on common traditions or innovative period techniques. Workmanship is important because it can furnish evidence of the technology of a craft, illustrate the aesthetic principles of a historic or prehistoric period, and reveal individual, local, regional, or national applications of both technological practices and aesthetic principles.

Workmanship is important because it can furnish evidence of the technology of a craft, illustrate the aesthetic principles of a historic or prehistoric period, and reveal individual, local, regional, or national applications of both technological practices and aesthetic principles. Examples of workmanship in historic buildings include tooling, carving, painting, graining, turning, and joinery. Workmanship of existing buildings in the District will not be affected.

Feeling

Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character. For example, a rural historic district retaining original design, materials, workmanship, and setting will relate the feeling of agricultural life in the 19th century.

The overall feeling of the WWD has been significantly changed since it was listed in the National Register by the construction of the Allegro Project, 428 Alice Street and 288 3rd Street projects, in the District as well as new construction surrounding the District. The impact of the proposed project will further alter the feeling and aesthetic sense of the District through its scale and height, especially in the north and eastern portion of the historic district.

Association

Association is the direct link between an important historic event or person and a historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character. Because feeling and association depend on individual perceptions, their retention alone is never sufficient to support eligibility of a property for the National Register.

The WWD is largely associated with the Oakland's industrial history. Since the industrial nature of the area is evolving into more of a mixed-use character, this association has been diminished. The association of the WWD contributors to each other has been impacted by the new developments in the District and the relative associative qualities of the buildings would be altered by demolition of 180 4th Street, a District contributor, and by the proposed new construction.

(2) Conclusion

The overall integrity of the District would be impaired by the proposed project in conjunction with the already constructed newer developments. This includes material impairment to integrity of design, setting, feeling, and association.

For an Oakland API,[29] normally two-thirds of the properties are "contributors" to the API, reflecting the API's principal historical or architectural themes, and must not have undergone major alterations. In this case, it appears that two-thirds of the properties will continue to meet this standard. Within the historic district boundary there are 33 parcels (including the Posey Tube Oakland Portal) containing the 25 current historic district contributors. The cumulative number of district contributors if all known projects are executed will be 24. (This would remain above the two-thirds percentage, or 22 district contributors.)

Under National Register criteria, a historic district may be considered eligible if the majority of the components add to the district's character, even if they are individually undistinguished; however, these individual resources must possess integrity, as must the district as a whole. Further, the number of noncontributing properties a district can contain and yet still convey its sense of time and place and historical development depends on how these properties affect the districts' integrity.

In the recent past, a number of new developments have been constructed in the historic district, including the Allegro, 288 3rd Street, and 428 Alice Street together with the loss of a contributing resource as the result of the latter project. The proposed project will add to this cumulative loss of integrity and loss of historic resources and as a result the integrity and significance National Register District will be materially affected.

Although the historic district would still maintain a little more than two-thirds of its district contributors, its integrity would be compromised, specifically in the area north and

[29] The API coincides with the National Register Oakland Waterfront Warehouse District.

east of Alice and 4th Streets. The scale, mass and height of 428 Alice Street and 180 4th Street will make this area incompatible with the rest of the historic district. In addition, the loss of two similar, major warehouse buildings exacerbates the loss of historic resources in this quadrant of the historic district.

The historic district as currently configured would, after construction of the proposed project and other past projects, be eroded and this could cumulatively affect the District's eligibility for listing in the National Register of Historic Places and the California Register of Historical Resources. Implementation of Mitigation Measure HIST-1 would minimize significant adverse effects to the extent feasible, but would not mitigate impacts to a less than significant level. It can be fairly argued that at some future point cumulative development may physically alter the historic district's integrity related to the numbers of contributors, as well as building size, scale, design and character such that its ability to convey its sense of an historic environment will be substantially reduced. Thus, the effect of the proposed project in combination with effects of the other past projects would be cumulatively significant and unavoidable. (SU)

C. TRAFFIC AND TRANSPORTATION

This chapter describes the existing transportation and circulation system in the vicinity of the Jack London Square 4th & Madison Project (project), including roadway, bicycle, pedestrian, and transit facilities, and provides an analysis of the potential impacts of the project on the transportation system.

1. Setting

The existing transportation system in the vicinity of the project site, the methods used to conduct the transportation analysis, and applicable transportation-related policies are described below. Existing intersection operations are also summarized.

a. Study Locations

This study evaluates impacts of the project on four study intersections adjacent to the project site. The study locations are listed below and shown on Figure IV.C-1. All four study intersections are signal controlled.

1. Jackson Street/5th Street
2. Jackson Street/6th Street
3. Oak Street/5th Street
4. Oak Street/6th Street

b. Analysis Scenarios

The operations of the study intersections were evaluated for the peak hour during the morning and evening commute periods (7:00 to 9:00 AM and 4:00 to 6:00 PM) for the following scenarios:

- **Existing Conditions –** Existing traffic volumes obtained from vehicle turning movement counts collected in 2013 and existing roadway/intersection configurations as presented in the *Jack London Square Redevelopment Project Addendum to the 2004 EIR* published in May 2014 (This document is referred to as the JLS Addendum in this report).
- **Existing Plus Project Conditions –** Existing traffic volumes plus new traffic generated by the project.
- **2035 No Project Conditions** – Projected conditions in 2035 including traffic estimates for approved and probable future development projects based on the 2035 Plus Project Conditions presented in the JLS Addendum.
- **2035 Plus Project Conditions –** 2035 No Project Conditions plus new traffic generated by the project.

LEGEND

Project Site

Study Intersection

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Source: Fehr & Peers, 2015

Figure IV.C-1
Jack London Square 4th & Madison Project EIR
Project Site Location

c. Existing Conditions

Existing transportation-related conditions at the project site and its vicinity are described below.

(1) Street Network

Regional and local streets serving the project site are described below.

Regional Access

Interstate 880 (I-880) is an eight-lane freeway on the north side of the project site between I-280 and State Route (SR) 17 in San Jose, and I-80 south of the Bay Bridge Crossing in Emeryville. In 2013, I-880 had an annual daily traffic volume (AADT) of 211,000 near the project site (Caltrans, 2013). Ramps at Oak and Jackson Streets provide the nearest access to the project site.

Interstate 980 (I-980) is an eight-lane freeway that connects I-880 to SR 24 and I-580. I-980 has an AADT of about 110,000 vehicles just north of I-880 (Caltrans, 2013). Ramps at Jackson Street provide access to the project site.

Local Access

Oak Street is a north-south street that extends from Embarcadero/1st Street to Lakeside Drive. Near the project site, Oak Street is a two way street with one lane in each direction. North of 6th Street, Oak is one-way northbound, providing between three to four travel lanes.

Madison Street is a north-south street between 2nd Street and Lakeside Drive. Between 2nd and 4th Streets, Madison Street provides two travel lanes, one in each direction. North of 4th Street, Madison is a one-way southbound street with two to three travel lanes. Madison Street borders the east side of the project.

Jackson Street is a north-south street between 2nd Street and Lakeside Drive. Jackson Street is a two-way street with one travel lane in each direction. It borders the west side of the project.

3rd Street is a minor east-west street between Oak Street and Mandela Parkway/Peralta Street. It has one travel lane in each direction. 3rd Street borders the south side of the project.

4th Street is a minor east-west street between Oak Street and Market Street. It is adjacent to both components of the project and has one travel lane in each direction.

5th Street is a major east-west street between Oak Street and Peralta Street., 5th Street is a one-way eastbound street and provides three to four travel lanes in the project vicinity. 5th Street borders the north side of the project.

6th Street is a major east-west street between Fallon Street and Market Street. 6th Street is a one-way westbound street and provides three travel lanes in the project vicinity.

(2) Transit System

Most of the existing transit services are concentrated along the Broadway corridor and the nearby Jack London Square. The project site is located approximately 0.25 mile south of the Lake Merritt BART Station. Alameda-Contra Costa Transit District (AC Transit) provides bus service within 0.25 miles of the project vicinity. Jack London Square is approximately 0.5 miles west of the project site and provides several transit services, including the Free B Broadway Shuttle, Amtrak and the Oakland Ferry Terminal. Existing transit services, as of April 2015, are shown on Figure IV.C-2, and described below.

AC Transit

The Alameda-Contra Costa Transit District (AC Transit) is the primary bus service provider in 13 cities and the adjacent unincorporated areas in Alameda County and Contra Costa County with Transbay service to destinations in San Francisco, San Mateo and Santa Clara Counties. Local AC Transit bus routes operate within a quarter-mile of the project site. Table IV.C-1 summarizes the characteristics of the AC Transit routes operating in the project vicinity. The nearest bus stops to the project are on southbound Jackson Street just south of 3rd Street and on eastbound 7th Street east of Jackson Street. Both stops provide only a bus stop sign. Although they do not provide direct service to the project site, the 11 AC Transit routes listed in Table IV.C-1 are within walking distance.

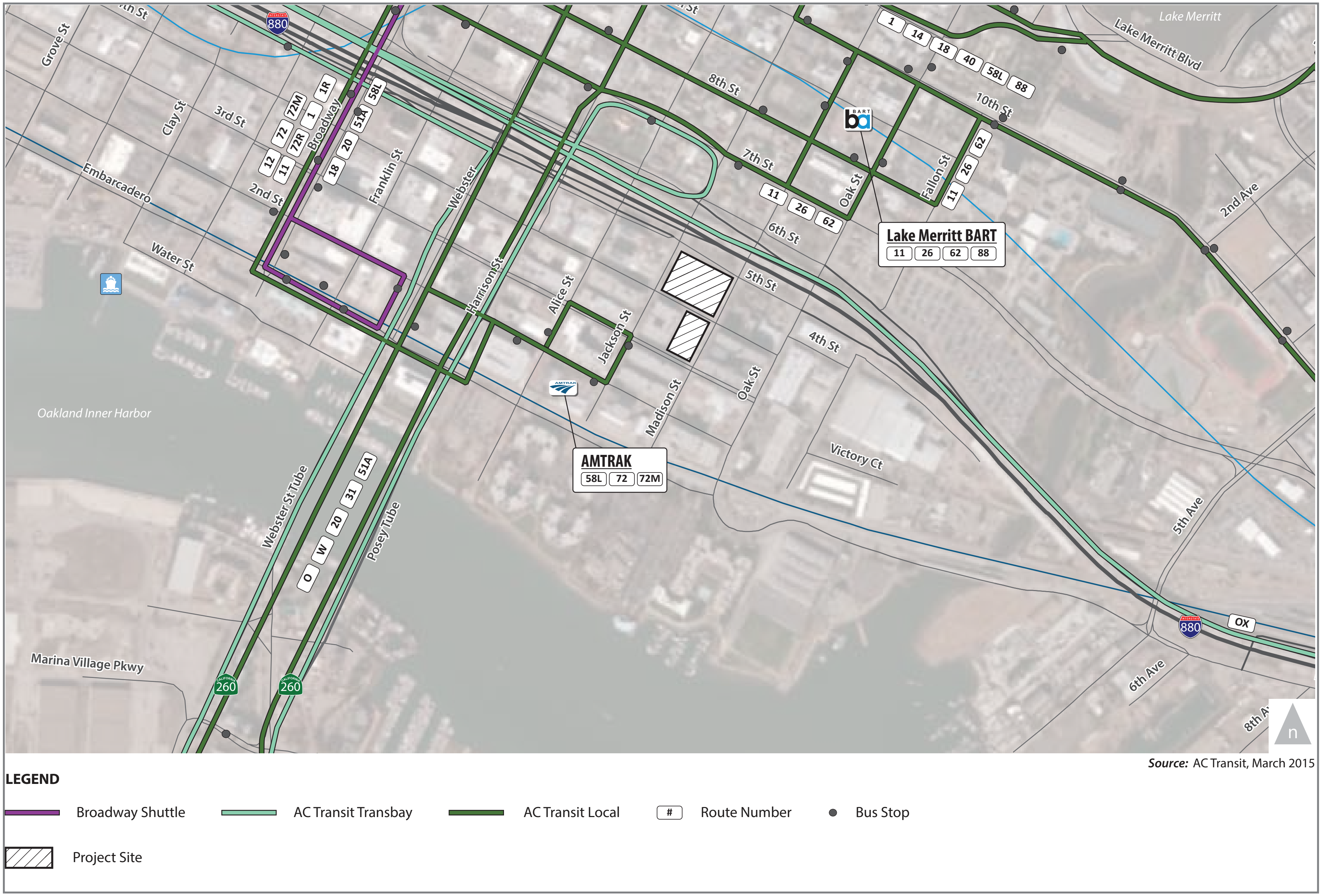
Bay Area Rapid Transit (BART)

BART provides regional rail service throughout the East Bay and across the Bay to San Francisco and the Peninsula. Lake Merritt BART station is the nearest BART station to the project site, located at 800 Madison Street (between 8th and 9th Streets), about 0.25 miles north of the project site. The Richmond-Fremont, Fremont-Daly City, and Dublin/ Pleasanton-Daly City lines provide service at the Lake Merritt BART station. Thus, BART riders destined for the Pittsburg/Bay Point-SFO/Millbrae line must transfer at another station or walk to the 12th Street Station. During the peak hour, 24 trains arrive and depart the station. Based on March 2015 data, about 14,900 weekday riders use the Lake Merritt BART Station.

TABLE IV.C-1 AC TRANSIT ROUTES IN THE PROJECT VICINITY

			Weekday		Weekend	
Line	**Route**	**Nearest Stops**	**Hours**	**Headway (Minutes)**	**Hours**	**Headway (Minutes)**
Local Routes						
11	Dimond District, Oakland to Estates Drive/Inverleith Terrace	7th St, east of Jackson St	6:00 AM – 8:35 PM	30	7:00 AM to 8:25 PM	60
20	Dimond District, Oakland to Oakland airport	Harrison St, north of 8th St	5:00 AM – 12:30 AM	30	5:00 AM to 12:30 AM	30
51A	Rockridge BART station to Fruitvale BART station	8th St, west of Harrison St	5:00 AM – 12:35 PM	10	5:00 AM to 12:30 PM	60
58L	Oakland Amtrak to Eastmont Transit Center	2nd St, east of Alice St	7:30 AM – 7:50 PM	30	No Service	No Service
62	West Oakland BART to Fruitvale BART	7th St, east of Jackson St	6:15 AM – 12:50 AM	20	6:15 AM to 12:50 PM	30
72	Hilltop Mall to Oakland Amtrak	Jackson St, south of 3rd St	5:00 AM – 1:00 AM	30	5:15 AM to 12:40 AM	30
72R	San Pablo Rapid – Contra Costa College to Jack London Square	Broadway, south of 3rd	6:00 AM – 8:15 PM	10	7:00 AM to 8:00 PM	15
72M	Point Richmond to Oakland Amtrak	Jackson St, south of 3rd St	5:40 AM – 12:20 AM	30	6:00 AM to 1:00 PM	40
88	Berkeley BART to Lake Merritt BART	Oak St, north of 8th St	5:15 AM – 10:30 PM	20	5:20 AM to 10:30 PM	30
TransBay Routes						
O	Fruitvale BART to Transbay Temporary Terminal, San Francisco	Corner of 7th St and Alice St	6:00 AM to 10:45 PM	10 – 60	6:00 AM to 10:40 PM	6
W	Broadway, Alameda to Transbay Temporary Terminal, San Francisco	Corner of 7th St and Alice St	4:00 PM to 8:40 PM	20	5:45 AM to 9:20 AM	20

Source: AC Transit, 2015.



Source: AC Transit, March 2015

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Source: Fehr & Peers, 2015

Figure IV.C-2
Jack London Square 4th & Madison Project EIR
Existing Transit Routes

Free B Broadway Shuttle

The Free B Broadway Shuttle provides free shuttle service along the Broadway corridor, between Jack London Square and Grand Avenue. The shuttle connects major destinations such as Jack London Square, City Center, and Uptown with major transportation services such as BART, AC Transit, Amtrak, the Ferry Terminal and Greyhound. The shuttle operates on Monday through Thursday from 7:00 AM to 10:00 PM, Fridays from 7:00 AM to 1:00 AM, and Saturdays from 6:00 PM to 1:00 AM, except on major holidays. The shuttle has headways of approximately 10 minutes during commute hours and lunch time, and 15 minutes during other times of the day. The nearest shuttle stop to the project site is on Webster Street, approximately 0.4 miles southwest of the project site.

Amtrak

Amtrak provides inter-city rail service throughout California and the country. The Oakland Jack London station is located at 245 Second Street (between Jackson and Alice Streets), approximately 0.25 miles southwest of the project site. The station provides a 115-space parking lot. The station operates from 5:15 AM to 11:00 PM seven days per week. The Oakland Jack London Station is served by the following routes:

- The Capitol Corridor, which operates more than 20 trains per day between San Jose and Sacramento/Auburn
- San Joaquin Intercity, which operates four trains per day in each direction to Bakersfield via Modesto and Fresno
- Coast Starlight, which operates one train per day in each direction between Los Angeles and Seattle.

In addition, Amtrak provides connecting bus service between the Oakland Jack London Square and San Francisco.

Ferry Service

The Clay Street Terminal provides weekday and weekend ferry service. The Water Emergency Transportation Authority (WETA) operates the Alameda/Oakland ferry service that connects Jack London Square to the Alameda Ferry Terminal, the San Francisco Ferry Building, and Pier 41 near Fisherman's Wharf. The ferry also provides seasonal service to AT&T Park and Angel Island.

The weekday service operates between 6:00 AM and 9:25 PM with one-hour headways during the peak periods, and about two-hour headways during off-peak periods. The weekend service operates between 10:00 AM and 7:10 PM about every 90 minutes to two hours.

(3) Bicycle System

City of Oakland's 2007 Bicycle Master Plan Update (BMP) identifies the following bicycle facility types:

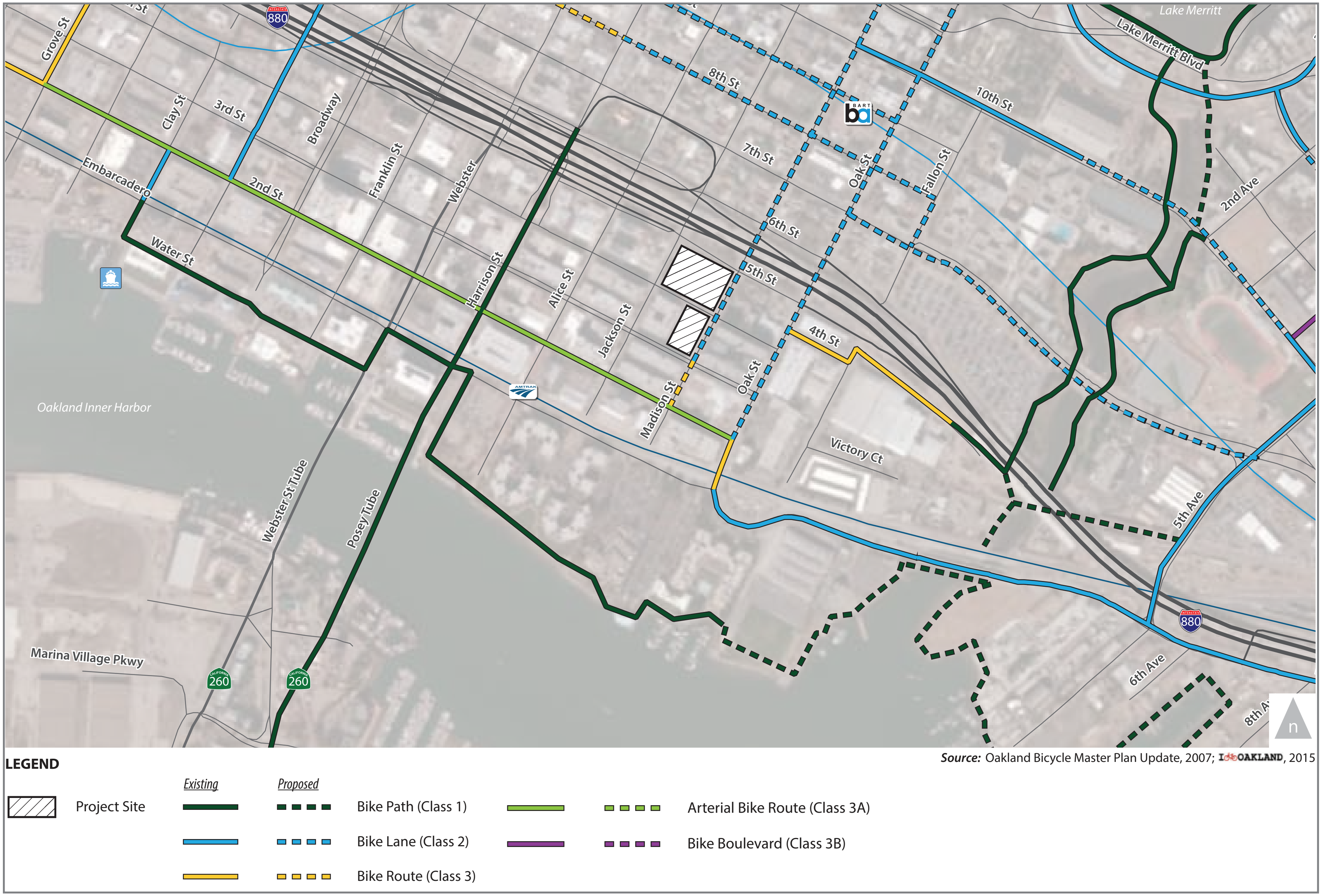
- **Class 1 Paths.** These facilities are located off-street and can serve both bicyclists and pedestrians. Recreational trails can be considered Class 1 facilities. Class 1 paths are typically 8 to 10 feet wide excluding shoulders and are generally paved.
- **Class 2 Bicycle Lanes.** These facilities provide a dedicated area for bicyclists within the paved street width through the use of striping and appropriate signage. These facilities are typically 5 to 6 feet wide.
- **Class 3 Bicycle Routes.** These facilities are found along streets that do not provide sufficient width for dedicated bicycle lanes. The street is then designated as a bicycle route through the use of signage informing drivers to expect bicyclists.
- **Class 3A Arterial Bicycle Routes.** These facilities are found along some arterial streets where bicycle lanes are not feasible and parallel streets do not provide adequate connectivity. Speed limits as low as 25 miles per hour (mph), and shared-lane bicycle stencils, wide curb lanes, and signage are used to encourage shared use.
- **Class 3B Bicycle Boulevards.** These facilities are found along residential streets with low traffic volumes. Assignment of right-of-way to the route, traffic calming measures and bicycle traffic signal actuation are used to prioritize through-trips for bicycles.

The bicycle facilities near the project site are shown on Figure IV.C-3. Class 1 bicycle paths are provided along Water Street, Posey Tube, and the San Francisco Bay Trail. Nearest Class 2 bike lanes are along segments of Embarcadero and Washington Street. Class 3 bike routes are provided on 4th Street and Oak Street and a Class 3A bicycle route is located on 2nd Street. The 2nd Street bikeway is also the on-street designated portion of the Bay Trail. Class 2 Bicycle lanes are proposed along Madison Street, north of 4th Street and the entire length of Oak Street, and a Class 3A arterial bicycle route is proposed along Madison Street between 2nd and 4th Streets near the project.

(4) Pedestrian Facilities

Figure IV.C-4 shows the existing pedestrian facilities within the project vicinity. Pedestrian facilities comprise sidewalks, off-street pathways, marked and enhanced crosswalks (at midblock and intersections), curb ramps, median refuges, and pedestrian signals.

Off-street pedestrian paths are provided along the Inner Harbor (as part of the Bay Trail), and along the railroad tracks between Webster and Oak Streets. Jack London Square also provides pedestrian-only plazas. Sky bridges provide grade separated crossings of the railroad track at Alice Street adjacent to the Amtrak station, and at Harrison Street.



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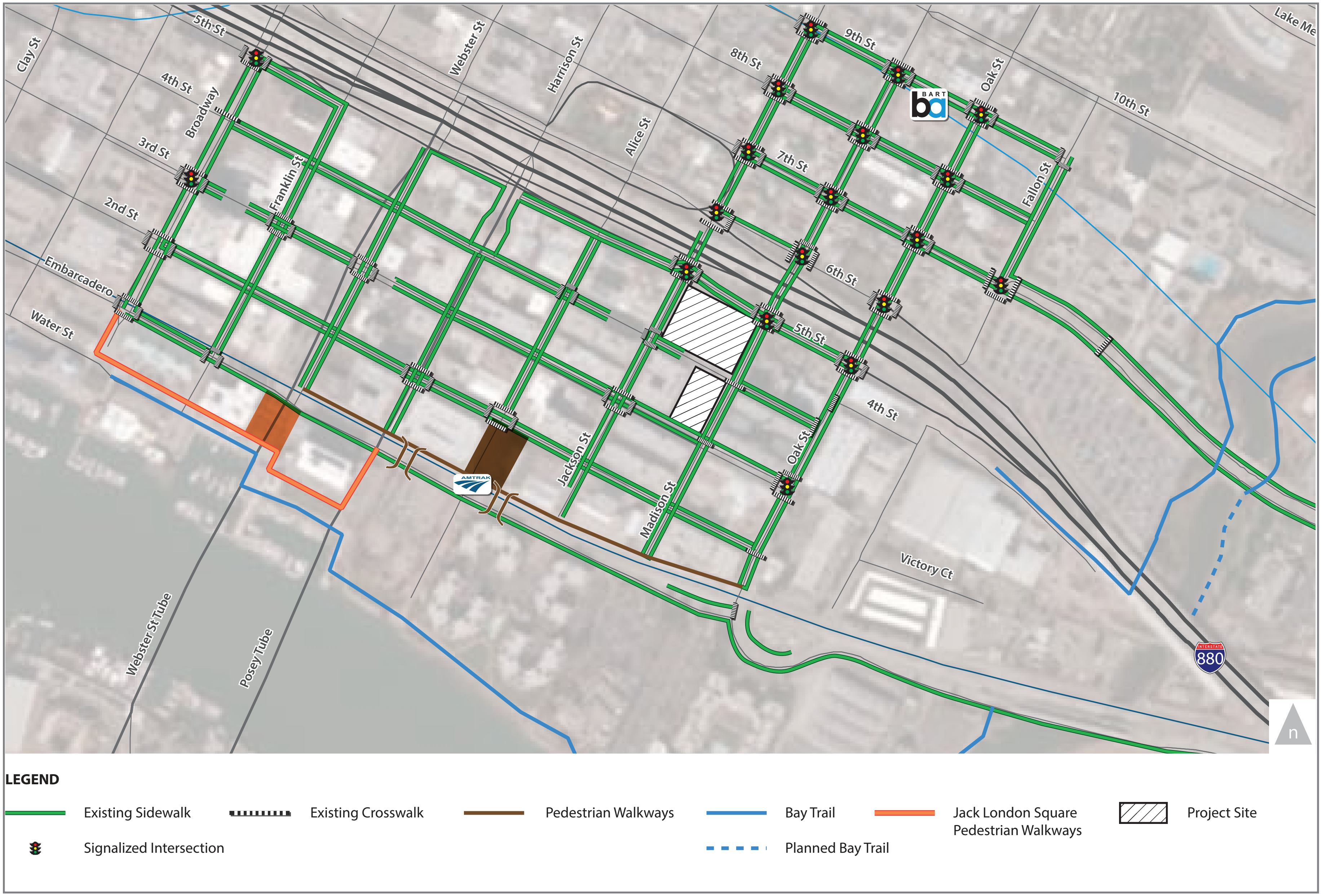
Source: Fehr & Peers, 2015

Figure IV.C-3
Jack London Square 4th & Madison Project EIR
Existing and Proposed Bicycle Routes



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Source: Fehr & Peers, 2015

Figure IV.C-4
Jack London Square 4th & Madison Project EIR
Existing Pedestrian Facilities

Sidewalks are provided on both sides of most streets in the project study area, and are approximately 18 feet wide. The effective sidewalk width is less than the actual sidewalk width because it accounts for the lost space due to landscaping, parking meters, light poles and store fronts. The minimum effective sidewalk width in the study area ranges from 7 to 12 feet. Segments of Jackson, 3rd, 4th, and 5th Streets do not provide sidewalks. Sidewalks adjacent to the project site are described below:

- Jackson Street provides an 18-foot-wide sidewalk along the west side of the project site. This sidewalk includes a minimum 10-foot pedestrian passage zone to accommodate trees and a building ramp on a portion of the block.
- Madison Street provides an 18-foot-wide sidewalk along the east side of the project site. There are no trees or obstructions on this block.
- 5th Street provides an 18-foot-wide sidewalk along the north side of the project site. This block includes a minimum 13-foot pedestrian passage zone to accommodate utility poles.
- 4th Street provides an 18-foot-wide sidewalk along the west half of the north side of the street. Landscaping on this segment reduces the pedestrian passage zone to a minimum 10-foot effective sidewalk width. The east segment of this block does not provide any sidewalks and is used for employee parking. On the south side of the street, along the existing Cost Plus parking lot, the sidewalk width is 12 feet, with an effective minimum sidewalk width of 7 feet to accommodate a utility zone for trees. The remaining segment of this sidewalk is 18 feet wide, with an effective minimum width of 12 feet.
- 3rd Street provides a 12-foot-wide sidewalk along the north side of the street with a 10-foot minimum effective pedestrian passage zone along the south side of the existing parking lot and proposed project building. The utility zone accommodates trees and utility poles. Along the remaining segment of this sidewalk, it narrows to a minimum effective width of 7 feet.

Signalized intersections adjacent to the project are pre-timed and provide striped crosswalks and pedestrian signal heads. Unsignalized intersections in the area provide striped crosswalks across some approaches.

(5) Traffic Conditions

Traffic conditions at study intersections in the project vicinity are described below.

Traffic Volumes

Intersection turning movement counts were obtained from the *JLS Addendum*. Counts from this study were conducted during the morning and evening peak periods (7:00 to 9:00 AM and 4:00 to 6:00 PM) in January and February, 2013. The counts were conducted on non-holiday weekdays, when local area schools were in normal session. Intersection lane configurations and traffic control devices (traffic signals or stop signs) were observed during field visits. Figure IV.C-5 shows the existing AM and PM peak-hour traffic volumes, lane geometries, and intersection controls for the study intersections.

Level of Service Methodology

Intersection operations are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic operations from the vehicle driver perspective and consists of the delay experienced by the driver at the intersection. It ranges from LOS A, with no congestion and little delay, to LOS F, with excessive congestion and delays. Different methodologies are used to assess signalized and unsignalized (stop-controlled) intersections.

Signalized Intersection

At signalized intersections, operations are evaluated using the methodology described in the 2000 Highway Capacity Manual (HCM) and the Synchro 8 traffic analysis software program. This methodology uses various intersection characteristics, such as traffic volumes, lane geometries, and signal timing parameters, to estimate average control delays and assign an LOS. Control delay is defined as the delay associated with deceleration, stopping, moving up in the queue, and acceleration experienced by drivers at an intersection. Table IV.C-2 provides a description of various LOS and the corresponding ranges of delays for signalized intersections.

Unsignalized Intersections

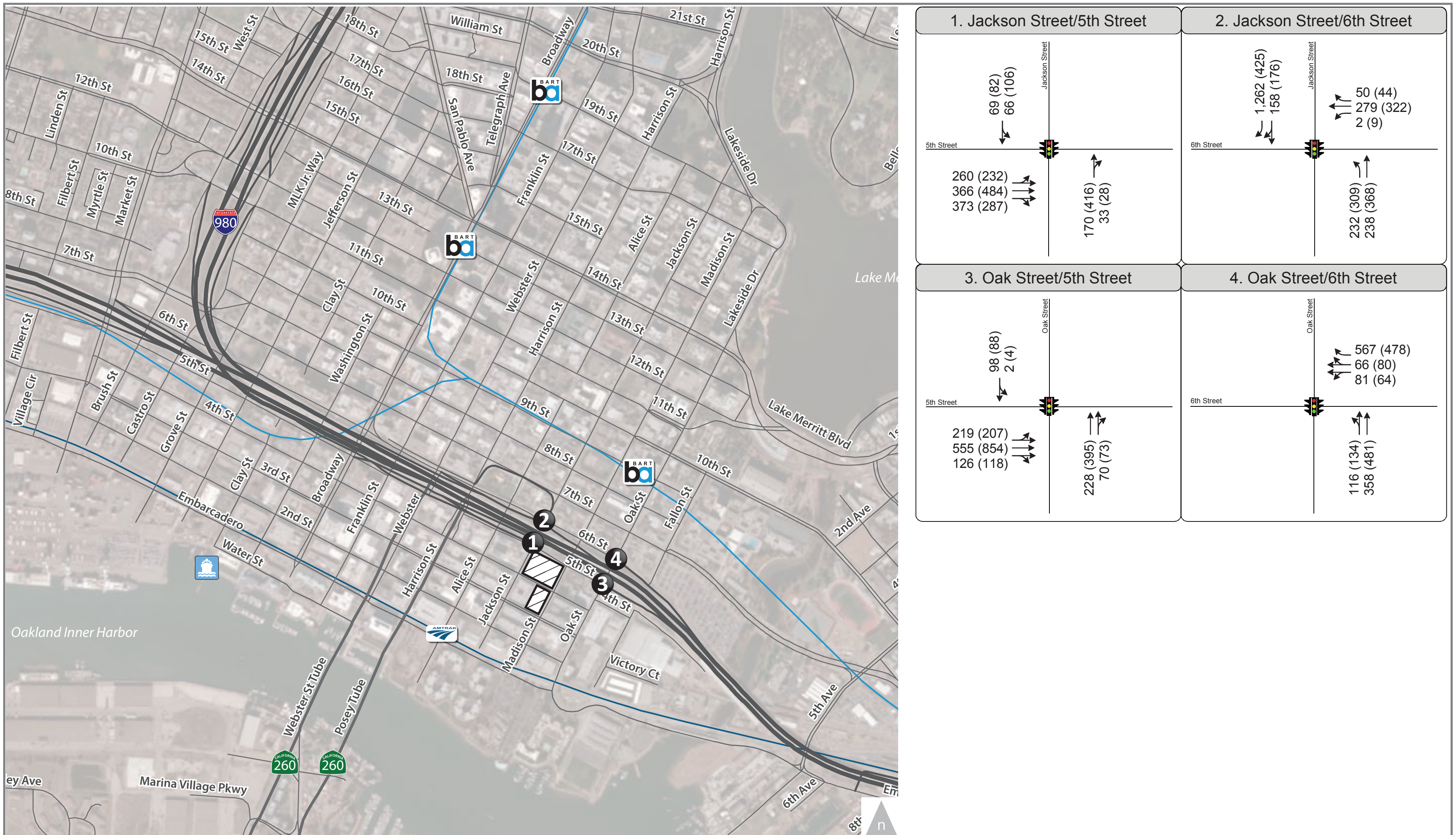
At unsignalized intersection, LOS is also analyzed using the 2000 HCM and Synchro 8 software. Delay is calculated for movements that are controlled by a stop sign or that must yield the right-of-way. This study reports the delay and corresponding LOS for the approach with the highest delay and the whole intersection. The LOS ranges for unsignalized intersections are shown in Table IV.C-2. They are lower than the delay ranges for signalized intersections because drivers will tolerate more delay at signals.

Intersection Operations

Table IV.C-3 summarizes the intersection LOS under Existing Conditions. As shown, the four study intersections currently operate at LOS B or better The LOS calculations are included in Appendix C.

(6) Planned Transportation Network Changes

A review of the available information indicates that several changes are planned for the various transportation modes in the study area. However, none of these changes have finalized design plans, full approvals, and/or full funding. Changes lacking final design, full approval, and/or full funding are not considered reasonably foreseeable, are not available to mitigate any deficient conditions in the No Project Conditions, and therefore



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Project Site

Study Intersection

04.27.2015 P:\14-023 CPCP\PRODUCTS\Graphics

Source: Fehr & Peers, 2015

Figure IV.C-5
Jack London Square 4th & Madison Project EIR
Existing Intersection Peak Hour Volumes, Lane Configurations and Traffic Control

TABLE IV.C-2 INTERSECTION LEVEL OF SERVICE DEFINITIONS

Unsignalized Intersections			Signalized Intersections	
Description	**Average Total Vehicle Delay (Seconds)**	**LOS Grade**	**Average Control Vehicle Delay (Seconds)**	**Description**
No delay for stop-controlled approaches.	≤10.0	A	≤10.0	Free Flow or Insignificant Delays: Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all.
Operations with minor delay.	>10.0 and ≤15.0	B	>10.0 and ≤20.0	Stable Operation or Minimal Delays: Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized.
Operations with moderate delays.	>15.0 and ≤25.0	C	>20.0 and ≤35.0	Stable Operation or Acceptable Delays: Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted.
Operations with increasingly unacceptable delays.	>25.0 and ≤35.0	D	>35.0 and ≤55.0	Approaching Unstable or Tolerable Delays: Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays.
Operations with high delays, and long queues.	>35.0 and ≤50.0	E	>55.0 and ≤80.0	Unstable Operation or Significant Delays: Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers.	>50.0	F	>80.0	Forced Flow or Excessive Delays: Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections.

Source: Transportation Research Board, Special Report 209, *Highway Capacity Manual*, 2000.

TABLE IV.C-3 INTERSECTION OPERATIONS EXISTING CONDITIONS

		AM		PM	
Intersection	**Control**	**Delay[a]**	**LOS**	**Delay[a]**	**LOS**
Jackson Street/5th Street	Signal	11.2	B	15.6	B
Jackson Street/6th Street	Signal	25.7	C	12.2	B
Oak Street/5th Street	Signal	8.8	A	9.7	A
Oak Street/6th Street	Signal	8.9	A	8.8	A

[a] For signalized intersections, the delay shown is the weighted average for all movements in seconds per vehicle.
Source: Fehr & Peers, 2015.

are not assumed in the analysis. Therefore, this analysis assumes the Existing Conditions roadway network and lane configuration at the study intersections as for the Existing Plus Project and 2035 No Project and Plus Project Conditions.

d. Regulatory Framework

The Oakland General Plan is comprised of numerous elements, and those containing policies relevant to transportation resources primarily are contained in the Land Use and Transportation Element (LUTE). The goals and policies contained in the various General Plan Elements are often competing. In reviewing a project for conformity with the General Plan, the City is required to 'balance' the competing goals and policies. This project is reviewed for compliance with the following local plans and policies:

- General Plan LUTE
- City of Oakland Pedestrian Master Plan (incorporated into the City's General Plan)
- City of Oakland Bicycle Master Plan (incorporated into the City's General Plan)
- City of Oakland Public Transit and Alternative Modes Policy
- City of Oakland Complete Streets Policy
- City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards

(1) City of Oakland General Plan

The City of Oakland General Plan (General Plan) is a comprehensive plan for the growth and development of the City. The General Plan includes policies related to: land use and circulation; housing; recreation; conservation and open space; noise; environmental hazards; and historic resources. These topics are addressed within individual elements of the General Plan: Land Use and Transportation; Pedestrian Master Plan; Bicycle Master Plan; Housing; Historic Preservation; Open Space; Conservation; Recreation; Noise; and Safety. Each is addressed separately below.

Regarding a project's consistency with the General Plan in the context of CEQA, the Oakland General Plan states the following:

> The General Plan contains many policies which may in some cases address different goals, policies and objectives and thus some policies may compete with each other. The Planning Commission and City Council, in deciding whether to approve a proposed project, must decide whether, on balance, the project is consistent (i.e., in general harmony) with the General Plan. The fact that a specific project does not meet all General Plan goals, policies and objectives does not inherently result in a significant effect on the environment within the context of the California Environmental Quality Act (CEQA).[1]

Land Use and Transportation Element

The City of Oakland, through various policy documents, states a strong preference for encouraging use of pedestrian, bicycle, and transit travel modes. The following policies are included in the LUTE:

> **LUTE Policy Framework, Encouraging Alternative Means of Transportation:** "A key challenge for Oakland is to encourage commuters to carpool or use alternative modes of transportation, including bicycling or walking. The Policy Framework proposes that congestion be lessened by promoting alternative means of transportation, such as transit, biking, and walking, providing facilities that support alternative modes, and implementing street improvements. The City will continue to work closely with local and regional transit providers to increase accessibility to transit and improve intermodal transportation connections and facilities. Additionally, policies support the introduction of light rail and trolley buses along appropriate arterials in heavily traveled corridors, and expanded use of ferries in the bay and estuary."

- **Policy T3.5: Including Bikeways and Pedestrian Walks.** The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.
- **Policy T3.6: Encouraging Transit.** The City should encourage and promote use of public transit in Oakland by expediting the movement of and access to transit vehicles on designated "transit streets" as shown on the Transportation Plan. (Policies T3.6 and T3.7 are based on the City Council's passage of "Transit First" policy in October 1996.)
- **Policy T3.7: Resolving Transportation Conflicts.** The City, in constructing and maintaining its transportation infrastructure, should resolve any conflicts between public transit and single occupant vehicles in favor of the transportation mode that has the potential to provide the greatest mobility and access for people, rather than vehicles, giving due consideration to the environmental, public safety, economic development, health and social equity impacts.
- **Policy T4.1: Incorporating Design Features for Alternative Travel.** The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that

[1] Oakland City Council Resolution No. 79312 C.M.S.; adopted June 2005.

encourage use of alternative modes of transportation such as transit, bicycling, and walking.

(2) Pedestrian Master Plan

In November 2002, the Pedestrian Master Plan (PMP) was adopted by the City Council and incorporated into the adopted General Plan. The PMP identifies policies and implementation measures that promote a walkable City. In the study area, the PMP designates a Pedestrian Route Network throughout Oakland and identifies a "City Route" on Jackson and Oak Streets, and a "Neighborhood Route" on Madison, 3rd, 4th, and 5th Streets.

The PMP includes the following relevant policies and actions:

- **Policy 1.1: Crossing Safety.** Improve pedestrian crossings in areas of high pedestrian activity where safety is an issue.
  - *Action 1.1.1:* Consider the full range of design elements – including bulbouts and refuge islands – to improve pedestrian safety.
- **Policy 1.2: Traffic Signals.** Use traffic signals and their associated features to improve pedestrian safety at dangerous intersections.
  - *Action 1.2.7:* Consider using crossing enhancement technologies like countdown pedestrian signals at the highest pedestrian volume locations.
- **Policy 1.3: Sidewalk Safety.** Strive to maintain a complete sidewalk network free of broken or missing sidewalks or curb ramps.
  - *Action 1.3.7:* Conduct a survey of all street intersections to identify corners with missing, damaged, or non-compliant curb ramps and create a plan for completing their installation.
- **Policy 2.1: Route Network.** Create and maintain a pedestrian route network that provides direct connections between activity centers.
  - *Action 2.1.8*: To the maximum extent possible, make walkway accessible to people with physical disabilities.
- **Policy 2.3: Safe Routes to Transit.** Implement pedestrian improvements along major AC Transit lines and at BART stations to strengthen connections to transit.
  - *Action 2.3.1:* Develop and implement street designs (like bus bulbouts) that improve pedestrian/ bus connections.
  - *Action 2.3.3:* Prioritize the implementation of street furniture (including bus shelters) at the most heavily used transit stops.
  - *Action 2.3.4:* Improve pedestrian wayfinding by providing local area maps and directional signage at major AC Transit stops and BART stations.
- **Policy 3.2: Land Use.** Promote land uses and site designs that make walking convenient and enjoyable.

- *Action 3.2.1:* Use building and zoning codes to encourage a mix of uses, connect entrances and exits to sidewalks, and eliminate "blank walls" to promote street level activity.
- *Action 3.2.2:* Promote parking and development policies that encourage multiple destinations within an area to be connected by pedestrian trips.
- *Action 3.2.4:* Require contractors to provide safe, convenient, and accessible pedestrian rights-of-way along construction sites that require sidewalk closure.
- *Action 3.2.8:* Discourage motor vehicle parking facilities that create blank walls, unscreened edges along sidewalks, and/or gaps between sidewalks and building entrances.

(3) Bicycle Master Plan

The Oakland City Council adopted the Oakland Bicycle Master Plan Update in December 2007 and incorporated into the adopted General Plan. The adopted plan includes the following policy-supporting actions that are applicable to the proposed project:

- **Policy 1A: Bikeway Network.** Develop and improve Oakland's bikeway network.
    - *Action 1A.1: Bicycle Lanes (Class 2).* Install bicycle lanes where feasible as the preferred bikeway type for all streets on the proposed bikeway network (except for the bicycle boulevards proposed for local streets with low traffic volumes and speeds).
    - *Action 1A.3: Bicycle Boulevards (Class 3B).* Enhance bicycle routes on local streets by developing bicycle boulevards with signage, striping, and intersection modifications to prioritize bicycle travel.
    - *Action 1A.6: Dedicated Right Turn Lanes and "Slip Turns."* Where feasible, avoid the use of dedicated right turn lanes on streets included in the bikeway network. Where infeasible, consider a bicycle through lane to the left of the turn lane or a combined bicycle lane/right turn lane.
- **Policy 1B: Routine Accommodation.** Address bicycle safety and access in the design and maintenance of all streets.
    - *Action 1B.2: Traffic Signals.* Include bicycle-sensitive detectors, bicycle detector pavement markings, and adequate yellow time for cyclists with all new traffic signals and in the modernization of all existing signals.
- **Policy 1C: Safe Routes to Transit.** Improve bicycle access to transit, bicycle parking at transit facilities, and bicycle access on transit vehicles.
    - *Action 1C.1: Bikeways to Transit Stations.* Prioritize bicycle access to major transit facilities from four directions, integrating bicycle access into the station design and connecting the station to the surrounding neighborhoods.
- **Policy 1D: Parking and Support Facilities.** Promote secure and conveniently located bicycle parking at destinations throughout Oakland.

- *Action 1D.6: Bicycle Parking Ordinance.* Adopt an ordinance as part of the City's Planning Code that would require new development to include short and long-term bicycle parking.
- *Action 1D.7: Development Incentives.* Consider reduced automobile parking requirements in exchange for bicycle facilities as part of transportation demand management strategies in new development.

(4) City of Oakland Public Transit and Alternative Modes Policy

The City of Oakland adopted the Public Transit and Alternative Modes Policy, also known as the "Transit-First Policy," in October 2006 (City Council Resolution 73036 C.M.S.). This resolution supports public transit and other alternatives to single occupant vehicles, and directs the LUTE to incorporate "various methods of expediting transit services on designated streets, and encouraging greater transit use." The resolution also directs the City, in constructing and maintaining its transportation infrastructure, to resolve any conflicts between public transit and single occupant vehicles on City streets in favor of the transportation mode that provides the greatest mobility for people rather than vehicles giving due consideration to the environment, public safety, economic development, health, and social equity impacts.

(5) City of Oakland Complete Streets Policy

The City of Oakland adopted the Complete Street Policy to Further Ensure that Oakland Streets Provide Safe and Convenient Travel Options for all Users in January 2013 (City Council Resolution 84204 C.M.S.). This resolution, consistent with the California Complete Streets Act of 2008, directs the City of Oakland to plan, design, construct, operate, and maintain the street network in the City to accommodate safe, convenient, comfortable travel for all modes, including pedestrians, bicyclists, transit users, motorists, trucks, and emergency vehicles.

(6) City of Oakland Conditions of Approval and Uniformly Applied Development Standards

The City's Standard Conditions of Approval (SCAs) that directly pertain to transportation and circulation and that apply to the proposed project are listed below. If the proposed project is adopted by the City, all applicable SCAs will be adopted as conditions of approval and required, as applicable, of the proposed project to help ensure no significant impacts. Because the conditions of approval are incorporated as part of the proposed project, they are not listed as mitigation measures.

SCA TRA-1: Parking and Transportation Demand Management

Prior to issuance of a final inspection of the building permit.

The project applicant shall submit a Transportation and Parking Demand Management (TDM) plan for review and approval by the City. The intent of the TDM plan shall be to reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable consistent with the potential traffic and parking impacts of the project.

The goal of the TDM shall be to achieve the following project vehicle trip reductions (VTR):

- Projects generating 50 to 99 net new AM or PM peak hour vehicle trips: 10 percent VTR.
- Projects generating 100 or more net new AM or PM peak hour vehicle trips: 20 percent VTR.

The TDM plan shall include strategies to increase pedestrian, bicycle, transit, and carpool use, and reduce parking demand. All four modes of travel shall be considered, as appropriate. VTR strategies to consider include, but are not limited to, the following:

a) Inclusion of additional long term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan, and Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement.

b) Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority Bikeway Projects, on-site signage and bike lane striping.

c) Installation of safety elements per the Pedestrian Master Plan (such as cross walk striping, curb ramps, count-down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project.

d) Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.

e) Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.

f) Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency).

g) Provision of a transit subsidy to employees or residents, determined by the project sponsor and subject to review by the City, if the employees or residents use transit or commute by other alternative modes.

h) Provision of an ongoing contribution to AC Transit service to the area between the development and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle or streetcar service; and 3) Establishment of new shuttle or streetcar service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3).

i) Guaranteed ride home program for employees, either through 511.org or through separate program.

j) Pre-tax commuter benefits (commuter checks) for employees.

k) Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants.

l) On-site carpooling and/or vanpooling program that includes preferential (discounted or free) parking for carpools and vanpools.

m) Distribution of information concerning alternative transportation options.

n) Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties.

o) Parking management strategies; including attendant/valet parking and shared parking spaces.

p) Requiring tenants to provide opportunities and the ability to work off-site.

q) Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week).

r) Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours.

The TDM Plan shall indicate the estimated VTR for each strategy proposed based on published research or guidelines. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.

The project applicant shall implement the approved TDM Plan on an ongoing basis. For projects that generate 100 or more net new AM or PM peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.

SCA TRA-2: Construction Traffic and Parking

Prior to issuance of a demolition, grading, or building permit.

The project applicant and construction contractor shall meet with appropriate City of Oakland agencies to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. The project applicant shall develop a construction management plan for review and approval by the Planning and Zoning Division, the Building Services Division, and the Transportation Services Division. The plan shall include at least the following items and requirements:

a) A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.

b) Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.

c) Location of construction staging areas for materials, equipment, and vehicles at an approved location.

d) A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an on-site complaint manager. The manager shall determine the cause of the complaints and shall take prompt action to correct the problem. Planning and Zoning shall be informed who the Manager is prior to the issuance of the first permit issued by Building Services.

e) Provision for accommodation of pedestrian flow.

f) Provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on-street spaces.

g) Any damage to the street caused by heavy equipment, or as a result of this construction, shall be repaired, at the project sponsor's expense, within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to issuance of a final inspection of the building permit. All damage that is a threat to public health or safety shall be repaired immediately. The street shall be restored to its condition prior to the new construction as established by the City Building Inspector and/or photo documentation, at the project sponsor's expense, before the issuance of a Certificate of Occupancy.

h) Any heavy equipment brought to the construction site shall be transported by truck, where feasible.

i) No materials or equipment shall be stored on the traveled roadway at any time.

j) Prior to construction, a portable toilet facility and a debris box shall be installed on the site, and properly maintained through project completion.

k) All equipment shall be equipped with mufflers.

l) Prior to the end of each work day during construction, the contractor or contractors shall pick up and properly dispose of all litter resulting from or related to the project, whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors.

2. Traffic and Transportation Impacts, Standard Conditions of Approval, and Mitigation Measures

This section discusses potential impacts to transportation and circulation that could result from the implementation of the proposed project. The section begins with the significance thresholds, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as appropriate. With respect to transportation and circulation, the project would have a significant impact on the environment if it meets or exceeds the City of Oakland CEQA transportation thresholds of significance detailed below.

a. Significance Criteria

The project would have a significant impact on the environment if it would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, specifically:

(1) Traffic Load and Capacity Thresholds

1. At a study, signalized intersection which is located outside the Downtown[2] area and that does not provide direct access to Downtown, the project would cause the motor vehicle level of service (LOS) to degrade to worse than LOS D (i.e., LOS E or LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;
2. At a study, signalized intersection which is located within the Downtown area or that provides direct access to Downtown, the project would cause the motor vehicle LOS to degrade to worse than LOS E (i.e., LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;
3. At a study, signalized intersection outside the Downtown area and that does not provide direct access to Downtown where the motor vehicle level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds;
4. At a study, signalized intersection outside the Downtown area and that does not provide direct access to Downtown where the motor vehicle level of service is LOS E,

[2] The Downtown area is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by the West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south, and I 980/Brush Street to the west. Intersections that provide direct access to downtown are generally defined as principal arterials within two (2) miles of Downtown and minor arterials within one (1) mile of Downtown, provided that the street connects directly to Downtown.

the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more;

5. At a study, signalized intersection for all areas where the motor vehicle level of service is LOS F, the project would cause (a) the overall volume-to-capacity ("V/C") ratio to increase 0.03 or more or (b) the critical movement V/C ratio to increase 0.05 or more;
6. At a study, unsignalized intersection the project would add ten (10) or more vehicles to the critical movement and after project completion satisfy the California Manual on Uniform Traffic Control Devices (MUTCD) peak hour volume traffic signal warrant;
7. For a roadway segment of the Congestion Management Program (CMP) Network, the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project;[3]
8. Cause congestion of regional significance on a roadway segment on the Metropolitan Transportation System (MTS) evaluated per the requirements of the Land Use Analysis Program of the CMP;4
9. Result in substantially increased travel times for AC Transit buses.

(2) Traffic Safety Thresholds

10. Directly or indirectly cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible uses;
11. Directly or indirectly result in a permanent substantial decrease in pedestrian safety;
12. Directly or indirectly result in a permanent substantial decrease in bicyclist safety;
13. Directly or indirectly result in a permanent substantial decrease in bus rider safety
14. Generate substantial multi-modal traffic traveling across at-grade railroad crossings that cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard.[5]

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[3] Refer to the ACTC *Congestion Management Program* for a description of the CMP Network. In Oakland, the CMP Network includes all state highways plus the following streets: portions of Martin Luther King Jr. Way, Webster/ Posey Tubes, 23rd Avenue, 29th Avenue, and Hegenberger Road.

[4] Refer to ACTC's *Congestion Management Program* for a description of the MTS and the Land Use Analysis Program. The ACTC will identify the roadway segments of the MTS that require evaluation in its letter commenting on the Notice of Preparation (NOP) issued by the City for the project (see section 6.c.(7), **Error! Reference source not found.**, Required Congestion Management Program (CMP) Evaluation, for list of these roadway segments). Note that the City is required to send NOPs and notices of proposed general plan amendments to ACTC under the Land Use Analysis Program regardless of how many project-related trips are expected to be generated.

[5] Refer to the City's SCOAs for conditions related to at-grade railroad crossings.

(3) Other Thresholds

15. Fundamentally conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment;

16. Result in a substantial, though temporary, adverse effect on the circulation system during construction of the project; or

17. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

(4) Cumulative Impacts

18. A project's contribution to cumulative impacts is considered "considerable" (i.e., significant) when the project exceeds at least one of the thresholds listed above in a future year scenario.

b. Project Characteristics

This section describes the project being analyzed in this study and the process used to develop the traffic projections, including trip generation, trip distribution, and trip assignment.

(1) Project Description

The project would consist of 330 residential units and approximately 3,000 square feet of retail space, in two buildings as shown on the project site plan on Figure IV.C-6, and described below:

- Building A would occupy the entire block bound by 5th, Madison, 4th, and Jackson Streets. It would replace the existing Cost Plus Headquarters with 240 multi-family residential units and 635 square feet of retail. Building A would provide two levels of parking with 256 parking spaces accessed via a full-access driveway on 4th Street.
- Building B would occupy the east half of the block bound by 4th, Madison, 3rd, and Jackson Streets. It would replace the existing parking lot for Cost Plus with 90 multi-family residential units and 2,229 square feet of retail space. Building B would provide two levels of parking with 109 parking spaces accessed via a full-access driveway on 3rd Street.

(2) Trip Generation Estimates

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the local roadway network. Trip generation data published by the Institute of Transportation Engineers (ITE) in Trip Generation Manual (Ninth Edition) was used as a starting point to estimate the project vehicle trip generation. The trip generation rates are adjusted to account for the project's location in Downtown Oakland, its proximity to transit, and the current uses that would be eliminated.

The ITE data is based on data collected at mostly single-use suburban sites where the automobile is often the only travel mode. However, the project site is in a mixed-use urban environment in downtown Oakland where many trips are walk, bike, or transit trips. Since the proposed project is within three blocks (0.25 miles) of the Lake Merritt BART Station, this analysis reduces the ITE based trip generation by 43 percent to account for the non-automobile trips. This reduction is consistent with City of Oakland Transportation Impact Study Guidelines and is based on the Bay Area Travel Survey (BATS) 2000 which shows that the non-automobile mode share within one-half mile of a BART Station in Alameda County is about 43 percent. A 2011 research study shows reducing ITE based trip generation using BATS data results is a more accurate estimation of trip generation for mixed use developments than just using ITE based trip generation.[6]

The trip generation estimates were further reduced to account for trips currently generated by the existing office uses that would be removed with the project. The existing trip generation at the site is based on data collected in February 2015. Accounting for non-auto and existing trips, the project is estimated to generate about 62 net new AM peak hour and 88 net new PM peak hour trips. Table IV.C-4 provides a detailed summary of the net trips generated by the project.

(1) Trip Generation for Non-Auto Travel Modes

Consistent with City of Oakland *Transportation Impact Study Guidelines,* Table IV.C-5 presents the estimates of project trip generation for all travel modes.

(2) Trip Distribution and Assignment

The trip distribution and assignment process estimates how the vehicle trips generated by a project site would distribute across the roadway network. Figure IV.C-7 shows the trip distribution for the project, which is generally consistent with the JLS Addendum, modified to account for the project location.

Trips generated by the project were assigned to the roadway network according to the trip distribution shown on Figure IV.C-7. Figures V.C-8A and V.C-8B show the resulting trip assignment by roadway segment and Figure IV.C-8C shows the project trips at the study intersections for the weekday AM and PM peak hours.

[6] UC Davis, Institute of Transportation Studies, 2011. *Evaluation of the Operation and Accuracy of Five Available Smart Growth Trip Generation Methodologies.*

TABLE IV.C-4 TRIP GENERATION SUMMARY – PROJECT

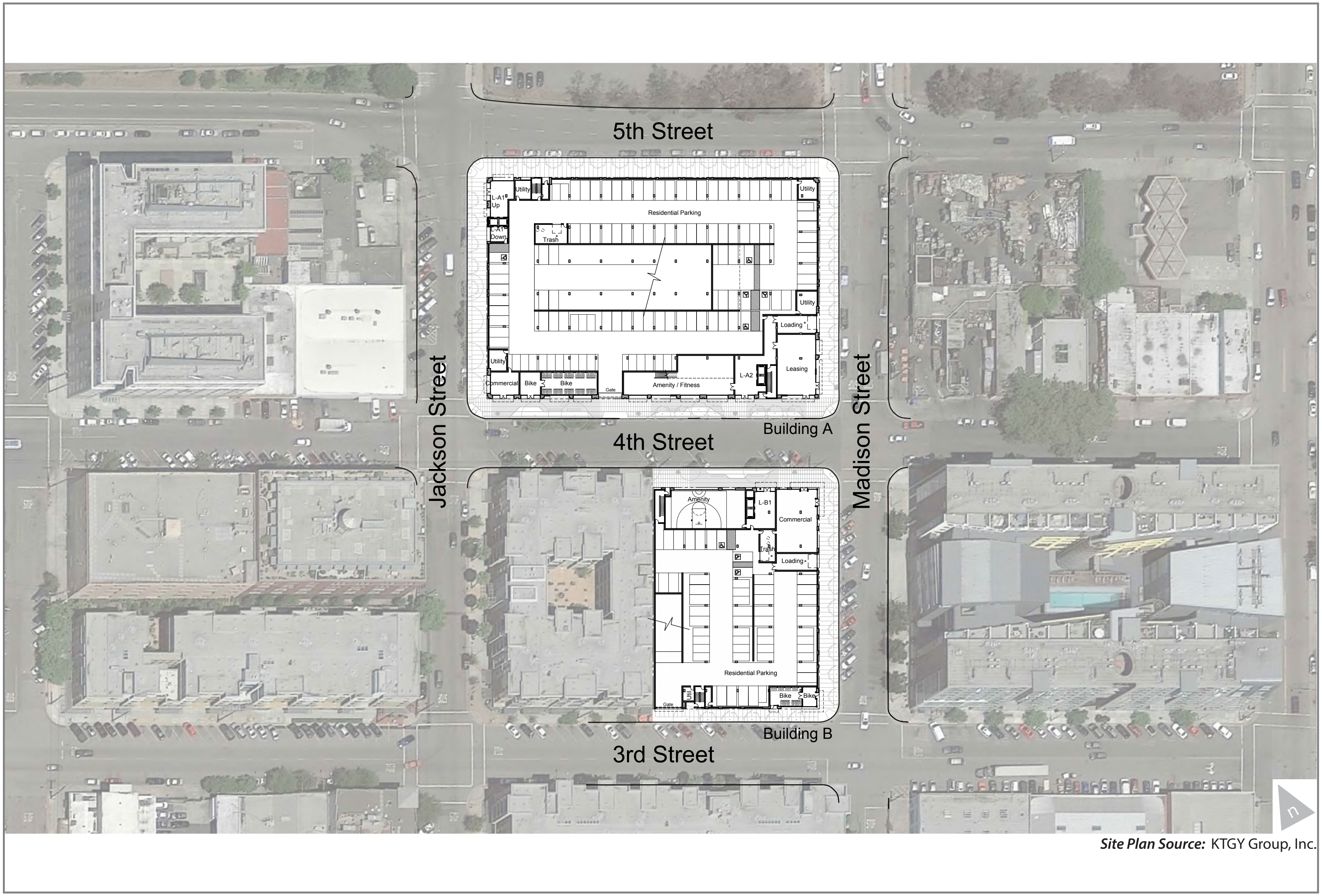
Land Use	Size	Unit[a]	Daily Trips	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Trips Total	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Trips Total
Proposed Project									
Apartment[b]	330	DU	2,195	34	134	168	133	72	205
Retail[c]	2.9	KSF	122	2	1	3	5	6	11
ITE Trip Generation Subtotal			***2,317***	***36***	***135***	***171***	***138***	***78***	***216***
Non-Auto Reduction (-43%)[d]			*-996*	*-15*	*-58*	*-74*	*-59*	*-34*	*-93*
Adjusted Total			**1,321**	**21**	**77**	**97**	**79**	**44**	**123**
Existing Land Use									
Total Existing Trips[e]			N/A	-28	-7	-35	-4	-31	-35
Net Trips			**1,321**	**–7**	**70**	**62**	**75**	**13**	**88**

[a] DU= dwelling units KSF= 1,000 square feet
[b] ITE Trip Generation (9th Edition) land use category 220 (Apartment):
Daily: 6.65 trips per DU
AM Peak Hour: Average Rate = 0.51 trips per DU (20% in, 80% out)
PM Peak Hour: Average Rate = 0.62 trips per DU (65% in, 35% out)
[c] ITE Trip Generation (9th Edition) land use category 820 (Shopping Center):
Daily: 42.70 trips per DU
AM Peak Hour: Average Rate = 0.96 trips per DU (62% in, 38% out)
PM Peak Hour: Average Rate = 3.71 trips per DU (48% in, 52% out)
[d] City of Oakland Transportation Impact Study Guidelines based on BATS 2000 data.
[e] Based on counts at existing facility conducted in February 2015.
Source: Fehr & Peers, 2015.

TABLE IV.C-5 TRIP GENERATION BY TRAVEL MODE

Mode	Mode Share Adjustment Factors[a]	Daily	AM Peak Hour	PM Peak Hour
Automobile	57.0%	1,321	97	123
Transit	30.4%	704	52	66
Bike	3.9%	90	7	8
Walk	23.0%	533	39	50
Total Trips		**2,648**	**195**	**247**

[a] Based on *City of Oakland Transportation Impact Study Guidelines* assuming project site is in an urban environment within 0.5 miles of a BART Station.
Sources: Fehr & Peers, 2015.



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Source: Fehr & Peers and KTGY Group, Inc., 2015.

Figure IV.C-6
Jack London Square 4th & Madison Project EIR
Project Site Plan

LEGEND

Project Site

XX% Project Trip Distribution

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Source: Fehr & Peers, 2015

Figure IV.C-7
Jack London Square 4th & Madison Project EIR
Project Trip Distribution

LEGEND

Project Trip Assignment

- Project Site
- 25 Trips or More
- Under 25 Trips
- Intersection Operating at LOS E or Better under Current or Future Conditions
- Intersection Operating at LOS F under Current and/or Future Conditions

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Source: Fehr & Peers, 2015

Figure IV.C-8A
Jack London Square 4th & Madison Project EIR
AM Peak Hour Project Trip Assignment

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Source: Fehr & Peers, 2015

Figure IV.C-8B
Jack London Square 4th & Madison Project EIR
PM Peak Hour Project Trip Assignment

LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Project Site

Study Intersection

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Source: Fehr & Peers, 2015

Figure IV.C-8C
Jack London Square 4th & Madison Project EIR
Project Trip Assignment

c. Less-than-Significant Impacts

The project's less-than-significant impacts are discussed below.

(1) Existing Plus Project Conditions

This section presents the results of the intersection Level of Service analysis for Existing Plus Project Conditions based on application of Significance Thresholds #1 through #6 as previously listed. Existing Conditions form the baseline against which project-related impacts are evaluated.

Figure IV.C-9 shows the traffic volumes under Existing Plus Project Conditions, which consists of Existing traffic volumes (shown on Figure IV.C-5) plus net new volumes generated by the proposed project (shown on Figure IV.C-8C). This analysis assumes that the roadway network, including signal timing parameters, would be the same as under Existing Conditions.

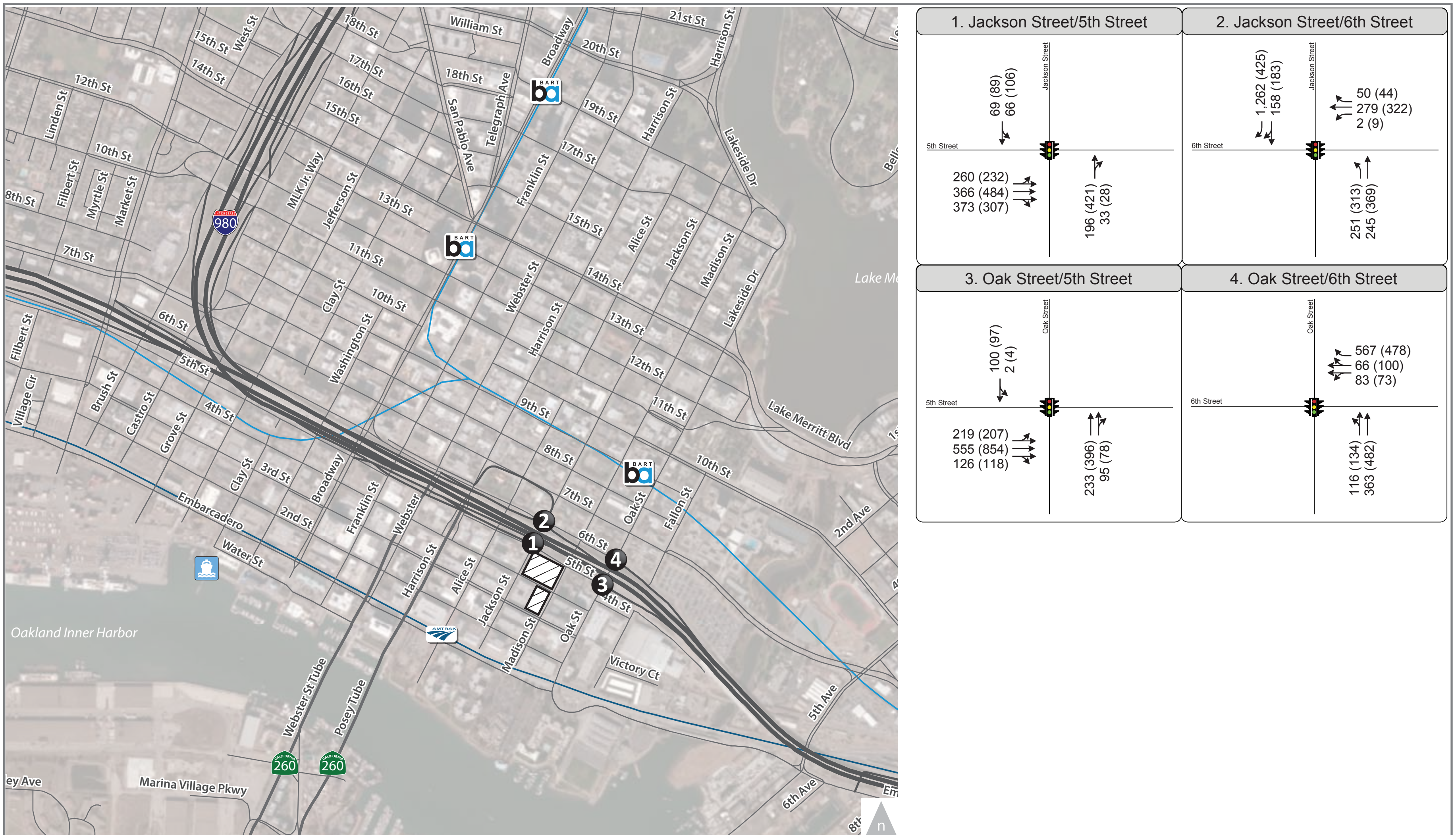
The intersection LOS results presented in Table IV.C-6 show that with the project (Existing Plus Project Conditions), all four study intersections would continue to operate at LOS B or better during both AM and PM peak hours. All four study intersections are located within Downtown Oakland, where the LOS standard for intersection operations is LOS F. Therefore, the proposed project would not cause a significant impact at the study intersections under Existing Plus Project Conditions, and no mitigation measures are required.

(2) 2035 Conditions

Cumulative Conditions represent projected conditions in 2035, including traffic estimates for probable future developments. Items addressed in this chapter include the development of traffic volume forecasts for the 2035 No Project and 2035 Plus Project scenarios, roadway improvements, intersection operations results, and project impacts. Project impacts at intersections under 2035 conditions is based on direct application of Significance Threshold #18, which references Significance Thresholds #1 through #6.

2035 Traffic Volume Forecasts

Cumulative volumes were obtained from the *JLS Addendum*, which used the Alameda County Transportation Commission (ACTC) Travel Demand Model (version released in June 2011 and based on Association of Bay Area Government [ABAG] *Projections 2009*) to estimate 2035 volumes. Since the JLS Addendum forecasts did not account for the proposed project, the 2025 No Project analysis for the Cost Plus Site project uses the JLS Addendum 2035 Plus Project forecasts. Figure IV.C-10 shows the 2035 No Project traffic volumes. Figure IV.C-11 shows the traffic volumes under 2035 Plus Project Conditions, which consists of 2035 No Project traffic volumes (shown on Figure IV.C.10) plus net new volumes generated by the proposed project.



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Project Site

Study Intersection

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Source: Fehr & Peers, 2015

Figure IV.C-9
Jack London Square 4th & Madison Project EIR
Existing Plus Project Intersection Hour Volumes, Lane Configurations and Traffic Control

TABLE IV.C-6 EXISTING PLUS PROJECT INTERSECTION LOS RESULTS

	Existing				Existing Plus Project			
	AM		PM		AM		PM	
Intersection	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS
Jackson Street/5th Street	11.2	B	15.6	B	11.3	B	15.7	B
Jackson Street/6th Street	25.7	C	12.2	B	30.8	C	12.7	B
Oak Street/5th Street	8.8	A	9.7	A	8.9	A	9.7	A
Oak Street/6th Street	8.9	A	8.8	A	9.0	A	8.8	A

[a] For signalized intersections, the delay shown is the weighted average for all movements in seconds per vehicle.
Source: Fehr & Peers, 2015.

Intersection Operations

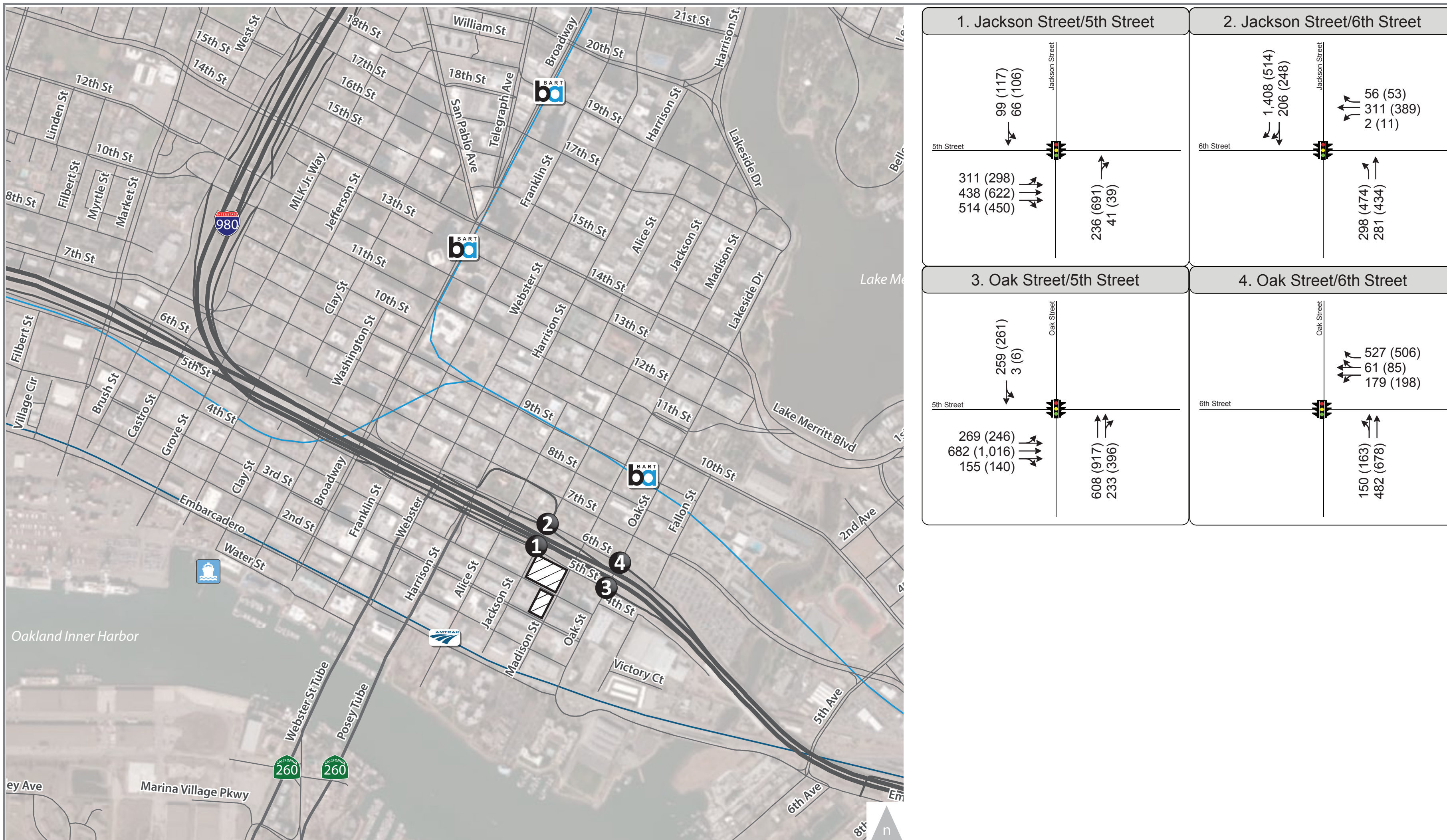
The intersection LOS analysis results under 2035 No Project and 2035 Plus Project Conditions are presented in Table IV.C-7. As shown, all study intersections would continue to operate at LOS D or better.[7] Therefore, the proposed project would not cause a significant impact at the study intersections under 2035 Plus Project Conditions, and no mitigation measures are required.

TABLE IV.C-7 CUMULATIVE AND CUMULATIVE PLUS PROJECT INTERSECTION LOS RESULTS

	2035 No Project				2035 Plus Project			
	AM		PM		AM		PM	
Intersection	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS
Jackson Street/5th Street	12.4	B	21.9	C	12.4	B	22.2	C
Jackson Street/6th Street	27.7	C	27.2	C	30.5	C	27.9	C
Oak Street/5th Street	12.1	B	47.3	D	12.3	B	48.5	D
Oak Street/6th Street	9.6	A	10.7	B	9.7	A	10.8	B

[a] For signalized intersections, the delay shown is the weighted average for all movements in seconds per vehicle.
Source: Fehr & Peers, 2015.

[7] These intersection results differ from those presented in the Lake Merritt Station Area Plan EIR (LMSP). This discrepancy is explained in the transportation memo presented as Appendix D to this EIR.



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Project Site

Study Intersection

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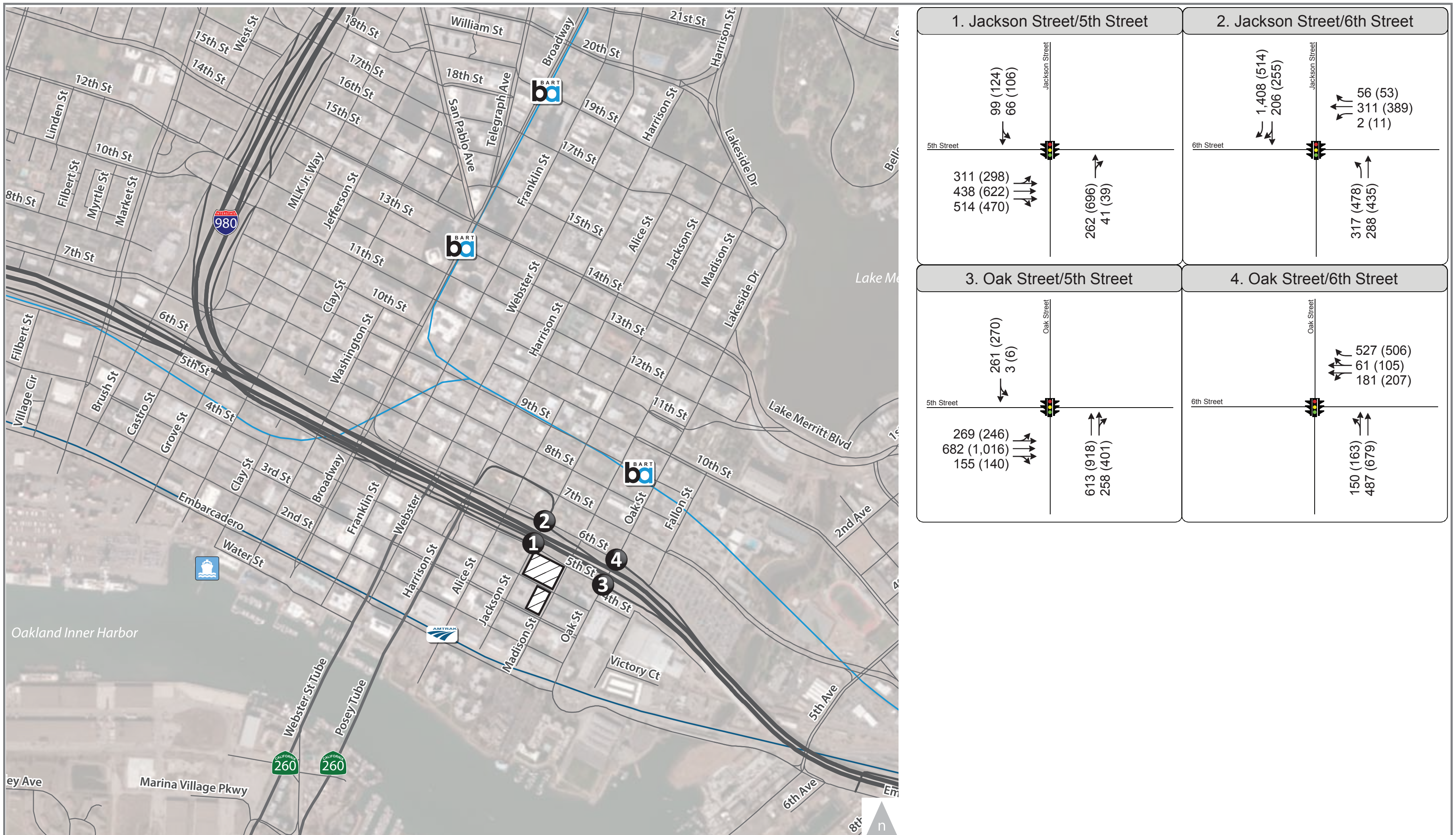
Source: Fehr & Peers, 2015

Figure IV.C-10
Jack London Square 4th & Madison Project EIR
2035 No Project Intersection Peak Hour Volumes, Lane Configurations and Traffic Control



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Project Site

Study Intersection

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Source: Fehr & Peers, 2015

Figure IV.C-11
Jack London Square 4th & Madison Project EIR
2035 Plus Project Intersection Peak Hour Volumes, Lane Configurations and Traffic Control

(1) Transit Travel Time

The discussion of transit travel time is based on application of Significance Threshold #9. Currently, no bus service operates directly adjacent to the project site; however, several bus routes operate in the project vicinity. The intersection operations analysis presented in previous sections shows that the proposed project would increase peak hour delay by less than three seconds at the intersections nearest to the project site. Currently, no buses operate through these intersections. The proposed project would result in a smaller increase in delay at intersections further away that have bus service. The resulting increases would have a minor effect on transit service within the area as the estimated increase is within the variability in travel time experienced by each bus on these corridors. This is a less-than-significant impact, and no mitigation measures are required.

(2) Vehicle, Pedestrian, and Bicycle Safety

The discussion of vehicle, pedestrian, and bicycle safety is based on application of Significance Thresholds #10 through #14. The project would result in increased vehicular traffic and pedestrian and bicycle activity in and around the project area. However, the project would not modify the streets serving the project site. Access and circulation for different travel modes are discussed below.

Transportation Hazards

The discussion of transportation hazards is based on application of Significance Threshold #10. The project site plan provides only conceptual drawings; the final project design will be reviewed to ensure consistency with applicable design standards, such as adequate sight distance for pedestrians and vehicles at project driveways.

The proposed project would eliminate the existing driveway on 4th Street currently used to access the Cost Plus private parking lot. The project would provide a driveway on 4th Street for Building A garage and a driveway to 3rd Street for Building B garage.

Madison Street is currently a one-way southbound street adjacent to the project between 4th and 5th Streets and further north. Considering the proposed project driveway locations and the existing street grid, converting this block of Madison Street to two-way operations would not provide much benefit to the proposed project. Therefore, converting this segment of Madison Street to two-way operation is not recommended.

The final design for the project is expected to minimize potential conflicts between various modes and provide safe and efficient pedestrian, bicycle, and vehicle circulation within the site and between the project and the surrounding circulation systems.

Aside from providing a sidewalk along Building A on 4th Street, the project does not propose any changes to the public right-of-way and would not change the physical design of the streets surrounding the site. In addition, the multi-family residential and retail uses proposed by the project are consistent with existing uses in the surrounding neighborhoods. This is a less-than-significant impact, and no mitigation measures are required.

Recommendation 1: While not required to address a CEQA impact, consider the following as part of the final project site plan review:

- Ensure that both proposed project driveways on 3rd and4th Streets provide adequate sight distance between vehicles exiting the driveway and pedestrians on the adjacent sidewalk and vehicles on the adjacent roadway. If necessary, it may require limiting landscaping and/or removing on-street parking spaces adjacent to the project driveways.

Pedestrian Safety

The discussion of pedestrian safety is based on application of Significance Threshold #11. The project does not propose any physical changes to the pedestrian environment.

As described in the existing conditions sections, the sidewalks adjacent to the project site are generally 18-feet wide with an effective width ranging from 7 to 12 feet. These facilities are consistent with the City of Oakland Pedestrian Master Plan (PMP) recommendations for sidewalk widths. The project proposes to complete the missing sidewalk along the project's Building A frontage on 4th Street where there is currently employee parking for Cost Plus. As previously shown on Figure IV.C-4, marked crosswalks are not provided on some of the unsignalized intersections surrounding the project. Signalized intersections near the project site include crosswalks on all four approaches, curb ramps, and pedestrian countdown signals.

The proposed project would consist of residential uses and neighborhood serving commercial retail and is expected to generate pedestrian demand in the neighborhoods surrounding the site. The existing pedestrian network surrounding the site is adequate to serve the expected increase in pedestrian demand. The proposed project would not propose physical design features that would expose pedestrians to a permanent and substantial hazard. This is a less-than-significant impact, and no mitigation measures are required.

Recommendation 2: While not required to address a CEQA impact, consider the following pedestrian improvements:

- Provide marked crosswalks on all approaches at Madison Street/4th Street intersection. In addition, provide a curb extension at the northwest and southwest corners of the intersection.

- Provide a marked crosswalk crossing the westbound 4th Street approach at Jackson Street/4th Street intersection. In addition, provide a curb extension at the southeast and northeast corners of the intersection to improve sight distance and minimize the conflict between pedestrians and motorists using the angled parking spaces.

- Replace the existing diagonal curb ramps adjacent to the project site with perpendicular curb ramps. ***[City to provide any desired revisions to this.]***

Bicyclist Safety

The discussion of bicyclist safety is based on application of Significance Threshold #12. The project does not propose any physical changes to the bicycle infrastructure surrounding the site.

The project would generate additional bicycle activity in the surrounding area. The existing bicycle facilities surrounding the site on 2nd and Harrison Streets, and those proposed on Madison and Oak Streets would provide bicycle access to the project site. With implementation of Recommendation 1, the proposed driveways on 4th Street and 3rd Street would not conflict with existing or proposed bikeways.

The project will also provide short-term and long-term bicycle parking at both Buildings A and B to accommodate the bicycle activity generated by the project. The project site plan identifies the long-term bicycle parking for Building A along the 4th Street frontage near the southwest corner of the building adjacent to the building main lobby. The site plan shows the long-term bicycle parking for Building B at the southeast corner of the building. It is expected that the long-term bicycle parking would be accessible from both the garage and the adjacent street. The project site plan does not identify short-term bicycle parking; however, short-term bicycle parking can be accommodated by bicycle racks on the surrounding sidewalk near each lobby and retail space..

The project would not result in permanent substantial decrease in bicycle safety because it would not propose physical design features that would expose bicyclists to a permanent and substantial hazard. This is a less-than-significant impact, and no mitigation measures are required.

Bus Rider Safety

The discussion of bus rider safety is based on application of Significance Threshold #13. Bus riders would use the pedestrian facilities to travel between the bus stops and the project site.

The nearest bus stops to the project site are on Jackson Street, just south of 3rd Street and on 7th Street, east of Jackson Street. Currently, both bus stops only provide a bus stop sign. The project does not propose any physical changes to the bus stops or the infrastructure serving bus riders. The new bus riders generated by the project would not result in overcrowding at the nearby bus stops.

The project would not result in permanent substantial decrease in bus rider safety. This is a less-than-significant impact, and no mitigation measures are required.

At-Grade Railroad Crossings

The discussion of at-grade railroad crossing safety is based on application of Significance Threshold #14. The project is located near several at-grade railroad crossings; the closest is located at Oak Street and Embarcadero, which is about 0.25 miles south of the site. However, the project will not generate substantial traffic of any travel mode (less than 10 AM and PM peak hour vehicle trips) travelling across at-grade railroad crossings. As a result, this would be a less-than-significant impact, and no mitigation measures are required.

Consistency with Adopted Policies, Plans, or Programs Supporting Alternative Transportation

The discussion of consistency with adopted policies, plans or programs supporting alternative transportation is based on application of Significance Threshold #15. A discussion of applicable policies and plans is provided below. In general, the project is consistent with these policies, plans and programs, and would not cause a significant impact by conflicting with adopted policies, plans, or programs supporting public transit, bicycle, or pedestrian.

The City of Oakland General Plan LUTE, as well as the City's Public Transit and Alternative Mode and Complete Streets Policies, states a strong preference for encouraging the use of non-automobile transportation modes, such as transit, bicycling, and walking. It is estimated that about 40 percent of the trips generated by the project would be by non-auto travel modes. The high usage of non-auto modes is due to the site's proximity to Downtown Oakland, the Lake Merritt BART station, Amtrak Station, Jack London Square, and the nearby AC Transit Routes, such as 11, 62, 72, 58L. By providing a mix of residential and retail uses in a dense walkable urban environment with both bicycle infrastructure and transit service, the project encourages the use of non-automobile transportation modes.

Consistent with the City of Oakland's SCA TRA-1, the project would implement a Transportation Demand Management (TDM) Plan because it would generate more than 50 peak hour trips.

Project would not conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. This is a less-than-significant impact, and no mitigation measures are required.

Recommendation 3: Consistent with the City of Oakland's requirements, consider including the following strategies as part of the required TDM program for the proposed project:

- Unbundle the cost of parking from the cost of housing where residents pay separately for their parking spaces.
- Designate dedicated on-site parking spaces for car-sharing.
- Provide long-term and short-term bicycle parking beyond the minimum required by City of Oakland Planning Code.
- Cooperate with City of Oakland and/or other regional agencies to allow installation of a potential bike share station along the project frontage.
- Provide all new residents and employees with information on the various transportation options available.
- Provide residents and employees with free or partially subsidized transit passes.

Construction Period Impacts

Off-site intersection impacts of the proposed project were found to be less-than-significant based on the significance criteria. However, there could be temporary, although significant impacts during the construction phase of the project. The discussion of construction-period impacts is based on application of Significance Threshold #16.

Considering the proximity of I-880 freeway ramps on Oak and Jackson Streets, it is expected that construction trucks on local roadways would be limited to those streets. Truck traffic that occurs during the weekday peak commute hours (7:00 to 9:00 AM and 4:00 to 6:00 PM) may result in worse LOS and higher delays at study intersections during the construction period. Also, if parking of construction workers' vehicles cannot be accommodated within the project site, it would temporarily increase parking occupancy levels in the area.

Potential construction activity along the 3rd, 4th, 5th, Jackson and Madison Street frontages, especially in the public right-of-way, could also result in temporary closure of sidewalks and prohibition of on-street parking.

The City of Oakland Construction Traffic and Parking Standard Condition of Approval (SCA) requires that a Construction Traffic Management Plan be developed as part of a larger Construction Management Plan to address potentially significant impacts during the project's construction. Thus, with the implementation of this SCA, the proposed project would not result in a substantial, though temporary, adverse effect on the circulation system during construction of the project. This is a less-than-significant impact, and no mitigation measures are required.

Changes in Air Traffic Patterns

The discussion of changes in air traffic patterns is based on application of Significance Threshold #17. The Oakland International Airport is located about nine miles south of the project site. The project would increase density and increase building heights at the project site. However, building heights are not expected to interfere with current flight patterns of Oakland International Airport or other nearby airports. Therefore, the project would not result in change in air traffic patterns. The project would result in a less-than significant impact on air traffic patterns.

(3) Planning-Related Non-CEQA Issues Discussion

The items discussed in this section include:

- Parking Considerations
- Transit Ridership

While these subjects do not relate to environmental impacts that are required to be evaluated under CEQA, they are discussed for informational purposes to aid the public and decision makers in evaluating and considering the merits of the project.

Parking Considerations

Bicycle Parking

Section 17.117.090 of the Oakland Municipal code requires bicycle parking spaces for non-residential uses at a rate of one long-term space per 12,000 square feet, with a minimum of two spaces and one short-term space per 5,000 square feet, with a minimum of two spaces. The project would add about 3,000 square feet of non-residential area, requiring the minimum two long-term and two short-term bicycle parking spaces.

For multi-family residential uses (Section 17.117.110), the City of Oakland requires bicycle parking at a rate of one long-term space for every four dwelling units, with a minimum of two long-term spaces and one short-term space for every 20 dwelling units, with a minimum of two short-term spaces. Buildings A and B combined would add 330 dwelling units, requiring 83 long-term parking spaces and 17 short-term parking spaces.

As shown in Table IV.C-8, neither Building A nor Building B would meet the City's minimum requirements for long-term bicycle parking. The required short-term bicycle parking can be accommodated by bicycle racks on the surrounding sidewalk near each lobby and retail space.

TABLE IV.C-8 BICYCLE PARKING REQUIREMENTS

		Long-Term		Short-Term	
Land Use	**Size**	**Spaces per Unit[a]**	**Spaces**	**Spaces per Unit[a]**	**Spaces**
Building A					
Apartments	240 DU	1:4 DU	60	1:20 DU	12
Commercial	0.7 KSF	Min.	2	Min.	2
Total Required Bicycle Spaces			62		14
Total Bicycle Parking Provided			60		-[b]
Bicycle Parking Surplus (Deficit)			**-2**		**-14**
Building B					
Apartments	90 DU	1:4 DU	23	1:20 DU	5
Commercial	2.2 KSF	Min.	2	Min.	2
Total Required Bicycle Spaces			25		7
Total Bicycle Parking Provided			23		-[b]
Bicycle Parking Surplus (Deficit)			**-2**		**-7**

Notes: DU = dwelling unit; KSF = 1,000 square feet
[a] Based on Oakland Municipal Code Sections 17.117.090 and 17.117.110.
[b] Short-term bicycle parking details not listed on site plan.
Source: Fehr & Peers, 2015.

Recommendation 4: While not required to address a CEQA impact, the following should be considered as part of the final design for the project:

- Provide additional long-term bicycle parking to meet the City's minimum requirements for non-residential uses.
- Identify location and amount of short-term bicycle parking, consistent with the City of Oakland Bicycle Parking Ordinance.
- Locate long-term bicycle parking access points to allow ease of access from inside and outside of the two project buildings. In addition, to the extent feasible, locate the long-term bicycle parking near the main building lobbies to provide easy access for the residents.

Automobile Parking

This section evaluates parking requirements per City of Oakland municipal code, estimates parking demand for the project and summarizes strategies to reduce parking demand.

Parking Supply

As previously described, the proposed project would consist of the following off-street parking facilities:

- Building A would provide two levels of parking with 256 parking spaces accessed via a full-access driveway on 4th Street.
- Building B would provide two levels of parking with 109 parking spaces accessed via a full-access driveway on 3rd Street.

The proposed project would eliminate the following existing off-street facilities:

- Building A would eliminate 16 perpendicular spaces on the north side of 4th Street.
- Building B would eliminate the existing Cost Plus parking lot that has a driveway on 4th Street.

Both parking facilities are currently used by Cost Plus employees. Thus, the proposed project would also eliminate the existing parking demand for these spaces.

The streets adjacent to the project site currently provide on-street parking. The proposed driveways on 3rd and 4th Streets will eliminate parking spaces, some of which would be replaced with the removal of the surface lot driveway on 4th Street, and addition of parallel parking spaces along the north side of 4th Street at the current location of the off-street perpendicular spaces. The net effect of the proposed project on on-street parking is not known at this time. Other on-street parking spaces adjacent to the site would remain the same.

City Code Parking Requirements

City of Oakland municipal code requirements for vehicle parking are detailed in Sections 17.116.060 and 17.116.080. The code requires one automobile parking space per multi-family dwelling unit. No parking is required for the retail space since it is less than the minimum 3,000 square feet for which parking is required.

Table IV.C-9 summarizes the code-required and proposed residential parking for the project. Building A would require 240 off-street residential parking spaces and would provide 256 spaces, resulting in a parking surplus of 16 spaces. Building B would require 90 off-street residential parking spaces and would provide 109 spaces, resulting in a

TABLE IV.C-9 REQUIRED AND PROPOSED PARKING

Land Use	Ratio[a]	Units[b]	Parking Spaces
Building A			
Required Residential Parking	1.0	240 DU	240
Required Commercial Parking	0.0	0.7 KSF	0
Total Required Parking			240
Parking Supply			256
Parking Surplus			**16**
Building B			
Required Residential Parking	1.0	90 DU	90
Required Commercial Parking	0.0	2.2 KSF	0
Total Required Parking			90
Parking Supply			109
Parking Surplus			**19**
TOTAL SURPLUS			**35**

[a] Source: City of Oakland Municipal Code Sections 17.116.060 - Off-Street Parking Requirements for Residential = 1.0 space per DU
[b] DU = Dwelling Units
Source: Fehr & Peers, 2015.

parking surplus of 19 spaces. Both buildings combined would have a surplus of 35 parking spaces.

Estimated Parking Demand

Parking demand for the residents of the project was determined by using average vehicle ownership rates of the Census tracts in the project area. According to American Community Survey estimates,[8] average vehicle ownership in the area is 0.92 vehicles per multi-family dwelling unit. Table IV.C-10 summarizes parking demand for the project. Peak parking demand for Building A would be 221 spaces, resulting in a surplus of 35 spaces. Peak parking demand for Building B would be 83 spaces, resulting in a surplus of 26 spaces. Both buildings combined would have a surplus of 61 parking spaces.

Parking demand for residential visitors and the commercial component of the project were estimated using ITE *Parking Generation, 4th Edition* and Urban Land Institute (ULI) *Shared*

[8] American Community Survey 5-Year Estimates, 2013.

TABLE IV.C-10 RESIDENTIAL PARKING DEMAND

Land Use	Rate[a]	Units[b]	Peak Parking Demand
Building A			
Parking Demand	0.92	240 DU	221
Residential Parking Supply			256
Parking Surplus			**35**
Building B			
Parking Demand	0.92	90 DU	83
Residential Parking Supply			109
Parking Surplus			**26**
TOTAL SURPLUS			**61**

[a] Based on 2013 ACS average automobile ownership of 0.92 vehicles per residential unit.
[b] DU = Dwelling unit.
Source: Fehr & Peers, 2015.

Parking, 2nd Edition. Table IV.C-11 presents peak parking demand on a typical weekday and Saturday. The peak parking demand for non-residential spaces for weekdays and Saturdays is estimated to be about 41 and 42 spaces, respectively, for both buildings combined. This is estimated to result in a parking deficit of 41or 42 spaces, because the project site plan does not designate parking for residential visitors and retail uses.

The parking demand estimated presented in Table IV.C-11 is conservative for the following reasons:

- The retail use would mostly serve the local residents and workers. Considering that the project is located in a dense urban neighborhood with a large number of residents and workers within walking distance of the project. It is expected that a higher proportion of trips would be non-automobile trips than assumed in this analysis.
- The analysis assumes that the parking demand for both residential visitors and commercial use would peak at the same time.

Parking Analysis Conclusions

The project would meet both City requirements for automobile parking, and would provide adequate parking supply to meet its estimated peak residential demand. Non-residential motorists unable to park at the site would most likely park on-street, or use other parking facilities in the vicinity. Since the proposed project is in a dense urban neighborhood with good pedestrian connections, nearby bicycle lanes, and is served by

TABLE IV.C-11 NON-RESIDENTIAL PARKING DEMAND

			Peak Hour Parking Demand	
Land Use	**Size[a]**		**Weekday**	**Saturday**
Building A				
Residential Visitor[b]	240	DU	24	24
Commercial[c]	0.7	KSF	2	2
Parking Demand			26	26
Non-Residential Parking Supply			0	0
Parking Deficit			**-26**	**-26**
Building B				
Residential Visitor[b]	90	DU	9	9
Commercial[c]	2.2	KSF	6	7
Parking Demand			15	16
Non-Residential Parking Supply			0	0
Parking Deficit			**-15**	**-16**
TOTAL DEFICIT			**-41**	**-42**

[a] DU = Dwelling unit; KSF = 1,000 square feet.
[b] Based on adjusted rate of 0.10 spaces per DU using ULI Shared Parking.
[c] ITE *Parking Generation (4th Edition)* land use category 820 (Shopping Center):Weekdays: Average rate is 2.55 spaces per KSF Saturdays: Average rate is 2.87 spaces per KSF
Source: Fehr & Peers, 2015.

robust local and regional transit service, potential site residents, employees, and visitors can use other travel modes instead of driving. Therefore, motorists shifting to other travel modes can be accommodated and would be consistent with City of Oakland's policies, such as City's Public Transit and Alternative Mode and Complete Streets Policies, promoting non-automobile travel modes.

Recommendation 5: While not required to address a CEQA impact, consider one or more of the following strategies to reduce project parking demand and manage the available supply:

- Unbundle the residential parking spaces from the residential units, where reserved parking spaces for residents could be leased separately from the housing.
- Implement a TDM plan to encourage employees and residents to use other travel modes.

- Consider making the unused parking spaces in the project garage available to residential visitors and retail use.

Transit Ridership

One of the stated goals in City of Oakland General Plan LUTE is the promotion of transit ridership and encouragement of transit accessibility and improvement of transit service throughout Oakland. Thus, an increase in transit ridership is not identified as an adverse impact under CEQA.

This section analyzes the transit system with project trips added to the existing system. This analysis presents the extent of impacts relative to existing transit conditions.

As described in the trip generation section, about 30 percent of the trips generated by the project are expected to be transit trips. Based on census data, about half of the trips are by AC Transit buses and half by BART (this corresponds to an overall mode share of about 15 percent for AC Transit and 15 percent for BART).

AC Transit Ridership

It is estimated that the project would generate about 26 AC Transit bus trips during the AM peak hour and 33 AC Transit bus trips during the PM peak hour. About 30 buses operate within ¼-mile of the project site during the peak hours. Thus, it is expected that ridership on buses in the project vicinity would increase by approximately one rider during the peak hours. This level of increase would not have a substantial effect on AC Transit operations.

BART Ridership

It is estimated that the project would generate about 26 BART trips during the AM peak hour and 33 BART trips during the PM peak hour. Considering that the project site is within walking distance of the Lake Merritt BART Station, it is expected that all project BART riders would use this station. About 25 trains operate through the Lake Merritt Station during peak hours. Thus, the project would result in one or two additional passengers on each BART train during the peak hours. This level of increase would not have a substantial effect on BART operations.

d. Significant Impacts

Implementation of the proposed project would not result in any significant traffic and transportation impacts.

e. Cumulative Impacts

The project would not contribute significantly to any significant cumulative impacts as discussed above under the 2035 conditions.

D. AIR QUALITY

This section evaluates the potential air quality impacts of the proposed project. The air quality impacts were evaluated for both the operational and construction phases of the proposed project. The air quality analysis considered project-related emissions on regional air quality, existing sources of air pollution near the project that could affect the project residents, and the temporary short-term construction air quality impacts on nearby receptors. This analysis was conducted following guidance provided by Bay Area Air Quality Management District (BAAQMD).[1]

1. Setting

The project site is located in the San Francisco Bay Area Air Basin (SFBAAB) and is under the jurisdiction of the BAAQMD. Air quality in the SFBAAB is influenced by the regional climate, meteorology, and topography, in addition to the presence of existing air pollution sources and ambient conditions. The following discussion provides an overview of the physical and regulatory setting for air pollutants of concern in the SFBAAB.

a. Climate, Meteorology, and Topography

The Bay Area has a Mediterranean climate characterized by wet winters and dry summers. During the summer, a high pressure cell centered over the northeastern Pacific Ocean results in stable meteorological conditions and a steady northwesterly wind flow that keep storms from affecting the California coast. During the winter, the Pacific high-pressure cell weakens resulting in increased precipitation and the occurrence of storms. The highest air pollutant concentrations in the Bay Area generally occur during inversions, when a surface layer of cooler air becomes trapped beneath a layer of warmer air. An inversion reduces the amount of vertical mixing and dilution of air pollutants in the cooler air near the surface.[2] There are two types of inversions that occur regularly in the SFBAAB. One is more common in the summer and fall, while the other is most common during the winter. The frequent occurrence of elevated temperature inversions in summer and fall months acts to cap the mixing depth, limiting the depth of air available for dilution. The inversions typical of winter, called radiation inversions, are formed as heat quickly radiates from the earth's surface after sunset, causing the air in contact with it to rapidly cool. Radiation inversions are strongest on clear, low-wind, cold winter nights, allowing the build-up of such pollutants as carbon monoxide and particulate matter.

The City of Oakland is located in a climatological subregion that stretches from Richmond to San Leandro. Its western boundary is defined by the Bay and its eastern boundary by

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[1] Bay Area Air Quality Management Disrict (BAAQMD), 2012a. *California Environmental Quality Act Air Quality Guidelines,* May.

[2] Bay Area Air Quality Management Disrict (BAAQMD), 2012a. *California Environmental Quality Act Air Quality Guidelines,* May.

the Oakland-Berkeley Hills. The Oakland-Berkeley Hills have a ridge line height of approximately 1500 feet, which creates a significant barrier to air flow in San Francisco Bay Area.[3] The prevailing wind direction is from the southwest from February to through October, and is then more interspersed with easterly winds from November through January.[4] Average summer temperatures range between about 55 to 70 degrees Fahrenheit (˚F) and average winter temperatures range between about 45 to 60 ˚F. Most of the rainfall in the City occurs during the winter months with an annual average of about 23.3 inches.[5]

b. Air Pollutants of Concern

The California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (U.S. EPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone, particulate matter, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health and about which extensive health-effects criteria documents are available, they are commonly referred to as “criteria air pollutants.” In addition to the criteria air pollutants, another group of pollutants, commonly referred to as toxic air contaminants (TACs), can result in local health effects that can be quite severe.

(1) Ozone

While ozone serves a beneficial purpose in the upper atmosphere (stratosphere) by reducing ultraviolet radiation potentially harmful to humans, it can be harmful to the human respiratory system and to sensitive species of plants when it reaches elevated concentrations in the lower atmosphere. Ozone is not emitted directly into the environment, but is formed in the atmosphere by complex chemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. Ozone formation is greatest during periods of little or no wind, bright sunshine, and high temperatures. As a result, levels of ozone usually build up during the day and peak in the afternoon hours.

Sources of ROG and NO_x are vehicle tailpipe emissions; the evaporation of solvents, paints, and fuels; and biogenic sources.[6] Automobiles are the single largest source of ozone precursors in the SFBAAB. Short-term ozone exposure can reduce lung function in children, make persons susceptible to respiratory infection, and produce symptoms that

[3] Bay Area Air Quality Management Disrict (BAAQMD), 2012a. *California Environmental Quality Act Air Quality Guidelines,* May.

[4] Weather Underground, 2015. *WunderMap*. Downtown Oakland; Station ID KCAOAKLA38. http://www.wunderground.com/wundermap/, accessed March 2.

[5] Western Regional Climate Center, 2015. *Cooperative Climatological Data Summaries; Oakland Museum, California, (046336).* http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6336, accessed March 2.

[6] Biogenic sources include volatile organic compounds, which include ROG, from the decomposition of vegetative matter and certain plants, such as oak and pine trees.

cause people to seek medical treatment for respiratory distress. Long-term exposure can impair lung defense mechanisms and lead to emphysema and chronic bronchitis. Ozone can also damage plants and trees, and materials such as rubber and fabrics.

(2) Particulate Matter

Particulate matter refers to a wide range of solid or liquid particles in the atmosphere, including smoke, dust, aerosols, and metallic oxides. Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM_{10}. Fine particulate matter is a subgroup of PM_{10} that has an aerodynamic diameter of 2.5 micrometers or less and is referred to as $PM_{2.5}$. Some sources of particulate matter, like pollen, forest fires, and windblown dust, are naturally occurring. However, in urban settings, most particulate matter is caused by road dust, factories, combustion products, construction activities, and motor vehicles. Particulate matter can also be formed in the atmosphere by condensation of SO_2 and ROG.

Extended exposure to respirable particulate matter can increase the risk of chronic respiratory disease. PM_{10} is of concern because it bypasses the body's natural filtration system more easily than larger particles, and can lodge deep in the lungs. $PM_{2.5}$ poses an increased health risk because the particles can deposit deep in the lungs and may contain substances that are particularly harmful to human health. Motor vehicles are currently responsible for about half of the particulate matter in the SFBAAB. Wood burning in fireplaces and stoves is another large source of fine particulates.

(3) Nitrogen Dioxide

NO_2 is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Combustion devices emit primarily nitrogen monoxide, which oxidizes in the atmosphere to form NO_2. Nitrogen monoxide and NO_2 are collectively referred to as NO_x. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

(4) Carbon Monoxide

CO is a colorless and odorless gas produced by the incomplete combustion of fuels, primarily from transportation sources but also from wood-burning stoves, incinerators, and other industrial sources. CO impacts are generally localized as CO will disperse rapidly as the distance from the source increases, but high concentrations can be a concern in areas with heavy traffic congestion. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near highly congested transportation corridors and intersections. When CO enters the bloodstream, it reduces the delivery of oxygen to the body's organs and tissues. Health threats are most serious for those who suffer from cardiovascular disease, chronic lung disease or anemia, as well as fetuses. Even healthy people exposed to high concentrations of CO can experience headaches, dizziness, fatigue, unconsciousness, and even death.

(5) Sulfur Dioxide

SO_2 is a colorless and extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries. SO_2 can irritate lung tissue and increase the risk of acute and chronic respiratory disease.

(6) Lead

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Lead is a state-recognized carcinogen.[7]

(7) Toxic Air Contaminants

TACs include a diverse group of air pollutants that can adversely affect human health. They are not fundamentally different from the criteria pollutants, but they have not had ambient air quality standards established for them for a variety of reasons (e.g., insufficient dose-response data, association with particular workplace exposures rather than general environmental exposure, etc.). TACs are evaluated based on estimations of localized concentrations and chemical-specific risk assessments.

For risk assessment purposes, the health effects of exposure to TACs are separated into cancer and health hazard impacts. Health hazards are often referred to as "non-cancer" health effects and may be minor ailments such as eye or lung irritation or more severe such as liver or kidney damage. The adverse health effects a person may experience following exposure to any chemical depend on several factors, including the amount to which one is exposed (dose), the duration of exposure, the form of the chemical, and if exposure to any other chemicals has occurred. A specific chemical may be considered a carcinogen or a health hazard or both; for instance, benzene is considered both a carcinogen and a health hazard. TACs that are defined as carcinogens are assumed to have no safe exposure threshold and cancer risk is expressed as excess cancer cases per one million exposed individuals over a lifetime of exposure. Non-carcinogenic substances

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[7] California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, 2015. *Safe Drinking Water and Toxic Enforcement Act of 1986, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity*, January 23.

are generally assumed to have a safe threshold below which health impacts would not occur. Acute exposure (less than a year) and chronic exposure (more than a year) to non-carcinogens is expressed as a hazard index (HI), which is the sum of expected chemical exposure levels divided by the corresponding chemical-specific reference exposure levels at which no adverse health effect would be expected to occur.

Common sources of TAC emissions include stationary sources, such as industrial facilities, and mobile sources, such as vehicle exhaust along highways and major roadways. Smoke from residential wood combustion can be a source of TACs and can also contain a significant amount of PM_{10} and $PM_{2.5}$. The CARB has identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. BAAQMD research indicates that mobile-source emissions of DPM, benzene, and 1,3-butadiene represent a substantial portion of the ambient background risk from TACs in the SFBAAB.[8]

(8) Odors

Other air quality issues of concern in the SFBAAB include nuisance impacts from odors. Objectionable odors may be associated with a variety of pollutants. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries, and chemical plants. Odors rarely have direct health impacts, but they can be very unpleasant and can lead to anger and concern over possible health effects among the public. Each year the BAAQMD receives thousands of citizen complaints about objectionable odors.

c. Regional Air Quality

California and national ambient air quality standards (CAAQSs and NAAQSs, respectively) have been developed by the CARB and U.S. EPA, respectively, for the six criteria air pollutants to assess regional air quality impacts. California has also established ambient air quality standards for sulfates, visibility reducing particles, hydrogen sulfide, and vinyl chloride. The CAAQSs and NAAQSs are intended to incorporate an adequate margin of safety to protect the public health and welfare, including people who are most susceptible to air pollutants, known as “sensitive receptors.”

The CAAQSs, which are based on meteorological conditions unique to California, are either equal to or more stringent than the NAAQSs. Areas in California are classified as either in “attainment” or “non-attainment” for each criteria air pollutant, based on whether or not the NAAQSs or CAAQSs have been achieved.

To assess the regional attainment status, the BAAQMD collects air quality data from about 32 monitoring sites within the SFBAAB. The SFBAAB is currently designated “non-

[8] Bay Area Air Quality Management Disrict (BAAQMD), 2012a. *California Environmental Quality Act Air Quality Guidelines,* May.

attainment" for the state 1-hour ozone and PM_{10} standards and the state and national 8-hour ozone and $PM_{2.5}$ standards. The SFBAAB is in "attainment" or "unclassified" with respect to the other ambient air quality standards (Table IV.D-1).

d. Local Air Quality

The closest BAAQMD air monitoring station to the project site is the Oakland West Station, which is located 1.5 miles northwest of the project site. The Oakland West Monitoring Station monitors ozone, NO_2, SO_2, CO, and $PM_{2.5}$[9] The highest annual ozone, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ concentrations reported at the Oakland West Monitoring Station since 2011 are summarized in Table IV.D-2. The number of days that ozone, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ exceeded CAAQSs or NAAQSs in the SFBAAB over this time period are summarized in Table IV.D-3. The $PM_{2.5}$ levels exceeded the NAAQS at the Oakland West Monitoring Station in 2013, and 2014; since 2011, exceedances of other ambient air quality standards have not been reported at the Oakland West Monitoring Station.

The number of days that ozone, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ exceeded CAAQSs or NAAQSs in the SFBAAB over the last 4 years is summarized in Table IV.D-3. The SFBAAB has exceeded both the CAAQSs and NAAQS for ozone on a number of days over the last 4 years. The NAAQS for NO_2 was only exceeded one day in 2012, but NO_2 levels did not exceed the CAAQS for any days over the four-year period. The 24-hour CAAQS for PM_{10} was exceeded on a number of days over the last four years but the NAAQS was not exceeded. The 24-hour NAAQS for $PM_{2.5}$ was also exceeded on a number of days over the last 4 years.

[9] $PM_{2.5}$ monitoring using federally accepted method began at Oakland West in December 2012, therefore, $PM_{2.5}$ statistics for 2011 and 2012 are not available.

TABLE IV.D-1 AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS

		CAAQSs		NAAQSs	
Pollutant	**Averaging Time**	**Concentration**	**Attainment Status**	**Concentration**	**Attainment Status**
Ozone	8-Hour	0.070 ppm (137μg/m³)	N	0.075 ppm	N
	1-Hour	0.09 ppm (180 μg/m³)	N	Revoked by U.S. EPA 2005	
CO	8-Hour	9.0 ppm (10 mg/m³)	A	9 ppm (10 mg/m³)	A
	1-Hour	20 ppm (23 mg/m³)	A	35 ppm (40 mg/m³)	A
NO_2	1-Hour	0.18 ppm (339 μg/m³)	A	0.100 ppm	U
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	A	0.053 ppm (100 μg/m³)	A
SO_2	24-Hour	0.04 ppm (105 μg/m³)	A	0.14 ppm (365 μg/m³)	A
	1-Hour	0.25 ppm (655 μg/m³)	A	0.075 ppm (196 μg/m³)	A
	Annual Arithmetic Mean			0.030 ppm (80 μg/m³)	A
PM_{10}	Annual Arithmetic Mean	20 μg/m³	N		
	24-Hour	50 μg/m³	N	150 μg/m³	U
$PM_{2.5}$	Annual Arithmetic Mean	12 μg/m³	N	15 μg/m³	A
	24-Hour			35 μg/m³	N
Sulfates	24-Hour	25 μg/m³	A		
Lead	30-Day Average	1.5 μg/m³	A		
	Calendar Quarter			1.5 μg/m³	A
	Rolling 3-Month Average			0.15 μg/m³	A
Hydrogen Sulfide	1-Hour	0.03 ppm (42 μg/m³)	U		
Vinyl Chloride	24-Hour	0.010 ppm (26 μg/m³)	No information available		
Visibility Reducing Particles	8 Hour (10:00 to 18:00 PST)		U		

Notes: A=Attainment; N=Nonattainment; U=Unclassified; mg/m³=milligrams per cubic meter; ppm=parts per million; μg/m³=micrograms per cubic meter.

Sources: BAAQMD website: http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm.
U.S. EPA website: http://www.epa.gov/oaqps001/greenbk/index.html
Title 17, California Code of Regulations, Sections 60201, 60203, 60205, 60207, and 60210 (as amended in 1 July 2014).

TABLE IV.D-2 MAXIMUM AIR POLLUTANT CONCENTRATIONS MEASURED AT OAKLAND WEST MONITORING STATION

Pollutant	Average Time	Measured Air Pollutant Levels 2011	2012	2013	2014
Ozone	1-Hour	0.057 ppm	0.061 ppm	0.071 ppm	0.072 ppm
	8-Hour	0.048 ppm	0.048 ppm	0.059 ppm	0.059 ppm
CO	1-Hour	3.5 ppm	2.8 ppm	3.8 ppm	3.0 ppm
	8-Hour	2.7 ppm	2.4 ppm	3.2 ppm	2.6 ppm
NO_2	1-Hour	0.062 ppm	0.053 ppm	0.064 ppm	0.056 ppm
	Annual	0.016 ppm	0.015 ppm	0.017 ppm	0.014 ppm
SO_2	1-Hour	0.0193 ppm	0.0681 ppm	0.0498 ppm	0.0165 ppm
	24-Hour	0.0038 ppm	0.0080 ppm	0.0071 ppm	0.0033 ppm
$PM_{2.5}$	24-Hour	NA	NA	**42.7 μg/m^3**	**38.8 μg/m^3**
	Annual	NA	NA	12.8 μg/m^3	9.5 μg/m^3

Note: **Bold and shaded** values exceed a current ambient air quality standard.
NA: $PM_{2.5}$ monitoring using a federally accepted method began at Oakland West in December 2012; therefore, $PM_{2.5}$ statistics for 2011 and 2012 are not available.

Source: BAAQMD Air Quality Summaries for 2011, 2012, 2013, and 2014, http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx.

TABLE IV.D-3 DAYS EXCEEDING AMBIENT AIR QUALITY STANDARDS IN THE SFBAAB

Pollutant	Standard	Days Exceeding Standard 2011	2012	2013	2014
Ozone	CAAQS 1-Hour	5	3	3	3
	CAAQS 8-Hour	10	8	3	10
	NAAQS 8-Hour	4	4	3	5
NO_2	CAAQS 1-Hour	0	0	0	0
	NAAQS 1-Hour	0	1	0	0
PM_{10}	CAAQS 24-Hour	3	2	6	2
	NAAQS 24-Hour	0	0	0	0
$PM_{2.5}$	NAAQS 24-Hour	8	3	13	3
Others (CO and SO_2)	NAAQS/CAAQS	0	0	0	0

Source: BAAQMD Air Quality Summaries for 2011, 2012, 2013, and 2014. http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx.

e. Sensitive Receptors

Sensitive receptors refers to subgroups of the general population who are most susceptible to poor air quality. Land uses such as schools, convalescent homes, and hospitals are considered to be relatively sensitive to poor air quality because the very young, the old, and the infirm are more susceptible to air-quality-related health problems than the general public. Residential areas are also considered sensitive to poor air quality because people are often at home for extended periods.[10] A recreational facility may also be considered a land use where sensitive receptors are located because high levels of physical activity can exacerbate the adverse health effects of poor air quality due to increased breathing rates.

There are no schools, convalescent homes, and hospitals located within 1,000 feet of the project site. There are a number of residential complexes in the surrounding area, including The Sierra at Jack London Square at 311 Oak Street, a 10-story multi-family residential community; The Allegro at 240 3rd Street, consisting of 5- to 6-story multi-family residential apartment buildings to the south of Blocks A and B along 3rd Street and west of the project site immediately adjacent to and sharing Block B; New Market Lofts at 201 4th Street, a 5-story multi-family residential community; and 428 Alice Street Lofts, a 7-story multi-family residential community, located at 428 Alice Street. Further south across Embarcadero West is The Landing at 101 Embarcadero West, a 4-story multi-family residential community and north across I-880 are single-family residential homes.

f. Regulatory Framework

An overview of the federal and state regulatory environments is provided below.

The Clean Air Act (CAA) is the primary federal law regulating air quality in the United States. In addition to being subject to federal requirements, air quality in California is regulated under the California Clean Air Act (CCAA). At the federal level, the U.S. EPA administers the CAA. At the state level, the CARB administers the CCAA. Regionally, California is divided into 15 air basins. Under the CARB, the BAAQMD regulates air quality within the SFBAAB, which includes all of Alameda, Contra Costa, Marin, Napa, San Mateo, and Santa Clara Counties, the southern half of Sonoma County, and the southwestern portion of Solano County. The City of Oakland also has some local policies and regulations related to air quality. Following is a discussion of regulatory programs, plans, and policies relevant to the project.

(1) United States Environmental Protection Agency

The U.S. EPA is responsible for enforcing the CAA. The U.S. EPA is also responsible for establishing the NAAQS, as required under the CAA. The U.S. EPA regulates emission

[10] California Air Resource Board (CARB), 2005. *Air Quality Land Use Handbook: A Community Perspective.*

sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The agency has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles and non-road[11] engines sold in the United States. For compression-ignition (CI) or diesel engines used in heavy-duty on-road (highway) vehicles and non-road construction equipment, the engines are assigned various "Tier" designations based on the year the engine is manufactured and have associated emission standards that must be met. Currently, all diesel-fueled construction engines with a horsepower rating greater than 25 are required to meet Tier 4 emission standards.

(2) California Air Resources Board

In California, CARB, which is part of the California EPA (Cal/EPA), is responsible for meeting the state requirements of the CAA, administering the CCAA, and establishing the CAAQSs. The CCAA requires all air districts in the state to endeavor to achieve and maintain the CAAQSs. CARB oversees the functions of the local air pollution control districts and air quality management districts, which are also called air districts. The air districts in turn administer air quality activities at the regional and county level. CARB conducts or supports research into the effects of air pollution on the public and works with the various air districts to develop strategies for reducing air pollutant emissions.

CARB is also responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. Automobiles sold in California must meet stricter emission standards than the standards established by the U.S. EPA. CARB has authority to set standards for fuel sold in California.

On July 26, 2007, CARB adopted In-Use Off-Road Diesel Vehicle and Large Spark Ignition Fleet Regulations to reduce diesel particulate matter and NO_x emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. These regulations require off-road construction equipment labeling, restrict the amount of time off-road equipment can idle, and require off-road equipment registration with CARB. Originally, the regulations also require off-road equipment operators to replace or retrofit older off-road equipment fleets to meet specific particulate matter and NO_x emission standard based on fleet averages. Because of reductions in off-road equipment emissions due to the economic recession and because CARB lacked authorization from the U.S. EPA to enforce certain aspects of the regulation, on February 11, 2010 CARB issued a delay of the regulation's NOx and PM retro-fit requirements.[12] CARB received authorization from the U.S. EPA on

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[11] Construction equipment, off-road recreational vehicles, lawn and garden equipment, boats and watercraft.

[12] California Air Resources Board (CARB), 2010. *Regulatory Advisory, Enforcement of the In-Use Off-Road Diesel Vehicle Regulation [Advisory: 10-414].*

September 13, 2013, to enforce the Off-Road regulation's restrictions on fleets adding vehicles with older tier engines, and began enforcing restrictions January 1, 2014. The performance requirements began on July 1, 2014 for large size fleets and will begin on January 1, 2017 for medium size fleets and January 1, 2019, for small size fleets.

Large fleet are defined as privately owned fleets with more than 5,000 total horsepower (hp) and all state and federal government fleets, regardless of total hp. Medium fleets are defined as privately-owned fleets with 2,501 to 5,000 total hp. Small fleets are defined as privately-owned or municipal fleets with total hp less than or equal to 2,500, municipal fleets in a low population county, captive attainment area fleets,[13] or non-profit training center, regardless of total hp.

Between years 2000 and 2010, DPM emissions have decreased in the SFBAAB, primarily as a result of reduced exhaust emissions from diesel mobile sources and are projected to continue to decrease through 2035.[14]

(3) Bay Area Air Quality Management District

BAAQMD is primarily responsible for assuring that the NAAQSs and CAAQSs are attained and maintained in the SFBAAB. BAAQMD fulfills this responsibility by adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits, inspecting stationary sources of air pollutants, responding to citizen complaints, and monitoring ambient air quality and meteorological conditions. BAAQMD also awards grants to reduce motor vehicle emissions, conducts public education campaigns and many other activities associated with improving air quality within the SFBAAB.

(4) Bay Area Clean Air Plan

In accordance with the CAA and CCAA, the BAAQMD is required to prepare and update an air quality plan that outlines measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve NAAQSs and CAAQSs in areas designated as non-attainment. In September 2010, the BAAQMD adopted the *Bay Area 2010 Clean Air Plan* (CAP),[15] which serves as an update to the previous *Bay Area 2005 Ozone Strategy*.[16] The 2010 CAP includes 55 control measures to reduce ozone precursors, particulate matter, TACs, and greenhouse gases (GHGs). The 2010 CAP was developed based on computer modeling and analysis of existing air quality monitoring data and emissions inventories, and incorporated traffic and population growth projections prepared by the

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[13] Captive attainment area fleets are publicly or privately owned fleets in which all of the vehicles operate exclusively within the specific counties and does not include Napa County.

[14] California Air Resources Board (CARB), 2013. *The California Almanac of Emissions and Air Quality*.

[15] Bay Area Air Quality Management Disrict (BAAQMD), 2010a. *Bay Area 2010 Clean Air Plan*, September 15.

[16] Bay Area Air Quality Management Disrict (BAAQMD), 2006. *Bay Area 2005 Ozone Strategy*, January 6.

Metropolitan Transportation Commission (MTC) and the Association of Bay Area Government (ABAG), respectively.

(5) Bay Area CEQA Air Quality Guidelines

In accordance with the 2010 CAP, the BAAQMD developed and adopted thresholds of significance that were incorporated into the 2010 *CEQA Air Quality Guidelines*.[17] The purpose of the *CEQA Air Quality Guidelines* is to assist lead agencies in the evaluation and mitigation of air quality impacts generated from new developments during the construction and operational phases of a project. The thresholds of significance established levels at which air pollution emissions would cause significant environmental impacts. The thresholds include emission values for ozone precursors (ROG and NO_x), $PM_{2.5}$, PM_{10}, CO, TACs, and GHGs.

The use of the BAAQMD's thresholds of significance to evaluate the impact of existing environmental conditions on future project users is currently being challenged in the Supreme Court. In response to the legal challenge, the BAAQMD updated the *CEQA Air Quality Guidelines* in 2012 to exclude the recommended use of the thresholds.[18] However, the technical and scientific basis of the BAAQMD's thresholds, as documented in Appendix D of the 2010 *CEQA Air Quality Guidelines*, has not been challenged. The City of Oakland has used the BAAQMD's supporting documentation in the 2010 *CEQA Air Quality Guidelines* to develop their own thresholds of significance for evaluating criteria air pollutants, TACs, and GHGs. The City's thresholds of significance are presented under the Impact Analysis, below.

(6) City of Oakland General Plan

The following air quality policies from the City of Oakland's General Plan would relate to the project.

- **Policy CO-12.1: Land Use Patterns Which Promote Air Quality.** Promote land use patterns and densities which help improve regional air quality conditions by: (a) minimizing dependence on single passenger autos; (b) promoting projects which minimize quick auto starts and stops, such as live-work development, mixed use development, and office development with ground floor retail space; (c) separating land uses which are sensitive to pollution from the sources of air pollution; and (d) supporting telecommuting, flexible work hours, and behavioral changes which reduce the percentage of people in Oakland who must drive to work on a daily basis.

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[17] Bay Area Air Quality Management Disrict (BAAQMD), 2010b. *California Environmental Quality Act Air Quality Guidelines*, May.

[18] Bay Area Air Quality Management Disrict (BAAQMD), 2012a. *California Environmental Quality Act Air Quality Guidelines*, May.

- **Policy CO-12.6: Control of Dust Emissions.** Require construction, demolition, and grading practices which minimize dust emissions. These practices are currently required by the City and include the following:
  - Avoiding earth moving and other major dust generating activities on windy days.
  - Sprinkling unpaved construction areas with water during excavation, using reclaimed water where feasible. (Watering can reduce construction-related dust by 50 percent.)
  - Covering stockpiled sand, soil, and other particulates with a tarp to avoid blowing dust.
  - Covering trucks hauling dirt and debris to reduce spills. If spills do occur, they should be swept up promptly before materials become airborne.
  - Preparing a comprehensive dust control program for major construction in populated areas or adjacent to sensitive uses like hospitals and schools.
  - Operating construction and earth-moving equipment, including trucks, to minimize exhaust emissions.

(7) City of Oakland Municipal Code

Chapter 15.34 of Oakland's Municipal Code requires new construction projects to submit a Waste Reduction and Recycling Plan to the City's Building Official for review and approval. The intent of the provisions are to divert (e.g., reuse on-site) at least 50 percent of construction and demolition debris from landfills. The purpose of these provisions is to prescribe requirements designed to meet and further the goals of the California Integrated Waste Management Act of 1989 Assembly Bill (AB) 939 and the Alameda County Waste Reduction and Recycling Act of 1990 (Measure D).

Chapter 15.36 of Oakland's Municipal Code requires the implementation of the following dust control measures during demolition activities:

> "Best manager practices" shall be used throughout all phases of work, including suspension of work, to alleviate or prevent fugitive dust nuisance and the discharge of smoke or any other air contaminants into the atmosphere in such quantity as will violate any city or regional air pollution control rules, regulations, ordinances, or statutes.
>
> Water or dust palliatives or combinations of both shall be applied continuously and in sufficient quantity during the performance of work and at other times as required. Dust nuisance shall also be abated by cleaning and sweeping or other means as necessary.
>
> A dust control plan may be required as condition of permit issuance or at other times as may be deemed necessary to assure compliance with this section. Failure to control effectively or abate fugitive dust nuisance or the discharge of smoke or any other air

contaminants into the atmosphere may result in suspension or revocation of the permit, in addition to any other applicable enforcement actions or remedies.

(8) City of Oakland Standard Conditions of Approval

The City of Oakland's Uniformly Applied Development Standards would be incorporated into the project as Standard Conditions of Approval (SCAs). The following SCAs would apply to the project.

SCA-A. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)[19]

Ongoing throughout demolition, grading, and/or construction.

During construction, the project applicant shall require the construction contractor to implement all of the following applicable measures recommended by the BAAQMD:

Basic[20]

a) Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.

b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).

c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d) Pave all roadways, driveways, sidewalks, etc. as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

e) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).

f) Limit vehicle speeds on unpaved roads to 15 miles per hour.

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[19] This SCA is from the City of Oakland's Supplemental Standard Conditions of Approval (dated July 28, 2011) and replaces the 2008 SCAs for Dust Control (SCA-26) and Construction Emissions (SCA-27).

g) Idling times shall be minimized either by shutting equipment off when not is use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations. Clear signage to this effect shall be provided for construction workers at all access points.

h) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

i) Post a publicly visible sign that includes the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor shall respond and take corrective action within 48 hours. The telephone numbers of contacts at the City and the BAAQMD shall also be visible. This information may be posted on other required on-site signage.

Enhanced[21]

j) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

k) All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph.

l) Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

m) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).

n) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.

[21] All "Basic" controls listed above plus the following controls if the project involves:
- 114 or more single-family dwelling units;
- 240 or more multi-family units;
- Nonresidential uses that exceed the applicable screening size listed in the Bay Area Air Quality Management District's CEQA Guidelines;
- Demolition permit;
- Simultaneous occurrence of more than two construction phases (e.g., grading and building construction occurring simultaneously);
- Extensive site preparation (i.e., the construction site is four acres or more in size); or
- Extensive soil transport (i.e., 10,000 or more cubic yards of soil import/export).

o) Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind-blown dust. Wind breaks must have a maximum 50 percent air porosity.

p) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

q) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

r) All trucks and equipment, including tires, shall be washed off prior to leaving the site.

s) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.

t) Minimize the idling time of diesel-powered construction equipment to two minutes.

u) The project applicant shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NO_x reduction and 45 percent particulate matter (PM) reduction compared to the most recent California Air Resources Board (CARB) fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as they become available.

v) Use low volatile-organic compound (VOC) (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).

w) All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NO_x and PM.

x) Off-road heavy diesel engines shall meet the CARB's most recent certification standard.

SCA-A is further supplemented by the following additional measure:

y) If access to grid power is available, grid power electricity shall be used instead of diesel-powered generators. If grid power is not available, then propane or natural gas generators may be used, as feasible. Only if propane or natural gas generators prove infeasible shall portable diesel engines be allowed.

SCA-B: Exposure to Air Pollution (Toxic Air Contaminants)[22]

The SCA applies to all projects that meet all of the following criteria:

1) The project involves either of the following sensitive land uses:
   a) New residential facilities or new dwelling units; or
   b) New or expanded schools, daycare centers, parks, nursing homes, or medical facilities; and
2) The project is located within 1,000' of one or more of the following sources of air pollution:
   a) Freeway;
   b) Roadway with significant traffic (at least 10,000 vehicles/day);
   c) Rail line (except BART) with over 30 trains per day;
   d) Distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating Transportation Refrigeration Units (TRU) per day, or where the TRU unit operations exceed 300 hours per week;
   e) Major rail or truck yard (such as the Union Pacific rail yard adjacent to the Port of Oakland);
   f) Ferry terminal;
   g) Port of Oakland; or
   h) Stationary pollutant source requiring a permit from BAAQMD (such as a diesel generator); and
3) The project exceeds the health risk screening criteria after a screening analysis is conducted in accordance with the BAAQMD CEQA Guidelines.

Health Risk Reduction Measures

Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose **one** of the following methods:

a) The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with the California Air Resources

[22] This SCA is from the City of Oakland's Supplemental Standard Conditions of Approval, as revised on August 30, 2013, and replaces the 2008 SCAs for Indoor Air Quality (SCA-94) and Air Pollution Buffering for Private Open Space (SCA-95).

Board (CARB) and the Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City.

b) The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

- Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents, and other sensitive populations, in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.
- Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.
- The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall not be located immediately adjacent to a loading dock or where trucks concentrate to deliver goods, if feasible.
- Sensitive receptors shall not be located on the ground floor, if feasible.
- Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid popular (*Populus deltoids X trichocarpa*), and Redwood (*Sequoia sempervirens*).
- Within the project site, sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.
- Within the project site, existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.

- Within the project site, emissions from diesel trucks shall be reduced through implementing the following measures, if feasible:
  - Installing electrical hook-ups for diesel trucks at loading docks.
  - Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.
  - Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.
  - Prohibiting trucks from idling for more than two minutes.
  - Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.

When Required: Prior to approval of construction-related permit

Initial Approval: Planning and Zoning Division

Monitoring/Inspection: Building Services Division

Maintenance of Health Risk Reduction Measures

Requirement: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.

When Required: Ongoing

Initial Approval Authority: N/A

Monitoring/Inspection/Enforcement: Building Services Division

2. Air Quality Impacts, Standard Conditions of Approval, and Mitigation Measures

This section discusses potential impacts on air quality that could result from implementation of the proposed project. The section begins with the City of Oakland's criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section analyzes the impacts associated with the proposed project and recommends mitigation measures to reduce significant impacts, if needed.

a. Significance Criteria

The significance criteria used for analyzing and determining the project's level of impact on air quality and the scope of the analysis are described in this section.

The City of Oakland has established *CEQA Thresholds of Significance Guidelines* to help clarify and standardize analysis and decision-making in the environmental review process. The air quality thresholds presented below that pertain to the effect of the environment on the project (as compared to the project's impact on the environment) are not legally required to be analyzed under CEQA but are nevertheless evaluated in order to provide information to decision-makers and the public.

In developing thresholds of significance for air pollutants, the City considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project does not exceed the identified significance thresholds, its emissions would not be considered cumulatively considerable, resulting in less-than-significant cumulative air quality impact relative to existing air quality conditions.[23]

Implementation of the proposed project would have a significant impact on air quality if it would:

1. During project construction result in average daily emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}.
2. During project operation result in average daily emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NO_x, or $PM_{2.5}$ or 15 tons per year of PM_{10}.
3. Contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of 9 parts per million (ppm) averaged over 8 hours and 20 ppm for 1 hour. *[NOTE: Pursuant to BAAQMD CEQA Guidelines, localized CO concentrations should be estimated for projects in which (a) project-generated traffic would conflict with an applicable congestion management program established by the county congestion management agency or (b) project-generated traffic would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour (or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited, such as tunnels, parking garages, bridge underpasses, natural or urban street*

[23] Kirk, Alison, Bay Area Air Quality Management Disrict (BAAQMD), 2015. Personal communication with BASELINE Environmental Consulting, June 23.

canyons, and below-grade roadways). In Oakland, only the MacArthur Maze portion of Interstate 580 exceeds the 44,000 vehicles per hour screening criteria.]

4. For new sources of TACs, during either project construction or project operation expose sensitive receptors to substantial levels of TACs under project conditions resulting in (a) an increase in cancer risk level greater than 10 in 1 million, (b) a non-cancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 micrograms per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter. *[NOTE: Pursuant to the BAAQMD CEQA Guidelines, when siting new TAC sources consider receptors located within 1,000 feet. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers. The cumulative analysis should consider the combined risk from all TAC sources.]*

5. Expose new sensitive receptors to substantial ambient levels of TACs resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter. *[NOTE: Pursuant to the BAAQMD CEQA Guidelines, when siting new sensitive receptors consider TAC sources located within 1,000 feet including, but not limited to, stationary sources, freeways, major roadways (10,000 or greater vehicles per day), truck distribution centers, airports, seaports, ferry terminals, and rail lines. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers.]*

6. Frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people. *[NOTE: For this threshold, sensitive receptors include residential uses, schools, daycare centers, nursing homes, and medical centers (but not parks).]*

b. Less-than-Significant Impacts

Implementation of the proposed project would result in less-than-significant impacts described below. Since these impacts would not exceed the significant thresholds described above, no mitigation measures are necessary for these less-than-significant impacts.

(1) Project Construction and Operation Emissions

The BAAQMD recommends using the most current version of the California Emissions Estimator Model (CalEEMod) to estimate construction and operational emissions of criteria pollutants for a proposed project. CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data for a variety of land-use projects that can be used if site-specific information is not available. The primary input data used to estimate emissions associated with each of the project's land-use type are summarized in Table IV.D-4. A copy of the CalEEMod report for the project, which summarizes the input parameters, assumptions, and findings, is included in Appendix E.

TABLE IV.D-4 SUMMARY OF CALEEMOD INPUT PARAMETERS

Project Land-Use Type	CalEEMod Land-Use Type	Square Feet
Residential	Mid-Rise Apartments	362,455
Garage	Enclosed Parking with Elevator	147,000
Amenity / Leasing	General Office	11,734
Retail	Convenience Market	2,962
Fitness / Basketball Court	Health Club	4,104

Notes: The total dwelling units = 330
The total lot acreage = 2.07
Approximately 60,000 square feet of existing buildings would be demolished.

Construction-Phase Emissions

Common pollutant emissions of concern during construction include ROG, NO_x and exhaust $PM_{2.5}$ and PM_{10} from construction equipment. Because the proposed project consists of more than 240 multi-family units and would require a demolition permit, the City's enhanced construction standard conditions for approval apply. Therefore, the evaluation assumed that all construction equipment, diesel trucks, and generators would be equipped with Best Available Control Technology for emission reductions of NO_x and PM [SCA-A(u)], and all off-road heavy diesel engines would meet the CARB's most recent certification standard (currently Tier 4) [SCA-A(x)]. While emissions of fugitive dust $PM_{2.5}$ and PM_{10} are also a common concern, these emissions would be controlled by implementation of the dust control measures required as part of the project design under SCA-A. Emissions of ozone precursors and exhaust $PM_{2.5}$ and PM_{10} above the City's thresholds of significance could substantially contribute to existing violations of CAAQSs and/or NAAQSs in the SFBAAB. Potential emission sources for the project would include demolition, grading, building construction, and architectural coatings. Unmitigated pollutant emissions during project construction were estimated using the CalEEMod default values, except as noted below.

- Site preparation (i.e., vegetation removal) was not included because the project site is devoid of vegetation.
- The concentrations of volatile-organic compounds (VOCs) in architectural coatings were reduced from 250 gram per liter (g/L) to 150 g/L based on the regulatory

requirements for non-flat high-gloss coatings described in BAAQMD Regulation 8, Rule 3: Architectural Coatings.

Based on the size and type of development, CalEEMod estimated that project construction would require 266 working days. The average daily emissions of criteria pollutants or precursors estimated over that time period are compared to applicable City thresholds in Table IV.D-5. The estimated unmitigated emissions for ROG, NO_x, and exhaust $PM_{2.5}$ and PM_{10} were below the applicable thresholds and, therefore, would have a less-than-significant impact on air quality standards.

TABLE IV.D-5 SUMMARY OF AVERAGE UNMITIGATED CRITERIA POLLUTANT EMISSIONS DURING PROJECT CONSTRUCTION

Pollutant	ROG	NO_x	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Units	lb/day	lb/day	lb/day	lb/day
Emissions	31	29	1.6	1.6
Thresholds	54	54	82	54
Exceedance	No	No	No	No

Notes: lb/day = pounds per day
Estimated emissions of particulate matter are from vehicle exhaust.
Assumes a 20 percent NO_x and 45 percent particulate matter reduction compared to the most recent CARB fleet average as required by SCA-A.
Source: CalEEMod (Appendix E).

Operation-Phase Emissions

Common pollutant emissions of concern during the operational phase of a project include ROG, NO_x, and exhaust $PM_{2.5}$ and PM_{10} from equipment. Emissions of ozone precursors and particulate matter above the City's thresholds of significance could substantially contribute to the existing violations of CAAQSs and/or NAAQSs in the SFBAAB.

Pollutant emissions of concern during the operational phase of the project would primarily be from mobile sources (i.e., vehicle trips). Other common emissions would include energy use (e.g., electricity and natural gas) and area sources (e.g., consumer products, architectural coatings, and landscape maintenance equipment). The unmitigated pollutant emissions from project operations were estimated using the CalEEMod default values, except as noted below.

- Based on the findings of the preliminary transportation analysis conducted for the project, the average weekday vehicle trip rate was changed from 6.59 to 3.99 trips/dwelling unit/day.[24]
- The concentrations of VOCs in architectural coatings were reduced from 250 g/L to 150 g/L based on the regulatory requirements for non-flat high-gloss coatings described in BAAQMD Regulation 8, Rule 3: Architectural Coatings.

The estimated average annual and daily emissions of ozone precursors and PM_{10} and $PM_{2.5}$ during the operational phase of the project are compared to the applicable City thresholds in Table IV.D-6. The estimated unmitigated emissions for ROG, NO_x, and exhaust $PM_{2.5}$ and PM_{10} were below the applicable thresholds and, therefore, would have a less-than-significant impact on air quality standards.

TABLE IV.D-6 SUMMARY OF AVERAGE UNMITIGATED CRITERIA POLLUTANT EMISSIONS DURING PROJECT OPERATION

Pollutant	ROG	NO_x	PM_{10} Exhaust	$PM_{2.5}$ Exhaust	ROG	NO_x	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Units	lb/day	lb/day	lb/day	lb/day	ton/yr	ton/yr	ton/yr	ton/yr
Emissions	21	20	0.41	0.39	3.8	3.6	0.075	0.071
Thresholds	54	54	82	54	10	10	15	10
Exceedance	No	No	No	No	No	No	No	No

Notes: lb/day = pounds per day
ton/yr = tons per year
Estimated emissions of particulate matter are from vehicle exhaust.
Source: CalEEMod (Appendix E).

(1) Carbon Monoxide Concentrations

The Alameda County Transportation Commission (Alameda CTC) serves as the County Congestion Management Agency. The Alameda CTC updates the County's Congestion Management Program (CMP) every 2 years to assess, monitor, and improve the performance of the County's multimodal transportation system and strengthen the integration of transportation and land use planning. The current 2013 CMP[25] requires an analysis of any project that is expected to generate more than 100 afternoon (PM) peak hour vehicle trips. The proposed project is expected to generate 88 PM-peak-hour vehicle

[24] Fehr & Peers, 2015. *Memorandum: 200 4th Street – Preliminary Transportation Analysis,* March 3.
[25] Alameda County Transportation Commission (Alameda CTC), 2013. *Congestion Management Program*, October.

trips during the weekdays.[26] Since the project would generate less than 100 PM peak-hour vehicle trips, the project is consistent with the current CMP.

The *Jack London Square Redevelopment Project Addendum to the 2004 EIR*, approved in 2014, included analysis of traffic operations at four intersections immediately north of the project (Table IV.D-7).[27] These intersections are located near the I-880 overpass, where vertical mixing of CO emissions from vehicle exhausts could be substantially limited. The preliminary traffic analysis prepared for the project estimates that the project would add 25 or more vehicle trips per hour to these intersections during peak morning (AM) and PM hours.[28] Existing traffic counts from 2013 and the estimated trips that would be generated by the project at each intersection are summarized in Table IV.D-7. Based on these traffic analyses, the project would not increase the traffic volumes at nearby intersections above the City's CO screening criteria of 24,000 vehicles per hours. Since the project meets the City's thresholds, the project would have a less-than-significant air quality impact related to CO emissions.

TABLE IV.D-7 SUMMARY OF TRAFFIC COUNTS AND PROJECT TRIP GENERATIONS AT NEARBY INTERSECTIONS

	2013 Traffic Count[a]		Project Trips[b]	
Intersection	**AM Peak Hour**	**PM Peak Hour**	**AM Peak Hour**	**PM Peak Hour**
Jackson Street/5th Street	1,290	1,585	58	70
Jackson Street/6th Street	2,204	1,615	33	39
Oak Street/5th Street	1,252	1,645	29	18
Oak Street/6th Street	1,150	1,191	10	31

[a] ESA, 2014. *Jack London Square Redevelopment Project Addendum to the 2004 EIR,* May 9.
[a] Fehr & Peers, 2015. Memorandum: 200 4th Street – Preliminary Transportation Analysis, March 3.

(2) Generate Toxic Air Contaminants

The project operations would not be expected to emit substantial amounts of TACs that would significantly affect nearby sensitive receptors. However, TACs would be generated on-site during project construction. TAC emissions during construction are primarily DPM from heavy-duty diesel vehicles and equipment. The closest sensitive receptors to the project site are the residents of the neighboring apartment buildings.

[26] Fehr & Peers, 2015. *Memorandum: 200 4th Street – Preliminary Transportation Analysis,* March 3.
[27] ESA, 2014. *Jack London Square Redevelopment Project Addendum to the 2004 EIR,* May 9.
[28] Fehr & Peers, 2015. *Memorandum: 200 4th Street – Preliminary Transportation Analysis,* March 3.

Annual average concentrations of PM_{10} and $PM_{2.5}$ were estimated for the maximally exposed individual resident (MEIR)[29] using U.S. EPA's Industrial Source Complex Short Term (ISCST3) air dispersion model. In accordance with guidance from the BAAQMD[30] and Office of Environmental Health Hazard Assessment (OEHHA),[31] a screening-level HRA was conducted to evaluate the construction-period DPM cancer and non-cancer risks to sensitive receptors. PM_{10} exhaust emissions were used in the model as a surrogate for DPM.

The total on-site emissions of DPM were assumed to equal the total on-site PM_{10} emissions estimated by CalEEMod over 266 days of construction. Based on the area of each block, it was assumed that two thirds of the total emissions were associated with Block A and one-third of the total emissions were associated with Block B. It was also assumed that construction of each block would occur sequentially (i.e., not at the same time) and the duration of construction would also be proportional to the area of each block. The dispersion of DPM and $PM_{2.5}$ emissions from each block was modeled as area sources based on the dimensions of each block. The release height for each area source was assumed to be 5 meters (16.4 feet), which represents the mid-range of the expected plume rise from frequently used construction equipment during daytime atmospheric conditions.[32] Receptor heights of 1.5 meters (4.9 feet), 6 meters (19.6 feet), 12 meters (39 feet), and 18 meters (59 feet) were used to represent residents at ground level and located in the upper stories of the neighboring multi-story apartment buildings. The estimated DPM emissions from heavy diesel trucks hauling debris during the demolition of the existing Cost Plus building were also included in the evaluation. These emissions were modeled as a line source along 5th Street from Block A to the I-880 on-ramp and, based on the CalEEMod results, were assumed to require 20 days of hauling.

The ISCST3 model input parameters included the emission rates for each block and the haul road based on the average daily emission rates and 3 years of meteorological data for Oakland from the BAAQMD.[33] The maximum 1-hour concentrations of DPM and $PM_{2.5}$ were modeled for the receptor locations at approximately 25-meter intervals, as shown on Figure IV.D-1. The maximum 1-hour concentration was scaled by 10 percent to estimate

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[29] A resident that may be located at the receptor location where the highest exposure to TACs emitted from a given source or project is predicted.

[30] Bay Area Air Quality Management Disrict (BAAQMD), 2011c. *Recommended Methods for Screening and Modeling Local Risks and Hazards*, May.

[31] Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, February.

[32] South Coast Air Quality Management District, 2008 (revised). *Final Localized Significance Threshold Methodology*, July.

[33] Bay Area Air Quality Management Disrict (BAAQMD), 2015. http://hank.baaqmd.gov/tec/data/, accessed March 25.

annual average concentrations in accordance with OEHHA guidance.[34] The input parameters and results of the ISCST3 model are included in Appendix E. It should be noted that these risk values were determined based on a conservative modeling analysis, and actual risks would likely be lower.

The modeled estimates of the annual average DPM concentrations at the MEIR were used to calculate the incremental increase in cancer risk and chronic HI from project construction. The acute HI for DPM was not calculated because an acute reference exposure level has not been approved by OEHHA and CARB, and the BAAQMD does not recommend analysis of acute non-cancer health hazards from construction activity.[35]

The cancer risk and chronic HI from DPM were assessed for children under the age of 2, who represent the most sensitive individuals to adverse air quality conditions that would likely be present at a nearby residence using OEHHA age-sensitivity factors for cancer risk. The average daily breathing rate estimated by OEHHA for a child under the age of 2 (658 liters per kilogram per day)[36] was assumed for the risk assessment. It was assumed that the child receptor would be continuously exposed to annual average concentrations of DPM over the entire duration of project construction. The input parameters and results of the HRA are included in Appendix E.

Estimates of the health risks posed by the project to MEIR from on-site construction DPM and total increase in exhaust $PM_{2.5}$ concentration are summarized and compared to the City's thresholds in Table IV.D-8. The estimated excess cancer risk and chronic health hazard (HI) for DPM from construction, as well as the increase in annual average $PM_{2.5}$ concentration associated with construction were below the City's thresholds. Therefore, this impact would be less than significant.

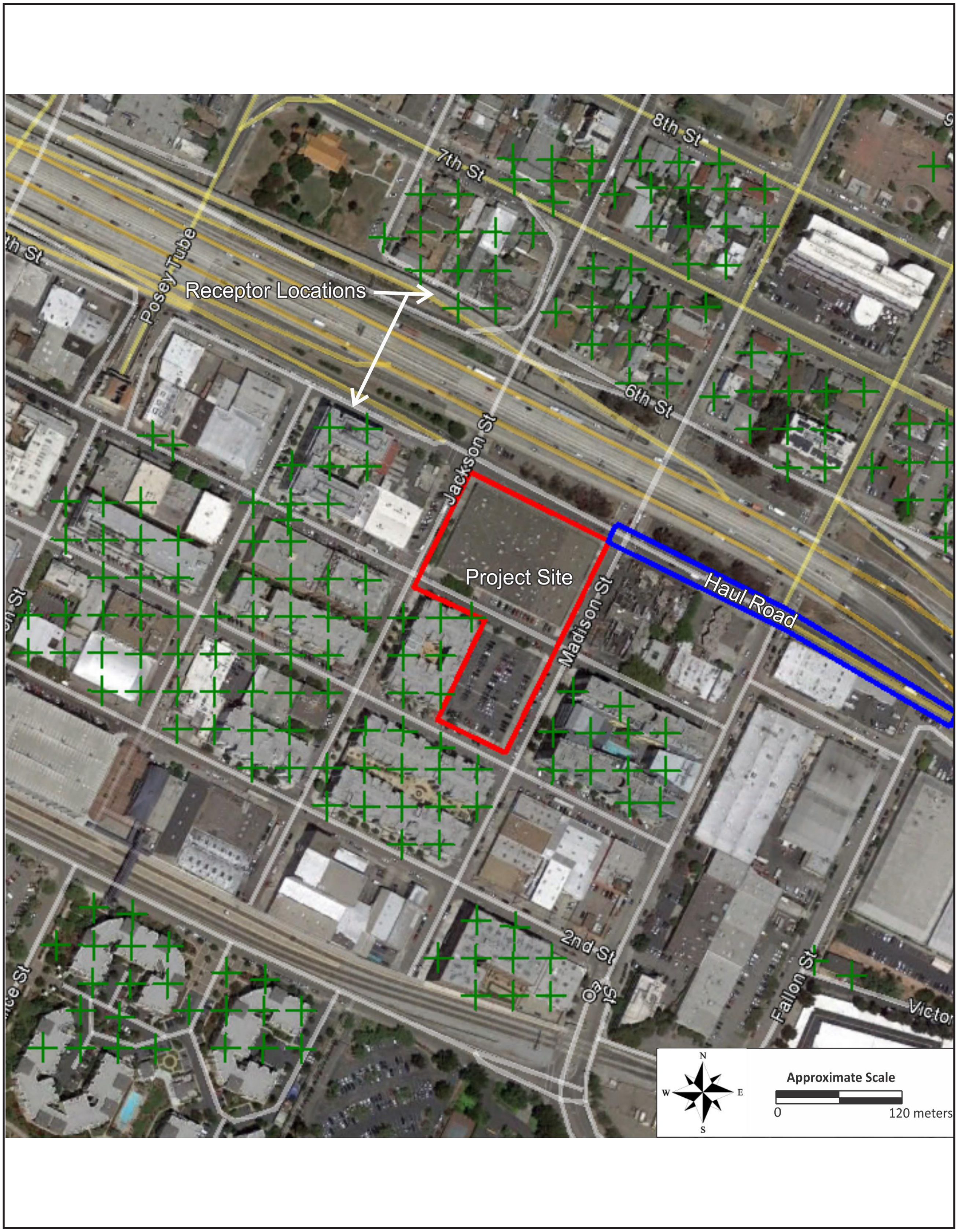
(1) Exposure to Toxic Air Contaminants

Future sensitive receptors (residents) at the project site could be exposed to existing sources of TAC emissions. The BAAQMD recommends using their online screening tools to evaluate TAC emissions from stationary and mobile sources within 1,000 feet of a new

[34] OEHHA, 2015. *Op. cit.*

[35] Kirk, Alison, Bay Area Air Quality Management Disrict (BAAQMD), 2015. Personal communication with BASELINE Environmental Consulting, March 9.

[36] Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, February.



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Source: BASELINE Environmental Consulting, 2015

Figure IV.D-1
Jack London Square 4th & Madison Project EIR
Sensitive Receptor Locations

TABLE IV.D-8 SUMMARY OF THE HEALTH RISK ASSESSMENT FOR DPM AND $PM_{2.5}$ EMISSIONS DURING PROJECT CONSTRUCTION

	Diesel Particulate Matter			
	Annual Average Concentration	Child <2 Excess Cancer Risk	Chronic Hazard Index	Exhaust $PM_{2.5}$ Annual Average Concentration
Units	(μg/m^3)	$(10^6)^{-1}$	---	(μg/m^3)
MEIR	0.078	1.9	0.16	0.079
Thresholds	---	10	1.0	0.3
Exceedance	---	No	No	No

Notes: MEIR = maximally exposed individual resident ;"---" = not applicable.
Source: Appendix E.

receptor (i.e., the project site). The screening tools provide conservative estimates of how much existing TAC sources would contribute to cancer risk, HI, and/or $PM_{2.5}$ concentrations in a community.

As summarized in Table IV.D-9, sources of TAC emissions identified near the project site included five stationary sources and five mobile sources (e.g., highways, major roadways, and railroads). Screening values for the stationary sources were determined using the BAAQMD's *Stationary Source Screening Analysis Tool*.[37] Screening values for I-880, which is located 115 feet northeast of the project site, were linearly interpolated from screening tables provided in the BAAQMD's *Highway Screening Analysis Tool*.[38] According to the California Environmental Health Tracking Program's *Traffic Spatial Linage Web Service*, the average annual daily traffic volumes along 6th Street (25,900 vehicles per day), 7th Street (35,800 vehicles per day), and 8th Street (13,300 vehicles per day) located north of the project site exceed the City's screening criteria for major roadways (10,000 or more vehicles per day).[39] Based on the average annual daily traffic volumes, the screening values

[37] Bay Area Air Quality Management Disrict (BAAQMD), 2012b. *Stationary Source Screening Analysis Tool*. http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx, accessed April 7, 2015.

[38] Bay Area Air Quality Management Disrict (BAAQMD), 2011a. *Highway Screening Analysis Tool*. http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx, accessed April 7, 2015.

[39] California Department of Public Health, 2015. *California Environmental Health Tracking Program's Traffic Spatial Linage Web Service*. Environmental Health Investigations Branch. http://www.ehib.org/traffic_tool.jsp, accessed March 12.

for the major roadways were linearly interpolated from the BAAQMD's *Roadway Screening Analysis Tables*.[40]

In 2008, CARB prepared the *Diesel Particulate Matter Health Risk Assessment for the West Oakland Community*, which evaluated the potential public health risk to residents of West Oakland from exposures to DPM. The sources of DPM evaluated include locomotives traveling along the Union Pacific and Amtrak railroad corridor located 560 feet southwest of the project site. Types of locomotive emissions estimated along this corridor included both movement and idling activities at the Jack London Square Amtrak station. According to the study, the increased cancer risk to people on the project site from locomotives traveling along the Union Pacific and Amtrak railroad corridor is about 100 per million.

Based on the screening-level analysis of nearby TAC sources, the unmitigated cumulative increase in cancer risk at the project site would be about 162 in a million, which exceeds the City's threshold (Table IV.D-9). The unmitigated cumulative concentration of $PM_{2.5}$ at the project site would be about 4.8 micrograms per cubic meter, which also exceeds the City's threshold (Table IV.D-9). However, it should be noted that this screening-level analysis does not account for air dispersion from permitted stationary sources, such as the Peerless Coffee Company facility, that would be expected to reduce the $PM_{2.5}$ concentrations at the project site.

Under SCA-B, the project applicant would be required to either a) prepare a HRA demonstrating that the future users of the site are not exposed to a health risk above the City's thresholds or b) incorporate health risk reduction measures into the project design that would reduce the cancer and hazard risks associated with nearby TAC emissions (SCA-B option b). For example, under SCA-B option b), the project would be required to install and maintain high efficiency filtration systems with a Minimum Efficiency Reporting Value rating of 13 (MERV-13). CARB has identified high efficiency filtration as the most effective method for residences to reduce incoming DPM and other contaminants from outdoor air.[41] The project applicant has indicted that the project design will include air filters with a MERV-13 rating, which will reduce levels of indoor DPM by at least 85 percent relative to the incoming outdoor air.[42] Therefore, implementation of the health risk reduction measures described under SCA-B option b) would reduce the potential health impacts to new receptors at the project site through project design features to a less-than-significant level.

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[40] Bay Area Air Quality Management Disrict (BAAQMD), 2011b. *Roadway Screening Analysis Tables*, April 29.

[41] California Air Resource Board (CARB), 2012. *Status of Research on Potential Mitigation Concepts to Reduce Exposure to Nearby Traffic Pollution*, August 23.

[42] South Coast Air Quality Management District, 2009. *Pilot Study of High Performance Air Filtration for Classrooms Applications*, October.

TABLE IV.D-9 SUMMARY OF UNMITIGATED RISKS AND HAZARDS FROM NEARBY TAC EMISSIONS

Plant ID	Name	Location	Cancer Risk (10^{-6})	Chronic Hazard Index	$PM_{2.5}$ (µg/m³)
G6837	Shell Service Station #135700	105 5th Street	1.01[a]	0.001[a]	NA
G584	Rhino Gas	245 8th Street	0.02[a]	0.000[a]	NA
14068	SF Bay Area Rapid Transit District	101 8th Street	1.51[b]	0.008	0.000[b]
8511	Madison Street Press	614 Madison Street	0.06	0.000	0.000
12318	Peerless Coffee Co	260 Oak Street	0.02[c]	0.000[c]	4.3[c]
NA	I-880	115 feet northeast	54.04	0.047	0.325
NA	6th Street	300 feet northeast	2.57		0.095
NA	7th Street	580 feet northeast	1.63	---	0.056
NA	8th Street	860 feet northeast	0.70	---	0.020
NA	Union Pacific /Amtrak Railroad	560 feet southwest	100	NA	NA
		Cumulative Risks and Hazards:	162	<1.0	4.8
		Thresholds:	100	10	0.8
		Exceedance:	Yes	No	Yes

Notes: µg/m³ = micrograms per cubic meter; NA = not available.
The 20-foot elevation exposure table (second floor exposures) was referenced to assess impacts from I-880.
[a] Value adjusted using the BAAQMD's Diesel Internal Combustion Engine Distance Multiplier Tool.
[b] Value adjusted using the BAAQMD's Gasoline Dispensing Facility Distance Multiplier Tool.
[c] Values provided by Alison Kirk, BAAQMD, via email correspondence with Patrick Sutton, BASELINE Environmental Consulting, on March 13, 2015 and account for a 70 percent $PM_{2.5}$ abatement efficiency as documented in email from Rochelle Reed, BAAQMD, via email correspondence with James McCarty, BASELINE Environmental Consulting, on May 4, 2015.
Source: BAAQMD, 2014. Tools and Methodology, http://www.baaqmd.gov/Divisions/Planning-and- Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

(2) Odors

Typical odor sources are generally associated with municipal, industrial, or agricultural land uses, such as wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of receptors.

As a mixed-use development, the project would not be expected to generate significant odors. Land uses surrounding the project site include mixed residential and commercial land uses, which would also not be expected to generate significant odors. Therefore, project impacts related to odors would be less than significant.

c. Significant Air Quality Impacts

Implementation of the proposed project would not result in any significant air quality impacts.

d. Cumulative Air Quality Impacts

As mentioned above in the discussion of significance criteria, if a project does not exceed the identified significance thresholds, its emissions would not be considered cumulatively considerable, resulting in less-than-significant cumulative air quality impact relative to existing air quality conditions.[43]

(1) Criteria Pollutants

According to the BAAQMD, regional air pollution is largely a cumulative impact. No single project is sufficient in size to independently create regional nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. As shown in Tables IV.D-5 and IV.D-6, implementation of the project would not result in an exceedance of the construction or operational thresholds for criteria pollutants, therefore, the project would not result in a considerable contribution to a cumulatively significant criteria air pollutant impact.

(2) Toxic Air Contaminants

As previously discussed, based on a screening level health risk evaluation, the cancer risk from existing stationary sources of TAC within 1,000 feet of the project site and the existing concentration of $PM_{2.5}$ are above the cumulative health and hazard thresholds (Table IV.D-8). At the project level, the impact to new receptors, i.e., new residents of the proposed project, would be mitigated to a less-than-significant level with the implementation of SCA-B option b), which requires health risk reduction measures, such as high-efficiency air filters, to be incorporated into the project design. As previously stated, the project applicant has indicated that the project design will include air filters with a MERV-13 rating, which will reduce levels of indoor DPM by at least 85 percent relative to the incoming outdoor air. Therefore, with the implementation of SCA-B option b), the cumulative TAC impact to new receptors would also be less than significant.

With implementation of the construction-related air pollution controls contained in SCA-A, which requires the use of the best available control technology for all construction equipment, diesel trucks, and generators and that off-road heavy diesel engines meet the

[43] Kirk, Alison, Bay Area Air Quality Management Disrict (BAAQMD), 2015. Personal communication with BASELINE Environmental Consulting, June 23.

CARB's most recent certification standard, as well as prescribing limits on equipment idling and simultaneous excavation, grading, and ground-disturbing activities, and minimizing the use of diesel-fueled generators, the proposed project would not result in a significant health risk or hazards impact from short-term construction emissions. As shown on Table IV.D-8, the estimated excess cancer risk and increase in average annual $PM_{2.5}$ from construction are less than the health and hazard thresholds of significance of 10 per million and 0.3 $\mu g/m^3$, respectively. Therefore, the proposed project's emissions of TAC's would not be considered cumulatively considerable, and the cumulative health risk and hazards impact from construction-generated TACs would be less than significant.

E. GREENHOUSE GAS EMISSIONS

This section describes the expected emissions of greenhouse gases (GHGs) generated during the construction and operational phases of the proposed project and the setting has been prepared in accordance with the most recent version of the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines.[1]

1. Setting

The following discussion provides an overview of the physical and regulatory setting for GHGs and a summary of GHGs as they apply to climate change issues in the City of Oakland.

a. Climate Change and Greenhouse Gas Emissions

Climate change refers to change in the Earth's weather patterns including the rise in the Earth's temperature due to an increase in heat-trapping GHGs in the atmosphere. According to the BAAQMD's *Bay Area 2010 Clean Air Plan* (CAP), some of the potential effects of increased GHG emissions and the associated climate change may include loss in snow pack (affecting water supply), sea level rise, more frequent extreme weather events, more large forest fires, and more drought years. In addition, climate change may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health.[2]

Existing GHGs allow about two-thirds of the visible and ultraviolet light from the sun to pass through the atmosphere and be absorbed by the Earth's surface. To balance the absorbed incoming energy, the surface radiates thermal energy back to space at longer wavelengths primarily in the infrared part of the spectrum. Much of the thermal radiation emitted from the surface is absorbed by the GHGs in the atmosphere and is re-radiated in all directions. Since part of the re-radiation is back towards the surface and the lower atmosphere, the global surface temperatures are elevated above what they would be in the absence of GHGs. This process of trapping heat in the lower atmosphere is known as the greenhouse effect.

An increases of GHGs in the atmosphere results in a global warming trend. Increases in global average temperatures have been observed since the mid-20th century, and have been linked to observed increases in GHG emissions from anthropogenic sources. The primary GHG emissions of concern are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Other GHGs of concern include hydrofluorocarbons (HFCs), perfluorocarbons

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[1] Bay Area Air Quality Management District (BAAQMD), 2012a *California Environmental Quality Act Air Quality Guidelines,* May.

[2] Bay Area Air Quality Management District (BAAQMD), 2010a. *Bay Area 2010 Clean Air Plan*, September 15.

(PFCs), and sulfur hexafluoride (SF_6), but their contribution to climate change is less than 1 percent of the total by well-mixed GHGs.[3]

According to the Intergovernmental Panel on Climate Change (IPCC), the atmospheric concentrations of CO_2, CH_4, and N_20 have increased to levels unprecedented in at least the last 800,000 years due to anthropogenic sources. In 2011, the concentrations of CO_2, CH_4, and N_20 exceeded the pre-industrial[4] levels by about 40, 150, and 20 percent, respectively. The Earth's mean surface temperature in the Northern Hemisphere from 1983–2012 was likely the warmest 30-year period over the last 1,400 years.[5]

The global increases in CO_2 concentration are due primarily to fossil fuel combustion, cement production, and land use change (e.g., deforestation). The dominant anthropogenic sources of CH_4 are from ruminant livestock, fossil fuel extraction and use, rice paddy agriculture, and landfills, while the dominant anthropogenic sources of N_20 are from ammonia for fertilizer and industry.[6] All emissions of HFCs, PFCs, and SF_6 are not naturally-occurring and originate from industrial processes such as semiconductor manufacturing, use as refrigerants and other products, and electric power transmission and distribution.[7]

Each GHG has a different global warming potential (GWP). For instance, CH_4 traps about 21 times more heat per molecule than CO_2. As a result, emissions of GHGs are reported in metric tons of "carbon dioxide equivalents" (CO_2e), where each GHG is weighted by its GWP relative to CO_2.

b. Existing GHG Emissions and Projections

In 2011, the California Air Resources Board (CARB) estimated that transportation was the source of 37.6 percent of California's anthropogenic GHG emissions, followed by industrial sources at 20.8 percent and electricity generation at 19.3 percent.[8] In 2007, 95.8 million metric tons of CO_2e GHGs were emitted from anthropogenic sources within the San Francisco Bay Area Air Basin (SFBAAB). The CO_2 emissions from various activities

[3] Intergovernmental Panel on Climate Change (IPCC), 2013. *Climate Change 2013; the Physical Science Basis; Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*.

[4] Pre-1750.

[5] Intergovernmental Panel on Climate Change (IPCC), 2013. *Climate Change 2013; the Physical Science Basis; Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*.

[6] Intergovernmental Panel on Climate Change (IPCC), 2013. *Climate Change 2013; the Physical Science Basis; Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*.

[7] Bay Area Air Quality Management District (BAAQMD), 2010c. *Source Inventory of Bay Area Greenhouse Gas Emissions,* updated February.

[8] California Air Resources Board (CARB), 2013b. *California Greenhouse Gas Inventory for 2000-2011; by Category as Defined in the 2008 Scoping Plan*. Last updated August 1.

represented about 91.6 percent of the total GHG emissions. The 2007 GHG emissions in the SFBAAB are summarized in Table IV.E-1.

TABLE IV.E-1 SAN FRANCISCO BAY AREA 2007 GREENHOUSE GAS EMISSIONS

Pollutant	Percent	CO_2e (Million Metric Ton/Year)
CO_2	91.6%	87.8
CH_4	2.6%	2.5
N_20	1.6%	1.5
HFC, PFC, SF_6	4.1%	4.0
Total	**100.0%**	**95.8**

Source: Bay Area Air Quality Management District (BAAQMD), 2010b. *Source Inventory of Bay Area Greenhouse Gas Emissions,* updated February.

In the absence of policy changes, the BAAQMD estimated that the 2007 SFBAAB GHG emissions would increase at an average rate of approximately 1.4 percent per year based on projected population growth and economic expansion (Table IV.E-2).[9] However, CARB and other state agencies are implementing measures to reduce statewide GHG emissions to 1990 levels by 2020.

TABLE IV.E-2 SAN FRANCISCO BAY AREA GREENHOUSE GAS EMISSION TRENDS BY SECTOR (MILLION METRIC TONS CO_2E)

Category	1990	2002	2005	2008	2011	2014	2017	2020
Transportation	29.8	34.1	34.8	35.3	36.3	37.6	39.3	40.7
Indus./Comm.	23.9	31.4	32.8	35.6	37.7	39.9	42.0	44.2
Electricity/Co-Gen.	25.1	17.0	15.1	15.6	16.3	16.9	17.6	18.3
Residential Fuel	5.8	6.6	6.7	6.9	7.0	7.2	7.4	7.5
Off-Road Equip.	2.2	2.7	2.8	3.0	3.1	3.3	3.4	3.6
Agriculture	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Total	**87.7**	**92.8**	**93.4**	**97.4**	**101.5**	**106**	**110.8**	**115.4**

Note: These are "business-as-usual" projections.
Source: Bay Area Air Quality Management District (BAAQMD), 2010b. *Source Inventory of Bay Area Greenhouse Gas Emissions*, updated February.

[9] Bay Area Air Quality Management District (BAAQMD), 2010c. *Source Inventory of Bay Area Greenhouse Gas Emissions*, updated February.

c. Regulatory Setting

Federal, state, and local policies and regulations relevant to GHGs are described below.

(1) Federal Regulations

The U.S. Supreme Court ruled on April 2, 2007 that CO_2 is an air pollutant as defined under the Clean Air Act, and that the U.S. Environmental Protection Agency (EPA) has the authority to regulate emissions of GHGs. The U.S. EPA made two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The current and projected concentrations of the six key well-mixed GHGs[10] CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, these findings were a prerequisite for implementing GHG emissions standards for vehicles. In collaboration with the National Highway Traffic Safety Administration, the U.S. EPA finalized emission standards for light-duty vehicles (2012-2016 model years) in May of 2010 and heavy-duty vehicles (2014-2018 model years) in August of 2011.

There are no federal regulations or policies regarding GHG emissions applicable to the proposed project.

(2) State Regulations

California has adopted the following regulations aimed at reducing statewide GHG emissions:

- **Executive Order S–3–05.** In 20005, executive Order S-3-05 established statewide targets to reduce GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.
- **Assembly Bill 32.** In 2006, State legislation passed the California Global Warming Solutions Act (AB 32), which requires to develop and implement regulatory and market mechanisms that will reduce GHG emissions and achieve the long-term emission reduction goal described in Executive Order S-3-05.
- **Climate Change Scoping Plan.** In December 2008, the Climate Change Scoping Plan was approved by CARB, which outlines the State's plan to achieve the GHG reductions required in AB 32. The Scoping Plan contains the primary strategies California will

[10] The well-mixed GHGs have lifetimes long enough to be relatively homogeneously mixed in the troposphere.

implement to achieve a reduction of 169 million metric tons of CO_2e, or approximately 28 percent from the State's projected 2020 emission levels.

Key elements of the Scoping Plan include the following recommendations:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

Senate Bill 375 (2008)

Senate Bill (SB) 375 aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocations to reduce vehicle emissions. SB 375 requires California's regional land use and transportation authorities to work with local agencies to achieve more compact growth patterns, thereby reducing the quantity of GHGs emitted by passenger vehicles. Each metropolitan planning organization (MPO) must adopt a Sustainable Communities Strategy or Alternative Planning Strategy, which will prescribe land use allocation in that MPO's Regional Transportation Plan. The Sustainable Communities Strategy seeks to achieve the targeted reductions in GHG emissions by encouraging compact growth in concert with transportation planning.

SB 375 requires CARB to establish GHG emission reduction targets related to transportation for each metropolitan transportation organization region. The Metropolitan Transportation Commission (MTC) is the designated MPO for the Bay Area. On July 28, 2010, the MTC approved a set of "Bay Area Principles for Establishing Regional Greenhouse Gas Reduction Targets" (Resolution 3970) proposing per-capita GHG reductions of 7 percent by 2020 and 15 percent by 2035. On September 23, 2010, CARB adopted the GHG reduction targets recommended by MTC.[11] These targets will now be

[11] California Air Resources Board (CARB), 2010. *Regional Greenhouse Gas Emission Reduction Targets Pursuant to SB 375.*

incorporated into the sustainable communities strategies that MPOs are required to adopt, as part of their next regional transportation plan.

The MTC, in collaboration with the Association of Bay Area Governments, BAAQMD, and the Bay Conservation and Development Commission, are collaborating to produce an integrated land-use/transportation plan to be implemented through 2040. In addition to integrating transportation and land use development plans, the plan will inaugurate a new process: the development of a Sustainable Communities Strategy. The nine Bay Area counties and 101 cities and towns will continue to have land-use authority in their respective jurisdictions.[12]

Two of the sustainable community strategies relevant to the proposed project are:

- Reduce vehicle miles traveled within the Bay Area by providing more housing in communities for people who provide essential services but cannot afford to live there and have to commute by car from far away, raising transportation costs, congesting roads, polluting the air and wasting time that could be spent with their families; and
- Develop compact communities where transit, jobs, schools, services, and recreation are conveniently located near people's homes.[13]

Title 24 Building Efficiency Standards

California regulates energy consumption under Title 24 Building Standards Code, Part 6 of the California Code of Regulations (also known as the California Energy Code). The Title 24 Building Energy Efficiency Standards were developed by the California Energy Commission and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings.

Title 24 California Green Building Standards Code

Title 24 Building Standards Code, Part 11 of the California Code of Regulations is referred to as the California Green Building Standards Code or CALGreen Code. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality.

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[12] Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), 2011. *Plan Bay Area*.

[13] Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), 2011. *Plan Bay Area*.

(3) Bay Area Air Quality Management District Climate Protection Program

The BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the SFBAAB. The climate protection program includes measures that promote energy efficiency, reduce vehicle miles traveled, and develop alternative sources of energy, all of which assist in reducing emissions of GHGs and in reducing air pollutants that affect the health of residents. The BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

(4) City of Oakland Energy and Climate Action Plan

In December 2012, the City adopted the Energy and Climate Action Plan (ECAP). The purpose of the ECAP is to identify and prioritize actions the City can take to reduce energy consumption and GHG emissions associated with the City. The ECAP outlines a 10-year plan including more than 150 actions that will enable the City to achieve a 36 percent reduction in GHG emissions below 2005 level by 2020.[14] The City can accomplish this goal by 2020 through:

- 20 percent reduction in vehicle miles traveled annually as residents, workers and visitors meet daily needs by walking, bicycling, and using transit;
- 24 million gallons of oil saved annually due to less driving and more fuel efficient vehicles on local roads;
- 32 percent decrease in electricity consumption through renewable generation, conservation and energy efficiency;
- 14 percent decrease in natural gas consumption through building retrofits, solar hot water projects and conservation;
- 62 million kWh and 2.7 million therms annually of new renewable energy used to meet local needs; and
- 375,000 tons of waste diverted away from local landfills through waste reduction, reuse, recycling, and composting.

(5) City of Oakland Green Building Ordinance

In October 2010, the City adopted the Green Building Ordinance for Private Development Projects. The ordinance affects a wide range of projects, including new residential developments. The minimum green building requirements described in the ordinance are designed to reduce energy use, conserve water and other natural resources, limit solid waste during construction and operation, and promote healthy indoor air quality.

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[14] City of Oakland, 2012. *Energy and Climate Action Plan*, December 4.

Requirements from both the City's local ordinance and the State's CALGreen code apply to future City developments.

(6) City of Oakland General Plan

The following air quality policies from the City of Oakland's General Plan would relate to the project.

- **Policy CO-12.1: Land Use Patterns Which Promote Air Quality.** Promote land use patterns and densities which help improve regional air quality conditions by: (a) minimizing dependence on single passenger autos; (b) promoting projects which minimize quick auto starts and stops, such as live-work development, mixed use development, and office development with ground floor retail space; (c) separating land uses which are sensitive to pollution from the sources of air pollution; and (d) supporting telecommuting, flexible work hours, and behavioral changes which reduce the percentage of people in Oakland who must drive to work on a daily basis.
- **Policy CO-12.4: Design of Development to Minimize Air Quality Impacts.** Require that development projects be designed in a manner which reduces potential adverse air quality impacts. This may include: (a) the use of vegetation and landscaping to absorb carbon monoxide and to buffer sensitive receptors; (b) the use of low-polluting energy sources and energy conservation measures; and (c) designs which encourage transit use and facilitate bicycle and pedestrian travel.
- **Policy CO-13.3: Construction Methods and Materials.** Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.
- **Policy CO-13.4: Alternative Energy Sources.** Accommodate the development and use of alternative energy resources, including solar energy and technologies which convert waste or industrial byproducts to energy, provided that such activities are compatible with surrounding land uses and regional air and water quality requirements.

(7) City of Oakland Municipal Code

Chapter 15.34 of Oakland's Municipal Code requires new construction projects to submit a Waste Reduction and Recycling Plan to the City's Building Official for review and approval. The intent of the provisions are to divert (e.g., reuse onsite) at least 50 percent of construction and demolition debris from landfills. The purpose of these provisions is to prescribe requirements designed to meet and further the goals of the California Integrated Waste Management Act of 1989 Assembly Bill 939 and the Alameda County Waste Reduction and Recycling Act of 1990 (Measure D).

(8) City of Oakland Standard Conditions of Approval

The City of Oakland's Uniformly Applied Development Standards would be incorporated into the project as Standard Conditions of Approval (SCOAs). The following SCAs would apply to the project.

SCOA-F: Greenhouse Gas (GHG) Reduction Plan.

Prior to issuance of a construction-related permit and ongoing as specified.

The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG Reduction Plan for City review and approval. The applicant shall implement the approved GHG Reduction Plan.

The requirement for a Greenhouse Gas Reduction Plan, would apply under any of the following scenarios:

Scenario A: Projects which (a) involve a land use development (i.e., a project that does not require a permit from the Bay Area Air Quality Management District (BAAQMD) to operate), (b) exceed the greenhouse gas (GHG) emissions screening criteria contained in the BAAQMD CEQA Guidelines, AND (c) after a GHG analysis is prepared would produce total GHG emissions of more than 1,100 metric tons of CO_2e annually AND more than 4.6 metric tons of CO_2e per service population annually (with "service population" defined as the total number of employees and residents of the project).

Scenario B: Projects which (a) involve a land use development, (b) exceed the GHG emissions screening criteria contained in the BAAQMD CEQA Guidelines, (c) after a GHG analysis is prepared would exceed at least one of the BAAQMD Thresholds of Significance (more than 1,100 metric tons of CO_2e annually OR more than 4.6 metric tons of CO_2e per service population annually), AND (d) are considered to be "Very Large Projects."[15]

Scenario C: Projects which (a) involve a stationary source of GHG (i.e., a project that requires a permit from BAAQMD to operate) AND (b) after a GHG analysis is prepared would produce total GHG emissions of more than 10,000 metric tons of CO_2e annually.

SCA-A. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)[16]

Ongoing throughout demolition, grading, and/or construction.

During construction, the project applicant shall require the construction contractor to implement all of the following applicable measures recommended by the BAAQMD:

[16] This SCA is from the City of Oakland's Supplemental Standard Conditions of Approval (dated July 28, 2011) and replaces the 2008 SCAs for Dust Control (SCA-26) and Construction Emissions (SCA-27).

Basic[17]

a) Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.

b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).

c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d) Pave all roadways, driveways, sidewalks, etc. as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

e) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).

f) Limit vehicle speeds on unpaved roads to 15 miles per hour.

g) Idling times shall be minimized either by shutting equipment off when not is use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations. Clear signage to this effect shall be provided for construction workers at all access points.

h) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

i) Post a publicly visible sign that includes the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor shall respond and take corrective action within 48 hours. The telephone numbers of contacts at the City and the BAAQMD shall also be visible. This information may be posted on other required on-site signage.

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[17] Applies to all construction sites.

Enhanced[18]

j) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

k) All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph.

l) Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

m) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).

n) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.

o) Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind-blown dust. Wind breaks must have a maximum 50 percent air porosity.

p) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

q) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

r) All trucks and equipment, including tires, shall be washed off prior to leaving the site.

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[18] All "Basic" controls listed above plus the following controls if the project involves:
- 114 or more single-family dwelling units;
- 240 or more multi-family units;
- Nonresidential uses that exceed the applicable screening size listed in the Bay Area Air Quality Management District's CEQA Guidelines;
- Demolition permit;
- Simultaneous occurrence of more than two construction phases (e.g., grading and building construction occurring simultaneously);
- Extensive site preparation (i.e., the construction site is four acres or more in size); or
- Extensive soil transport (i.e., 10,000 or more cubic yards of soil import/export).

s) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.

t) Minimize the idling time of diesel-powered construction equipment to two minutes.

u) The project applicant shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate matter (PM) reduction compared to the most recent California Air Resources Board (CARB) fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as they become available.

v) Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).

w) All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.

x) Off-road heavy diesel engines shall meet the CARB's most recent certification standard.

SCA-H. Compliance with the Green Building Ordinance, OMC Chapter 18.02

Prior to issuance of a demolition, grading, or building permit

The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, OMC Chapter 18.02.

a) The following information shall be submitted to the Building Services Division for review and approval with the application for a building permit:

   i. Documentation showing compliance with Title 24 of the 2013 California Building Energy Efficiency Standards.

   ii. Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.

   iii. Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit.

iv. Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (b) below.

v. Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance.

vi. Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit.

vii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

b) The set of plans in subsection (a) shall demonstrate compliance with the following:

i. CALGreen mandatory measures.

ii. All pre-requisites per the LEED/GreenPoint Rated checklist approved during the review of the Planning and Zoning permit, or, if applicable, all the green building measures approved as part of the Unreasonable Hardship Exemption granted during the review of the Planning and Zoning permit.

iii. Insert green building point level/certification requirement: (See Green Building Summary Table; for New Construction of Residential or Non-residential projects that remove a Historic Resource (as defined by the Green Building Ordinance) the point level certification requirement is 75 points for residential and LEED Gold for non-residential) per the appropriate checklist approved during the Planning entitlement process.

iv. All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plancheck application is submitted and approved by the Planning and Zoning Division that shows the previously approved points that will be eliminated or substituted.

v. The required green building point minimums in the appropriate credit categories.

During construction

The applicant shall comply with the applicable requirements CALGreen and the Green Building Ordinance, Chapter 18.02.

a) The following information shall be submitted to the Building Inspections Division of the Building Services Division for review and approval:

   i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.

   ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance.

   iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

SCA-I. Compliance with the Green Building Ordinance, OMC Chapter 18.02, for Building and Landscape Projects Using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist. This SCA would apply to the projects listed below **AND** that are rated using the Small Commercial or Bay Friendly Basic Landscape Checklists:

a) New Construction of Non-Residential Buildings between 5,000 and 25,000 sq. ft. of total floor area.

b) Alterations/Alterations 5,000 and 25,000 sq. ft. of total floor area to a Non-Residential Building

c) Additions/Alterations (not meeting the Major Alteration Definition) over 25,000 sq. ft. of total floor area to a Non-Residential Building

d) Alterations/Alterations 5,000 and 25,000 sq. ft. of total floor area to a Historic Non-Residential Building

e) Additions/Alterations (not meeting the Major Alteration Definition) over 25,000 sq. ft. of total floor area to a Historic Non-Residential Building

f) Construction projects with over 25,000 sq. ft. of total floor area of new construction requiring a landscape plan.

Prior to issuance of a building permit

The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, (OMC Chapter 18.02.) for projects using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist.

a) The following information shall be submitted to the Building Services Division for review and approval with application for a Building permit:

   i. Documentation showing compliance with the 2013 Title 24, California Building Energy Efficiency Standards.

   ii. Completed copy of the green building checklist approved during the review of a Planning and Zoning permit.

   iii. Permit plans that show in general notes, detailed design drawings and specifications as necessary compliance with the items listed in subsection (b) below.

   iv. Other documentation to prove compliance.

b) The set of plans in subsection (a) shall demonstrate compliance with the following:

   i. CALGreen mandatory measures.

   ii. All applicable green building measures identified on the StopWaste.Org checklist approved during the review of a Planning and Zoning permit, or submittal of a Request for Revision Plan-check application that shows the previously approved points that will be eliminated or substituted.

During construction

The applicant shall comply with the applicable requirements of CALGreen and Green Building Ordinance, Chapter 18.02 for projects using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist.

a) The following information shall be submitted to the Building Inspections Division for review and approval:

   i. Completed copy of the green building checklists approved during review of the Planning and Zoning permit and during the review of the Building permit.

   ii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

1. Greenhouse Gas Emissions Impacts, Standard Conditions of Approval, and Mitigation Measures

This section discusses potential impacts on GHG emissions that could result from implementation of the proposed project. The section begins with the City of Oakland's criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section analyzes the impacts associated with the proposed project and recommends mitigation measures to reduce significant impacts, if needed.

a. Significance Criteria

The significance criteria used for analyzing and determining the project's level of impact on GHG emissions and the scope of the analysis are described in this section.

The City of Oakland has established *CEQA Thresholds of Significance Guidelines* to help clarify and standardize analysis and decision-making in the environmental review process. GHG impacts are, by their nature, cumulative impacts because one project by itself cannot cause global climate change. The City's GHG thresholds pertains to a project's contribution to cumulative impacts.

Implementation of the project would have a significant impact if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, specifically:

    a) For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO_2e annually [**NOTE:** Stationary sources are projects that require a BAAQMD permit to operate.].

    b) For a project involving a land use development, produce total emissions of more than 1,100 metric tons of CO_2e annually **AND** more than 4.6 metric tons of CO_2e per service population annually [**NOTE:** Land use developments are projects that do not require a BAAQMD permit to operate. The service population includes both the residents and the employees of the project. The project's impact would be considered significant if the emissions exceed **BOTH** the 1,100 metric tons threshold and the 4.6 metric tons threshold. Accordingly, the impact would be considered less than significant if the project's emissions are below **EITHER** of these thresholds.]

    NOTE: The project's expected GHG emissions during construction should be annualized over a period of 40 years and then added to the expected emissions during operation for comparison to the threshold. A 40-year period is used because 40 years is considered the average life expectancy of a building before it is remodeled with considerations for increased energy efficiency. The thresholds are based on the BAAQMD thresholds. The BAAQMD thresholds were originally developed for project operation impacts only. Therefore, combining both the construction emissions and operation emissions for comparison to the threshold represents a conservative analysis of potential GHG impacts.

2. Fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions.

b. Less-Than-Significant Greenhouse Gas Emissions Impacts

Implementation of the proposed project would result in less-than-significant impacts described below. Since this impact would not exceed the significant thresholds described above, no mitigation measures are necessary for these less-than-significant impacts, and the City's SCA-F requiring a Greenhouse Gas Reduction Plan would not apply.

(1) Greenhouse Gas Impacts on the Environment

To quantify annual GHG emissions during the operational phase of a project, the BAAQMD recommends using the most current version of the California Emissions Estimator Model (CalEEMod). CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data for a variety of land-use projects that can be used if site-specific information is not available. The primary input data used to estimate GHG emissions associated with each of the project's land-use types are summarized in Table IV.E-3. A copy of the CalEEMod report for the project, which summarizes the input parameters, assumptions, and findings, is included in Appendix E.

TABLE IV.E-3 SUMMARY OF CALEEMOD INPUT PARAMETERS

Project Land-Use Type	CalEEMod Land-Use Type	Square Feet
Residential	Mid-Rise Apartments	362,455
Garage	Enclosed Parking with Elevator	147,000
Amenity / Leasing	General Office	11,734
Retail	Convenience Market	2,962
Fitness / Basketball Court	Health Club	4,104

Notes: The total dwelling units = 330
The total lot acreage = 2.07
Approximately 60,000 square feet of existing buildings would be demolished.

GHG emissions during project construction would primarily be from heavy-duty diesel construction equipment. GHG emissions during the operational phase of the project would primarily be from mobile sources (i.e., vehicle trips). Both onsite and offsite GHG emissions during project construction and operation were estimated using the CalEEMod default values, except as noted below.

- Site preparation (i.e., vegetation removal) was not included because the project site is devoid of vegetation.

- The average weekday vehicle trip rate was changed to 4.01 trips/dwelling unit/day, based on the assumptions of the transportation analysis conducted for the project.[19]
- Based on the design of the East Bay Municipal Utility District's wastewater treatment plant, the wastewater treatment process was changed to 100 percent aerobic biodegradation and 100 percent anaerobic digestion with cogeneration.
- Based on the project description, no fireplaces or woodstoves would be included in the project operations.
- Sequestration from landscaping was not included.

Based on the size and type of development, CalEEMod estimated that project construction would likely last 266 working days. In accordance with the City's guidance for evaluating the GHG thresholds, the construction CO_2e emissions were annualized over a period of 40 years and then added to the expected CO_2e emissions during operation.

The average annual CO_2e emissions per service population were determined based on the 2013 United State Census for the City of Oakland. According to the census, there were 2.52 persons per household on average from 2009 to 2013.[20] The project would build 330 units, which would result in an average residential population of about 813.6 residents according to the Census data. The residential population estimate for the project, which excludes employees, was used to conservatively estimate the project's service population.

Tthe average annual CO_2e emissions and the average annual CO_2e emissions per service population for the project are compared to the City's thresholds in Table IV.E-4. The project's estimated CO_2e emissions exceeded the City's annual emissions threshold, but were below the efficiency-based threshold in terms of annual emissions per service population. Since annual CO_2e emissions only need to be below one of the thresholds, the project's GHG emissions would have a less-than-significant impact on global climate change.

(2) Conflict with Applicable Greenhouse Gas Plan, Policy, or Regulation

The City's GHG quantitative thresholds were designed to ensure compliance with the AB 32 GHG reduction goals. Since the project's GHG emissions would be below the City's efficiency-based threshold for GHG emissions (Table IV.E-4), it can be assumed that the project would comply with AB 32. Therefore, the project's impact on applicable plans, policies, or regulations related to GHG emission reductions in the SFBAAB would be less than significant.

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[19] Fehr & Peers, 2015. *Memorandum: 200 4th Street – Preliminary Transportation Analysis,* March 3.

[20] United States Census Bureau, 2013. *State and County QuickFacts*. http://quickfacts.census.gov/qfd/index.html, accessed March 14, 2015. Last updated December 4, 2014.

TABLE IV.E-4 SUMMARY OF AVERAGE GREENHOUSE GAS EMISSIONS

Pollutant	**GHGs**	
Units	Metric Tons CO2e/year	Metric Tons CO2e/year/ Service Population
Emissions	3,099	3.8
Thresholds	1,100	4.6
Exceedance	Yes	No

Source: CalEEMod (Appendix E).

In addition, the proposed project is subject to the City's Standard Conditions of Approval, some of which result in a reduction or mitigation of GHG emissions. These include but are not limited to SCA Trans-1: Parking and Transportation Demand Management, SCA Air Quality A.: Construction-Related Air Pollution Controls, SCA 33: Waste Reduction and Recycling, and SCA 40: Tree Removal Permit, SCA 41: Tree Replacement and Replanting, and SCA 83: Stormwater and Sewer.

The ECAP was developed to identify, evaluate and recommend prioritized actions to reduce energy consumption and GHG emissions in Oakland. The ECAP identifies energy and climate goals, clarifies policy direction, and identifies priority actions for reducing energy use and GHG emissions. The proposed project would conform to the Green Building Ordinance and, as stated earlier, comply with SCA 33: Waste Reduction and Recycling, both of which support the policies and goals of the ECAP. The proposed project also conforms to the transportation and land use policies of the ECAP through the development of residential/commercial mixed in an area well served by public transit. The Project would not be in direct conflict with the policies and actions contained in the ECAP, and because the Project results in a reduction of GHG emissions as compared to the baseline, the Project is consistent with the ECAP actions to reduce energy consumption and GHG emissions in Oakland.

c. Significant Impacts

There would be no significant impacts related to GHG emissions that would result from implementation of the proposed project.

d. Cumulative Impacts

Please see the discussion above. GHG impacts are, by their nature, cumulative impacts because one project by itself cannot cause global climate change. The City's GHG thresholds pertains to a project's contribution to cumulative impacts.

F. NOISE AND VIBRATION

This section evaluates potential noise and vibration impacts from the proposed project. The setting section includes a description of noise and vibration terminology, a description of the current noise conditions near the project site, and a summary of the relevant guidance, plans, and policies for evaluating and regulating noise and vibration. The potential impacts assessed include temporary noise and vibration generated during construction, noise generated during the operational phase of the proposed project, and the exposure of residents of the proposed development to traffic noise from the nearby highway and railroad.

1. Setting

The following discussion provides background information on noise and vibration, a summary of the existing noise environment, and a description of relevant noise and vibration regulations.

a. General Information on Noise

Noise is commonly defined as unwanted sound that annoys or disturbs people and can have an adverse psychological or physiological effect on human health. Sound is measured in decibels (dB), which is a logarithmic scale. Decibels describe the purely physical intensity of sound based on changes in air pressure, but they cannot accurately describe sound as perceived by the human ear since the human ear is only capable of hearing sound within a limited frequency range. Therefore, the frequency of a sound must be taken into account when evaluating the potential human response to sound. For this reason, a frequency-dependent weighting system is used and monitoring results are reported in A-weighted decibels (dBA). Decibels and other technical terms are defined in Table IV.F-1. Typical A-weighted noise levels at specific distances are shown for different noise sources in Table IV.F-2.

In an unconfined space, such as outdoors, noise attenuates with distance according to the inverse square law. Noise levels at a known distance from point sources are reduced by 6 dBA for every doubling of that distance for hard surfaces, such as cement or asphalt surfaces, and 7.5 dBA for every doubling of distance for soft surfaces, such as undeveloped or vegetative surfaces.[1] Noise levels at a known distance from line sources (e.g. roads, highways, and railroads) are reduced by 3 dBA for every doubling of the distance for hard surfaces and 4.5 dBA for every doubling of distance for soft surfaces.[2]

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[1] California Department of Transportation (CalTrans), 1998. Technical Noise Supplement: A Technical Supplement to the Traffic Noise Analysis Protocol.

[2] California Department of Transportation (CalTrans), 1998. Technical Noise Supplement: A Technical Supplement to the Traffic Noise Analysis Protocol.

TABLE IV.F-1 DEFINITION OF ACOUSTICAL TERMS

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound on a logarithmic scale. Sound described in decibels is usually referred to as sound or noise "level." This unit is not used in this analysis because it includes frequencies that the human ear cannot detect.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, in a manner similar to the frequency response of the human ear, and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period. For this CEQA evaluation, L_{eq} refers to a 1-hour period unless otherwise stated.
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels to sound levels during the evening from 7 to 10 p.m. and after addition of 10 decibels to sound levels during the night between 10 p.m. and 7 a.m.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to sound levels during the night between 10 p.m. and 7 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Vibration Decibel (VdB)	A unit describing the amplitude of vibration on a logarithmic scale.
Peak Particle Velocity (PPV)	The maximum instantaneous peak of a vibration signal.
Root Mean Square (RMS) Velocity	The average of the squared amplitude of a vibration signal.

Source: Salter, Charles M., 1998. *Acoustics – Architecture, Engineering, the Environment*, William Stout Publishers. Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment (DTA-VA-90-1003-06).

Greater decreases in noise levels can result from the presence of intervening structures or buffers.

An important method for determining a person's subjective reaction to a new noise is by comparing it to existing conditions. The following describes the general effects of noise on people:[3]

- A change of 1 dBA cannot typically be perceived except in carefully controlled laboratory experiments;

[3] Salter, Charles M., 1998. *Acoustics – Architecture, Engineering, the Environment,* William Stout Publishers.

TABLE IV.F-2 TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

Noise Source (Distance in Feet)	A-Weighted Sound Level in Decibels (dBA)	Subjective Impression
Civil Defense Siren (100)	130	Pain Threshold
Jet Takeoff (200)	120	
Rock Music Concert (50)	110	
Pile Driver (50)	100	Very Loud
Ambulance Siren (100)	90	
Diesel Locomotive (25)	85	Loud
Pneumatic Drill (50)	80	
Freeway (100)	70	Moderately Loud
Vacuum Cleaner (10)	60	
Light Traffic (100)	50	
Large Transformer (200)	40	Quiet
Soft Whisper (5)	30	Threshold of Hearing

Source: Salter, Charles M., 1998, *Acoustics – Architecture, Engineering, the Environment*.

- A 3-dBA change is considered a just-perceivable difference;
- A minimum of 5-dBA change is required before any noticeable change in community response is expected; and
- A 10-dBA change is subjectively perceived as approximately a doubling or halving in loudness.

Since sound pressure levels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. For instance, if one noise source emits a sound level of 90 dBA, and a second source is placed beside the first and also emits a sound level of 90 dBA, the combined sound level is 93 dBA, not 180 dBA. When the difference between two noise levels is 10 dBA or more, the amount to be added to the higher noise level is zero. In such cases, no adjustment factor is needed because adding in the contribution of the lower noise source makes no perceptible difference in what people can hear or measure. For example if one noise source generates a noise level of 95 dBA and another noise source is added that generates a noise level of 80 dBA, the higher noise source dominates and the combined noise level will be 95 dBA.

b. General Information on Vibration

Vibration is an oscillatory motion through a solid medium (versus noise which is an oscillatory motion through air) in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Several different methods are used to quantify vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors to vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment. Vibration amplitudes are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous peak of the vibration signal. PPV is appropriate for evaluating potential damage to buildings, but it is not suitable for evaluating human response to vibration because it takes the human body time to respond to vibration signals. The response of the human body to vibration is dependent on the average amplitude of a vibration. The RMS of a signal is the average of the squared amplitude of the signal and is more appropriate for evaluating human response to vibration. PPV and RMS are normally described in units of inches per second (in/sec), and RMS is also often described in vibration decibels (VdB).

c. Local Noise Environment

The local noise environment, including sensitive receptors and existing noise conditions, is described below.

(1) Surrounding Receptors

The land uses adjacent to the proposed project include Interstate 880 (I-880) to the north, and commercial, light-industrial, and multi-family residential to the east, south, and west. The nearest residential and commercial receptors are the residential units and deli within the Allegro apartment building, which is located adjacent to, and west of, Block B.[4] There is an approximately 20-foot-wide patio located between the project site and the nearest residential units in the Allegro apartment building, and there is a deli located beneath this patio. There are also commercial, light industrial, and multi-family residential receptors located approximately 75 feet east, south, and west of the project site.

(2) Ambient Noise Environment

The primary sources of noise in the vicinity of the project site are: (1) traffic on the I-880 highway, which is located approximately 100 feet north of the project site; and (2) the Union Pacific Railroad (UPRR), which is located approximately 560 feet south of the project

[4] The Allegro is a multi-family residential community consisting of three buildings. One of its buildings is located east of Jackson Street, adjacent to and sharing a city block with Block B. A second building is located west of Jackson Street. A third building is located south of 3rd Street between Jackson and Madison Streets. For the purposes of this noise analysis, references to the Allegro building in this section refer to the building located adjacent east of Jackson Street and adjacent to and sharing a city block with Block B.

site. Airport operations and Bay Area Rapid Transit (BART) lines are major sources of noise in some parts of the City. However, the project site is not located within the 65 dBA L_{dn} contour lines for Oakland International Airport,[5] the closest airport to the project site, and the BART lines in the vicinity of the project site are located underground and therefore do not contribute to noise at the project site.

Traffic on the I-880 generates noise levels of approximately 83 dBA L_{dn} at 150 feet.[6,7] Therefore, the northern boundary of Block A, located approximately 100 feet south of I-880, would be subject to highway noise levels of approximately 85 dBA L_{dn}.[8] The southern boundary of Block A/the northern boundary of Block B, located approximately 380 feet south of I-880, would be subject to highway noise levels of about 74 dBA L_{dn}.[8,9] This estimate is similar to the 71 dBA L_{dn} noise level previously measured at the intersection of Oak Street and 4th Street, which is located a comparable distance south of I-880. Lastly, units on the southern boundary of Block B, located approximately 590 feet south of I-880, would be subject to highway noise levels of approximately 69 dBA L_{dn}.[8,9]

Diesel engines, the movement of steel wheels over rails, train air horns, and crossing bell gates all contribute to noise levels associated with the UPRR tracks. The UPRR tracks are utilized by both freight trains and Amtrak trains. Train noise, although intermittent, can generate major noise events. At the project site, Block A is subject to UPRR generated

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[5] Alameda County Community Development Agency, 2010, Oakland International Airport, Airport Land Use Compatibility Plan, December. Available online at: http://www.acgov.org/cda/planning/generalplans/documents/OAK_ALUCP_122010_FULL.pdf.

[6] City of Oakland, 2005. *City of Oakland General Plan, Noise Element,* March.

[7] The 83 dBA Ldn value was estimated based on 2005 traffic levels, however, the Noise Element of the City of Oakland General Plan states that community noise levels in a built-out city like Oakland would not change sufficiently in 10 years to require a new model. Furthermore, only minor changes in traffic noise are anticipated between 2005 and 2025.

[8] The following noise attenuation adjustment equation was applied to estimate noise levels from the I-880 (a line source) at 100, 380, and 590 feet assuming:

dBA2 = dBA1 + 10 x Log 10 (D1/D2)
Where:
dBA1 reference noise level at a specified distance (83 dBA Ldn).
dBA2 is the calculated noise level.
D1 is the reference distance (150 feet).
D2 is the perpendicular distance from receiver.

[9] A building located between a roadway and receiver provides about 5 dBA of noise reduction and each subsequently row provides an additional 3 dBA reduction, with an upper limit of 20 dBA (Salter, 1998). Therefore, in addition to the noise reduction due to attenuation, the building on Block A would reduce noise levels at Block B by about 5 dBA, and the Buildings on Block A and B together would reduce noise levels at the southern boundary of Block B by about 8 dBA.

noise levels of less than 60 dBA L_{dn} while Block B is subject to UPRR generated noise levels of between 60 and 65 dBA L_{dn}.[10]

Noise generated by the I-880 at Block A is at least 10 dBA L_{dn} higher than noise generated by the UPRR. Therefore, based on the additive properties of noise described above, noise levels at Block A are determined primarily by highway traffic, and range from approximately 74 dBA L_{dn} at the southern boundary to 85 dBA L_{dn} at the northern boundary, as estimated above.

The difference between noise generated by the I-880 and the UPRR at Block B is less than 10 dBA L_{dn}, and therefore noise at Block B is determined by both I-880 and UPRR generated noise. Based on the decibel addition of the I-880 and UPRR generated noise, noise levels at the Block B range from approximately 71 dBA L_{dn} at the southern boundary to 75 dBA L_{dn} at the northern boundary.[11]

d. Regulatory Setting

Noise standards in the City of Oakland are promulgated by the State of California and by the local general plan and local ordinances. The State of California provides guidance for the preparation of noise elements in general plans. In California, noise is primarily regulated at the local level, through the implementation of general plan policies and local noise ordinances. The purpose of a local general plan is to identify the general principles intended to guide land use and development, and the purpose of the ordinances is to specify the standards and requirements for implementing the principles of the general plan.

(1) State Regulations

The California Noise Act and the applicable sections of the California Building Code are summarized below.

California Noise Control Act

Sections 46000 to 46080 of the California Health and Safety Code codify the California Noise Control Act (CNCA) of 1973. This act established the Office of Noise Control under the California Department of Health Services. The CNCA requires that the Office of Noise Control adopt, in coordination with the Office of Planning and Research, guidelines for the preparation and content of noise elements for general plans. The most recent guidelines are contained in General Plan Guidelines, published by the California Office of Planning

[10] City of Oakland, 2005. *City of Oakland General Plan, Noise Element,* March.

[11] Conservatively assumed UPRR noise levels of 65 dBA Ldn throughout the southern property. The decibel addition of 65 dBA Ldn plus 74 dBA Ldn (the estimated highway generated noise at the northern boundary of Block A) is equal to 74.5 dBA Ldn. The decibel addition of 65 dBA Ldn plus 69 dBA Ldn (the estimated highway generated noise at the southern boundary of Block A) is equal to 70.5 dBA Ldn.

and Research in 2003.[12] The document provides land use compatibility guidelines for cities and counties to use in their general plans in order to reduce conflicts between land use and noise. The City of Oakland has adopted a modified version of the State's land use compatibility guidelines, as discussed below.

California Building Code

Part 11 Section 5.507 of the 2013 California Building Code specifies that buildings containing non-residential uses (e.g., retail spaces and offices) that are exposed to exterior noise levels at or above 65 dBA L_{eq} or CNEL shall maintain interior noise level below 50 dBA L_{eq} in occupied areas during any hour of operation. An acoustical analysis documenting compliance with this interior sound level is required. Although the 2013 California Building Code does not specify an interior noise standard for residential uses, the 2010 California Building Code restricted interior noise levels attributable to exterior noise sources to 45 dBA L_{dn} or CNEL for dwellings other than detached single-family dwellings, and this restriction is incorporated in the City of Oakland General Plan.

(2) City of Oakland

General Plan

The Noise Element of the City of Oakland General Plan contains the following noise policies and action items that are applicable to the proposed project: [13]

- **Policy 1:** Ensure the compatibility of existing and, especially, of proposed development projects not only with neighboring land uses but also with their surrounding noise environment.

- *Action 1.1:* Use the noise-land use compatibility matrix (Figure 6 *of the Noise Element [Table IV.F-3 below]*) in conjunction with the noise contour maps (especially for roadway traffic) to evaluate the acceptability of residential and other proposed land uses and also the need for any mitigation or abatement measures to achieve the desired degree of acceptability.

- *Action 1.2:* Continue using the City's zoning regulations and permit processes to limit the hours of operation of noise-producing activities which create conflicts with residential uses and to attach noise-abatement requirements to such activities.

- **Policy 2:** Protect the noise environment by controlling the generation of noise by both stationary and mobile noise sources.

- **Policy 3:** Reduce the community's exposure to noise by minimizing the noise levels that are *received* by Oakland residents and others in the City. (This policy addresses the *reception* of noise whereas Policy 2 addresses the *generation* of noise.)

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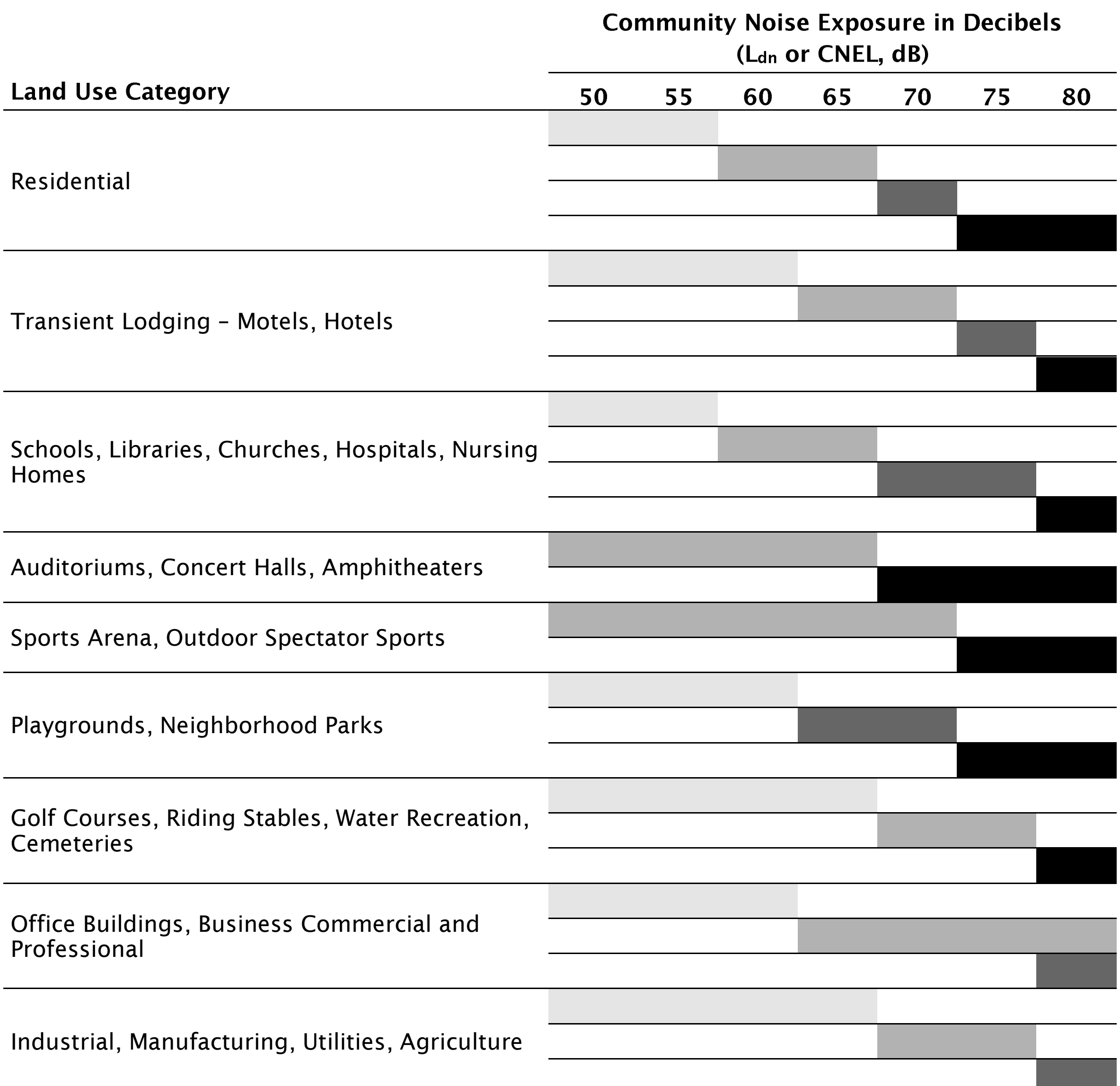
[12] California Office of Planning and Research, 2003. *General Plan Guidelines.*

[13] City of Oakland, 2005. *City of Oakland General Plan, Noise Element,* March.

TABLE IV.F-3 NOISE LAND USE COMPATIBILITY MATRIX



NORMALLY ACCEPTABLE Development may occur without an analysis of potential noise impacts *to the proposed development* (though it might still be necessary to analyze noise impacts that the project might have *on its surroundings*).	NORMALLY UNACCEPTABLE Development should generally de discouraged; it may be undertaken only if a detailed analysis of the noise-reduction requirements is conducted, and if highly effective noise insulation, mitigation or abatement features are included in the design.
CONDITIONALLY ACCEPTABLE Development should be undertaken only after an analysis of noise-reduction requirements is conducted, and if necessary noise-mitigating features are included in the design. Conventional construction will usually suffice as long as it incorporates air conditioning or forced-air-supply systems, though it will likely require that project occupants maintain their windows closed.	CLEARLY UNACCEPTABLE Development should not be undertaken.

Source: City of Oakland, 2005. City of Oakland General Plan, Noise Element, Figure 6.

- *Action 3.1:* Continue to use the building-permit application process to enforce the California Noise Insulation Standards regulating the maximum allowable interior noise level in new multi-unit buildings.

- **Policy N3.9: Orienting Residential Development.** Residential developments should be encouraged to face the street and to orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings, respecting the privacy needs of residents of the development and surrounding properties, providing for sufficient conveniently located on-site open space, and avoiding undue noise exposure.

Noise Ordinances

Chapter 17.120.050 of the Municipal Code establishes performance standards to control dangerous or objectionable environmental effects of noise. The operational noise level standards for residential, commercial, and industrial zones are presented in Table IV.F-4. The construction and demolition noise level standards for residential, commercial/ industrial land uses are presented in Table IV.F-5. Noise from air conditioning mechanical heating, ventilation, and air conditioning (HVAC) systems are prohibited from exceeding the nighttime noise levels presented in Table IV.F-4, and the systems are required to be housed within an enclosure if located within 200 feet of a residential zone. Chapter 17.120.060 prohibits activities from generating vibration that is perceptible without instruments by the average person at or beyond the lot line of the lot containing such activities. Vibration generated by motor vehicles, trains, and construction or demolition work is exempt from this standard.

Chapter 8.18.010 of the Municipal Code defines nuisance noises and establishes noise enforcement procedures and penalties for excessive and annoying noises. Noise that conflicts with the performance standards established in Chapter 17.120.050 is considered a nuisance noise. Chapter 8.18.020 prohibits noises that would disturb the peace and comfort of any person from between the hours of 9:00 p.m. and 7:00 a.m. Additionally, the following construction noise control measures are required:

a) All construction equipment powered by internal combustion engines shall be properly muffled and maintained.

b) Unnecessary idling of internal combustion engines is prohibited.

c) All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.

d) Quiet construction equipment, particularly air compressors, are to be selected whenever possible.

e) Use of pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.

TABLE IV.F-4 CITY OF OAKLAND OPERATIONAL NOISE STANDARDS AT RECEIVING PROPERTY LINE, DBA

Receiving Land Use	Cumulative Number of Minutes in a 1-Hour Period	Maximum Allowable Noise Level (dBA)[a,b] Daytime 7:00 a.m.–10:00 p.m.	Nightime 10:00 p.m.–7:00 a.m.
Residential and Civic[c]	20	60	45
	10	65	50
	5	70	55
	1	75	60
	0 (L_{max}[d])	80	65
		Anytime	
Commercial	20	65	
	10	70	
	5	75	
	1	80	
	0 (L_{max}[d])	85	
Industrial	20	70	
	10	75	
	5	80	
	1	85	
	0 (L_{max}[d])	90	

[a] These standards are reduced 5 dBA for simple tone noise, noise consisting primarily of speech or music, or recurring impact noise.

[b] If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

[c] Legal residences, schools and childcare facilities, health care or nursing home, public open space, or similarly sensitive land uses.

[d] L_{max} is the maximum instantaneous noise level.

Source: City of Oakland Municipal Code Section 17.10.050 Noise.

TABLE IV.F-5 CITY OF OAKLAND CONSTRUCTION NOISE STANDARDS AT RECEIVING PROPERTY LINE, DBA

	Daily 7:00 a.m. to 7:00 p.m.	Weekends 9:00 a.m. to 8:00 p.m.
Short-Term Operation[a]		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Operation[b]		
Residential	65	55
Commercial, Industrial	70	60

Notes: If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

Nighttime noise levels from construction and demolition between the hours of 7:00 p.m. to 7:00 a.m. on weekdays and 8:00 p.m. to 9:00 a.m. on weekends and federal holidays are prohibited from exceeding the applicable nighttime operational noise level standards (see Table IV.F-4).

[a] Short-term construction or demolition operation is less than 10 days.

[b] Long-term construction or demolition operation is 10 days or more.

Source: City of Oakland Municipal Code Section 17.10.050 Noise.

Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs)[14] that are relevant to noise and vibration are listed below. The SCAs are adopted as requirements for all projects approved within the City of Oakland.

SCA Noise-1: Days/Hours of Construction Operation

Ongoing throughout demolition, grading, and/or construction.

The project applicant shall require construction contractors to limit standard construction activities as follows:

a) Construction activities are limited to between 7:00 AM and 7:00 PM Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday.

[14] City of Oakland Planning and Zoning Division. Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval. As amended through September 17, 2008.

b) Any construction activity proposed to occur outside of the standard hours of 7:00 a.m. to 7:00 p.m. Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division.

c) Construction activity shall not occur on Saturdays, with the following possible exceptions:

    i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.

    ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and windows closed.

d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions.

e) No construction activity shall take place on Sundays or Federal holidays.

f) Construction activities include but are not limited to: truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

g) Applicant shall use temporary power poles instead of generators where feasible.

SCA NOISE-2: Noise Control

Ongoing throughout demolition, grading, and/or construction.

To reduce noise impacts due to construction, the project applicant shall require construction contractors to implement a site-specific noise reduction program, subject to the Planning and Zoning Division and the Building Services Division review and approval, which includes the following measures:

a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).

b) Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

c) Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.

d) The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

SCA NOISE-3: Noise Complaint Procedures

Ongoing throughout demolition, grading, and/or construction.

Prior to the issuance of each building permit, along with the submission of construction documents, the project applicant shall submit to the Building Services Division a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include:

a) A procedure and phone numbers for notifying the Building Services Division staff and Oakland Police Department; (during regular construction hours and off-hours);

b) A sign posted on-site pertaining with permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours);

c) The designation of an on-site construction complaint and enforcement manager for the project;

d) Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities about the estimated duration of the activity; and

e) A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

SCA NOISE-4: Interior Noise

Prior to issuance of a building permit and Certificate of Occupancy.

If necessary to comply with the interior noise requirements of the City of Oakland's General Plan Noise Element and achieve an acceptable interior noise level, noise reduction in the form of sound-rated assemblies (i.e., windows, exterior doors, and walls), and/or other appropriate features/measures, shall be incorporated into project building design, based upon recommendations of a qualified acoustical engineer and submitted to the Building Services Division for review and approval prior to issuance of building permit. Final recommendations for sound-rated assemblies, and/or other appropriate features/measures, will depend on the specific building designs and layout of buildings on the site and shall be determined during the design phases. Written confirmation by the acoustical consultant, HVAC or HERS specialist, shall be submitted for City review and approval, prior to Certificate of Occupancy (or equivalent) that:

a) Quality control was exercised during construction to ensure all air-gaps and penetrations of the building shell are controlled and sealed; and

b) Demonstrates compliance with interior noise standards based upon performance testing of a sample unit.

c) Inclusion of a Statement of Disclosure Notice in the Covenants, Conditions, and Restrictions (CC&R's) on the lease or title to all new tenants or owners of the units acknowledging the noise generating activity and the single event noise occurrences. Potential features/measures to reduce interior noise could include, but are not limited to, the following:

   i. Installation of an alternative form of ventilation in all units identified in the acoustical analysis as not being able to meet the interior noise requirements due to adjacency to a noise generating activity, filtration of ambient make-up air in each unit and analysis of ventilation noise if ventilation is included in the recommendations by the acoustical analysis.

   ii. Prohibition of Z-duct construction.

SCA NOISE-5: Operational Noise-General

Ongoing.

Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

SCA NOISE-6: Pile Driving and Other Extreme Noise Generators

Ongoing throughout demolition, grading, and/or construction.

To further reduce potential pier drilling, pile driving and/or other extreme noise generating construction impacts greater than 90 dBA, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. Prior to commencing construction, a plan for such measures shall be submitted for review and approval by the Planning and Zoning Division and the Building Services Division to ensure that maximum feasible noise attenuation will be achieved. This plan shall be based on the final design of the project. A third-party peer review, paid for by the project applicant, may be required to assist the City in evaluating the feasibility and effectiveness of the noise reduction plan submitted by the project applicant. The criterion for approving the plan shall be a determination that maximum feasible noise attenuation will be achieved. A special inspection deposit is required to ensure compliance with the noise reduction plan. The amount of the deposit shall be determined by the Building Official, and the deposit shall be submitted by the project applicant concurrent with submittal of the noise reduction plan. The noise reduction plan shall include, but not be limited to, an evaluation of implementing the following measures. These attenuation measures shall include as many of the following control strategies as applicable to the site and construction activity:

a) Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
b) Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
c) Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;

d) Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and

e) Monitor the effectiveness of noise attenuation measures by taking noise measurements.

2. Noise Impacts, Standard Conditions of Approval, and Mitigation Measures

This section discusses potential impacts to the noise environment that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures to address these impacts, if needed.

a. Significance Criteria

Implementation of the proposed project would have a potentially significant impact if it would:

1. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise (Table IV.F-5), except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts.[15] During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard (Table IV.F-4);
2. Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise;
3. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise;
4. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative

[15] The acoustical analysis must identify, at a minimum, (a) the types of construction equipment expected to be used and the noise levels typically associated with the construction equipment and (b) the surrounding land uses including any sensitive land uses (e.g., schools and childcare facilities, health care and nursing homes, public open space). If sensitive land uses are present, the acoustical analysis must recommend measures to reduce potential impacts.

condition including the project compared to the existing conditions) and a 3 dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project).[16]

5. Expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi- family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24);
6. Expose the project to community noise in conflict with the land use compatibility guidelines of the City of Oakland General Plan (Table IV.F-3) after incorporation of all applicable Standard Conditions of Approval;[17]
7. Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]);
8. During either project construction or project operation expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA);[18]
9. Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels; or
10. Be located within the vicinity of a private airstrip, and would expose people residing or working in the project area to excessive noise levels.

b. Less-than-Significant Impacts

The following discussion describes the less-than-significant impacts associated with noise and vibration that would result from the proposed project.

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[16] Outside of a laboratory, a 3 dBA change is considered a just-perceivable difference. Therefore, 3 dBA is used to determine if the project-related noise increases are cumulative considerable. Project-related noise should include both vehicle trips and project operations.

[17] The evaluation of land use compatibility should consider the following factors: type of noise source; the sensitivity of the noise receptor; the noise reduction likely to be provided by structures; the degree to which the noise source may interfere with speech, sleep or other activities characteristic of the land use; seasonal variations in noise source levels; existing outdoor ambient levels; general societal attitudes towards the noise source; prior history of the noise source; and tonal characteristics of the noise source. To the extent that any of these factors can be evaluated, the measured or computed noise exposure values may be adjusted in order to more accurately assess local sentiments towards acceptable noise exposure.

[18] The FTA criteria were developed to apply to transit-related groundborne vibration. However, these criteria may also be applied to non-transit-related sources of vibration.

(1) Construction-Generated Noise (Criteria 1 and 2)

The primary noise impacts from construction would occur from the noise generated by the operation of heavy equipment on the project site. Although traffic flow would increase along local streets from the transport of workers, equipment, and materials to the project site, the increase in traffic flow would be temporary and intermittent, and therefore would not be a significant source of project generated noise. Construction of the project would occur over the course of 26 months and would involve demolition of the existing building located on Block A and construction of a building on Block A and a building on Block B. Table IV.F-6 shows typical noise levels associated with various types of construction equipment that may be used at the project site.

TABLE IV.F-6 TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT (DBA)

Equipment	Noise Level at 50 Ft
Backhoe	80
Compactor	82
Concrete Mixer	85
Dozer	85
Generator	81
Grader	85
Jack Hammer	88
Paver	89
Roller	74
Saw	76
Scraper	89
Truck	88

Source: Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment (DTA-VA-90-1003-06).

Construction is performed in distinct phases, each with its own mix of equipment, workers, and activities. Consequently, each phase of construction has its own noise characteristics. Table IV.F-7 shows typical exterior noise levels at various phases of commercial construction.

The nearest commercial and residential receptors to the project site are located within the Allegro apartment building, which is located adjacent to, and west of, Block B. There is an approximately 20-foot-wide patio located between the project site and the nearest residential units in the Allegro apartment building, and there is a deli located beneath this

TABLE IV.F-7 ESTIMATED NOISE LEVELS FROM CONSTRUCTION ACTIVITIES (DBA)

Noise Source	Noise Level at 5 Feet	Noise Level at 20 Feet	Noise Level at 50 Feet	Noise Level at 75 Feet
Ground Clearing	103	91	83	80
Excavation	108	96	88	85
Foundations	101	89	81	78
Erection	101	89	81	78
Finishing	108	96	88	85

Note: The following propagation adjustment was applied to estimate noise levels at 5, 20, and 75 feet assuming:

$dBA2 = dBA1 + 10 \times Log_{10} (D1/D2)^2$

Where:

dBA1 reference noise level at a specified distance.

dBA2 is the calculated noise level.

D1 is the reference distance.

D2 is the perpendicular distance from receiver.

Source of noise levels at 50 feet: U.S. EPA, Legal Compilation, 1973.

patio. There are also commercial, light industrial, and multi-family residential receptors located approximately 75 feet east, south, and west of the project site. Based on the distances of these receptors from the new building site, heavy equipment used during construction of the proposed project could generate exterior noise levels of up to 108 dBA at the deli, 96 dBA at the residential units within the Allegro apartment building that face Block B, and 79 dBA at the multi-family residential, commercial, and light industrial receptors located approximately 75 feet east, south, and west of the project site, depending on where the equipment is located within the project site. These exterior construction-generated noise levels exceed the maximum allowable noise level standards for residential and commercial/industrial land uses subject to long-term construction activities (Table IV.F-5). It should be noted that a typical building façade with windows closed provides a noise level reduction of approximately 25 dBA,[19] and therefore interior noise levels at these receptors would be substantially lower than exterior noise levels. Interior construction-generated noise levels could reach 83 dBA at the deli, 71 dBA at the residential units within the Allegro apartment building that face Block B, and 54 dBA at the multi-family residential, commercial, and light industrial receptors located approximately 75 feet east, south, and west of the project site.

The impacts from construction noise would be reduced by the implementation of the SCAs Noise-1, Noise-2, Noise-3, and Noise-6. SCAs Noise-1, Noise-2, and Noise-3 specify

[19] Salter, Charles M., 1998. *Acoustics – Architecture, Engineering, the Environment,* William Stout Publishers.

construction hours of operation, noise complaint procedures, and standard construction equipment noise control measures. SCA Noise-6 addresses the exposure of receptors to construction noise greater than 90 dBA by requiring the development of a site specific noise reduction plan that specifies the noise attenuation measures required to minimize construction noise to the maximum extent feasible. There may still be short-term noise impacts related to construction even with implementation of the SCAs, but they would be of limited duration and are considered to be less than significant.

(2) Operational Noise (Criteria 3 and 4)

The proposed long-term use of the project site would be primarily as a multi-family residential buildings with a commercial space on the ground floor of the building on Block B. Based on this land use, the primary noise generation from the long-term operation of the project would occur as a result of the use of mechanical HVAC systems and from increased vehicular traffic on area roads.

Noise generated from HVAC systems installed as part of the proposed project would be subject to SCA Noise-5 which requires noise from any activities or mechanical equipment on a site to comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. Therefore, the project would not violate the City of Oakland operational noise standards (Table IV.F-4). In addition, given the existing high ambient noise levels at the project site, which includes noise generated by similar HVAC systems at adjacent commercial, light industrial, and residential buildings, the noise generated by mechanical equipment at the project site would not result in an increase in ambient noise levels.

Implementation of the project would result increased traffic on local area roadways. However, due to the additive properties of noise, discussed above, traffic volumes would have to nearly double for a perceptible increase in noise levels to occur.[20] A preliminary assessment of AM and PM peak hour traffic volumes at local intersections indicates that traffic volumes at the following four intersections would increase by 25 trips or more as a result of the proposed project:[21]

1. Jackson Street/5th Street (58 AM and 70 PM peak hour trips added)
2. Jackson Street/6th Street (33 AM and 39 PM peak hour trips added)
3. Oak Street/5th Street (29 AM and 18 PM peak hour trips added)
4. Oak Street/6th Street (10 AM and 31 PM peak hour trips added)

The existing traffic volumes at these four intersections are as follows:[22]

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[20] Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment (DTA-VA-90-1003-06).

[21] Fehr and Peers, 2015. *Memorandum: 200 4th Street – Preliminary Transportation Analysis,* March 3.

[22] ESA, 2014. *Jack London Square Redevelopment Project Addendum to the 2004 EIR*, May 9.

1. Jackson Street/5th Street (1,290 AM and 1,585 PM peak hour trips)
2. Jackson Street/6th Street (2,204 AM and 1,615 PM peak hour trips)
3. Oak Street/5th Street (1,252 AM and 1,645 PM peak hour trips)
4. Oak Street/6th Street (1,150 AM and 1,191 PM peak hour trips)

Based on these values, traffic volumes along local roads would increase by approximately 1 to 5 percent relative to existing conditions as a result of the proposed project. This traffic volume increase is well below the near doubling of traffic volume required for a perceptible change in noise levels to occur. Therefore, the potential impacts of noise generated by the operation of the proposed project are less than significant.

(3) Exposure of Persons to Significant Noise (Criteria 5-7)

As described above, vehicular traffic on the I-80 and trains on the UPRR tracks currently generate noise levels ranging from 71 dBA L_{dn} to 85 dBA L_{dn} throughout the project site. As a result of these elevated exterior noise levels, the noise level reduction of 25 dBA provided by a typical building façade with windows,[23] would not reduce the interior noise levels of residential units to below 45 dBA L_{dn} or of commercial spaces to below 50 dBA L_{eq}. Consequently, future occupants could be exposed to interior noise levels in excess of standards.

The project would be subject to SCA Noise-4, which requires noise reduction in the form of sound-rated assemblies (i.e., windows, exterior doors, and walls), and/or other appropriate features/measures, to be incorporated into project building design, based upon recommendations of a qualified acoustical engineer. The recommendations are required to be submitted to the Building Services Division for review and approval prior to issuance of a building permit. Written confirmation by the acoustical consultant that compliance with interior noise standards have been demonstrated by the testing of a sample unit must be submitted for City review and approval before a Certificate of Occupancy would be issued. The implementation of SCA Noise-4 would ensure that interior noise levels would be maintained below the 45 dBA L_{dn} residential standard and the 50 dBA L_{eq} non-residential standard established by the City of Oakland and California Building Code.

The ambient noise environment in the project area encompasses both the "normally unacceptable" and "clearly unacceptable" community noise exposure levels for residential land uses (Table IV.F-3). The City of Oakland General Plan indicates that development within a "normally unacceptable" environment requires the completion of a detailed noise analysis and the implementation of noise reduction measures to ensure that interior remain below existing standards. Development within a "clearly unacceptable"

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[23] Salter, Charles M., 1998. *Acoustics – Architecture, Engineering, the Environment,* William Stout Publishers.

environment should generally not be undertaken. The General Plan stipulates however that the use of these noise compatibility guidelines should consider many factors including the noise reduction likely to be provided by structures, existing outdoor ambient levels, general societal attitudes towards the noise source, and tonal characteristics of the noise source.

Highways, arterial roads, railroad lines, and BART lines all cross the City of Oakland, and high ambient noise environments are therefore commonly found throughout the City. The project site is surrounded by multi-family residential and commercial buildings, which indicates that the residents of the City of Oakland are generally accepting of the development of multi-family residential and commercial land uses in this area, despite its proximity to the I-880 and the UPRR. Furthermore, the I-880 and UPRR are not sources of annoying noise, which is defined as noise with a repetitive pattern, shrill frequencies, and/or static-like sounds,[24] and compliance with SCA Noise-4 would reduce interior noise levels in residential and commercial spaces within the building to below the 45 dBA L_{dn} residential standard and the 50 dBA L_{eq} non-residential standard established by the City of Oakland and California Building Code. Therefore, the project does not conflict with the land use compatibility guidelines of the General Plan.

(4) Groundborne Noise and Vibration during Project Operation (Criteria 8)

The long-term operation of the project would not involve the use of any equipment or processes that would generate excessive vibration. Measurements previously collected along UPRR tracks (i.e., not specifically for this project) indicate that Amtrak trains generate vibration levels of 70 RMS VdB at 100 feet from track centerline.[25] Freight trains were found to generate vibration levels of 74 RMS VdB at 100 feet from track centerline.[26] The project site is located approximately 560 feet north of the UPRR tracks. At this distance, vibration levels at the project site would be well below the 72 RMS VdB disturbance threshold for vibration generated by long freight trains. Additionally, the occupants of the project site would not be subject to excessive vibration from traffic because highways and roads do not generate perceptible levels of vibration.[27] Therefore, the potential of the operational phase of the project to expose people to excessive vibration is less than significant.

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[24] City of Oakland Municipal Code Section 8.18.010 Excessive and Annoying Noises Prohibited.

[25] Ambient Air Quality and Noise Consulting, 2007. *Noise Impact Analysis for City of Berkeley 651 Addison Street Mixed-Use Project,* December 3.

[26] Ambient Air Quality and Noise Consulting, 2007. *Noise Impact Analysis for City of Berkeley 651 Addison Street Mixed-Use Project,* December 3.

[27] Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment (DTA-VA-90-1003-06).

(5) Aircraft Noise (Criteria 9 and 10)

Oakland International Airport is the closest airport to the project site, and is located approximately 4 miles to the southeast. The project site is not located within a public airport land use plan or within 2 miles of a public use airport.[28] The project site is also not located within the vicinity of a private airstrip.[29] Therefore, people residing or working in the project area would not be exposed to excessive aircraft noise.

c. Significant Impacts

One significant impact related to noise and vibration would result from project implementation.

<u>Impact NOISE-1</u>: The construction of the proposed project could result in the exposure of nearby receptors to excessive groundborne vibration. (S)

Construction activities can result in varying degrees of groundborne vibration, depending on the equipment, activity, and relative proximity to sensitive receptors. The vibration levels for construction equipment that could be used at the project site are summarized in Table IV.F-8. Although the table provides one vibration level for each piece of equipment, it should be noted that there is considerable variation in reported ground vibration levels from construction activities, primarily due to variation in soil characteristics. Tables IV.F-9 and IV.F-10 summarize the vibration criteria to prevent disturbance of building occupants and to prevent damage to structures.

The nearest building to the project site is the Allegro apartment building. Based on the estimates presented in Table IV.F-9, construction equipment-generated vibration levels at this building could reach 0.995 PPV in/sec, which would exceed the 0.3 PPV in/sec threshold to prevent damage to engineered concrete and masonry structures. The 0.3 PPV in/sec threshold would not be exceeded at the buildings located approximately 75 feet east, south, and west of the project site.

The implementation of the Mitigation Measure NOISE-1 below, which requires a vibration impact assessment and the implementation of design means and methods to reduce vibration levels at the Allegro apartment building, would reduce this potential impact to a less-than-significant level.

> <u>Mitigation Measure NOISE-1</u>: The structural engineer or other appropriate professional retained to prepare the vibration impact assessment shall undertake an existing conditions study (study) of the Allegro apartment building located east of Jackson

[28] Alameda County Community Development Agency, 2010, Oakland International Airport, Airport Land Use Compatibility Plan, December. Available online at: http://www.acgov.org/cda/planning/generalplans/documents/OAK_ALUCP_122010_FULL.pdf.

[29] Skyvector, 2015. *San Francisco Sectional Chart*, www.skyvector.com, accessed January 13.

TABLE IV.F-8 VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

	in/sec			VdB			
Equipment	**PPV at 5 Ft**	**PPV at 25 Ft**	**PPV at 75 Ft**	**RMS at 5 Ft**	**RMS at 20 Ft**	**RMS at 25 Ft**	**RMS at 75 Ft**
Large bulldozer	0.995	0.089	0.017	108	90	87	73
Loaded trucks	0.850	0.076	0.015	107	89	86	72
Jackhammer	0.391	0.035	0.007	100	82	79	65
Small bulldozer	0.034	0.003	0.001	79	61	58	44

Notes: Based on vibration levels at 25 feet, the following propagation adjustment was applied to estimate PPV vibration levels at 15 and 50 feet assuming:

$PPV2 = PPV1 \times (D1/D2)^{1.5}$

Where:

PPV1 is the reference vibration level at a specified distance.

PPV2 is the calculated vibration level.

D1 is the reference distance.

D2 is the distance from the equipment to the receiver.

Based on vibration levels at 25 feet, the following propagation adjustment was applied to estimate RMS vibration levels at 50 feet assuming:

$RMS2 = RMS1 - 30 \, Log_{10} (D2/D1)$

Where:

RMS1is the reference vibration level at a specified distance.

RMS2 is the calculated vibration level.

D1 is the reference distance.

D2 is the distance from the equipment to the receiver.

RMS vibration levels at 15 feet were not estimated because RMS velocity is used to evaluate the human response to vibration and the building located 15 feet from the construction site is not occupied and therefore the analysis of human response is not appropriate.

Source of PPV and RMS vibration levels at 25 feet: Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment (DTA-VA-90-1003-06).

Street. The study will establish the baseline condition of the building including, but not limited to, the location and extent of any visible cracks or spalls on the building. The study shall include written descriptions and photographs of the building. The study shall be reviewed and approved by the Building Services Division prior to issuance of a grading permit. Upon completion of the project, the building will be resurveyed, and any new cracks or other changes in the building shall be compared to pre-construction conditions and a determination shall be made as to whether the proposed project caused the damage. The findings shall be submitted to the Building Services Division for review. If it is determined that project construction has resulted in damage to the building, the damage shall be repaired to the pre-existing condition by the project sponsor, provided that the property owner approves of the repair. (LTS)

TABLE IV.F-9 VIBRATION CRITERIA TO PREVENT DISTURBANCE – RMS (VDB)

Land Use Category	Frequent Events[a]	Occasional Events[b]	Infrequent Events[c]
Buildings where vibration would interfere with interior operations[d]	65	65	65
Residences and buildings where people normally sleep	72	75	80
Institutional land uses with primarily daytime use	75	78	83

[a] More than 70 vibration events of the same kind per day or vibration generated by a long freight train.

[b] Between 30 and 70 vibration events of the same kind per day.

[c] Fewer than 30 vibration events of the same kind per day.

[d] These criteria are based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research should always require detailed evaluation to define the acceptable vibration levels. Ensuring low vibration levels in a building requires special design of HVAC systems and stiffened floors.

Source: Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment (DTA-VA-90-1003-06).

TABLE IV.F-10 VIBRATION CRITERIA TO PREVENT DAMAGE TO STRUCTURES

Building Category	PPV (in/sec)	RMS (VdB)
Reinforced-concrete, steel or timber (no plaster)	0.5	102
Engineered concrete and masonry (no plaster)	0.3	98
Non-engineered timber and masonry buildings	0.2	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment (DTA-VA-90-1003-06).

The residential units located at the Allegro apartment building are separated from the project site by a patio that is approximately 20 feet wide. Based on the vibration level estimates presented in Table IV.F-9, the residents of this building could be exposed to construction equipment-generated vibration of up to 90 RMS VdB, which exceeds the 75 RMS VdB occasional events threshold of daytime use disturbance at residential buildings.

There is also a deli located underneath the patio. The occupants of the deli could be exposed to construction equipment-generated vibration of up to 108 RMS VdB, which exceeds the 78 RMS VdB occasional events threshold of daytime use disturbance at institutional buildings. Lastly, there are multi-family residential buildings, light industrial, and commercial buildings located approximately 75 feet east, south, and west of the project site. The occupants of these buildings could be exposed to vibration of up to 73 RMS VdB, which does not exceed the 75 or 78 RMS VdB disturbance thresholds. Therefore, the occupants of these buildings would not be exposed to excessive vibration levels.

Although the residents of the Allegro apartment building and workers at the deli could be exposed to vibration levels above the 75 and 78 RMS VdB disturbance thresholds, vibration levels would only exceed these threshold when construction equipment is operated in close proximity to the building (within approximately 45 to 65 feet). This is because, as discussed above, ground-borne vibration attenuates rapidly with distance from the source of the vibration. Because the location of construction equipment would vary over time across the site, the exposure of the deli and of any given residential unit within the building would not be expected to last more than a few days. In addition, compliance with SCAs Noise-1, Noise-2, and Noise-3, which limit the use of impact tools, limits construction to daytime hours, require stationary construction equipment and staging areas to be located as far as possible from sensitive receptors, and require the implementation of measures to respond to and track complaints, would further reduce the potential of construction-generated vibration to disturb occupants of the Allegro apartment building. Because of the limited duration of potential vibration impacts to any given occupant of the Allegro apartment building and because of the required compliance with SCAs Noise-1, Noise-2, and Noise-3, the potential of the proposed project to expose occupants of the Allegro apartment building to excessive vibration is less than significant.

d. Cumulative Impacts

Longer-term noise from cumulative development (including past, present, and reasonably foreseeable future development) in the area would primarily occur from motor vehicle traffic. As discussed above, the project's contribution to baseline traffic levels would not be nearly significant enough to result in a significant noise impact. This would also be true for the project's contribution to traffic levels in 2035 and in no case would the project's contribution to cumulative noise associated with traffic increased be considered significant.

In addition, the impacts from construction noise and vibration at the site would be reduced to less-than-significant levels with implementation of the City's Standard Conditions of Approval for construction noise. In the event that multiple construction projects occur in the vicinity at the same time, all projects would be subject to the same construction noise and vibration conditions of approval, thereby reducing potential cumulative construction noise impacts to a less-than-significant level.

V. EFFECTS FOUND NOT TO BE SIGNIFICANT OR LESS THAN SIGNIFICANT WITH STANDARD CONDITIONS OF APPROVAL

This chapter contains a brief analysis of the environmental topics determined to be less than significant relevant to the proposed Jack London Square 4th & Madison Project (project). The following topics were excluded from extensive discussion in this EIR: Aesthetics, Shade and Shadow; Agriculture and Forest Resources; Biological Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Mineral Resources; Population and Housing; Public Services; Recreation; and Utilities and Service Systems. During the scoping phase for the EIR it was determined that the project would have no impact or a less-than-significant impact related to these topics as a result of the project's characteristics and, if applicable, the implementation of the City's Standard Conditions of Approval (SCAs). A brief analysis is provided below for each of these topic areas.

A. AESTHETICS, SHADOW AND WIND

The project site is located in a built-out urban area, immediately adjacent to Interstate 880 (I-880) and surrounded by several multi-family residential developments, as well as industrial and warehouse structures. I-880 lies immediately north of the project site across 5th Street. The Oakland Estuary is located approximately one-third mile southwest of the project, with two 5-story residential structures immediately south and west of the project site, and other multi-story residential developments and industrial and warehouse structures between the project site and the Estuary. The project would be approximately 85 feet (7 stories) tall at the roofline and located on a relatively flat, urban site in an area that is already developed with existing buildings immediately adjacent to the project that are of a similar 5- to 10-story height.

The Housing Element EIR assessed impacts associated with aesthetics as part of the Initial Study completed for the Housing Element project.[1] Block B (431 Madison Street, APN 001-0161-007-07) of the project site is identified in the City's *2015-2023 Housing Element* as

[1] The Housing Element Initial Study and EIR referenced here were completed and certified for the *2007-2014 Housing Element*. It was determined that an Addendum to this EIR was appropriate CEQA review for the *2015-2023 Housing Element*. All potential impacts relating to Aesthetics, Shadow and Wind identified in the *2015-2023 CEQA Addendum* were found not to be significant or less than significant with the City's SCAs. The *2015-2023 Housing Element* and *2015-2023 CEQA Addendum* were approved in December 2014.

a housing opportunity site.[2] The Initial Study identified that implementation of the Housing Element update would result in less-than-significant impacts to scenic resources, visual character, and nighttime views with implementation of SCAs and previously identified Mitigation Measures. More specifically, the Housing Element Initial Study found that new development on housing opportunity sites in the flatlands could result in massing and loss of vegetation that may adversely affect scenic views; panoramic views from the City's designated scenic routes could be impacted by construction of housing due to increased massing on currently vacant or underutilized properties; views could potentially be obstructed or altered from the scenic routes; and new development could create new sources of light and glare adversely impacting nighttime views. However, the Housing Element Initial Study determined that compliance with existing General Plan policies, Municipal Code standards, and SCAs would ensure that potential impacts to aesthetic resources would be less than significant. The Initial Study also concluded that impacts to aesthetic resources would be less than significant because each specific development project would be reviewed individually. No significant aesthetic impacts were identified and no mitigation measures were required.

The proposed project includes the build out of Block B of the project site as contemplated in the *2015-2023 Housing Element* and as permitted under the existing C-45 zoning[3] for the site. The Block B portion of the project thus would not result in any significant impacts beyond those identified in the Housing Element EIR as discussed above. The potential significant environmental effects of the proposed project related to aesthetics are "adequately addressed" in the Housing Element EIR in that:

A. They have been mitigated or avoided as a result of the prior environmental impact report and findings adopted in connection with that prior environmental report; or

B. They have been examined at a sufficient level of detail in the prior environmental impact report to enable those effects to be mitigated or avoided by site-specific revisions, the imposition of Standard Conditions of Approval or mitigation measures, or by other means in connection with the approval of the project.

The Block A portion of the project site was not included in the Housing Element as a housing opportunity site. This block is situated within the boundaries of the Oakland Waterfront Warehouse District, which is listed in the National Register of Historic Places. This is discussed further in *Section IV.B, Historic Resources.* Given that the development of Block A was not analyzed in the Housing Element EIR, an analysis of potential impacts related to aesthetics for the entire project site is included here.

[2] City of Oakland, 2014. *2015-2023 Housing Element*, Appendix C: Detailed Site Inventory, Table C-6 Additional Housing Opportunity Sites, page 411, December 9.

[3] Oakland Planning Code, 2015. Section 17.56.140.B.

1. Visual Quality

A view is defined as the ability to see something from a particular place, buildings and natural elements such as trees or geologic features such as hills or rock outcroppings guide lines of sight and control view directions available to pedestrians and motorists. A view corridor is defined as a line of sight from a specific viewpoint toward an object of significance. A public view corridor is a line of site in an area in which views are available from publicly accessible places, such as city streets, parks, and other public spaces. In the City of Oakland's General Plan Open Space, Conservation, and Recreation Element (OSCAR), Policy OS-10.1 states that projects are to *"protect the character of existing scenic views in Oakland, paying particular attention to: (a) views of the Oakland Hills from the flatlands; (b) views of downtown and Lake Merritt; (c) views of the shoreline; and (d) panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations"*. For purposes of this analysis, this policy has been used to define public scenic vistas.

Views in the area are limited because of the urban context. Several tall buildings exist in the vicinity of the project site. The Sierra at Jack London Square, a 10-story multi-family residential community, lies to the east of Block B along Madison Street, and the Allegro, a 5-story multi-family residential community, lies to the south of Blocks A and B along 3rd Street. One of the three Allegro buildings shares a city block with the Block B portion of the project site. Additionally, taller buildings in the adjacent Waterfront Warehouse District are visible from locations where low-rise buildings and/or parking lots permit partially unobstructed sight lines, or down street rights-of-way. Views within and outside of the District of public scenic vistas thus are generally limited by these existing buildings and the flat topography of surrounding areas, as well as the I-880 freeway just north of the project site. Given that the project would construct two buildings of similar heights to buildings immediately adjacent to and surrounding the project site, and that existing views are generally limited, the project would not have an adverse effect on any public scenic vista as defined above.

No designated scenic highway is in the immediate vicinity of the project site.[4] The nearest designated scenic highway is Macarthur Freeway, a portion of Interstate 580 (I-580) that is over 1.5 miles north of the project site.[5] The City of Oakland Scenic Highways Element and the California Department of Transportation identify the MacArthur Freeway as a scenic highway for the portion between San Leandro City limits and SR-24. As there are no scenic highways in the proximity of the project site, there are no views from such vantage points. The project therefore would not adversely affect any scenic resources or vistas within a designated scenic highway.

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[4] California Department of Transportation, 2015. California Scenic Highway System. http://www.dot.ca.gov/hq/LandArch/scenic_highways/, accessed March 12.

[5] California Department of Transportation, 2015. California Scenic Highway System. "Route 580 – Scenic Highway." http://www.dot.ca.gov/hq/LandArch/scenic_highways/, accessed March 12.

Block A comprises the entire block between 4th and 5th Streets and Jackson and Madison Streets and is covered by a single-story warehouse building (this building is actually comprised of two connected buildings which together comprise 60,000 square feet of space currently used as office space by Cost Plus World Market). As discussed further in *Section IV.B, Historic Resources*, the building is situated within the boundaries of the Oakland Waterfront Warehouse District, which is listed in the National Register of Historic Places (National Register). Block B is a paved parking area consisting of wheel blocks, a drainage channel, a picnic area, and pole-mounted spot lights. The parking lot is currently used exclusively by Cost Plus World Market employees.

The project includes the demolition of the existing building on Block A. Demolition of this building would alter the visual character of the site and its relation to the surrounding area. The existing warehouse building is a 1-story, rectangular-plan building that covers a full city block.[6] The warehouse on Jackson Street side is a reinforced concrete and wood post and beam structure with concrete and stucco exterior walls, metal sash windows, a straight parapet with fluted pilasters and round medallions. The corner at Jackson and 5th Streets is rounded and originally housed the offices for S & W Fine Foods. The brick warehouse on Madison Street side is brick masonry with metal sash windows. The building's former use as a shipping, receiving, and branch warehouse for S & W Fine Foods, and other companies later, adds to the continuity of other similar uses in the area. However, the building itself lacks a distinct architectural design. It is located in a built-out urban area that now contains several new multi-story residential developments similar to the proposed project, including the Allegro, the 428 Alice Street project, the 288 3rd Street project, and the Sierra at Jack London. As a result, given that the type and size of project proposed is similar to other development in the surrounding area, and given that the building does not constitute a significant visual resource, its removal would not substantially degrade the visual character of the site or surroundings (refer to *Section IV.B, Historic Resources* regarding the building's contribution to the historic character of the Oakland Waterfront Warehouse District). The demolition of the building would therefore not be considered a significant visual quality impact.

Oakland's *Estuary Policy Plan* states that new development "should be compatible with adjacent uses, and incorporate physical features that reinforce the district's unique scale, historic flavor and activities."[7] The Plan also notes that uses, mass, setbacks, elevations, character-defining architectural features and appurtenances, building materials, and landscape are important characteristics of the Oakland Waterfront Warehouse District and

[6] Information for the following paragraphs were compiled from Oakland Cultural Heritage Survey, *400-430 Jackson Street Evaluation Tally Sheet,* March 21, 1983, re-evaluated January 10, 1995; Jack London District Association, 2007. *Oakland Waterfront Warehouse District, A Self-Guided Walking Tour*; Wilda L. White, *National Register of Historic Places Registration Form, Oakland Waterfront Warehouse District,* August 9, 1999; and updated after February 2015 site visit.

[7] City of Oakland, 1999. *Estuary Policy Plan,* Section III: District Recommendations, page 63.

the new structures should be sympathetic to the integrity and original design features of the District, as per the National Register's evaluation of integrity. The project would be required to comply with the City's Design Review process, which would factor these recommendations for new development in the *Estuary Policy Plan* area, as well as others discussed in *Section IV.B, Historic Resources.*

In addition, the SCAs listed below and would be adopted as requirements of the project to further ensure no significant impacts to aesthetic resources occur.

SCA 12: Required Landscape Plan for New Construction and Certain Additions to Residential Facilities.

Prior to issuance of a building permit:

Submittal and approval of a landscape plan for the entire site is required for the establishment of a new residential unit (excluding secondary units of five hundred (500) square feet or less), and for additions to Residential Facilities of over five hundred (500) square feet. The landscape plan and the plant materials installed pursuant to the approved plan shall conform with all provisions of Chapter 17.124 of the Oakland Planning Code, including the following:

a) Landscape plan shall include a detailed planting schedule showing the proposed location, sizes, quantities, and specific common botanical names of plant species.

b) Landscape plans for projects involving grading, rear walls on downslope lots requiring conformity with the screening requirements in Section 17.124.040, or vegetation management prescriptions in the S-11 zone, shall show proposed landscape treatments for all graded areas, rear wall treatments, and vegetation management prescriptions.

c) Landscape plan shall incorporate pest-resistant and drought-tolerant landscaping practices. Within the portions of Oakland northeast of the line formed by State Highway 13 and continued southerly by Interstate 580, south of its intersection with State Highway 13, all plant materials on submitted landscape plans shall be fire-resistant The City Planning and Zoning Division shall maintain lists of plant materials and landscaping practices considered pest-resistant, fire-resistant, and drought-tolerant.

d) All landscape plans shall show proposed methods of irrigation. The methods shall ensure adequate irrigation of all plant materials for at least one growing season.

SCA 13: Landscape Requirements for Street Frontages.

Prior to issuance of a final inspection of the building permit:

a) All areas between a primary Residential Facility and abutting street lines shall be fully landscaped, plus any unpaved areas of abutting rights-of-way of improved streets or alleys, provided, however, on streets without sidewalks, an unplanted strip of land five (5) feet in width shall be provided within the right-of-way along the edge of the pavement or face of curb, whichever is applicable. Existing plant materials may be incorporated into the proposed landscaping if approved by the Director of City Planning.

b) In addition to the general landscaping requirements set forth in Chapter 17.124, a minimum of one (1) fifteen-gallon tree, or substantially equivalent landscaping consistent with city policy and as approved by the Director of City Planning, shall be provided for every twenty-five (25) feet of street frontage. On streets with sidewalks where the distance from the face of the curb to the outer edge of the sidewalk is at least six and one-half (6 ½) feet, the trees to be provided shall include street trees to the satisfaction of the Director of Parks and Recreation.

SCA 14: Assurance of Landscaping Completion. *Prior to issuance of a final inspection of the building permit:* The trees, shrubs and landscape materials required by the conditions of approval attached to this project shall be planted before the certificate of occupancy will be issued; **or a bond, cash, deposit, or letter of credit, acceptable to the City**, shall be provided for the planting of the required landscaping. The amount of such **or a bond, cash, deposit, or letter of credit** shall equal the greater of two thousand five hundred dollars ($2,500.00) or the estimated cost of the required landscaping, based on a licensed contractor's bid.

SCA 16: Landscape Requirements for Street Frontages. *Prior to issuance of a final inspection of the building permit:* On streets with sidewalks where the distance from the face of the curb to the outer edge of the sidewalk is at least six and one-half (6 ½) feet and does not interfere with access requirements, a minimum of one (1) twenty-four (24) inch box tree shall be provided for every twenty-five (25) feet of street frontage, unless a smaller size is recommended by the City arborist. The trees to be provided shall include species acceptable to the Tree Services Division.

SCA 17: Landscape Maintenance. *Ongoing:* All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. All required irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

2. Light and Glare

The project site is located in a built-out urban area, among a variety of existing sources of light and glare from associated industrial, warehouse, residential, commercial, and live-work loft uses. The site is also situated in a context of local roadways and is adjacent to the I-880 freeway where street lighting projects light and glare during evening and nighttime hours. As a result, nighttime views in the area are limited by existing conditions in the vicinity of the project site.

The project would be a more intensive use than the existing 1-story warehouse building currently used as office space and the paved parking lot as it would create two multi-story buildings in their place with more sources of light. The amount of light and glare emitted from the site would therefore be increased. However, this incremental increase would not substantially increase the overall ambient light levels in the project area, as light and glare produced from the proposed project would be typical of residential and live-work loft structures immediately adjacent to the project, and throughout the Jack London District and greater downtown area. The project would be required to prepare a lighting plan in compliance with the following SCA, which would ensure that impacts by the project related to light or glare are less than significant.

> **SCA 39: Lighting Plan.** *Prior to the issuance of an electrical or building permit:* The proposed lighting fixtures shall be adequately shielded to a point below the light bulb and reflector and that prevent unnecessary glare onto adjacent properties. Plans shall be submitted to the Planning and Zoning Division and the Electrical Services Division of the Public Works Agency for review and approval. All lighting shall be architecturally integrated into the site.

3. Shadow and Wind

The existing warehouse building on Block A of the project site, which comprises an entire city block between 4th and 5th Streets and Jackson and Madison Streets, and is a single story tall, casts minimal shadow from the project site. Block B is a paved parking lot with no existing buildings or other vertical structures, aside from one or two pole-mounted spot lights, and thus casts minimal to no shadows. No trees or other landscape exist on the project site. A couple of street trees exist around the perimeter of Block B in the public right-of-way, and several other street trees are situated adjacent to Block A on 4th and Jackson Streets. There are also no major public open spaces directly adjacent to the project site. Estuary Park is located along the estuary shore more than ¼ mile to the southeast, and other public plazas located in Jack London Square are located about ¼ mile southwest of the project site.

The project would construct two buildings (Buildings A and B) at 85 feet in height. The most comparably scaled buildings in the vicinity of the project site include: the Allegro

Building, at about 57 feet in height; the Sierra at Jack London Square, a 10-story building at least 100 feet in height; the Fourth Street Lofts Building, at about 60 feet in height; and the 428 Alice Street project, 85 feet.

As shown in Figures IV.A-1a and IV.A-1b, the project would cast a relatively small amount of new shadow on adjacent sidewalks and buildings during the morning and midday most of the year, with more significant shadows cast on buildings to the true north and northwest in the morning and mid-day during the winter months. However, the project would not cast shadows on any public open space or any quasi-public park, lawn, garden, or other open space. Although not a significant effect, the project would cast shadow on 4th and 5th Streets (true north and west), and on properties west of Jackson Street and between 4th and 5th Streets, in the early morning during the winter months (see Figures IV.A-1a and IV.A-1b). Minimal to no shadow would be cast by the project during other times of day and months of the year.

Given that the project would be similar in height to many of the existing buildings immediately adjacent to the project site, and that the project would cast most shadow on 4th and 5th Streets to the north and northwest of Buildings A and B (see Figures IV.A-1a and IV.A-1b), the project is not anticipated to cast shadow that would substantially impair the function of existing solar collectors in use on surrounding buildings.

The location of the proposed project is at the far northeast corner of the Oakland Waterfront Warehouse District. Given that the proposed project is anticipated to cast most shadow to the north and northwest, and minimal or no shadow in other directions at other times of day and year, the project is not anticipated to cast substantial shadow onto the area that comprises the Oakland Waterfront Warehouse District and designated API. As a result, the project is not anticipated to cast shadow on the Waterfront Warehouse District such that the shadow would materially impair the significance of the historic resource(s), or its eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, or identification as an Area of Primary Importance.

The project would not require a variance to the policies and regulations in the General Plan, Planning Code or Uniform Building Code, that would cause a fundamental conflict with any existing policies and regulations addressing the provision of adequate light. As proposed, the project is less than 100 feet in height and is not located adjacent to a substantial water body or located in Downtown; a wind analysis is therefore not required.

4. Conclusion

As a result of the findings described above, and with implementation of the SCAs identified, the proposed project would not have any impact related to aesthetics, shade or shadow in relation to the City of Oakland's adopted significance thresholds.

B. AGRICULTURE AND FOREST RESOURCES

The proposed project would be located in a built-out urban area that contains a variety of industrial, warehouse, commercial, residential, and joint living and working uses. Neither the project site nor any adjacent land has been identified as an agricultural resource or forest land, and there are no agricultural uses in the vicinity.[8, 9] The project therefore would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use and would not result in the loss of forest land or conversion of forest land to non-forest use. Thus, the proposed project would not have any impact on agriculture or forest resources.

C. BIOLOGICAL RESOURCES

The project area is located in a built-out urban area that contains a variety of industrial, warehouse, commercial, residential, and joint living and working uses. The proposed project would be replacing an existing office and warehouse in the Block A portion of the site, and a parking lot in the Block B portion of the site. The existing Cost Plus World Market office/warehouse structure is built out to the property lines on Block A, and is a fully paved parking lot to the edge of the property lines on Block B. The project site contains no trees or other plants and is not within or near a riparian corridor. The site does not provide a habitat for any plant or animal species and is not located within a designated habitat area, including Resource Conservation Areas designated by the City.[10] Given the existing, long-standing (the past 80 years) urban setting and that the site has been disturbed by development, the site is unlikely to be a part of an established native resident or migratory wildlife corridor. The project would not conflict with any local policies or ordinances protecting biological resources, including the City's Tree Protection Ordinance and Creek Protection Ordinance.[11] Thus, the proposed project would not result in significant impacts on biological resources.

D. CULTURAL RESOURCES

The proposed project will be located in an urban area and will be replacing a former produce warehouse building. As the project area has been subject to continuous urban development over the past century, any archaeological or paleontological remains would be buried by fill. The proposed project would result in demolition and some grading activities on site that would require a grading permit. Thus, the following SCAs are

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[8] City of Oakland, 1996. *General Plan,* Open Space, Conservation, & Recreation Element, June.

[9] California Department of Conservation, 2015. Farmland Mapping and Monitoring Program, California Important Farmland Finder.

[10] City of Oakland, 2014. General Plan Designations Map, November 18.

[11] City of Oakland, 1996. *General Plan.* Open Space, Conservation, & Recreation Element, June.

required to ensure that if any such archaeological or paleontological resources or human remains are encountered during excavation or construction activities on site that such resources would be addressed to lessen any potential adverse effects.

SCA 51: Archaeological Resources.

Prior to issuance of a final inspection of the building permit:

a) Pursuant to CEQA Guidelines section 15064.5 (f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted. Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist would meet to determine the appropriate avoidance measures or other appropriate measure, with the ultimate determination to be made by the City of Oakland. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.

b) In considering any suggested measure proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the project applicant shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while measure for historical resources or unique archaeological resources is carried out.

c) Should an archaeological artifact or feature be discovered on-site during project construction, all activities within a 50-foot radius of the find would be halted until the findings can be fully investigated by a qualified archaeologist to evaluate the find and assess the significance of the find according to the CEQA definition of a historical or unique archaeological resource. If the deposit is determined to be significant, the project applicant and the qualified archaeologist shall meet to determine the appropriate avoidance measures or other appropriate measure, subject to approval by the City of Oakland, which shall assure implementation of appropriate measure measures recommended by the archaeologist. Should archaeologically-significant materials be recovered, the qualified archaeologist shall recommend appropriate analysis and treatment, and shall prepare a report on the findings for submittal to the Northwest Information Center.

SCA 52: Human Remains. *Ongoing throughout demolition, grading, and/or construction:* In the event that human skeletal remains are uncovered at the project site during construction or ground-breaking activities, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

SCA 53: Paleontological Resources. *Ongoing throughout demolition, grading, and/or construction:* In the event of an unanticipated discovery of a paleontological resource during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (per Society of Vertebrate Paleontology standards (SVP 1995,1996)). The qualified paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the City determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important, and such plan shall be implemented. The plan shall be submitted to the City for review and approval.

The SCA below applies to all projects that require a grading permit and are located in archaeologically sensitive areas. Archaeologically sensitive areas include areas in which previous CEQA documents or other information identified a higher likelihood of archaeological finds. The City requires this SCA for the proposed project.

Note: This SCA further implements (and is in addition to) the 2008 SCA for Archeological Resources (SCA 52).

SCA-E: Archaeological Resources – Sensitive Areas.

Prior to issuance of a demolition, grading, or building permit

The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision D (Construction ALERT Sheet). However, if in either case a high potential presence of historic-period archaeological resources on the project site is indicated, or a potential resource is discovered, the project applicant shall also implement all of the following provisions:

- Provision B (Construction-Period Monitoring),
- Provision C (Avoidance and/or Find Recovery), and
- Provision D (to establish a Construction ALERT Sheet if the Intensive Pre-Construction Study was originally implemented per Provision A, or to update and provide more specificity to the initial Construction ALERT Sheet if a Construction Alert Sheet was originally implemented per Provision D).

Provision A through Provision D are detailed as follows:

Provision A: Intensive Pre-Construction Study - The project applicant, upon approval from the City Planning and Zoning Division, may choose to complete a site-specific, intensive archaeological resources study prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. If that approach is selected, the study shall be conducted by a qualified archaeologist approved by the City Planning and Zoning Division. If prepared, at a minimum, the study shall include:

- An intensive cultural resources study of the project site, including subsurface presence/absence studies, of the project site. Field studies conducted by the approved archaeologist(s) may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources;
- A report disseminating the results of this research;
- Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources.

If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction (see Provision B, Construction-Period Monitoring, below), implement avoidance and/or find recovery measures (see Provision C, Avoidance and/or Find Recovery, below), and prepare an ALERT Sheet that details what could potentially be found at the project site (see Provision D, Construction ALERT Sheet, below).

Provision B: Construction-Period Monitoring - Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT Sheet, require per Provision D, Construction ALERT Sheet, below) and the procedures to follow if any are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, or preparing a report to document negative findings after construction is completed. If a significant archaeological resource is discovered during the monitoring activities, adherence to Provision C, Avoidance and/or Find Recovery, discussed below), would be required to reduce the impact to less than significant. The project applicant shall hire a qualified archaeologist to monitor all ground-disturbing activities on the project site throughout construction.

Provision C: Avoidance and/or Find Recovery - If a significant archaeological resource is present that could be adversely impacted by the proposed project, the project applicant of the specific project site shall either:

- Stop work and redesign the proposed project to avoid any adverse impacts on significant archaeological resource(s); or,
- If avoidance is determined infeasible by the City, design and implement an Archaeological Research Design and Treatment Plan (ARDTP). The project applicant shall hire a qualified archaeologist who shall prepare a draft ARDTP that shall be submitted to the City Planning and Zoning Division for review and approval. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical. The project applicant shall implement the ARDTP. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant.

Provision D: Construction ALERT Sheet - The project applicant, upon approval from the City Planning and Zoning Division, may choose to prepare a construction ALERT sheet prior to soil-disturbing activities occurring on the project site, instead of conducting site-specific, intensive archaeological resources pursuant to Provision A, above. The project applicant shall submit for review and approval by the City prior to subsurface construction activity an "ALERT" sheet prepared by a qualified archaeologist with visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor; any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving); and/or utilities firm involved in soil-disturbing activities within the project site.

The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, that in the event of discovery of the following cultural materials, all work must be stopped in the area and the City's Environmental Review Officer contacted to evaluate the find: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones.

Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel.

If the project applicant chooses to implement Provision D, Construction ALERT Sheet, and a potential resource is discovered on the project site during ground disturbing activities during construction, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction (see Provision B, Construction-Period Monitoring, above), implement avoidance and/or find recovery measures (see Provision C, Avoidance and/or Find Recovery, above), and prepare an updated ALERT Sheet that addresses the potential resource(s) and other possible resources based on the discovered find found on the project site.

E. GEOLOGY AND SOILS

The project site is located within the San Francisco Bay Block of the Coast Ranges geologic province of California. The Bay Block is a fault-bound crustal rock mass bounded by the San Andreas Fault to the west and the Hayward Fault to the east. The nearest active fault to the project site is the Hayward fault, approximately 3.7 miles to the east. Other nearby faults include the Calaveras Fault, approximately 14.2 miles to the east, and the San Andreas Fault, approximately 14.3 miles to the west. The project site is not located within a State of California Alquist-Priolo Earthquake Fault Zone,[12] and therefore ground rupture during an earthquake would be unlikely.

The project site is likely to experience strong seismic-related ground shaking during the life of the project. The U.S. Geological Survey's (USGS) Working Group on California Earthquake Probabilities estimated that there is a 63 percent probability that one or more moment magnitude (M_w)[13] 6.7 or greater earthquakes will occur in the San Francisco Bay Area between 2007 and 2036. For those individual faults nearest the project site, the probability of a M_w 6.7 magnitude or greater earthquake was estimated to be 31 percent along the Hayward Fault, 7 percent along the Calaveras Fault, and 21 percent along the San Andreas Fault.[14]

Project design would be subject to the 2013 California Building Code (CBC), which includes numerous requirements to address site-specific seismic impacts. The CBC requires that a site-specific geotechnical investigation report be prepared by a licensed professional for proposed developments of one or more buildings greater than 4,000 square feet to evaluate geologic and seismic hazards. Chapter 16 of the CBC provides guidelines for calculation of seismic design parameters based on the ground movement created by the maximum credible earthquake at the site. These parameters are designed to ensure that structures are able to resist minor earthquakes undamaged, resist moderate earthquakes without significant structural damage, and resist severe earthquakes without collapse. Adherence to the CBC would reduce potential impacts from groundshaking to a less-than-significant level.

The project site is not located within a mapped liquefaction hazard zone.[15] The Preliminary Geotechnical Assessment for the project evaluated the site-specific potential for liquefaction and found that the potential for settlement as a result of liquefaction to be less than three inches overall with approximately 1.5 inches of differential settlement over

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[12] California Geographic Survey (CGS), 2003. State of California Special Studies Zones, Oakland West Quadrangles.

[13] Moment magnitude (M_w) is now commonly used to characterize seismic events as opposed to Richter Magnitude. Moment magnitude is determined from the physical size (area) of the rupture of the fault plane, the amount of horizontal and/or vertical displacement along the fault plane, and the resistance to rupture of the rock type along the fault.

[14] United States Geological Survey (USGS), 2008. *Forecasting California's Earthquakes – What Can We Expect in the Next 30 Years*, USGS Fact Sheet 2008-3027.

[15] California Geographic Survey (CGS), 2003. State of California Special Studies Zones, Oakland West Quadrangles.

50 feet.[16] The potential for lateral spreading, subsidence, collapse, or landslides was determined to be low to negligible.[17]

Because project development involves more than 500 cubic yards of excavation and fill, earthmoving activities at the project site must be conducted under a grading permit in accordance with City of Oakland Municipal Code Section 15.04.660. Among other requirements, an Erosion and Sediment Control Plan would be required under City of Oakland SCA 54:

SCA 54: Erosion and Sedimentation Control Plan.

Prior to any grading activities:

a) The project applicant shall obtain a grading permit if required by the Oakland Grading Regulations pursuant to Section 15.04.660 of the Oakland Municipal Code. The grading permit application shall include an erosion and sedimentation control plan for review and approval by the Building Services Division. The erosion and sedimentation control plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading operations. The plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the Director of Development or designee. The plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

Ongoing throughout grading and construction activities:

b) The project applicant shall implement the approved erosion and sedimentation plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Building Services Division.

[16] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California,* December.

[17] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California,* December.

Adherence to the requirements of the grading permit and SCA 54 would reduce any potential impacts due to soil erosion or loss of topsoil to a less-than-significant level.

Based on subsurface testing performed for the Preliminary Geotechnical Assessment, soils at the project site consist of heterogeneous alluvium (clay, silt, and sand) to a depth of at least 50 feet, the limits of exploration for the assessment.[18] The assessment did not identify any clayey soils within the upper 15 feet of exploration, and therefore the risk of expansive soils was determined to be moderately low to nominal.[19] A preliminary settlement analysis predicted less than one inch of load-induced settlement, and generally less than ¼-inch, as a result of the project site improvements.[20] The Preliminary Geotechnical Assessment concluded that the proposed project was feasible from a geotechnical standpoint, though it recommended that a design-level geotechnical study be conducted prior to construction in accordance with City and CBC requirements once more detailed construction plans were available.[21]

The project site does not contain wells, pits, swamps, mounds, tank vaults, or unmarked sewer lines; is not located above a landfill; and does not propose the use of septic tanks or alternative wastewater disposal systems. As a result, no geologic impacts related to those features would occur.

F. HAZARDS AND HAZARDOUS MATERIALS

The project proposes the demolition of the existing structures and parking lot on the project site, and construction of two residential apartment buildings with lower level parking garages and commercial spaces. The project site is not included on any list compiled pursuant to Government Code Section 65962.5 (the "Cortese list"). This type of land use typically does not involve transport, use, or disposal of significant quantities of hazardous materials. Generally, small quantities of hazardous materials, such as paints and cleaning chemicals, would be used for routine maintenance. During project construction, hazardous materials such as fuel, lubricants, paint, sealants, and adhesives would be transported and used at the project site. The project would be required to comply with all applicable Occupational Safety and Health Administration (OSHA) regulations regarding worker safety. Additionally, because the total project area is greater than 1 acre, management of hazardous materials at the site during construction activities

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[18] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California,* December.

[19] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California,* December.

[20] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California,* December.

[21] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California,* December.

would be subject to the requirements of the Stormwater Construction General Permit (CGP), which requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to reduce the risk of spills or leaks from reaching the environment, including procedures to address minor spills of hazardous materials. Additionally, the project would be required to comply with the City's SCAs which include the following:

SCA 34: Hazards Best Management Practices.

Prior to commencement of demolition, grading, or construction:

The project applicant and construction contractor shall ensure that Best Management Practices (BMPs) are implemented as part of construction to minimize the potential negative effects to groundwater and soils. These shall include the following:

- Follow manufacturer's recommendations on use, storage, and disposal of chemical products used in construction;
- Avoid overtopping construction equipment fuel gas tanks;
- During routine maintenance of construction equipment, properly contain and remove grease and oils;
- Properly dispose of discarded containers of fuels and other chemicals.
- Ensure that construction would not have a significant impact on the environment or pose a substantial health risk to construction workers and the occupants of the proposed development. Soil sampling and chemical analyses of samples shall be performed to determine the extent of potential contamination beneath all underground storage tanks (USTs), elevator shafts, clarifiers, and subsurface hydraulic lifts when on-site demolition or construction activities would potentially affect a particular development or building.
- If soil, groundwater or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any USTs, abandoned drums or other hazardous materials or wastes are encountered), the applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies) and implementation of the actions described in SCAs, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

Compliance with applicable regulations and the City's SCAs would ensure that the proposed project would not create a significant hazard to the public or the environment associated with the transport, use, disposal, or emission of hazardous materials during and after construction.

Phase I Environmental Site Assessments (ESAs) were prepared for the project site in February 2006[22] and December 2014.[23] The Phase I ESAs included review of historical land use information; review of environmental records from local, state, and federal sources; reconnaissance of the site; and interviewing a site representative. Based on the review of public agency databases and information, the project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Block A of the project site (the area bound by 5th, 4th, Madison, and Jackson streets) was developed as a boarding school and academy in the late 19th and early 20th century, and was redeveloped for commercial and industrial uses in the early to mid-1900s, which included a pipe yard, the Dork Gas Engine Co. and machine shop, warehouses, and offices. The Dork Gas Engine Co. was in operation for a period between the early 1900s and late 1930s, and was identified as a site with numerous chemicals, fuel, distillate, gas, and oil. There are two buildings which currently occupy Block A of the project site. The larger western building (430 Madison Street address) was constructed between 1937 and 1939, and the smaller eastern building (425 Jackson Street address) was constructed between 1939 and 1946. The buildings were used as warehouses and offices from the 1950s through late 1960s, and the buildings appear to have been connected in the mid-1980s. In 2006 and 2014, the buildings were occupied by corporate offices of Cost Plus World Market and no hazardous materials were observed to be stored or used at the project site. Block B of the project site (the western half of the block bound by 3rd, 4th, Madison, and Jackson streets) consisted of residential properties until redevelopment in the early 1900s with the Western Pacific Railroad and freight storage yard, which existed until the 1990s, when it was redeveloped as a the existing parking lot.[24]

The Phase I ESAs indicated that due to the age of the buildings on the project site, there is a potential that hazardous building materials including asbestos containing materials (ACMs) and lead-based paint (LBP) are present.[25,26] The project would be required to

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[22] AEI Consultants, 2006. *Phase I Environmental Site Assessment, 430 Jackson Street, Oakland, California,* February.

[23] ENGEO, 2014. *Phase I Environmental Site Assessment, 430 Jackson Street Property, Oakland, California.* December.

[24] AEI Consultants, 2006. *Phase I Environmental Site Assessment, 430 Jackson Street, Oakland, California,* February.

[25] AEI Consultants, 2006. *Phase I Environmental Site Assessment, 430 Jackson Street, Oakland, California,* February.

comply with the City's SCAs addressing hazardous building materials, which include the following:

SCA 62: Lead-Based Paint/Coatings, Asbestos, or PCB Occurrence Assessment. *Prior to issuance of any demolition, grading or building permit:* The project applicant shall submit a comprehensive assessment report to the Fire Prevention Bureau, Hazardous Materials Unit, signed by a qualified environmental professional, documenting the presence or lack thereof of ACM, LBP, and any other building materials or stored materials classified as hazardous waste by state or federal law for review and approval.

SCA 40: Asbestos Removal in Structures. *Prior to issuance of a demolition permit:* If ACMs are found to be present in building materials to be removed, demolition and disposal, the project applicant shall submit specifications signed by a certified asbestos consultant for the removal, encapsulation, or enclosure of the identified ACM in accordance with all applicable laws and regulations, including but not necessarily limited to: California Code of Regulations (CCR); Title 8, Business and Professions Code; Division 3; California Health & Safety Code 25915-25919.7; and Bay Area Air Quality Management District (BAAQMD), Regulation 11, Rule 2, as may be amended.

SCA 64: Lead-Based Paint Remediation. *Prior to issuance of any demolition, grading or building permit:* If LBP is present, the project applicant shall submit specifications to the Fire Prevention Bureau, Hazardous Materials Unit signed by a certified Lead Supervisor, Project Monitor, or Project Designer for the stabilization and/or removal of the identified lead paint in accordance with all applicable laws and regulations, including but not necessarily limited to: Cal/OSHA's Construction Lead Standard, 8 CCR1532.1 and DHS regulation 17 CCR Sections 35001 through 36100, as may be amended.

SCA 65: Other Materials Classified as Hazardous Waste. *Prior to issuance of any demolition, grading or building permit*: If other materials classified as hazardous waste by State or federal law are present, the project applicant shall submit written confirmation to Fire Prevention Bureau, Hazardous Materials Unit that all State and federal laws and regulations shall be followed when profiling, handling, treating, transporting and/or disposing of such materials.

SCA 66: Health and Safety Plan per Assessment. *Prior to issuance of any demolition, grading or building permit:* If the required LBP/coatings, asbestos, or polychlorinated biphenyl (PCB) assessment finds presence of such materials, the project applicant

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[26] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California,* December.

shall create and implement a health and safety plan to protect workers from risks associated with hazardous materials during demolition, renovation of affected structures, and transport and disposal. The applicant shall implement the approved plan.

The Phase I ESAs indicated that concentrations of petroleum hydrocarbons, semi- volatile organic compounds (SVOCs), and metals were detected in soil and groundwater on the project site during a 1996 investigation; and recommended that further investigation be considered prior to redevelopment of the project site because previously unidentified impacts may be present in soil and groundwater.[27,28] The 2014 Phase I ESA also recommended that a risk management plan (RMP) be developed prior to demolition and construction to address potential unknown environmental issues.[29]

Soil and groundwater contamination could adversely affect construction workers who may come into direct contact with those materials. In addition, if these materials are improperly managed and disposed of during construction, they could be released to the environment and pose a potential risk to future site occupants, other members of the public, and the environment. These risks can be reduced through a comprehensive soil and groundwater management plan (SGMP) or RMP, which would incorporate worker health and safety measures and safe stockpiling and disposal procedures.

A Phase II ESA is currently planned to be performed for the project site, which would include further investigation of soil and groundwater conditions. The findings of the Phase II ESA would be used to develop the SGMP or RMP. If the Phase II ESA recommends remedial action, the project would be required to comply with the City's following SCA:

SCA 63: Environmental Site Assessment Reports Remediation. *Prior to issuance of a demolition, grading, or building permit:* If the ESA reports recommend remedial action, the project applicant shall:

- Consult with the appropriate local, state, and federal environmental regulatory agencies to ensure sufficient minimization of risk to human health and environmental resources, both during and after construction, posed by soil contamination, groundwater contamination, or other surface hazards including, but not limited to, USTs, fuel distribution lines, waste pits, and sumps.

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[27] AEI Consultants, 2006. *Phase I Environmental Site Assessment, 430 Jackson Street, Oakland, California,* February.

[28] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California,* December.

[29] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California,* December.

- Obtain and submit written evidence of approval for any remedial action if required by a local, state, or federal environmental regulatory agency.
- Submit a copy of all applicable documentation required by local, state, and federal environmental regulatory agencies, including but not limited to: permit applications, Phase I and II ESAs, human health and ecological risk assessments, remedial action plans, risk management plans, soil management plans, and groundwater management plans.

Compliance with applicable regulations and the City's SCAs would ensure that the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

The project site is located within ¼-mile of Laney College, a local community college located at 900 Fallon Street. No hazardous materials emissions with the potential to affect this school would be anticipated during demolition, construction, or operation of the project.

Oakland International Airport is the closest airport to the project, and is located approximately four miles to the southeast. The project site is not located within a public airport land use plan or within two miles of a public use airport.[30] The project site is also not located within the vicinity of a private airstrip.[31] Thus, the proposed project would not result in an aviation-related safety hazard.

The proposed project would not affect the City street grid system and would therefore not impede an emergency access route or interfere with an emergency response or evacuation plan. Temporary, construction-related closures of streets would require traffic control plans to ensure emergency vehicle access, as required by SCAs described in *Section IV.C, Traffic and Transportation*, of this Draft EIR. Compliance with the SCAs would ensure that the proposed project would not create a significant hazard associated with emergency access, response, or evacuation.

The project site is surrounded by urbanized uses and is located several miles away from areas where wildland fires could occur (e.g., the Oakland Hills). The proposed project would be required to conform to the California Fire Code and Uniform Building Code, Oakland Building Code, and requirements of the Oakland Fire Department to reduce the potential for structural fires. Therefore, the proposed project would not expose people or structures to significant risks associated with wildland fires.

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[30] Alameda County Community Development Agency, 2010. *Oakland International Airport, Airport Land Use Compatibility Plan,* December. http://www.acgov.org/cda/planning/generalplans/documents/OAK_ALUCP_122010_FULL.pdf.

[31] Skyvector, 2015. *San Francisco Sectional Chart*, www.skyvector.com, accessed January 13.

As a result of the findings discussed above, the project would not result in significant impacts related to hazards and hazardous materials.

G. HYDROLOGY AND WATER QUALITY

The nearest surface water bodies to the project site are the Oakland Inner Harbor, located approximately ¼-mile to the south, and the Lake Merritt Channel, located approximately ⅓-mile to the east. The project would not affect any creeks and would therefore not conflict with the City of Oakland Creek Protection Ordinance.

Stormwater discharges in the City of Oakland are regulated through compliance with National Pollution Discharge Elimination System (NPDES) permit requirements. The project site is approximately two acres in area, so construction of the project would be subject to the NPDES General Construction Permit. These requirements are included in SCA 74:

> **SCA 74: Stormwater Pollution Prevention Plan (SWPPP).** *Prior to and ongoing throughout demolition, grading, and/or construction activities:* The project applicant must obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the State Water Resources Control Board (SWRCB). The project applicant must file a notice of intent (NOI) with the SWRCB. The project applicant will be required to prepare a stormwater pollution prevention plan (SWPPP) and submit the plan for review and approval by the Building Services Division. At a minimum, the SWPPP shall include a description of construction materials, practices, and equipment storage and maintenance; a list of pollutants likely to contact stormwater; site-specific erosion and sedimentation control practices; a list of provisions to eliminate or reduce discharge of materials to stormwater; Best Management Practices (BMPs), and an inspection and monitoring program. Prior to the issuance of any construction-related permits, the project applicant shall submit to the Building Services Division a copy of the SWPPP and evidence of submittal of the NOI to the SWRCB. Implementation of the SWPPP shall start with the commencement of construction and continue through the completion of the project. After construction is completed, the project applicant shall submit a notice of termination to the SWRCB.

In addition, SCA 54 requires earthmoving activities to be performed under an Erosion and Sedimentation Control Plan, as described above under Geology and Soils, which would prevent excessive erosion and stormwater runoff of solid materials as a result of earthmoving activities. SCA 54 and 74 would mitigate potential project stormwater impacts during construction to a less-than-significant level.

As the project would replace greater than 10,000 square feet of impervious surfaces, the project would be required to comply with the following Oakland SCAs, which implement post-construction NPDES stormwater requirements:

SCA 79: Post-Construction Stormwater Management Plan. *Prior to issuance of building permit (or other construction-related permit):* The applicant shall comply with the requirements of Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) permit issued to the Alameda Countywide Clean Water Program. The applicant shall submit with the application for a building permit (or other construction-related permit) a completed Construction-Permit-Phase Stormwater Supplemental Form to the Building Services Division. The project drawings submitted for the building permit (or other construction-related permit) shall contain a stormwater management plan, for review and approval by the City, to manage stormwater run-off and to limit the discharge of pollutants in stormwater after construction of the project to the maximum extent practicable.

a) The post-construction stormwater management plan shall include and identify the following:
   - i. All proposed impervious surface on the site;
   - ii. Anticipated directional flows of on-site stormwater runoff; and
   - iii. Site design measures to reduce the amount of impervious surface area and directly connected impervious surfaces; and
   - iv. Source control measures to limit the potential for stormwater pollution;
   - v. Stormwater treatment measures to remove pollutants from stormwater runoff; and
   - vi. Hydromodification management measures so that post-project stormwater runoff does not exceed the flow and duration of pre-project runoff, if required under the NPDES permit.

b) The following additional information shall be submitted with the post-construction stormwater management plan:
   - i. Detailed hydraulic sizing calculations for each stormwater treatment measure proposed; and
   - ii. Pollutant removal information demonstrating that any proposed manufactured/mechanical (i.e., non-landscape-based) stormwater treatment measure, when not used in combination with a landscape-based treatment measure, is capable or removing the range of pollutants typically removed by landscape-based treatment measures and/or the range of pollutants expected to be generated by the project.

All proposed stormwater treatment measures shall incorporate appropriate planting materials for stormwater treatment (for landscape-based treatment measures) and shall be designed with considerations for vector/mosquito control. Proposed planting materials for all proposed landscape-based stormwater treatment measures shall be included on the landscape and irrigation plan for the project. The applicant is not required to include on-site stormwater treatment measures in the post-construction stormwater management plan if he or she secures approval from Planning and Zoning of a proposal that demonstrates compliance with the requirements of the City's Alternative Compliance Program.

Prior to final permit inspection, the applicant shall implement the approved stormwater management plan.

SCA 80: Maintenance Agreement for Stormwater Treatment Measures. *Prior to final zoning inspection:* For projects incorporating stormwater treatment measures, the applicant shall enter into the "Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement," in accordance with Provision C.3.e of the NPDES permit, which provides, in part, for the following:

i. The applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and

ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The agreement shall be recorded at the County Recorder's Office at the applicant's expense.

SCA 79 would ensure that development of the project does not increase the quantity of stormwater runoff at the site and that any stormwater discharges from the site are treated in accordance with NPDES permit requirements. SCA 80 would provide a mechanism to ensure that required maintenance of the stormwater treatment system is performed during the life of the project.

Based on field exploration for the Preliminary Geotechnical Assessment, groundwater at the project site is located at 5.7 to 10 feet below the ground surface (bgs).[32] Based on project design, which includes partially sub-grade parking, the Preliminary Geotechnical Assessment concluded that temporary dewatering for construction may be required, as well as waterproofing of foundation elements. Any groundwater dewatering would limited in duration and would be subject to permits from East Bay Municipal Utility District

[32] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California*, December.

(EBMUD) or the Regional Water Quality Control Board (RWQCB), depending if the discharge were to the sanitary or storm sewer system. Therefore the project would have no significant impacts on groundwater.

The project site is not located in a 100- or 500-year mapped flood hazard zone,[33] and the project site is not in a mapped dam inundation area.[34] The project site location is not located in an area subject to seiche, tsunami, or mudslide hazards.[35] Therefore, flooding hazards for the project site would be considered less than significant.

As a result of the findings discussed above, the project would not result in significant impacts related to hydrology and water quality.

H. MINERAL RESOURCES

The proposed project would be located in an urban area and would replace an existing office/warehouse building and a paved parking lot. The project site has no known existing mineral resource. The project would not require quarrying, mining, dredging, or extraction of locally-important mineral resources on site, nor would it deplete any known mineral resource that would be of value to the region and the residents of the state.[36] As a result, the project would have no significant impacts related to mineral resources.

I. POPULATION AND HOUSING

The proposed project would result in the construction of approximately 330 additional residential units with 3,000 square feet of space and 365 parking spaces in an urban area. The proposed project would replace an existing office use and parking lot. The existing office use is that of the corporate headquarters of Cost Plus World Market, which is being phased out independently of the proposed project due to the acquisition of Cost Plus World Market by Bed Bath & Beyond.

The proposed project is consistent with the General Plan Land Use and Transportation Element, which encourages infill housing opportunities in close proximity to employment centers and alternative transportation options. In addition, the proposed project would provide additional housing in the area and therefore additional residents to patronize and support to areas planned for more intense retail, dining, and entertainment activities in

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[33] Federal Emergency Management Agency (FEMA), 2009. Flood Insurance Rate Map, Alameda County, California and Incorporated Areas Panel 67 of 725, Map 06001C0067G, August 3.

[34] City of Oakland, 2004. *General Plan.* Safety Element, Figure 6.1, Flooding Hazards.

[35] ENGEO, 2014. *Preliminary Geotechnical Assessment, 430 Jackson Street, Oakland, California,* December.

[36] City of Oakland, 1996. *General Plan.* Open Space, Conservation, and Recreation Element, June.

the Jack London Square and Lower Broadway in accordance with the *Estuary Policy Plan*. The proposed project would support and be consistent with the following land use objectives from the *Estuary Policy Plan*:[37]

- *Objective LU-1: Provide for a broad mixture of activities within the Estuary area.* "…A variety of uses can contribute in making the Estuary of value to Oakland's community and an attractive regional destination. A balance of uses and activities such as commercial, recreation, and residential - both traditional and non-traditional - will add to a dynamic waterfront…"
- *Objective LU-3: Expand opportunities and enhance the attractiveness of the Estuary as a place to live.* "The Estuary has been a place for people to live, with neighborhoods established close to jobs on inland sites. The mix of jobs and housing is characteristic of urban waterfront locations, and provides a precedent for modern day mixed use. It should remain so. In the future, opportunities to develop housing should be supported in the Estuary study area. An expanded residential population and associated services would support commercial and recreational uses, and over time generate neighborhoods..."

The U.S. Census population for the City of Oakland in 2010 was 390,724. According to ABAG's *2013 Projections*, the City of Oakland is expected to reach a population of more than 551,000 by 2040. For Oakland, ABAG projected a 12.5 percent population growth rate between 2010 and 2020, or an increase by 48,876 persons.[38] Residents added by the proposed project would represent a marginal fraction of this projected and planned for growth. Additionally, Block B (431 Madison Street, APN 001-0161-007-07) is identified in the City's *2015-2023 Housing Element* as a housing opportunity site.[39] The project thus would not induce substantial population growth in a manner not contemplated in the General Plan, including the *2015-2023 Housing Element* and *Estuary Policy Plan*, and would not displace substantial numbers of existing housing or people. The project therefore would not result in a significant impact related to population growth and would have no impact on housing or population displacement.

J. PUBLIC SERVICES

The proposed project site is located in a completely developed urban area already served by public services. The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could

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[37] City of Oakland and Port of Oakland, 1999. *Estuary Policy Plan*, Section II: Objectives, pages 29-30, June.

[38] City of Oakland, 2014. *2015-2023 Housing Element*, pages 210-211. December 9.

[39] City of Oakland, 2014. *2015-2023 Housing Element*, Appendix C: Detailed Site Inventory, Table C-6 Additional Housing Opportunity Sites, page 411, December 9.

cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for public services as described below:

1. Fire Protection Services

Fire protection and emergency medical response services are provided to the project site by the Oakland Fire Department. The nearest fire station, Station 12, is located within a mile from the project site at 822 Alice Street, Oakland. Station 12 has four staff on duty at any given time. The Oakland Fire Department meets a 7.5-minute response time 90 percent of the time, and meets an 8-minute response time standard for medical calls. Residential projects constructed in the vicinity of the project site in recent years have not impacted the Fire Department's ability to maintain these response times; the only anticipated additional calls would be industrial accidents that could potentially occur during the finite construction period for the project.[40]

In compliance with Oakland's Building Code, the proposed project would contain a full sprinkler system, and the stairwells would be fire-walled and smoke proof.[41] In accordance with standard City practices, the Fire Services Division will review the project plans at the time of building permit issuance to ensure that adequate fire life safety measures are designed into the project, in compliance with all applicable state and city fire safety requirements.

The project would be new construction required to comply with the following Oakland SCAs, which address the above-mentioned requirements and others, and would result in only a marginal increase in population that would not be expected to affect call response times or other performance standards.[42] As a result, the project would have a less-than-significant effect on fire prevention services.

SCA 4: Conformance with other Requirements.

Prior to issuance of a demolition, grading, P-job, or other construction related permit:

a) The project applicant shall comply with all other applicable federal, state, regional and/or local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Building Services Division, the City's Fire Marshal, and the City's Public Works Agency. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in SCA 3.

[40] Hoffman, Deputy Chief Mark, Oakland Fire Department, 2015. Personal communication with Urban Planning Partners, March 13.

[41] City of Oakland, 2015. Municipal Code, Chapter 15.12, Oakland Fire Code.

[42] Hoffman, Deputy Chief Mark, Oakland Fire Department, 2015. Personal communication with Urban Planning Partners, March 13.

b) The applicant shall submit approved building plans for project-specific needs related to fire protection to the Fire Services Division for review and approval, including, but not limited to automatic extinguishing systems, water supply improvements and hydrants, fire department access, and vegetation management for preventing fires and soil erosion.

SCA 19: Improvements in the Public Right-of-Way (General).

Prior to issuance of P-job or building permit:

a) The project applicant shall submit Public Improvement Plans to Building Services Division for adjacent public rights-of-way (ROW) showing all proposed improvements and compliance with the conditions and/or mitigations and City requirements including but not limited to curbs, gutters, sewer laterals, storm drains, street trees, paving details, locations of transformers and other above ground utility structures, the design specifications and locations of facilities required by the East Bay Municipal Utility District (EBMUD), street lighting, on-street parking and accessibility improvements compliant with applicable standards and any other improvements or requirements for the project as provided for in this Approval. Encroachment permits shall be obtained as necessary for any applicable improvements- located within the public ROW.

b) Review and confirmation of the street trees by the City's Tree Services Division is required as part of this condition and/or mitigations.

c) The Planning and Zoning Division and the Public Works Agency will review and approve designs and specifications for the improvements. Improvements shall be completed prior to the issuance of the final building permit.

d) The Fire Services Division will review and approve fire crew and apparatus access, water supply availability and distribution to current codes and standards.

2. Police Protection Services

Police protection services are provided to the project site by the Oakland Police Department headquartered in downtown Oakland at 455 7th Street. The City of Oakland is divided into six geographic areas and 57 patrol beats numbered 1X through 35Y.[43] Each patrol beat generally includes an area with between 5,000 and 7,000 residents.[44] The project site is located within the Police Services Agency's Community Policing Area 1 and

[43] City of Oakland, 2015. Oakland Police Department Districts and Beats Map. http://oakgis.maps.arcgis.com/home/, accessed March 12.

[44] Oakland City Council, 1996. Resolution No. 72727. June 11.

in Beat 1X. Area 1 is the area traditionally known as West Oakland, and is bordered by the City of Emeryville and Area 2 on the north, Lake Merritt on the east, the Oakland Estuary on the south, and the Bay on the west.[45] Area 1 is a diverse community with multiple thriving business districts, including Jack London Square, Downtown Oakland, and City Hall (Frank Ogawa Plaza),[46] as well as Chinatown, the Port of Oakland, and West Oakland extending to the Emeryville Border.[47] Patrol Beat 1X encompasses a portion of Jack London Square and is generally bounded by I-880 to the north, the Lake Merritt Channel to the east, the Oakland Estuary to the south, and Castro Street and Martin Luther King Jr. Way to the west.

Approximately 90 officers are assigned to Area 1, including foot patrol (1 sergeant and 3 officers, Monday through Friday, 8:00 a.m. to 4:00 p.m.), specialized units (Tuesday through Friday, and including the crime reduction team), community response officers, and 24-hour patrol.[48] Calls placed to the Police Department are prioritized, and depending on the priority of the call, the nearest police officer will be dispatched to respond to the call. An officer from any of the six areas may be dispatched on a call depending on their location in the City and the priority of the call. Although the project would add residents to Area 1, it would add only a marginal number of residents to the area, and officers from assigned to all six areas would be available to respond to high-priority calls. Given that the project would add only a relatively small number of residents to the area, the project would not result in the need for new or physically altered governmental police facilities due to this population increase.

Additionally, a Neighborhood Crime Prevention Council, part of Oakland's community policing program, is organized for each police beat area. For each Neighborhood Crime Prevention Council, a Neighborhood Services Coordinator is assigned help residents work together and in partnership with the Police and other City departments to identify and solve problems and to set priorities and develop strategies to improve public safety and crime.[49] The Neighborhood Crime Prevention Council for Beat 1X has been temporarily inactive, but is expected to have at least one meeting sometime in the first half of 2015 to re-initiate activity.[50]

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[45] Oakland Police Department, 2013. *Annual Management Report,* page 6.

[46] Oakland Police Department, 2013. *Annual Management Report,* page 6.

[47] Capt. Drennon Lindsey, Area 1 Commander, Oakland Police Department, 2015. Personal communication with Urban Planning Partners, March 12.

[48] Capt. Drennon Lindsey, Area 1 Commander, Oakland Police Department, 2015. Personal communication with Urban Planning Partners, March 12.

[49] Oakland Police Department, 2015. Neighborhood Councils. http://www2.oaklandnet.com/Government/o/OPD/s/NSD/s/ncpc/index.htm, accessed March 12.

[50] Brenda Ivey, Oakland Police Department, 2015. Personal communication with Urban Planning Partners. March 12.

3. Schools

The Oakland Unified School District (OUSD) operates public schools within the vicinity of the project site. The project site lies within the boundaries of Lincoln Elementary School, located to the north at 225 11th Street, less than ¾-mile from the project site, and within the boundaries of Westlake Middle/Junior High School, further to the north at 2629 Harrison Street and within 2 miles of the project site.[51] The project site also lies within the boundaries of Oakland Technical High School, located approximately 4 miles north at 4351 Broadway.[52]

While important to the quality of life in the project area, impacts to schools from increased development do not necessarily result in physical environmental impacts. In *Goleta Union School District v. Regents of the University of California*, the Court of Appeal found that "Classroom overcrowding, per se, does not constitute a significant effect on the environment."[53] A General Plan may have policies relating to public service levels in general or schools in particular. If a development project overwhelms the school district's capacity and quality of service, it could be inconsistent with the General Plan. The City of Oakland's General Plan does not have a specific policy related to school service levels.

Although the proposed project entails the construction of 330 additional residential units with some 1- and 2-bedroom units, this is considered a minimal increase of families with children. Therefore, the project would not cause any significant increase in enrollment at nearby public schools, nor would the project interfere with the operations of existing schools. In addition, the project sponsor would be required to pay school impact fees of $3.20 per square foot,[54] the maximum authorized by California Government Code Section 65995, to offset any impacts to school facilities from the proposed project. Payment of this fee is considered adequate mitigation to ensure the project's impacts on schools are less than significant.

4. Other Public Facilities

The City's Open Space, Conservation, and Recreation Element (OSCAR) provides a citywide goal of establishing 10 acres of total park acreage for each 1,000 residents, with 4 acres of that total being in local-serving parks. As identified in the OSCAR, the existing citywide total park acreage average is 8.26 acres, and the local-serving average is 1.33 acres per

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[51] Oakland Unified School District, 2015. Map Center & School Finder. http://www.ousd.k12.ca.us/domain/51, accessed March 15, last updated September 4, 2009.

[52] Unified School District, 2015. Map Center & School Finder. http://www.ousd.k12.ca.us/domain/51, accessed March 15, last updated September 4, 2009.

[53] Goleta Union School District v. Regents of the University of California (2d Dist. 1995) (37 Cal. App. 4th 1025, 1032, 1995).

[54] Don Smith, City of Oakland, Building Services, 2015. Personal communication with Urban Planning Partners, March 16.

1,000 residents.[55] The Central area (including the Jack London District) has a higher than average existing local-serving park acreage of 1.65 acres per 1,000 residents. The OSCAR recognizes the difficulty in meeting the established goals—which it notes would be impossible without massive redevelopment—especially in built-out urban areas, but states that major gains toward the goal can be made through the expansion of existing parks, improvement of creek and shoreline access, acquisition of vacant parcels, and incorporation of new parks in major redevelopment projects.[56]

The proposed project site is located in an urban area of downtown Oakland that is served by a number of parks in the area including: the nearby 6.6-acre Estuary Park, located ½-mile southeast; Madison Park and Harrison (Chinese Garden) Park, each 1.38 acres and located ¼-mile north; and Lake Merritt, located 1 mile northeast of the project site. Implementation of the shoreline access and public space plan identified in the *Estuary Policy Plan* would add to the area's public open space. Components include the expansion of Estuary Park, development of a Meadow Green located a few blocks to the southwest of the project site, and development of a Marina Green located a few blocks to the south of the project site, some of which, such as Marina Green, are now complete. Other components of the shoreline access and public space plan, including the improvement of recreational access in the Oak to 9th District, are underway. The Brooklyn Basin project, a 65-acre project in the Oak to 9th District which will include 32 acres of parks and open spaces, restored wetlands, and a new marina, will be required to comply with public access requirements that will ultimately close the largest gap in the Bay Trail along the Oakland Estuary. This uninterrupted, public access walkway along the estuary shoreline and development of the Oak to 9th District would provide additional public open spaces and recreational facilities for nearby residents, providing a system of open spaces and recreational facilities along the estuary.

The additional persons generated by the 330-unit project would represent a small, incremental increase to the existing population already served by the City's public parks, recreational facilities and open space. In addition, the proposed project includes required open space through the project's two landscaped courtyards totaling approximately 15,000 square feet. As a result, no new or physically altered governmental facilities, including parks, would be required, and the project's impacts related to these other public facilities would be less than significant.

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[55] City of Oakland, 1996. *General Plan*. Open Space, Conservation, and Recreation Element, pages 4-9, June.

[56] City of Oakland, 1996. *General Plan*. Open Space, Conservation, and Recreation Element, pages 4-9 and 4-10, June.

K. RECREATION

The proposed project would provide one approximately 10,000-square-foot, landscaped central courtyard (with a pool and spa) in the Block A building and one approximately 5,000-square-foot, landscaped central courtyard in the Block B building as required open space for the residential units. In addition, the proposed project is located in an urban area of downtown Oakland that is served by the existing parks and plazas in the downtown and estuary area. As mentioned above in the Other Facilities subsection of the Public Services section of this Chapter, implementation of the shoreline access and public access plan identified in the *Estuary Policy Plan* would enhance the existing recreational facilities for nearby residents. Thus, the proposed project would not result in significant impacts on existing parks or recreational facilities such that substantial deterioration would occur or be accelerated, nor would the construction or expansion of recreational facilities be required as a result of the project.

L. UTILITIES AND SERVICE SYSTEMS

The project site is located in an urban area already served by utilities and service systems, and the existing conditions of the site include office buildings that house approximately 100 employees with active utilities connections.

1. Water Supply

Oakland's water service provider, EBMUD, summarizes its water services capacity in the Urban Water Management Plan (2010). According to the plan, EBMUD anticipates higher densities of existing land uses through 2020, consistent with the projected site analysis. The plan includes implementation of water conservation and recycled water programs to decrease impacts of development. Additionally, EBMUD can meet customer service demands (based on ABAG population projections) through the year 2030 during normal year conditions. This includes the projected Regional Housing Needs Allocation (RHNA)[57] Oakland is required to plan for. However, during dry years, EBMUD would have to implement a Drought Management Program focused on reducing water consumption. In the case of multiple dry years, in addition to water consumption reduction programs, EBMUD's water supply would have to be supplemented.[58] Given that the project represents only a marginal increase in population captured by the ABAG population projections, the project is not anticipated to exceed water supplies available to serve the project from existing entitlements and resources and require or result in the expansion or construction of water facilities that would cause significant environmental effects.

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[57] 14,765 housing units.

[58] East Bay Municipal Utility District (EBMUD), 2011. *Urban Water Management Plan 2010*, page 4-2-4-10, June.

The project would also be required to comply with SCA 18, below, to ensure that any necessary water service facilities would be installed in accordance with standard specifications of the serving utilities, therefore ensuring no significant environmental effects related to water facilities.

> **SCA 18: Underground Utilities.** *Prior to issuance of any building permit:* The project applicant shall submit plans for review and approval by the Building Services Division and the Public Works Agency, and other relevant agencies as appropriate, that show all new electric and telephone facilities; fire alarm conduits; street light wiring; and other wiring, conduits, and similar facilities placed underground. The new facilities shall be placed underground along the project applicant's street frontage and from the project applicant's structures to the point of service. The plans shall show all electric, telephone, water service, fire water service, cable, and fire alarm facilities installed in accordance with standard specifications of the serving utilities.

> **SCA 90: Stormwater and Sewer.** *Prior to completing the final design for the project's sewer service:* Confirmation of the capacity of the City's surrounding stormwater and sanitary sewer system and state of repair shall be completed by a qualified civil engineer with funding from the project applicant. The project applicant shall be responsible for the necessary stormwater and sanitary sewer infrastructure improvements to accommodate the proposed project. In addition, the applicant shall be required to pay additional fees to improve sanitary sewer infrastructure if required by the Sewer and Stormwater Division. Improvements to the existing sanitary sewer collection system shall specifically include, but are not limited to, mechanisms to control or minimize increases in infiltration/inflow to offset sanitary sewer increases associated with the proposed project. To the maximum extent practicable, the applicant will be required to implement Best Management Practices to reduce the peak stormwater runoff from the project site. Additionally, the project applicant shall be responsible for payment of the required installation or hook-up fees to the affected service providers.

2. Wastewater Treatment and Collection

The City of Oakland is located within the jurisdictional boundaries of the San Francisco Bay Regional Water Quality Control Board (SF Bay RWQCB). The SF Bay RWQCB provides groundwater protection, wastewater discharge regulation, site cleanups, brownfields cleanups, stormwater basin planning, water quality information, enforcement, and stream and waterway protection. Under the SF Bay RWQCB National Pollutant Discharge Elimination System (NPDES) permit system, all existing and future municipal and industrial discharges to surface waters within the City would be subject to regulation.

In 2009, the SF Bay RWQCB reissued an NPDES permit to EBMUD to operate its wastewater treatment facilities. The EBMUD treats the City of Oakland's wastewater. The City of

Oakland owns and maintains approximately 1,000 miles of sewer collection pipelines and seven pump stations.[59] The City has both collection and treatment capacity to accommodate its share of the RHNA.[60] Wastewater from the project would be directed to existing facilities, which would continue to comply with all provisions of the NPDES program, as enforced by the SF Bay RWQCB. Therefore, the project would not result in an exceedance of wastewater treatment requirements and the impact is less than significant. The project is also not expected to have a significant impact on wastewater collection system facilities or capacity on a cumulative basis, when considering other General Plan (including the *2015-2023 Housing Element*) projects anticipated in the General Plan and Housing Element EIRs.

Consistent with current regulations, the applicant will be required, as described in SCA 54 in the Geology and Soils section of this Chapter, to submit on-site grading and drainage plans to the Building Services Division for review prior to commencement of construction or grading activities on site as to ensure that surface runoff during construction and operation of the project is adequately controlled. The project would also be required to comply with the post-construction requirements outlined in SCAs 79 and 80 in the Hydrology and Water Quality section of this Chapter. SCA 79 would ensure that development of the project does not increase the quantity of stormwater runoff at the site and that any stormwater discharges from the site are treated in accordance with NPDES permit requirements. SCA 80 would provide a mechanism to ensure that required maintenance of the stormwater treatment system is performed during the life of the project. Thus, the proposed project would not result in significant impacts with respect to stormwater drainage system capacity or wastewater treatment requirements.

3. Solid Waste

Assembly Bill (AB) 939 requires that all cities divert 50 percent of their solid waste from landfills by December 31, 2000. The current waste diversion rate in the City of Oakland is only 40 percent. The project sponsor shall be required to comply with the City's construction and demolition debris recycling ordinance, which requires submittal of a plan to divert at least 50 percent of the construction waste generated by the project from landfill disposal. Compliance with this ordinance and SCA 35, below, would result in less than significant short-term and long-term impacts relating to solid waste.

> **SCA 35: Waste Reduction and Recycling.** The project applicant will submit a Construction & Demolition Waste Reduction and Recycling Plan (WRRP) and an Operational Diversion Plan (ODP) for review and approval by the Public Works Agency.

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[59] City of Oakland, 2014. *2015-2023 Housing Element*, pp. 247-248. December 9.

[60] City of Oakland, 2014. *2015-2023 Housing Element*, pp. 247-248. December 9.

Prior to issuance of demolition, grading, or building permit:

Chapter 15.34 of the Oakland Municipal Code outlines requirements for reducing waste and optimizing construction and demolition (C&D) recycling. Affected projects include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3), and all demolition (including soft demo).The WRRP must specify the methods by which the development will divert C&D debris waste generated by the proposed project from landfill disposal in accordance with current City requirements. Current standards, FAQs, and forms are available at www.oaklandpw.com/Page39.aspx or in the Green Building Resource Center. After approval of the plan, the project applicant shall implement the plan.

Ongoing:

The ODP will identify how the project complies with the Recycling Space Allocation Ordinance, (Chapter 17.118 of the Oakland Municipal Code), including capacity calculations, and specify the methods by which the development will meet the current diversion of solid waste generated by operation of the proposed project from landfill disposal in accordance with current City requirements. The proposed program shall be in implemented and maintained for the duration of the proposed activity or facility. Changes to the plan may be re-submitted to the Environmental Services Division of the Public Works Agency for review and approval. Any incentive programs shall remain fully operational as long as residents and businesses exist at the project site.

4. Energy Standards

Because the project proposes the new construction of a multi-family development of more than three units, it would also be required to comply with the SCA H below. Compliance with SCA H would ensure that the project would not violate applicable federal, state and local statutes and regulations relating to energy standards.

SCA H: Compliance with the Green Building Ordinance, OMC Chapter 18.02

Prior to issuance of a demolition, grading, or building permit:

The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, OMC Chapter 18.02.

a) The following information shall be submitted to the Building Services Division for review and approval with the application for a building permit:

i. Documentation showing compliance with Title 24 of the 2013 California Building Energy Efficiency Standards.

ii. Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.

iii. Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit.

iv. Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (b) below.

v. Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance.

vi. Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit.

vii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

b) The set of plans in subsection (a) shall demonstrate compliance with the following:

i. CALGreen mandatory measures.

ii. All pre-requisites per the LEED / GreenPoint Rated checklist approved during the review of the Planning and Zoning permit, or, if applicable, all the green building measures approved as part of the Unreasonable Hardship Exemption granted during the review of the Planning and Zoning permit.

iii. Insert green building point level requirement (See Green Building Summary Table; for New Construction of Residential or Non-Residential projects that remove a Historic Resource (as defined by the Green Building Ordinance) the point level requirement is 53 points for residential and LEED Gold for non-residential) per the appropriate checklist approved during the Planning entitlement process.

iv. All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plancheck application is submitted and approved by the Planning and Zoning Division that shows the previously approved points that will be eliminated or substituted.

v. The required green building point minimums in the appropriate credit categories.

During construction:

The applicant shall comply with the applicable requirements CALGreen and the Green Building Ordinance, Chapter 18.02.

a) The following information shall be submitted to the Building Inspections Division of the Building Services Division for review and approval:

i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.

ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance.

iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

VI. ALTERNATIVES

The CEQA Guidelines require the analysis of a range of reasonable alternatives to the proposed Jack London Square 4th & Madison Project ("project" or "proposed project"), or to the location of the project, which would feasibly attain most of the project's basic objectives and avoid or substantially lessen any of the significant effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.[1] An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation.

The primary purpose of this chapter is to ascertain whether there are alternatives of design, scale, land use, or location that would substantially lessen the project's significant impacts, even if those alternatives "impede to some degree the attainment of the project objectives, or would be more costly."[2]

The four CEQA project alternatives to the proposed project considered include:

- The **No Project/No Build Alternative,** which assumes the project would not be developed. Structures on the existing site would remain in their current state, with no new construction on the project site.
- **Partial Preservation Alternative #1,** which assumes Buildings A and B would be designed such that they provide the same number of residential units as the proposed project, yet partially preserve the original façades of the existing Block A building.
- **Partial Preservation Alternative #2**, which assumes Buildings A and B would be designed such that they provide the same number of residential units as the proposed project, yet partially preserve the original façades of the existing Block A building (in a manner different than Partial Preservation Alternative #1).
- The **Setback/Stepped Alternative**, which assumes construction similar to the proposed project with some modifications to Building A. Building B would have the same massing, height and unit count, while Building A would step down in height and massing toward the district. The façades of the existing Block A building would not be preserved.

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[1] *CEQA Guidelines*, Section 15126.6.

[2] *CEQA Guidelines*, Section 15126.6(b).

The remainder of this chapter is organized as follows: overview of project objectives and impacts; description of alternatives considered and rejected from further study; description and analysis of CEQA project alternatives; and discussion of environmentally superior alternatives.

A. PROJECT OBJECTIVES AND IMPACTS

To determine what range of alternatives should be considered, the impacts identified for the proposed project were considered along with the project objectives. The proposed project is described in detail in *Chapter III, Project Description,* and the potential environmental effects of the proposed project are analyzed in *Chapter IV, Setting, Impacts, Standard Conditions of Approval and Mitigation Measures*. The project objectives and impacts are summarized below.

1. Project Objectives

The proposed project seeks to create a new multi-family residential development that incorporates residential amenities and ground-floor retail space. An overarching goal of the project is to create high quality multi-family residential development that fits with the fabric of surrounding neighborhood and the Jack London District as a whole. Specifically, the project proposes to:

- Develop a multi-family residential infill project that will complement and enhance existing adjacent residential and commercial neighborhoods.
- Include resident serving amenities and commercial space that benefits the community and activates portions of the ground level street frontage, primarily along 4th Street.
- Provide safe multimodal access for residents, guests, and commercial patrons that is adequate for all modes.
- Develop a project of quality design with an architectural character that balances relevance with the contextual district and contemporary style.
- Construct financially feasible developments with sufficient flexibility to adjust to market needs and to provide reasonable returns on investment so as to secure construction and long-term financing.

2. Project Impacts

As detailed in *Chapter IV, Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures* and *Chapter V, Effects Found Not to be Significant,* the project's impacts, with the exception of one significant and unavoidable impact related to the loss of a historic resources, would be less than significant with implementation of the City's Standard Conditions of Approval (SCAs) and/or mitigation measures.

B. ALTERNATIVES CONSIDERED AND REJECTED FROM FURTHER STUDY

In considering the range of alternatives to be analyzed in an EIR, alternatives were identified that were not selected to be further analyzed in this document, given that they would not feasibly attain most of the project's basic objectives and avoid or substantially lessen any of the significant effects of the project. Given that the most severe impacts that would result from the proposed project are related to historic resources, the alternatives chosen to be further analyzed in this chapter were those that best addressed and mitigated the historic impacts identified.

A Reduced Density Alternative was considered, which would build a smaller number of units in Buildings A and B. This alternative would potentially reduce transportation and traffic impacts further, however it would not mitigate the historic impacts identified for the proposed project to a less-than-significant level and thus was rejected from further consideration. Consideration of an alternative that preserves façades of Building A and incorporates a minor setback and stepping of massing down into the District, paired with a Building B that is seven stories similar to the proposed project, was also considered but found to be an infeasible alternative due to a severely reduced unit count.

The CEQA Guidelines state that an alternative site/location should be considered when feasible alternative locations are available and the "significant effects of the project would be avoided or substantially lessened by putting the project in another location." No specific alternative site locations are considered in this EIR. The project applicant does not control any alternate sites in Oakland that could accommodate the project as proposed, and has no interest in pursuing similar development at other locations within Oakland.

Moreover, a portion of the project site is identified in the Housing Element as a site for multi-family residential development and is assumed to be developed as such. The Housing Element assumes development of Block B of the site to meet with City's Regional Housing Needs Assessment (RHNA) numbers.

Further, an alternative involving relocation of the project would not preclude the development of another residential development on the Block B portion of this site. For the reasons stated above, the consideration of an Alternative Site Location was considered infeasible and was rejected for evaluation in this EIR.

C. CEQA ALTERNATIVES CONSIDERED

The four CEQA-based alternatives analyzed in this EIR are listed below. These four alternatives are included to meet the CEQA requirement for an EIR to describe a range of reasonable alternatives to the project that would feasibly attain most of the basic objectives of the project while avoiding or substantially lessening significant impacts.

1. No Project/No Build Alternative

a. Principal Characteristics

The No Project/No Build Alternative assumes that the project site would remain in its current condition and would not be subject to development. The No Project/No Build Alternative is considered to compare the impacts of approving the project to not approving the project. Under the No Project/No Build Alternative, no development would occur on the project site and existing conditions would remain on both Blocks A and B. No physical alterations to the existing Block A building would occur and it would continue to be utilized for a similar office use. Block B would continue to be used as a private parking lot. No new structures would be developed. As a result, no new vehicle trips would be generated at the adjacent intersection and no noise from building construction would occur.

b. Relationship to Project Objectives

The No Project/No Build Alternative would not achieve any of the key project objectives, including those related to:

- Developing multi-family residential infill housing;
- Including resident-serving amenities and commercial space;
- Providing safe multi-modal access;
- Bringing quality design and architectural character to the neighborhood; and
- Constructing a financially feasible and flexible development.

c. Analysis of the No Project/No Build Alternative

(1) Land Use and Planning

Implementation of the No Project/No Build Alternative would result in the continuation of existing land uses on the project site, which is currently vacant. No new land uses would be introduced. As would be the case under the proposed project, this alternative would not physically divide the existing community, nor conflict with habitat conservation plans. Similar to the proposed project, this alternative would not result in any significant land use impacts.

(2) Historic Resources

Under this alternative, the project site would remain as it currently exists. This alternative would include what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure (CEQA Guidelines Sec. 15126.6(e)). Under this alternative, the existing Block A building would remain. Although routine maintenance of Building A would be expected over time, it is not likely to be improved. Beyond the proposed project, there are no known plans for development.

The No Project/No Build Alternative would not meet any of the project sponsor's objectives as it would retain the current industrial use and Building A would not be used for residential development.

Because this alternative would not result in the construction of a new building on the site, Building A, which is a contributing resource to the Oakland Waterfront Warehouse District (WWD) and an individual historic resource for purposes of CEQA, would remain and the impacts to both the contributing resource itself and the historic district would be less than significant.

(3) Traffic and Transportation

The No Project/No Build Alternative would not alter traffic and transportation conditions at and around the project site. Whereas the proposed project would result in no significant traffic-related impacts, including to traffic load and capacity, traffic safety, transit travel time, transportation hazards, pedestrian and transit rider safety, parking, and policy consistency, this alternative would result in no impacts. As such, this alternative would not be subject to the recommendations identified in this document, related to transportation hazards, pedestrian safety, automobile parking, and bicycle parking.

(4) Air Quality

The No Project/No Build Alternative would not change existing air quality. Under this alternative, there would be no construction activity or increases in vehicle trips associated with the development of new residential land use. Similar to the proposed project, the No Project/No Build Alternative would not produce significant operational impacts related to toxic air contaminants, emissions standards, and odors. Unlike the proposed project, it would produce no temporary, construction-related emissions or dust. This alternative would not result in any significant impacts related to air quality.

(5) Greenhouse Gas Emissions

The No Project/No Build Alternative would result in no operational or construction activity at the project site. As a result, it would produce no new greenhouse gas (GHG) emissions. As would be the case under the proposed project, this alternative would not conflict with any plans or policies related to the reduction of GHGs. Unlike the proposed project, this alternative would generate no GHG emissions whatsoever. While construction and operation of the proposed project would result in numerous activities that contribute to GHG emissions, these emissions would not exceed BAAQMD thresholds. The No Project/No Build Alternative would result in no significant impacts related to GHGs.

(6) Noise and Vibration

No construction activity would occur under the No Project/No Build Alternative. This alternative would not result in increased traffic and would not expose new residences or offices to increased noise levels; therefore, the No Project/No Build Alternative would result in no significant impacts related to noise exposure, increased noise levels and construction-related noise. No significant noise-related significant impacts were identified for the proposed project, but the project would increase noise at a less-than-significant level. Construction activities would generate minimal, temporary increases in noise levels for surrounding residences, and new traffic resulting from operation of the proposed project would generate negligible increases in noise levels (well below the near doubling of traffic volume required for a perceptible change in noise levels to occur) in an area without sensitive receptors.

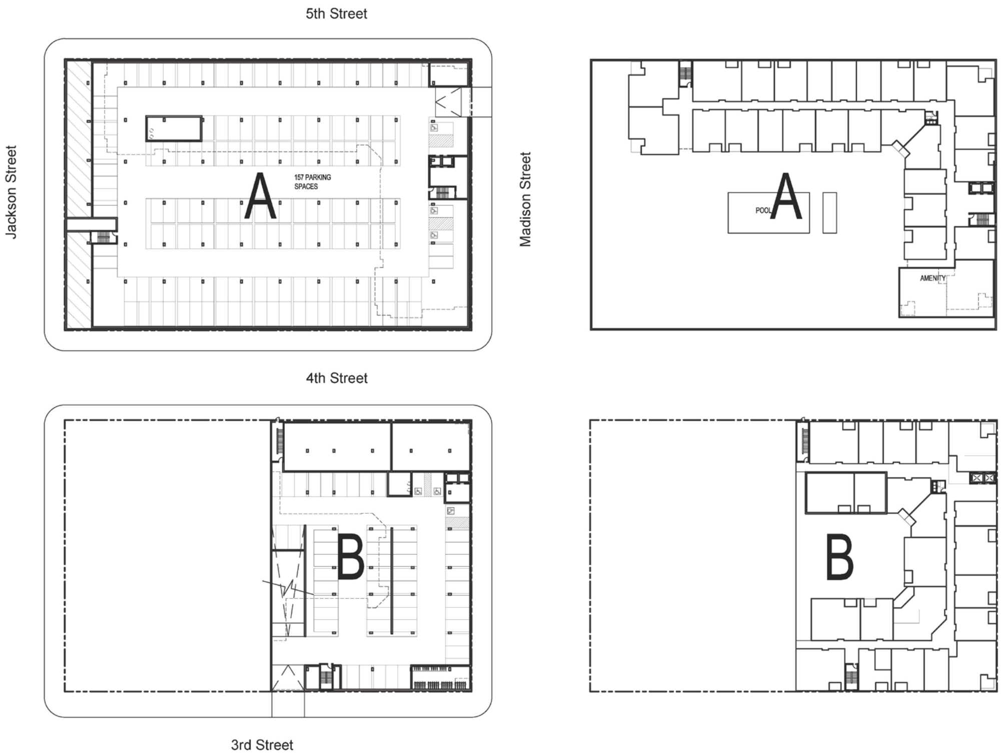
2. Partial Preservation Alternative #1

a. Principal Characteristics

Partial Preservation Alternative #1 assumes that Building A would be designed in such a way that the Madison Street and 4th Street façades of the original, existing Block A building would be preserved (see Figure VI-1). This would be achieved by redesigning the footprint and decreasing the height of the proposed Building A development, which for Partial Preservation Alternative #1 would be comprised of an L-shaped structure adjoined to approximately one half of the existing Block A warehouse building. As a result, the unit count for Building A under this alternative is less than that of the unit count for Building A under the proposed project. Conversely, the height and unit count of Building B would be increased to accommodate the difference. Thus, the resulting, total unit count of Partial Preservation Alternative #1 is identical to that of the proposed project.

Under Partial Preservation Alternative #1, the Building A would be an L-shaped structure aligned along 5th and Madison Streets. This design would leave a majority of the original, existing building—including its northwest, southwest, and southeast corners at 5th Street and Madison Street, 4th Street and Madison Street, and 4th Street and Jackson Street, respectively—preserved and exposed (see Figure VI-2). The new, four-story, vertical addition would include three levels of housing containing 77 units, atop a single level of podium parking with 157 spaces. This is in contrast to the proposed project, for which Building A contains a rectangular, seven-story structure composed of five residential levels over a two-level podium parking, and completely replaces the existing building. Under the proposed project, the Building A would contain 240 units and 256 parking spaces.

As noted, the size of the Block B building would increase under Partial Preservation Alternative #1, such that the total unit count remains identical to the proposed project. Building B would retain the footprint of Building B under proposed project, but would increase in height to 16 stories, with 12 residential levels over four levels of podium



GROUND FLOOR PLAN

PODIUM LEVEL PLAN

SITE A:

PRESERVE EXISTING BUILDING FACADE
3 RESIDENTIAL LEVELS OVER 1 LEVEL PARKING
(TYPE V PODIUM CONSTRUCTION)

77 UNITS
157 PARKING SPACES (INCLUDING 46 TANDEM)

SITE B:

12 RESIDENTIAL LEVELS OVER 4 PARKING LEVELS
(TYPE I HIGH RISE CONSTRUCTION)

253 UNITS
240 PARKING SPACES

0 20 40 80

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Source: KTGY, Inc.

Figure VI-1
Jack London Square 4th & Madison Project EIR
Partial Preservation Alternative #1

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Source: KTGY, Inc., and Urban Planning Partners, Inc.

Figure VI-2
Jack London Square 4th & Madison Project EIR
Northeast Perspective of Partial Preservation Alternative #1

parking. As such, the building would accommodate 253 housing units and 240 parking spaces. This design accommodates greater density in comparison to Building B under the proposed project, which would contain 90 units and 109 parking spaces. Partial Preservation Alternative #1 would include a total of 330 units and 397 parking spaces, similar to the proposed project.

b. Relationship to Project Objectives

Partial Preservation Alternative #1 would achieve many of the key objectives of the proposed project, including those related to:

- Developing multi-family residential infill housing;
- Including resident-serving amenities and commercial space;
- Providing safe multi-modal access;
- Bringing quality design and architectural character to the neighborhood; and

c. Analysis of Partial Preservation Alternative #1

(1) Land Use and Planning

Implementation of Partial Preservation Alternative #1, would result in similar land uses developed on the project site as those developed under the proposed project, including multi-family housing and resident serving amenities and commercial uses. As would be the case under the proposed project, this alternative would not physically divide the existing community, nor conflict with habitat conservation plans. This alternative would not result in any additional significant land use impacts.

(2) Historic Resources

Impacts to the Historic Resource

As explained above, Partial Preservation Alternative #1 is intended to avoid the significant and unavoidable impacts to the historic architectural resource that would result from the construction of the proposed project, while simultaneously allowing expansion of Building A to further the project sponsor's programmatic goals. Under this alternative, a three-story, L-shaped vertical addition would be constructed above Building A, which would retain its exterior walls at the two elevations facing toward the historic district. The addition would be located at the northeast corner of Building A, at what also would be the northeast corner of the WWD, and would rise approximately 30 to 40 feet above the roof of the existing Block A building. The interior of Building A would be used as parking for the residential units. Two exterior walls of the existing Block A warehouse building would be retained, but the roof would be removed to accommodate the addition and roof top open space (see Figure VI-1).

The Secretary of the Interior's Standards for the Treatment of Historic Properties guide the rehabilitation and expansion of historical resources, and these standards would apply to any proposed expansion of Building A. Standard #9 states, "New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment." The design of the vertical addition would therefore be differentiated from the existing building, but compatible with massing, size, scale and features. For example, the exterior of the addition could be clad in materials similar to the proposed project including stucco, fiber cement panels, and metal windows, awnings, balcony railings, and grills. The use of a variety of materials and greater articulation of the addition's elevations would differentiate the addition from the plain, unadorned concrete walls of Building A, and thus could differentiate the addition from the original structure.

However, only two of the four façades of the existing Block A warehouse building, at Jackson Street and 4th Street, would be preserved under this alternative. The two façades at Madison Street and 5th Street would not be preserved. As a result, the new construction would partially destroy historic materials that characterize the property. The building therefore would not retain its status as either a contributing resource to the historic resource or as an individual resource under CEQA. Partial Preservation Alternative #1 would result in a significant unavoidable impact to the individual historic resource, similar to the proposed project.

Impacts to the Historic District

The Building A addition would place a three-level vertical addition on a one-story structure. By placing the addition at the northeast corner of the building with substantial setbacks from the exterior walls of the existing buildings at the south and west elevations from the corner of 4th and Jackson Streets, the visual intrusiveness of the addition will be diminished (see Figure VI-2). Also contributing to diminishing the appearance of the addition is the length of Building A along both 4th Street (300 feet) and Jackson Street (200 feet). Given its height, Building B could have visual effects on the setting of the historic district. The physical features that constitute the setting of a historic property can be either natural or manmade. These features and their relationships should be examined not only within the exact boundaries of the property, but also between the property and its surroundings. This is particularly important for districts.

Building B is located a half a block outside the WWD and is adjacent to the Allegro at Jack London Square to the west. The Allegro is located between Building B and the eastern boundary of the WWD. Any effects related to the height of the Building B would be mitigated by the presence of the Allegro project which, at five stories and approximately 60 feet high would visually obscure Building B. In effect, Building B would be "set back" about 190 feet from the historic district boundary (middle of Jackson Street). The construction of Building B, in and of itself, would not significantly alter the physical characteristics of the historic district that convey its historic significance. Relative to the historic district, the Building A addition would be at the far northeast corner of the district at its boundary. It would be obscured from views from within the historic district by the Allegro at Jack London Square development and is lower in height than the contributing or non-contributing properties to the historic district within one block of Building A. Based on these factors, together with its use of compatible materials, the addition would have a less-than-significant impact to the historic district. Thus, Partial Preservation Alternative #1 would result in less-than-significant effects to the historic district, similar to the proposed project.

Cumulative Impacts

Partial Preservation Alternative #1, similar to the proposed project, would result in the loss of Building A as an historic resource under CEQA and as a contributing resource to the historic district. The alternative would involve construction of a new building within the boundaries of a designated National Register Historic District and an API, which, combined with the other past, current, and reasonably foreseeable demolition; new construction; and other alterations to the WWD, has the potential to materially impair the significance of the historic district in a manner that may be cumulatively significant if all of these projects are executed in the near future. As a result, similar to the proposed project, Partial Preservation Alternative #1 would result in a significant and unavoidable cumulative impact to the historic district.

(3) Traffic and Transportation

Like the proposed project, the Partial Preservation Alternative #1 would not result in any significant traffic and transportation impacts. The similarity of this alternative to the proposed project in terms of land uses, size, scale, residential unit count, and parking spaces means that impacts to the surrounding transportation and traffic environment would be similar as well. This alternative would be subject to the same four sets of recommendations identified for the proposed project, related to transportation hazards, pedestrian safety, automobile parking, and bicycle parking.

(4) Air Quality

The Partial Preservation Alternative #1 would contribute to an increase in emissions affecting air quality due to construction activities to a similar extent as the proposed project. Under this alternative, there would be construction activities and an increase in vehicle trips as compared with existing conditions. The similar scale of development assumed under this alternative would result in a similar quantity of the emissions effecting air quality. As such, this alternative would likely result in the same, less than significant air quality-related impacts as the proposed project.

(5) Greenhouse Gas Emissions

The Partial Preservation Alternative #1 would result in similar operational and construction activity at the project site as the proposed project. As a result, development under this alternative would produce new GHG emissions. As would be the case under the proposed project, this alternative would not conflict with any plans or policies related to the reduction of GHGs. Similar to the proposed project, construction and operation of the alternative project would result in numerous activities that contribute to GHG emissions. However, these emissions would not exceed BAAQMD thresholds. As a result, the Partial Preservation Alternative #1 would not result in significant impacts related to GHGs.

(6) Noise and Vibration

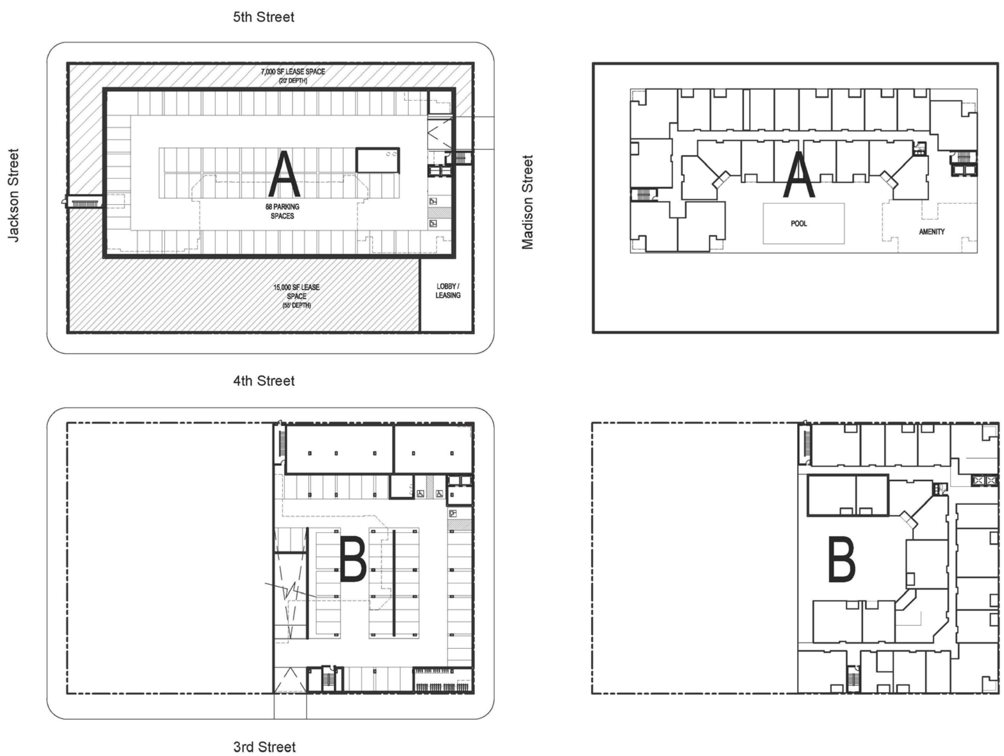
The Partial Preservation Alternative #1 would result in noise impacts associated with the construction of the project, similar to the impacts that would be the result of the proposed project. Given the similarity in project size and scale, it is likely that use of similar construction equipment over a similar timeframe would be needed to implement development under this alternative. Construction activities would generate minimal, temporary increases in noise levels for surrounding residences, and new traffic resulting from operation of the proposed project would generate negligible increases in noise levels in the area.

3. Partial Preservation Alternative #2

a. Principal Characteristics

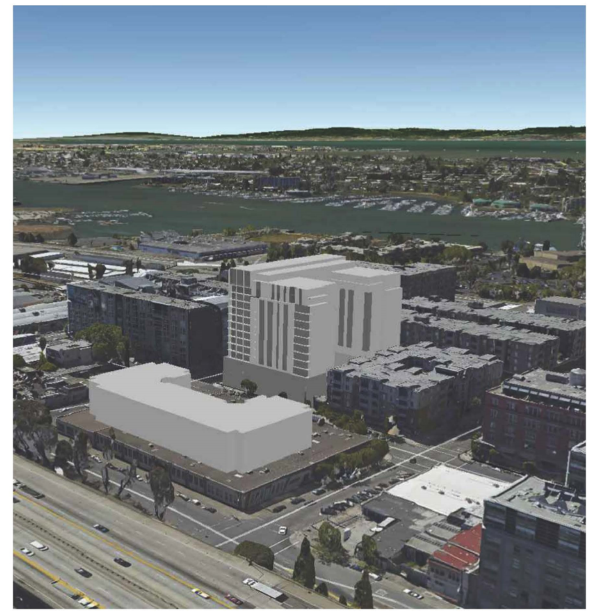
Similar to Partial Preservation Alternative #1, Partial Preservation Alternative #2 would include a proposed Building A designed to preserve elements of the original, existing Block A building. Under Partial Preservation Alternative #2, all four of façades of the existing building would be preserved, the result of a new, "C"-shaped building that sits atop the original building but is inset on all four sides (see Figure VI-3). Both the height and building envelope of this building would be reduced, as compared to that of the proposed project. As a result, the Building A unit count under this alternative is less than that of the Building A unit count in the proposed project. Conversely, the height and unit count of Building B would be increased, to accommodate the difference. The resulting, total unit count of Partial Preservation Alternative #2 is identical to that of the proposed project.

Under Partial Preservation Alternative #2, Block A would include a five-story building composed of four levels of housing containing 90 units, atop a single level of podium parking containing 88 spaces. This is opposed to the proposed project, under which Block A contains a rectangular, seven-story structure composed of five residential levels over two levels of podium parking, and that leaves none of the original building preserved. Under the proposed project, Building A would contain 240 units and 256 parking spaces.



GROUND FLOOR PLAN

PODIUM LEVEL PLAN



SITE A:

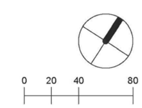
PRESERVE EXISTING BUILDING FACADE
4 RESIDENTIAL LEVELS OVER 1 LEVEL PARKING
(TYPE V PODIUM CONSTRUCTION)

90 UNITS
88 PARKING SPACES

SITE B:

11 RESIDENTIAL LEVELS OVER 4 PARKING LEVELS
(TYPE I HIGH RISE CONSTRUCTION)

240 UNITS
240 PARKING SPACES



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Source: KTGY, Inc.

Figure VI-3
Jack London Square 4th & Madison Project EIR
Partial Preservation Alternative #2

As noted, the size of the Building B would increase under Partial Preservation Alternative #2, such that total unit count remains identical to the proposed project. Building B would retain the footprint of Building B under proposed project, but would increase in height to 15 stories, with 11 residential levels over four levels of podium parking. As such, Building B under Partial Preservation Alternative #2 would accommodate 240 housing units and 240 parking spaces. This is compared to Building B under the proposed project, which would contain 90 units and 109 parking spaces. Partial Preservation Alternative #2 would include 330 total units and 328 total parking spaces. The proposed project would contain 330 total units and 397 parking spaces.

b. Relationship to Project Objectives

Partial Preservation Alternative #2 would achieve many of the key objectives of the proposed project, including those related to:

- Developing multi-family residential infill housing;
- Including resident-serving amenities and commercial space;
- Providing safe multi-modal access;
- Bringing quality design and architectural character to the neighborhood

c. Analysis of Partial Preservation Alternative #2

(1) Land Use and Planning

Implementation of Partial Preservation Alternative #2 would result in similar land uses developed on the project site as those developed under the proposed project, including multi-family housing and resident serving amenities and commercial uses. As would be the case under the proposed project, this alternative would not physically divide the existing community, nor conflict with habitat conservation plans. This alternative would not result in significant land use impacts.

(2) Historic Resources

Impacts to the Historic Resource

Building A under this alternative would include a vertical addition to the existing Block A warehouse building that would add four levels of housing containing 90 units, set back from the facade of the existing warehouse building on all sides. As described for Partial Preservation Alternative #1 above, per the Secretary of the Interior’s Standards for the Treatment of Historic Properties guide the rehabilitation and expansion of historical resources, the addition shall be differentiated from the older building and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. The design of the addition would therefore be differentiated from the existing building, but compatible with massing, size, scale and features.

As described for Partial Preservation Alternative #1, the exterior of the addition could, for example, be clad in materials similar to the proposed project including stucco, fiber cement panels, and metal windows, awnings, balcony railings, and grills. The use of a variety of materials and greater articulation of the addition's elevations would differentiate the addition from the plain, unadorned concrete walls of Building A. All four façades of the existing building would be preserved, and the new construction added in the form of a vertical addition would not destroy historic materials that characterize the property. Therefore, Building A would retain its status as an individually contributing resource to the historic district and as an individual historic resource under CEQA.

Impacts to the Historic District

The Building A addition under Partial Preservation Alternative #2 would place a four-level vertical addition on a one-story structure. Similarly to Partial Preservation Alternative #1, its relative size, massing and scale could have an intrusive effect on Building A. By placing the addition in the center of the existing building and set back from the exterior walls of the existing building on all sides, the visual intrusiveness of the addition will be diminished similar to Partial Preservation Alternative #1 (see Figure VI-2). However, relative to the historic district, the addition would be partially obscured from views from within the historic district by the Allegro at Jack London Square development and is generally equal in height to contributing and non-contributing properties of the historic district within one block of Building A. Based on these factors, together with its use of compatible materials, the addition would have an impact that is less severe than the impact of the proposed project, mitigating the project-level impact to the historic district to a less-than-significant level.

Similarly to Partial Preservation Alterative #1, Building B under Partial Preservation Alterative #2 could have visual effects on the setting of the historic district given its height (11 residential levels over four levels of podium parking). However, any effects related to the height of the Building B would be mitigated by the presence of the Allegro project which, at five stories and approximately 60 feet high, would visually obscure Building B. In effect, Building B would be "set back" about 190 feet from the historic district boundary (middle of Jackson Street). The construction of Building B under this alternative, in and of itself, would not significantly alter the physical characteristics of the historic district that convey its historic significance.

Thus, Partial Preservation Alternative #2 would have a less-than-significant impact on the historic district similarly to the proposed district.

Cumulative Impacts

Although the alternative would involve new construction within the boundaries of a designated National Register Historic District and an API, Partial Preservation Alternative

#2 would maintain Building A as an historic resource under CEQA and as a contributing resource to the historic district. Further, Partial Preservation Alternative #2 would have a less-than-significant project-level impact to the historic district. As a result, Partial Preservation Alternative #2 would result in less-than-significant cumulative impact to the historic district. The cumulative impact of this alternative is reduced to a less-than-significant level in comparison to the proposed project, which has a significant and unavoidable cumulative impact on the historic district.

(3) Traffic and Transportation

Like the proposed project, the Partial Preservation Alternative #2 would not result in any significant traffic and transportation impacts. The similarity of Partial Preservation Alternative #2 to the proposed project in terms of land uses, size, scale, residential unit count, and parking spaces means that impacts to the surrounding transportation and traffic environment would be similar as well. This alternative would be subject to the same four sets of recommendations identified for the proposed project, related to transportation hazards, pedestrian safety, automobile parking, and bicycle parking.

(4) Air Quality

The Partial Preservation Alternative #2 would contribute to an increase in emissions affecting air quality due to construction activities to a similar extent as the proposed project. Under this alternative, there would be construction activities and an increase in vehicle trips as compared with existing conditions. The similar scale of development assumed under this alternative would result in a similar quantity of the emissions effecting air quality. As such, this alternative would likely result in the same, less than significant air quality-related impacts as the proposed project.

(5) Greenhouse Gas Emissions

The Partial Preservation Alternative #2 would result in similar operational and construction activity at the project site as the proposed project. As a result, development under this alternative would produce new GHG emissions. As would be the case under the proposed project, this alternative would not conflict with any plans or policies related to the reduction of GHGs. Similar to the proposed project, construction and operation of the alternative project would result in numerous activities that contribute to GHG emissions. However, these emissions would not exceed BAAQMD thresholds. As a result, Partial Preservation Alternative #1 would not result in significant impacts related to GHGs.Noise and Vibration

Partial Preservation Alternative #2 would result in noise impacts associated with the construction of the project, similar to the impacts that would be the result of the proposed project. Given the similarity in project size and scale, it is likely that use of similar construction equipment over a similar timeframe would be needed to implement development under this alternative. Construction activities would generate minimal, temporary increases in noise levels for surrounding residences, and new traffic resulting from operation of the proposed project would generate negligible increases in noise levels in the area.

4. Setback/Stepped Alternative

a. Principal Characteristics

The defining characteristic of the Setback/Stepped Alternative would be the stepped massing of Building A. Unlike the partial preservation alternatives described above, this alternative would not preserve any of the existing Block A warehouse façades. Rather, the Building A podium would be the same as that of the proposed project, with a footprint matching that of the existing building. The design of Building A, described below, would be intended to mitigate visual impacts to the WWD and preserve relevant viewsheds.

Under the Setback/Stepped Alternative, Building A would increase in height from Jackson Street to Madison Street. The building would be podium level height beginning at Jackson Street. It would then increase to two residential levels over two levels of parking podium at a distance of 20 feet back from Jackson Street. It would step up once more further toward Madison Street, increasing to five residential levels over of the two-level parking podium (see Figure VI-4). Under this alternative, Building A would be reduced in in total floor area. It would accommodate 148 dwelling units and 228 parking spaces. This is significantly less than the proposed project, under which Building A contains 240 dwelling units and 256 parking spaces.

Building B would be located on the same site as Building B of the proposed project, with the same height and design. Like the proposed project, it would include five levels of residential uses atop two levels of parking, and contain 91 dwelling units and 109 parking spaces.

The Setback/Stepped Alternative would include 239 total units and 337 parking spaces, substantially less than the proposed project, which would include 330 units and 397 parking spaces.

b. Relationship to Project Objectives

The Setback/Stepped Alternative would achieve many of the key objectives of the proposed project, including those related to:

- Developing multi-family residential infill housing;
- Including resident-serving amenities and commercial space;
- Providing safe multi-modal access; and
- Bringing quality design and architectural character to the neighborhood.

c. Analysis of Setback/Stepped Alternative

(1) Land Use Planning

Implementation of the Setback/Stepped Alternative would result in similar land uses developed on the project site as those developed under the proposed project, including multi-family housing and resident-serving amenities and commercial uses. As would be the case under the proposed project, this alternative would not physically divide the existing community, nor conflict with habitat conservation plans. This alternative would not result in any additional significant land use impacts.

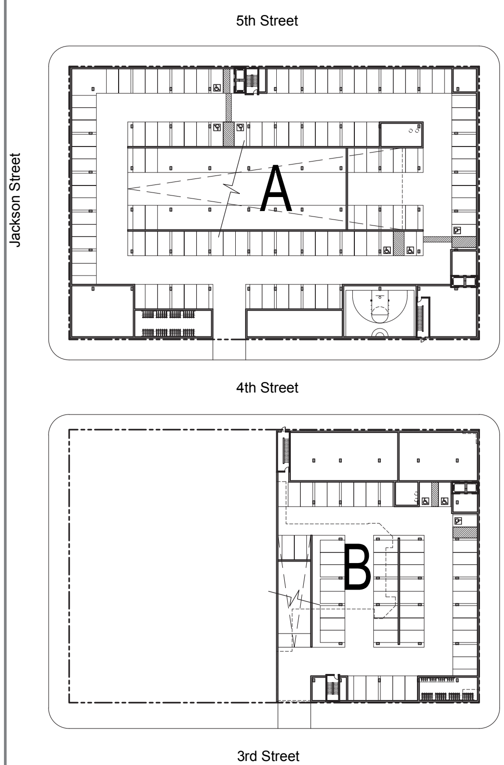
(2) Historic Resources

Impacts to the Historic Resource

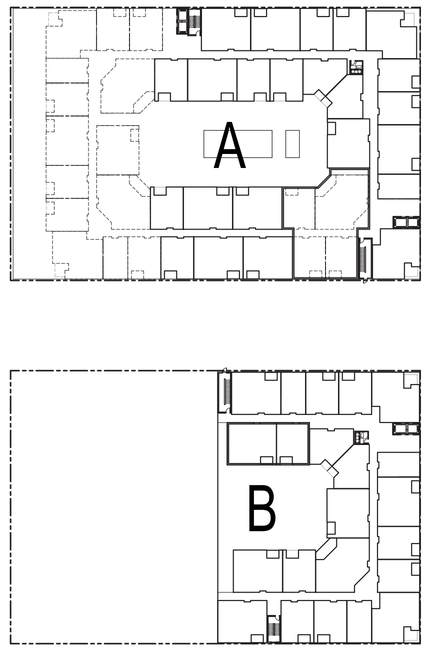
Building A would have the same podium footprint the proposed project, and would not preserve any elements of the existing Block A building. It would increase in height beginning 20 feet back from Jackson Street, stepping up to two residential levels over two levels of parking, and then to five residential levels over two levels of parking. The result would be a reduction in overall building size as compared to the proposed project.

Similar to the proposed project, this alternative would result in the replacement of the existing Block A warehouse. As explained in *Section IV.B, Historic Resources*, this warehouse is a contributor to a designated National Register Historic District that is located within an Area of Primary Importance (API). According to City policy, these factors place the building on the City's Local Register of Historic Resources. Thus, similar to the proposed project, the demolition of the warehouse would result in a significant adverse effect to an individual historic resource under CEQA.

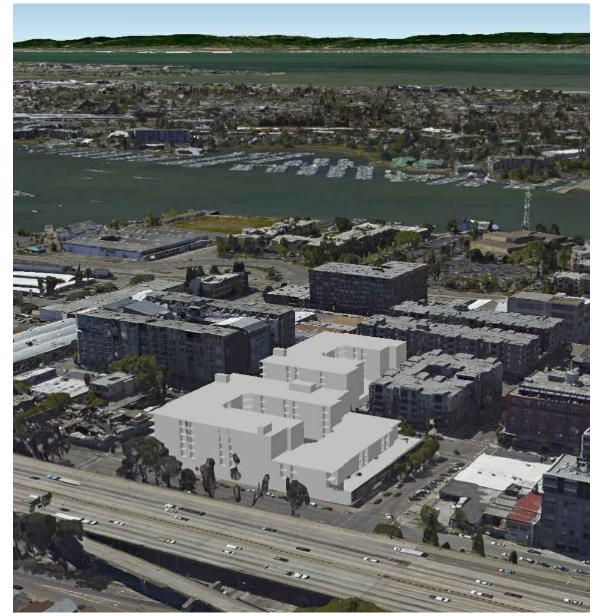
As would be the case with the partial preservation alternatives, Building A under this alternative has elements that may reduce the severity of its impact on the surrounding historic district, as compared to the impact of the proposed project. The visual intrusiveness of the stepped building would be less severe than the proposed project from Jackson, 4th, and 5th Streets. The setback, lower sections would be further obscured from views from within the historic district by the Allegro at Jack London Square development, and the building is generally equal in height to contributing and non-contributing properties of the historic district within one block of Building A. However, the building would still be visible from within the historic district, and, unlike the partial preservation alternatives, it would be devoid of original elements of the existing warehouse building. As such, the building would result in a loss of workmanship through the loss of the majority of materials; a loss of the physical features that convey the building's historic character; and a loss of physical features that convey the relationship of the building to its history as a warehouse. Regardless of its design, Building A under the Setback/Stepped Alternative would constitute a significant impact to the individual historic resource.



GROUND FLOOR PLAN



PODIUM LEVEL PLAN



SITE A:

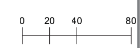
20' SETBACK FROM JACKSON ST. & STEPPED MASSING
2 & 5 RESIDENTIAL LEVELS OVER 2 LEVELS OF PARKING
(TYPE III PODIUM CONSTRUCTION)

148 UNITS
228 PARKING SPACES

SITE B:

5 RESIDENTIAL LEVELS OVER 2 PARKING LEVELS
(TYPE III PODIUM CONSTRUCTION)

91 UNITS
109 PARKING SPACES



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Source: KTGY, Inc.

Figure VI-4
Jack London Square 4th & Madison Project EIR
Setback/Stepped Alternative

Impacts to the Historic District

Building B is located a half a block outside the WWD and is adjacent to the Allegro at Jack London Square to the west. The Allegro is located between Building B and the eastern boundary of the WWD. As explained in *Section IV.B, Historic Resources*, the height of Building B could have visual effects on the setting of the historic district. However, any effects related to the height of the Building B would be mitigated by the presence of the Allegro project which, at five stories and approximately 60 feet high would visually obscure Building B. In effect, Building B would be "set back" about 190 feet from the historic district boundary (middle of Jackson Street). Given its similar height and design as Building B under the proposed project, the construction of Building B under this alternative, in and of itself, would not significantly alter the physical characteristics of the historic district that convey its historic significance.

As a result, similar to the proposed project and the other alternatives, the new construction introduced into the historic district by Building A would not constitute a significant impact in and of itself, and overall the Setback/Stepped Alternative would have a less-than-significant project-level impact to the historic district.

Cumulative Impacts

The Setback/Stepped Alternative, similar to the proposed project, would result in the loss of Building A as an historic resource under CEQA and as a contributing resource to the historic district. The alternative would involve construction of a new building within the boundaries of a designated National Register Historic District and an API, which, combined with the other past, current, and reasonably foreseeable demolition; new construction; and other alterations to the WWD, has the potential to materially impair the significance of the historic district in a manner that may be cumulatively significant if all of these projects are executed in the near future. As a result, similar to the proposed project, the Setback/Stepped Alternative would result in a significant and unavoidable cumulative impact to the historic district.

(3) Traffic and Transportation

Like the proposed project, the Setback/Stepped Alternative would not result in any significant traffic and transportation impacts. The reduced size and residential unit count associated with Setback/Stepped Alternative, and similarity to the proposed project in terms of land uses, means that impacts to the surrounding transportation and traffic environment would be either less severe or similar. This alternative would be subject to the same four sets of recommendations identified for the proposed project, related to transportation hazards, pedestrian safety, automobile parking, and bicycle parking.

(4) Air Quality

The Setback/Stepped Alternative would contribute to an increase in emissions affecting air quality due to construction activities to a similar extent as the proposed project. Under this alternative, there would be construction activities and an increase in vehicle trips as compared with existing conditions. The similar scale and type of development assumed under this alternative would result in a similar quantity of the emissions effecting air quality. As such, this alternative would likely result in the same, less than significant air quality-related impacts as the proposed project.

(5) Greenhouse Gas Emissions

The Setback/Stepped Alternative would result in similar operational and construction activity at the project site as the proposed project. As a result, development under this alternative would produce new GHG emissions. As would be the case under the proposed project, this alternative would not conflict with any plans or policies related to the reduction of GHGs. Similar to the proposed project, construction and operation of the alternative project would result in numerous activities that contribute to GHG emissions. However, these emissions would not exceed BAAQMD thresholds. As a result, the Setback/Stepped Alternative would not result in significant impacts related to GHGs.

(6) Noise and Vibration

The Setback/Stepped Alternative would result in noise impacts associated with the construction of the project, similar to the impacts that would be the result of the proposed project. Given the similarity in project size, scale and construction type, it is likely that use of similar construction equipment over a similar timeframe would be needed to implement development under this alternative. Construction activities would generate minimal, temporary increases in noise levels for surrounding residences, and new traffic resulting from operation of the proposed project would generate negligible increases in noise levels in the area.

D. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of the environmentally superior alternative in an EIR. The No Project/No Build Alternative is considered the environmentally superior alternative in the strict sense that environmental impacts associated with its implementation would be the least of all the scenarios examined (including the project). To maintain the project site at its current conditions would avoid each of the impacts that would result from the project. In cases like this where the No Project Alternative is the environmentally superior alternative, CEQA requires that the second most environmentally superior alternative be identified. Comparison of the environmental impacts associated with each alternative as described above, indicates that the Partial Preservation Alternative #2 would represent the next-best alternative in terms of the fewest significant environmental impacts. This alternative would result in reducing project-level impacts to the individual historic resource to a less-than-significant level and the cumulative impact to the historic district to a less-than-significant level as compared to the proposed project.

VII. CEQA REQUIRED ASSESSMENT CONCLUSIONS

As required by CEQA, this chapter discusses the following types of impacts that could result from implementation of the Jack London Square 4th & Madison Project ("project" or the "proposed project"): growth-inducing impacts, significant unavoidable environmental impacts, significant irreversible changes, and cumulative impacts. Effects found not to be significant are discussed in *Chapter V, Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval.*

A. GROWTH-INDUCING IMPACTS

A project is considered growth inducing if it would directly or indirectly foster economic or population growth or the construction of additional housing. Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped. Typically, redevelopment projects on infill sites that are surrounded by existing urban uses are not considered growth-inducing because redevelopment by itself usually does not facilitate development intensification on adjacent sites.

The proposed project would not have any growth inducement effects. The project site is in a developed area fully served by public utilities. There are no significant areas that are undeveloped adjacent to the project site. Additionally, the project would not remove any obstacles that would help facilitate growth that could significantly affect the physical environment.

Indirect residential population growth associated with the proposed project could also occur. Given the commercial area of the project would be significantly less than the existing amount of commercial office space on the site, the project would result in a net decrease in permanent jobs. The economic stimulus generated by construction of the proposed project could result in the creation of new construction-related jobs. However, the jobs created during the construction phase of the project would not be substantial in the context of job growth in Oakland and the region. Although some of the employees generated by the proposed project may decide to live in Oakland, the migration of these employees into the City would not result in a substantial population increase.

Implementation of the proposed project would result in an increase in residential population of 868 people, based on the 2009-2013 household size of 2.63 residents per household.[1] According to ABAG's *2013 Projections*, the City of Oakland is expected to reach a population of more than 551,000 by 2040. For Oakland, ABAG projected a 12.5 percent population growth rate between 2010 and 2020, or an increase by 48,876 persons.[2] Residents added by the proposed project would represent a marginal fraction of this projected and planned for growth. The proposed project's associated increase in population would account for approximately 1.8 percent of this increase. This residential growth is well within the anticipated population growth for the City of Oakland and would not be considered substantial.

In addition, the proposed project would occur on an infill site in an existing urbanized neighborhood in Oakland. It would not result in the extension of utilities or roads into exurban areas, and would not directly or indirectly lead to the development of greenfield sites in the East Bay. Because the project site is located within an existing urbanized area, and is immediately adjacent to a major transit station, anticipated growth would benefit the existing transit system and could reduce adverse impacts associated with automobile use, such as air pollution and noise. In addition, the provision of additional housing in Oakland would allow more people to live in an existing urbanized area and could reduce develop¬ment pressures on farmland and open space in the greater Bay Area. Therefore, the population growth that would occur as a result of project implementation would be largely beneficial and not considered substantial and adverse.

B. SIGNIFICANT IRREVERSIBLE CHANGES

CEQA requires that EIRs assess whether the proposed project could result in significant irreversible changes to the physical environment. These may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses. The CEQA Guidelines discuss three categories of significant irreversible changes that should be considered. Each is discussed below.

1. Changes in Land Use which Commit Future Generations

The proposed project would allow for the redevelopment of 1.5-block, 2-acre parcel of land located in the Jack London District Neighborhood in Oakland. Although the project site currently has an office use, it is surrounded by urban development on all sides and is designated for residential, commercial and mixed-use development in the plans and policies of the City of Oakland, including the General Plan and *2015-2023 Housing Element*. The *2015-2023 Housing Element* specifically identifies a portion of the project

[1] U. S. Census Bureau, American Community Survey (ACS), 5-Year Estimates. http://factfinder2.census.gov, accessed April 30.

[2] City of Oakland, 2014. *2015-2023 Housing Element*, pages 210-211. December 9.

site as a housing opportunity site.[3] Because the proposed project would occur on an infill site on land designated for a mixture of land uses, it would not commit future generations to a significant change in land use.

2. Irreversible Damage from Environmental Accidents

No significant irreversible environmental damage, such as what could occur as a result of an accidental spill or explosion of hazardous materials, is anticipated due to implementation of the proposed project. Furthermore, compliance with federal, state and local regulations, of the City of Oakland, and the implementation of Standard Conditions of Approval (SCAs) identified in the Hazards and Hazardous Materials section of *Chapter V, Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval*, would reduce to a less-than-significant level the possibility that hazardous substances within the project site could cause significant environmental damage.

3. Consumption of Nonrenewable Resources

Consumption of nonrenewable resources includes the use of non-renewable energy sources, conversion of agricultural lands, and loss of access to mining reserves. Because the site has not been used for mineral extraction, loss of access to any minerals that historically occurred on-site would not be considered significant. Implementation of the project would require electricity, natural gas, and possibly other forms of energy. However, the scale of such consumption for the proposed uses would be typical for a residential and commercial infill development of this size. The proposed project would incorporate energy-conserving features, as required by the Uniform Building Code and the California Energy Code (Title 24, Part 6) and as stipulated by SCA H: Compliance with the Green Building Ordinance, OMC Chapter 18.02. Additionally, the placement of the project on a site within an urban area near City services and easily accessible transit and regional roadways would facilitate the increased use of public transit and reduce the overall vehicle miles traveled, further reducing non-renewable energy consumption associated with the single-occupant vehicles and total vehicle miles traveled. The project would not convert land used for prime agriculture to residential and public uses, as no agricultural uses or farmland are present within or adjacent to the project site.

C. SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS

As discussed at the end of each topical section in *Chapter IV, Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures*, the project would not significantly contribute to any significant and unavoidable impacts, with the exception of impacts related to Historic Resources. Implementation of the proposed project would result in two

[3] City of Oakland, 2014. *2015-2023 Housing Element,* Appendix C: Detailed Site Inventory, Table C-6 Additional Housing Opportunity Sites, page 411, December 9.

significant unavoidable impacts that could not be avoided by implementation of mitigation measures, or reduced to a less-than-significant level:

HIST-1: The proposed project would demolish a warehouse that is a contributor to a designated National Register Historic District and located within an Area of Primary Importance (API). (SU)

HIST-2: The proposed project would involve construction of a new building within the boundaries of a designated National Register Historic District and an API. This, combined with the other past, current, and reasonably foreseeable new construction and other alterations to the OWWD, has the potential to materially impair the significance of the historic district in a manner that may be cumulatively significant if all of these projects are executed in the near future. (SU)

Additionally, the Housing Element EIR identified the following significant impact related to odor:

Impact AQ-5. Residential development at specific project sites proposed under the Housing Element could expose occupants to substantial/frequent odor nuisance resulting from odors emitted by strong local sources. (SU)

Through certification of the Housing Element, the City Council adopted a statement of overriding considerations for this impact. However, as discussed in *Section IV.D, Air Quality,* there is no significant odor impact for this project.

D. CUMULATIVE IMPACTS

CEQA defines cumulative impacts as “two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts.”[4] Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts that are individually limited, but cumulatively considerable. Per Section 15065(a)(3) of the CEQA Guidelines, “cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects. Cumulative effects of the proposed project are discussed in the respective topics in *Chapter IV, Settings, Impacts, Standard Conditions of Approval and Mitigation Measures.*

[4] *CEQA Guidelines*, Section 15355.

E. EFFECTS FOUND NOT TO BE SIGNIFICANT

Meetings among representatives of the City of Oakland departments involved in project planning and review and consultants for the City were held to preliminarily determine the scope of the EIR. In addition to these meetings, a Notice of Preparation (NOP) was circulated on April 17, 2015, and two public scoping sessions were held for the project on May 6, 2015 and May 11, 2015 before the Planning Commission and Landmarks Preservation Advisory Board, respectively. Written comments received on the NOP and public comments received during the scoping meetings were considered in the preparation of the final scope for this document and in the evaluation of the proposed project.

The environmental topics analyzed in *Chapter IV, Setting, Impacts, Standard Conditions of Approval and Mitigation Measures*, represent those topics that generated the greatest potential controversy and expectation of adverse impacts among City staff and members of the public. The following topics were excluded from discussion in the EIR because it was determined during the scoping phase for the project that impacts would be less-than-significant: Aesthetics, Shadow and Wind; Agriculture and Forest Resources; Biological Resources; Cultural Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Population and Housing; Mineral Resources; Public Services; Recreation; and Utilities and Service Systems. A description of the project's impacts related to each of these topics is provided in *Chapter V, Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval.*

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URBAN
PLANNING
PARTNERS
INC.

JACK LONDON SQUARE 4TH & MADISON PROJECT

Appendices
Draft Environmental Impact Report

Case No. ER15-005
State Clearinghouse No. 2015042051

Prepared for:

City of Oakland

August 2015

URBAN
PLANNING
PARTNERS
INC.

JACK LONDON SQUARE 4TH & MADISON PROJECT

Appendices
Draft Environmental Impact Report

Case No. ER15-005
State Clearinghouse No. 2015042051

Prepared for the City of Oakland

By:

Urban Planning Partners, Inc.
505 17th Street, 2nd Floor
Oakland, CA 94612

With:

BASELINE Environmental Consulting
Carey & Co., Inc.
Fehr & Peers

August 2015

URBAN PLANNING PARTNERS INC.

APPENDIX A

Notice of Preparation and Written Comments Received

CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA • SUITE 3315 • OAKLAND, CALIFORNIA 94612

Planning and Building Department (510) 238-3941
Bureau of Planning FAX (510) 238-6538
TDD (510) 238-3254

NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) JACK LONDON SQUARE 4TH & MADISON

The City of Oakland's Department of Planning and Building is preparing a Draft Environmental Impact Report (EIR) for the proposed Jack London Square 4th and Madison Project (the project) as identified below, and is requesting comments on the scope and content of the Draft EIR. The Draft EIR will address the potential physical, environmental effects that the project may have on each of the environmental topics outlined in the California Environmental Quality Act (CEQA). The City has **not** prepared an Initial Study.

The City of Oakland is the Lead Agency for the project and is the public agency with the greatest responsibility for approving the project or carrying it out. This notice is being sent to Responsible Agencies and other interested parties. Responsible Agencies are those public agencies, besides the City of Oakland, that also have a role in approving or carrying out the project. When the Draft EIR is published, it will be sent to all Responsible Agencies and to others who respond to this NOP or who otherwise indicate that they would like to receive a copy. Responses to this NOP and any questions or comments should be directed in writing to or via email to: Peterson Z. Vollmann, City of Oakland, Bureau of Planning, 250 Frank H. Ogawa, Suite 2114 Oakland, CA 94612; (510) 238-6167(phone); (510) 238-4730(fax) or by e-mail at pvollmann@oaklandnet.com. Comments on the NOP must be received at the above mailing or e-mail address **by 4:00 p.m. on May 18, 2015**. Please reference case number **ER15-005** in all correspondence. In addition, comments may be provided at the EIR Scoping Meetings to be held before the City Planning Commission and Landmarks Preservation Advisory Board:

PUBLIC HEARINGS: The City Planning Commission will conduct a public scoping hearing on the Draft EIR for the project on Wednesday, May 6, 2015, at 6:00 p.m. in Sgt. Mark Dunakin Hearing Room 1, City Hall, 1 Frank H. Ogawa Plaza, Oakland, CA 94612.

The Landmarks Preservation Advisory Board will conduct a public scoping hearing on the Draft EIR for the project on Monday, May 11, 2015, at 6:00 p.m in Sgt. Mark Dunakin Hearing Room 1, City Hall, 1 Frank H. Ogawa Plaza, Oakland, CA 94612.

PROJECT TITLE: Jack London Square 4th & Madison

PROJECT LOCATION: The project is proposed at a 1.5 block site in Jack London Square located at 180 4th Street and 431 Madison Street (APN#s 001-0161-001, 001-0161-002, and 001-0161-007-07).

PROJECT SPONSOR: CP V JLS, LLC

EXISTING CONDITIONS: The approximately 90,169 square-foot (2.07 acre) project site, which consists of a 1.38 acre parcel (APN#s 001-0161-001 and 001-0161-002) and a 0.69 acre parcel (APN 001-0161-007-07), is located in the City of Oakland at 180 4th Street in the Jack London District in the City of Oakland. The northern, larger parcel comprises the entire block between 4th and 5th Streets and Jackson and Madison Streets. Two buildings located on this parcel, and at addresses 430 Jackson Street and 425 Madison Street, function currently as office space for Cost Plus World Market. One building is a 45,000 square-foot, single-story warehouse building and the other contains 15,000 square feet of office space. Both buildings currently house approximately 100 employees of back office and sales staff. Cost Plus World Market, however, was acquired by Bed Bath & Beyond and as a result, this location will be phased out within the next one to three years. The southern, smaller parcel comprises one-half block at 431 Madison Street, between 3rd and 4th Streets and along Madison Street. It is a paved parking area consisting of wheel blocks, a drainage channel, a picnic area, and pole-mounted spot lights. The parking lot is used exclusively by Cost Plus World Market employees and is usually 50 to 75 percent full.

The site is bounded by Jackson Street to the west, 5th Street to the north, Madison Street to the east, and 3rd Street to the south. The project site is within one-half mile of the Lake Merritt Bay Area Rapid Transit District (BART) station, and is located adjacent to (within a 200-foot radius of) Interstate 880 (I-880). Uses in the project vicinity are primarily industrial in nature with some residential adjacencies. The project site contains an existing building that is a contributing historic resource to the Oakland Waterfront Warehouse Historic District. The historic district is listed in the National Register of Historic Places. The project site is not included on any list compiled pursuant to Government Code Section 65962.5

PROJECT DESCRIPTION: The project would demolish the existing building and surface parking lot and construct approximately 330 apartments and approximately 3,000 square feet of ground floor commercial in two buildings of Type IIIa construction, including 5 levels of wood frame construction (potentially with an additional mezzanine) over two levels of Type I concrete.

PROBABLE ENVIRONMENTAL EFFECTS:

It is anticipated that the project may have significant environmental impacts related to the following environmental topic areas, which will be evaluated in the Draft EIR: **Land Use & Planning, Air Quality, Cultural Resources, Greenhouse Gas Emissions, Noise, and Transportation**. It is anticipated that the project will not have significant environmental impacts on **Agriculture and Forest Resources, Aesthetics, Biological Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Mineral Resources, Population and Housing, Public Services, Recreation, and Utilities and Service Systems**. A brief discussion of each of these topics and documentation as to why impacts related to these topics will not be significant will be provided in the Draft EIR. The level of analysis and discussion for these topics is anticipated to be similar to what would typically be included in an Initial Study. The City's Standard Conditions of Approval will be referenced where applicable.

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

April 17, 2015
File Number ER15-005

Darin Ranelletti
City of Oakland
Environmental Review Officer

Vollmann, Peterson

From: Suzanne Chan <suzannechan.chan@gmail.com>
Sent: Tuesday, April 21, 2015 1:57 PM
To: Vollmann, Peterson
Subject: Re: City Of Oakland Public Hearing Notice- Jack London Square 4th & Madison Project

Reference to case - ER15-005

Will these be rentals, if so it will absolutely HURT JLS and i heavily oppose this. Also as a property owner at the Sierra and facing the parking lot, how high will the structure be? The Ellington already blocked by view of the Bay, please do not put any more buildings to block pre-existing ones for the benefit of a developer.

Suzanne Chan

Vollmann, Peterson

From: Stefano Caccia <smcaccia@gmail.com>
Sent: Friday, April 24, 2015 6:30 PM
To: Vollmann, Peterson
Subject: 4th & Madison Streets (APN:001-0161-001-00; 002-00; & -007-07)

Dear Peterson Z. Vollmann,

I own a dwelling at 428 Alice Street in Oakland, adjacent to the proposed construction of 330 dwelling units at 4th & Madison streets. I understand you are the case planner. I would like to receive additional information on the plan. I'd like to understand the height or number of floors of the dwelling. Will it increase over the current structure? Any additional information would be greatly appreciated.

Sincerely,
Steven M Caccia
415-290-2525

TO: P. VOLLMANN
FR: BRICKHOUSE LOFTS HOA (201 3RD STREET)
RE: LANDMARKS ADVISORY BOARD 5/11/15 HEARING
4th & MADISON DEVELOPMENT

Dear Mr. Vollmann,

I am sorry we are unable to attend tonight's hearing regarding the above project. As set forth in our May 6, 2015 letter to the City Planning Commission, and which was emailed to members of the Advisory Board, we generally favor development.

We are opposed, however, to Carmel Partners' plan to demolish the Cost Plus warehouse. The Cost Plus warehouse is listed on the national registry and serves as the 5th Street entry to the Jack London Square Historic Warehouse District.

Brickhouse Lofts, at 3rd & Jackson St., is in the immediate vicinity of the proposed project. We are proud of our award-winning building's aesthetic contribution to the Jack London Square Historic Warehouse District.

An historic district provides stability to its community and increases property values. Being a part of an historic district assures us we will not have an out-of-scale and out-of-character building erected next door.

The 4th and Madison warehouse was once home to S&W Fine Foods -- a local company founded in 1896 by a San Francisco family. The 4th & Madison warehouse was developed for that local company in 1937, and remained with them until 2000. The building has distinguished architectural features, including Art Deco fluted pilasters.

We ask that you require the developers to contribute rather than detract from our community by, at least, retaining the façade of the historic property and reconsidering the out-of-scale height.

Thank you for your consideration.

Respectfully submitted,

BRICKHOUSE LOFTS HOA
Judith E. Ganz, email:jganzbx67@gmail.com
510.306.6904

Brickhouse Lofts Home Owners Association
201 Third Street
Oakland, CA 94607

May 6, 2015

RE:
CITY OF OAKLAND CASE FILE NO. ER15005
JACK LONDON SQUARE 4TH & MADISON; Notice of Preparation.

The Home Owners Association (HOA) of Brickhouse Lofts, located at 201 Third Street, Oakland, CA 94607, completed in 1998 and one of the pioneering structures in our Jack London Square Historic District, is in favor of new development that retains our unique warehouse heritage, brings vitality to our community, enhances public safety, creates an environment for needed services, and encourages population diversity.

In that light, and so that our community moves in the right direction, our HOA requests the following be included in the EIR:

I. **Transportation/Traffic.**

The NOP correctly lists transportation as an area to be studied in the EIR.

In recent years, the vitality of our community has improved with commercial businesses and restaurants locating in Jack London Square. But with that influx, vehicular traffic has dramatically increased, particularly during peak hours.

Jack London Square is easily accessible to public transit. However, vehicles are still necessary because of the absence of basic services, including the lack of a grocery store and medical services, for example. Moreover, although our community may be currently populated largely by 'millenials', others -- including retirees and families with young children who live here as well -- may be unable to rely solely on public transit.

The proposed Carmel Partners Project (Project) of 330 units, 330 cars, and 660 people, will have significant adverse affects on traffic which may be off-putting to new residents and office workers looking to capitalize on the easy freeway access our neighborhood provides. The likely congestion will impede the flow of emergency service vehicles when needed.

The study of the impact on traffic on our community by this Project should include, but not be limited to, the following:

A. *Freeway Access.*

Will the Project further degrade the access to and exit from the I-880 freeway on Jackson Street and 6th Street that is already *too congested to be functional at peak hours,* and has been the subject of long-standing community complaints yet to be adequately addressed by the City. (See,"City of Oakland Service Request #485970 Jackson St and 6th St." correspondence, attached as Exhibit A and incorporated by reference as if set forth in full.)

The EIR should examine the following mitigation measures or require the City and/or the Project to devise others designed to satisfy standards:

(1) install a left-hand turn only traffic signal at the Jackson St. & 6th Street freeway entrance and optimize signal timing to alleviate the gridlock;

(2) change parking on Jackson Street between 4th and 5th Streets -- which is currently angled and makes the exit from the freeway ramp dangerous and congested -- to parallel only and restricted altogether during rush hours;

(3) extend the current free shuttle bus route to include Jackson Street to and from the Lake Merritt BART station, and/or improve the lighting under the freeway overpasses, to make access to public transit safer and more convenient.

B. *Will the City, through design review, ensure the Project's Entrance will not result in permanent and substantial traffic hazards*?

The location of the Project's garage and/or entrance currently proposed on Jackson Street will expose roadway users to a permanent and substantial transportation hazard, and will further clog Jackson Street which is already too congested to be functional. Shifting the entrance to Harrison Street will alleviate the back-up of traffic that will form on Jackson Street; and

C. *Parking.*

Insure the Project will adhere to Oakland street parking code requirements.

II. **Noise.**

Will the Project days and hours of construction be limited to from Monday through Friday, and forbid construction on Saturday, Sunday, and State and Federal holidays? Will the City mitigate the use of pile driving, by requiring other means of construction, the use of quiet technology, restrict hours of use, and monitor noise attenuation measures?

III. **Other Environmental Effects.**

The NOP "anticipates the project will not have significant environmental impacts on …" a long list that includes areas that should be addressed. (NOP page 2.) Because of the dramatic impact of 330 units, 330 cars, and 660 people on the environment, it is insufficient that the NOP has already determined these environmental factors will not be further studied. We understand the City will impose its "Standard Conditions of Approval and Mitigation Monitoring and Reporting Program", but as long-time owners of our proximate loft building -- and intimate familiarity with demolition and construction in our area -- we seek the City's special attention to the following:

A. *Aesthetics*. Whether the proposed project will negatively impact Jack London Square Historic Warehouse's aesthetics should be addressed in the EIR. The Cost Plus existing warehouse, and the proposed Project, is the entrance to the neighborhood's historic district.

(1) *Will the Project destroy the existing warehouse*?

The EIR should address the economic and political impact of the proposed destruction of the existing warehouse on the community. Historic warehouses give our neighborhood its unique character. By demolishing the existing warehouse and replacing it with a uniform building jeopardizes our neighborhood's allure. Similarly, high-rise buildings bring a modernity inconsistent with our historic designation.

Maintaining an historic district increases property values, provides a higher degree of investor confidence, and ensures the promise of community stability in that no out-of-scale or out-of-character building will be erected next door.

New development design review should focus on varied architecture to avoid further projects like Allegro: three blocks of bland architecture that detracts from our community's aesthetics. Projects should vary in height and density. Recognizing that modified Type V construction is the most economical does not mean that all projects, including this one, should adhere to this generic form.

<u>The façade of the Cost Plus warehouse can be maintained within the new Project to retain, at least, some of the historic nature of the building.</u>

(2) *Will the Project cast shadow that substantially impairs the beneficial use of pedestrian walk-ways?*

B. *Hydrology and Water Quality*. The EIR should address what is the source of water for this many units, particularly in light of California's drought and new water restrictions, whether the Project's water usage will exceed the capacity of existing stormwater drainage systems, and whether the Project will degrade water quality.

C. *Geology and Soils.*

Since the Project is located above a landfill, has it been determined whether there is an approved closure or closure plan or unknown fill soils that would result in substantial soil erosion or loss of topsoil, or jeopardize the water table, creating substantial risks to life or property?

Jack London Square's proximity to the Estuary makes it necessary to examine the impact of the proposed development on the area's water table. The shoreline was once a series of coves, bays, inlets, and tidal marshlands fed by creeks and watercourses from the hills; over time, human activity advanced it incrementally outward into the bay. The Estuary was narrowed by filling and lengthened by dredging until it became a linear tidal canal that connects San Francisco Bay with San Leandro Bay.

(2) *Will the City mitigate the use of pile driving and monitor vibration?*

The EIR should mitigate the adverse effects of pile driving and its vibrations on the neighboring dwellings and land, and determine whether we will be exposed to vibrations that exceeds state and federal criteria. In June 2000, when the Allegro project was under construction, one of the pile drivers fell on Brickhouse Lofts; it damaged windows, injured a worker, caused a car fire and total destruction of that car, downed power lines, and required police intervention and the shut down of our street for the entire day.

D. *Utility and Service Systems*. The study should evaluate the existing infrastructure to determine whether our utility and sewer systems can accommodate the increased usage, and/or whether the infrastructure needs to be improved to avoid risks to life or property. There have already been several electrical transformer explosions on Third Street and flooded streets at the corner of 3rd & Jackson during rain storms.

E. *Hazards and Hazardous Materials*. If it is determined the existing warehouse can be destroyed in all or in part, and/or in the general demolition and construction process, the EIR must address whether the structure contains hazardous materials (including, but not limited to asbestos, dust, lead-based paint) and, if so, how the community (and workers) will be protected to avoid the release of hazardous materials into the environment, and how those materials will be disposed of.

The EIR should examine the increased pollution and green-house gases generated by idling vehicular traffic as drivers wait to access the freeway and/or navigate the more crowded neighborhood.

F. *Population and Housing.* The EIR should address how the development of 330 small apartment units will address the City's Plan to accommodate housing needs for families.

The EIR should examine the impact of small rental units on our community since for-sale units increase ownership and buy-in to caring for our neighborhood. The EIR should study whether the Project should only contain small rental units rather than a mix of unit sizes from studios to three bedroom units and the impact of failing to accommodate a diverse mix of people from young professionals to families to retirees. The EIR should study whether the Project will be mapped for condominiums for future optionality.

G. *Public Services.*

Concerted efforts between the City and the Project, including consideration of subsidies, should be put toward securing basic services to the area, including a full-service grocery store and medical services.

Fifth Street should be improved to better reflect the entrance to our historic district. With no retail presence, this street is prime for increased crime and graffiti.

Pedestrian traffic can be increased with more ground level retail. The Project's parking structure should be wrapped with varied retail. The Project now proposes only 3000 square feet of retail. The EIR should examine whether this allotment is sufficient for two full blocks of development. Other projects have 'sold' our community on increased development with the promise of retail, which, has turned out to be illusory. Although most of the retail space checked the box for developers in delivering the square footage, most of the retail remains vacant. The layout of those spaces makes them functionally obsolete. The Project should be required to wrap the majority of its ground floor with retail at street level. These amenities are conducive to an active neighborhood and importantly, put more eyes on the street to improve public safety.

With the increased population, improvements should be focused under the freeway with the addition of better lighting.

III. *Conclusion.*

Brickhouse Lofts HOA welcomes new development so long as these concerns outlined here are adequately addressed in the EIR, including especially the environmental issues currently excluded from the study. As long-time owners of property in Jack London Square, we have demonstrated our commitment to our community. We hope the City and the Project will exhibit the same respect.

Very truly yours,

Brickhouse Lofts Board of Directors
Fred Morner, Pres.
Scott Winder, Treas.
Judith Ganz, Sect.
(Contact person: J. Ganz: jganzbx67@gmail.com. 510.306.6904)

EXHIBIT A

From: **dw stegman** dw.stegman@sbcglobal.net
Subject: Jackson Street Striping after repaving- FW: Request: 579402
Date: April 30, 2015 at 10:50 AM
To: Judith E. Ganz jganzbx67@gmail.com, [redacted]

DS

FYI....I had contacted the City after seeing several cars plow through 3rd and Jackson without stopping.

> ---------- Forwarded message ----------
> From: "Fung, Phillip" <pfung@oaklandnet.com>
> Date: Apr 29, 2015 4:50 PM
> Subject: FW: Request: 579402
> To: "THEONLYCOOKIE@GMAIL.COM" <THEONLYCOOKIE@gmail.com>
> Cc:
>
> Hello Deborah:
> The reason for the striping not installed yet is that there's a contract dispute between the general contractor and the striping contractor at the moment. The City is doing our best to resolve this issue asap. Please contact me if you have any further questions.
>
> Thank you.
> Phillip Fung, PE
> Civil Engineer, Project Delivery Division, Public Works Department
> 250 Frank Ogawa Plaza, Suite 4344
> Oakland, CA 94612
> (Direct) 510-238-2938 (Fax) 238-6633
> pfung@oaklandnet.com
>
> **From:** Cityworks
> **Sent:** Wednesday, April 29, 2015 12:14 PM
> **To:** Wong, Jason
> **Subject:** Request: 579402
>
> **City of Oakland**
> **Oakland Public Works Call Center**

Service Request Information

Request Number:	**579402**
Description:	**Engineering Issues**
Problem Address:	**2ND ST & JACKSON ST**
Submitted To:	**REFER, (ENTER BELOW)**
Category:	OTHER
Date / Time Reported:	4/29/2015 12:10:02 PM
Service Priority:	3 - Medium
Initiated By:	WONG, JASON
Status:	Referred
Associated Cityworks Project:	
Council District:	CCD3
Police Beat:	01X

Caller Information:

Name	Phone	Date & Time Of Call	Customer Email
DEBORAH STEGMAN	Home: 415-999-5363 Work: Other: Cell:	4/17/2015 10:53:28 AM	THEONLYCOOKIE@GMAIL.COM

Related Work Orders:

Work Order Id	Category	Description	Submit To	WO Status

Q&A & Comments:

By WONG, JASON: 4/29/2015 12:10:02 PM CITIZEN REPORTING THE CROSSWALKS HAVE NOT BEEN RE-STRIPED SINCE THE STREET HAS BEEN REPAVED, ON JACKSON ST., BETWEEN 2ND ST. AND 6TH ST. Caller: STEGMAN, DEBORAH: Q: What is the engineering issue? A: Capital - Construction

Oakland Public Works Call Center | (510) 615-5566
www.oaklandpw.com | opwcallcenter@oaklandnet.com | Mobile app: SeeClickFix
Oakland Public Works is an American Public Works Association Accredited Agency.

From: **dw stegman** dw.stegman@sbcglobal.net
Subject: Fwd: Service Request #485970 Jackson St and 6th St
Date: April 30, 2015 at 4:32 PM
To: Judith E. Ganz jganzbx67@gmail.com, Dina Winder dinawinder@gmail.com, Glynda Hull glynda@berkeley.edu

DS

Here's my latest emails to the City regarding the above mentioned intersection...
Deborah

---------- Forwarded message ----------
From: **DW Stegman** <theonlycookie@gmail.com>
Date: Mon, Apr 27, 2015 at 9:42 AM
Subject: Fwd: Service Request #485970 Jackson St and 6th St
To: opwcallcenter@oaklandnet.com

Please assist me with the status of the below as I have not heard anything from Kenneth Patton or Jamie Ramey since I have sent the below emails, starting last year and it seems that John Esperanza is not in this department any longer. This intersection is a MAJOR downtown Oakland connector to the freeway and deserves immediate attention to the below issues.

Thank you for looking into this for me as I hate to see the City of Oakland liable for possible lawsuits for allowing such a dangerous intersection to go unchecked.

Deborah Stegman
415.999.5363

---------- Forwarded message ----------
From: **DW Stegman** <theonlycookie@gmail.com>
Date: Mon, Apr 20, 2015 at 5:18 PM
Subject: Fwd: Service Request #485970 Jackson St and 6th St
To: "Patton, Kenneth" <kpatton@oaklandnet.com>, "Ramey, Jamie" <jramey@oaklandnet.com>, "Esperanza, John" <JEsperanza@oaklandnet.com>

Hello Again,

In addition to requesting the below items, the repaving of Jackson Street has created additional issues. My loft is right at the corner of 3rd and Jackson and several cars have driven right through this intersection as it is not striped yet.

This is an accident ready to happen so the sooner the better for striping Jackson Street! Also, you can also see from the barriers being run over at the corner of 6th and Jackson, that this issue continues to be a problem. Cars driving from Alameda drive straight through these temporary orange barriers and several are missing already from being installed last week.

PLEASE look into a left turn arrow at the 6th and Jackson intersection.

Thank you for your attention to these issues.
Best,
Deborah Stegman

---------- Forwarded message ----------
From: **DW Stegman** <theonlycookie@gmail.com>
Date: Wed, Apr 15, 2015 at 8:49 AM
Subject: Re: Service Request #485970 Jackson St and 6th St
To: "Patton, Kenneth" <kpatton@oaklandnet.com>, "Ramey, Jamie" <jramey@oaklandnet.com>, "Esperanza, John" <JEsperanza@oaklandnet.com>

Hello Everyone,

I writing again about the intersection at 6th and Jackson. After being involved in several close calls regarding cars darting from Alameda in the supposedly "do not change lanes" lane going directly onto the freeway, I feel the intensified request to please create a permanent barrier to close off cars who dart through this gap in the yellow barriers. Several of the barriers have been run over since they were installed and now the gap is wide enough for fire trucks (seen many times going through the gap), trucks and of course, cars. Vehicles going through this gap further create traffic tie ups at this intersection and also create a traffic hazard for cars in the correct lane going straight to 4th, 3rd and 2nd streets. I would hate to see lawsuits against the City of Oakland for its negligence in creating such an unsafe traffic situation at this intersection.

Secondly, although a left turn lane was added for this intersection for cars driving from Jack London to get onto the freeway, this intersection is a traffic nightmare for cars trying to turn left onto the freeway. I continue to sit for 15 minutes as only one or two cars make it through the light. A left turn arrow is desperately needed for this intersection! Please have one or two of your traffic engineers sit at this intersection during commute times as well as other times throughout the day to see for themselves how bad this intersection is. This intersection is a major connection from downtown Oakland, Chinatown, Jack London Square to get onto 880 north and 24 east. As Jack London continues to become more populated with more restaurants, residents and businesses, this intersection will only continue to grow in congestion. It is not a matter of if but when for a left turn light be required, so why not now?

attempting to turn left. Cars traveling at a high speed in the Alameda lane save time to avoid the light and go straight onto Jackson. This is not only a problem for oncoming traffic but for the cars behind the rouge car going straight as the cars behind are not expecting any stoppage in this lane. John witnessed this himself when he was scoping out the intersection. Is it possible to construct a more permanent barrier so that cars cannot suddenly switch lanes and dart into traffic where they should not be going? Probably as many as 6 yellow barriers have been destroyed by cars driving through this gap.

Thank you for your assistance with this important intersection as it is a vital link to 880, 24 and the route to San Francisco/Berkeley.

Best,
Deborah Stegman

---------- Forwarded message ----------
From: **Dw Stegman** <theonlycookie@gmail.com>
Date: Tue, Mar 4, 2014 at 6:14 PM
Subject: Re: Service Request #485970 Jackson St and 6th St
To: "Esperanza, John" <JEsperanza@oaklandnet.com>

Hello John,

Thank you so much for contacting me about this huge traffic problem in my neighborhood. Yesterday, I took a picture from my unit at 3rd and Jackson at around 5:30pm looking down Jackson towards 880. You can see the extensive backup for cars to turn left at Jackson and 6th. Granted, not all of these cars will turn left, but I have sat in this backup many times myself and often am sitting for 15 minutes to turn left as only 1 or 2 cars can get through this light. This is a critical intersection for Jack London as more restaurants and residents have added to this traffic tie up.

Also at the same intersection, the yellow barriers that were placed to separate the traffic coming from Alameda from the traffic heading to Jack London have been compromised with the gap that was left at the end of the barriers. I called the city about this last fall and three orange cones were placed to try to prevent cars from squeezing through the gap. Soon, these orange cones were driven over and destroyed. Also, the yellow barriers by the gap are getting destroyed by cars frequently driving through the gap. I even saw an Oakland Fire Truck, siren not on, squeezing through the gap to head straight to Jack London...I assume to get coffee at World Grounds at 3rd and Jackson! Many times, I have almost had a collision as I am turning left to get on 880 and a car all a sudden, darts from the gap to go straight. The gap at the end of the yellow barriers I would recommend to be closed with a more permanent solution so that cars cannot drive through. Also, Thank you for your attention to this major traffic problem in downtown Oakland. I will look forward to your reply.

Deborah Stegman
415.999.5363 Cell

On Thu, Sep 11, 2014 at 11:32 AM, DW Stegman <theonlycookie@gmail.com> wrote:

Hello Kenneth and Jamie,

Thank you again for stripping the new left turn lane at the very busy entrance to 880 North/24 East! I am hoping that a new left turn light will also be installed as the back up continues at this intersection as during peak times, only a few cars can get through the light to turn left. Can we put a motion sensitive left turn arrow at this intersection?

Also, the yellow barriers at this same intersection have largely been driven over and destroyed, leaving a huge gap for vehicles of any size to squeeze through. I counted 3 cars at one light lately leaving Alameda, taking the quick lane to avoid the traffic light and then at the last minute, turning left to go straight onto Jackson. This very dangerous situation not only impacts cars who are turning the corner at a high rate of speed to find a car stopped (waiting to turn left onto Jackson through the gap) but it also presents an extremely hazardous situation to cars turning left onto the freeway, not expecting a car to pop though the gap. Please consider an alternate, more permanent barrier between these two lanes and close the gap entirely so that cars cannot endanger the safety of others in this intersection.

Thank you for your update and I look forward to hearing from you.

Best,
Deborah Stegman
415.999.5363

On Tue, Aug 19, 2014 at 5:56 PM, DW Stegman <theonlycookie@gmail.com> wrote:

Hello Kenneth and Jamie,

John offered your email addresses to connect about the below issue. I am ecstatic to see the left turn lane striped out at 6th and Jackson! I am forwarding the note for your information that I sent John to get an update on this issue I first raised last fall with the City of Oakland.

I am also hoping the the barriers will get addressed with this intersection make over as the lane from Alameda has been completely compromised by cars driving through the now widened gap of the yellow barriers. As I mentioned below, several times I have been in close calls with cars as I am when I am heading toward Jack London from Lake Merritt on Jackson, cars dart through the gap and I have had several close calls as I am not expecting cars to jump into my lane from the right to go straight to Jack London.

Thank you again for looking into this for our neighborhood. I would think there would be enough room for a left turn lane as cars are already forming two lanes on their own under 880 to turn left. Please feel free to call me if you have any questions- 415.999.5363. You will make many people very happy with a left turn lane and also by closing the gap with the barriers!

Best,
Deborah Stegman

On Tue, Mar 4, 2014 at 5:07 PM, Esperanza, John <JEsperanza@oaklandnet.com> wrote:

> Hello,
>
> My name is John and I'm with the City of Oakland Traffic Engineering Department. I will be the one working on your request for a left turn only lane along with Ade Oluwasogo and Si Lau, my supervisors.
>
> Currently, we are gathering traffic data for analysis to come to a conclusion with your request. We should have an idea of what is going to be done by the end of next week. I will keep you updated as the request develops.
>
> Thank you for your patience.
>
> John Patrick D. Esperanza
> City of Oakland
> Traffic Engineering Department

3/1/14

4TH & MADISON - 5/6/15 SCOPING

→ JUDITH GANZ

↳ WANT GREAT DEVELOPMENT

ITEMS ADDRESSED ↳ TRAFFIC, RETAIL ATTRACTION,

TRAFFIC → JACKSON ST. ISSUES

RETAIL → MORE RETAIL

HIST. → RETAIN FACADE OF WAREHOUSE

→ JULIA "ELVERTO"

↳ TRAFFIC/PARKING

↳ HIST. CHARACTER (7 STORIES IS TOO HIGH)

↳ RETAIL IS TOO SMALL
NEED SERVICES

→ NAOMI SCHIFF

↳ ALT'S → PARTIAL OR WHOLE RE-USE OF BLDG.

↳ NORTH FACADE ESPECIALLY

DEMO → MIT - ROBUST - MORE THAN DOCUMENTATION

FULL DISCUSSION OF IMPACT TO DISTRICT.

$

↳ FACADE IMP.

↳ HIST. MARKERS REFURBISH

↳ CONTEXTUAL DESIGN

- MOORE

→ ATTENTION TO I-880 UNDERPASSES

→ TRAFFIC LOOK AT LANEY FLEA MARKET TRAFFIC

→ TRAFFIC - LOOK AT PRODUCE MARKET CONFLICT

= NAGRAJ

→ DOWNTOWN SPEC. PLAN ? COORDINATE ?

= PERALTA

4th & Madison

LPAB Scoping 5/11/15

=> Public

* -> Naomi (OHA) -> Impact on the Nat. Reg. District
  - -> Alt. show incorporation of Bldg 14 Project (Jackson & 5th St. Facades)
    - -> Signifies entry to district
  - -> Mit program would need to off set damage to district (removing entire city block)
    - -> How to strengthen dist?
    - -> Facade imp. program contrib.
    - -> Restore hist. markers
    - -> ~~Est~~
  - -> District is being nibbled away

=> Board Comments

* -> Andrews
  - -> Viable alt w/ inc. of facade

* -> Birkholtz (Lobbying calls about potential projects)
  - -> Scale of bldgs
  - -> Alt w/ preservation
  - -> Rail remnants & retail as mit

* → CASSELL → SUPPORT PRIOR COMMENTS

EAST BAY
MUNICIPAL UTILITY DISTRICT

May 11, 2015

Peterson Z. Vollmann
City of Oakland, Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

Re: Notice of Preparation of a Draft Environmental Impact Report – Jack London Square 4th and Madison, Oakland

Dear Mr. Vollmann:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to review the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the Jack London Square 4th and Madison Project located in the City of Oakland (City). EBMUD has the following comments.

ALAMEDA-NORTH BAY FARM ISLAND PIPELINE CROSSINGS PROJECT

EBMUD is undertaking the Alameda-North Bay Farm Island Pipeline Crossings Project to improve water service reliability to the City of Alameda. This project includes three new submarine pipeline crossings using horizontal directional drilling, that will connect Alameda Island to the City of Oakland and North Bay Farm Island, as well as associated 24-inch steel pipeline in streets connecting the crossings to existing transmission pipelines. These crossings are sequentially planned for construction with the first submarine crossing scheduled to begin construction in 2018. The first crossing includes construction activity near the subject project, including a proposed horizontal directional drilling pit near Estuary Park in the City of Oakland and installation of approximately 3,300 feet of 24-inch pipeline in Madison Street between 2nd Street (or 3rd Street) and 8th Street; this pipeline length also includes extension down Oak Street and Fallon Road to Estuary Park. The Draft EIR for the Jack London Square 4th and Madison Project will need to evaluate the cumulative impacts of the two projects. EBMUD is preparing an EIR for the Alameda-North Bay Farm Island Pipeline Crossings Project and is scheduled to release an NOP by August 2015.

WATER SERVICE

EBMUD's Central Pressure Zone, with a service elevation range between 0 and 100 feet, will serve the proposed development. Offsite pipeline improvements, at the project sponsor's expense, may be required to serve the property depending on EBMUD's metering requirements and fire flow requirements set by the local fire department. The project sponsor should contact EBMUD's New Business Office and request a water service estimate to determine the costs and conditions of providing water service to the proposed development. Engineering and installation of water mains and services require substantial lead time, which should be provided for in the project sponsor's development schedule.

EBMUD's Standard Site Assessment Report indicates the potential for contaminated soils or groundwater to be present within the project site boundaries. The project sponsor should be aware that EBMUD will not install piping or services in contaminated soil or groundwater (if groundwater is present at any time during the year at the depth piping is to be installed) that must be handled as a hazardous waste, or that may be hazardous to the health and safety of construction and maintenance personnel wearing Level D personal protective equipment. Nor will EBMUD install piping or services in areas where groundwater contaminant concentrations exceed specified limits for discharge to the sanitary sewer system and sewage treatment plants. The project sponsor must submit copies to EBMUD of all known information regarding soil and groundwater quality within or adjacent to the project boundary and a legally sufficient, complete and specific written remediation plan establishing the methodology, planning and design of all necessary systems for the removal, treatment, and disposal of contaminated soil and groundwater.

EBMUD will not design piping or services until soil and groundwater quality data and remediation plans have been received and reviewed and will not start underground work until remediation has been carried out and documentation of the effectiveness of the remediation has been received and reviewed. If no soil or groundwater quality data exists, or the information supplied by the project sponsor is insufficient, EBMUD may require the project sponsor to perform sampling and analysis to characterize the soil and groundwater that may be encountered during excavation, or EBMUD may perform such sampling and analysis at the project sponsor's expense. If evidence of contamination is discovered during EBMUD work on the project site, work may be suspended until such contamination is adequately characterized and remediated to EBMUD standards.

WASTEWATER SERVICE

EBMUD's Main Wastewater Treatment Plant (MWWTP) and interceptor system are anticipated to have adequate dry weather capacity to accommodate the proposed wastewater flows from this project and to treat such flows provided that the wastewater generated by the project meets the requirements of the EBMUD Wastewater Control Ordinance. However, wet weather flows are a concern. The East Bay regional wastewater collection system experiences exceptionally high peak flows during storms due to excessive infiltration and inflow (I/I) that enters the system through cracks and misconnections in both public and private sewer lines. EBMUD has historically operated three Wet Weather Facilities (WWFs) to provide primary treatment and disinfection for peak wet weather flows that exceed the treatment capacity of the MWWTP. Due to reinterpretation of applicable law, EBMUD's National Pollutant Discharge Elimination System (NPDES) permit now prohibits discharges from EBMUD's WWFs. Additionally, the seven wastewater collection system agencies that discharge to the EBMUD wastewater interceptor system ("Satellite Agencies") hold NPDES permits that prohibit them from causing or contributing to WWF discharges. These NPDES permits have removed the regulatory coverage the East Bay wastewater agencies once relied upon to manage peak wet weather flows.

A federal consent decree, negotiated among EBMUD, the Satellite Agencies, the Environmental Protection Agency (EPA), the State Water Resources Control Board (SWRCB), and the Regional Water Quality Control Board (RWQCB), requires EBMUD and the Satellite Agencies to eliminate WWF discharges by 2036. To meet this requirement, actions will need to be taken over time to reduce I/I in the system. The consent decree requires EBMUD to continue implementation of its Regional Private Sewer Lateral Ordinance (www.eastbaypsl.com), construct various improvements to its interceptor system, and identify key areas of inflow and rapid infiltration over a 22-year period. Over the same time period, the consent decree requires the Satellite Agencies to perform I/I reduction work including sewer main rehabilitation and elimination of inflow sources. EBMUD and the Satellite Agencies must jointly demonstrate at specified intervals that this work has resulted in a sufficient, pre-determined level of reduction in WWF discharges. If sufficient I/I reductions are not achieved, additional investment into the region's wastewater infrastructure would be required, which may result in significant financial implications for East Bay residents.

To ensure that the proposed project contributes to these legally required I/I reductions, the lead agency should require the project applicant to comply with EBMUD's Regional Private Sewer Lateral Ordinance. Additionally, it would be prudent for the lead agency to require the following mitigation measures for the proposed project: (1) replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines to ensure that such systems and lines are free from defects or, alternatively, disconnected from the sanitary sewer system, and (2) ensure any new wastewater collection systems, including sewer lateral lines, for the project are constructed to prevent I/I to the maximum extent feasible while meeting all requirements contained in the Regional Private Sewer Lateral Ordinance and applicable municipal codes or Satellite Agency ordinances.

WATER CONSERVATION

The proposed project presents an opportunity to incorporate water conservation measures. EBMUD requests that the City include in its conditions of approval a requirement that the project sponsor comply with Assembly Bill 325, "Model Water Efficient Landscape Ordinance," (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495) and "Landscape Water Conservation Section, Article 10 of Chapter 7" of the Oakland Municipal Code. The project sponsor should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense.

If you have any questions concerning this response, please contact Timothy R. McGowan, Senior Civil Engineer, Major Facilities Planning at (510) 287-1981.

Sincerely,

David J. Rehnstrom
Manager of Water Distribution Planning

DJR:JRC:dks
sb15_076.doc

ALAMEDA
County Transportation Commission
1111 Broadway, Suite 800, Oakland, CA 94607 • 510.208.7400 • www.AlamedaCTC.org

May 18, 2015

Peterson Z. Vollmann
Bureau of Planning
City of Oakland
250 Frank H. Ogawa, Suite 2114
Oakland, CA 94612

SUBJECT: Response to Notice of Preparation of a Draft Environmental Impact Report (DEIR) for the Jack London Square 4th and Madison Project

Dear Mr. Vollmann,

Thank you for the opportunity to respond to the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Jack London Square 4th and Madison Project. The 2.07 acre project site is bounded by Jackson Street to the west, 5th Street to the north, Madison Street to the east, and 4th Street to the south. The Project proposed demolition of the existing office building and warehouse and construction of two buildings with approximately 330 apartments and 3,000 square feet of ground floor commercial.

We have reviewed the NOP and determined that this project is exempt from review under the Congestion Management Program Land Use Analysis Element as it will not generate 100 p.m. peak hour trips in excess of existing uses. We have no further comments.

Thank you for the opportunity to respond to this NOP. Please contact me at (510) 208-7428 or Daniel Wu of my staff at (510) 208-7453 if you have any questions.

Sincerely,

Tess Lengyel
Deputy Director of Planning and Policy

cc: Daniel Wu, Assistant Transportation Planner

DEPARTMENT OF TRANSPORTATION
DISTRICT 4
P.O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5528
FAX (510) 286-5559
TTY 711
www.dot.ca.gov

Serious Drought.
Help save water!

May 18, 2015

ALA880722
ALA-880-PM 31.2
SCH# 2015042051

Mr. Peterson Vollmann
Planning Division
City of Oakland
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

ER15-005 Jack London Square 4th & Madison Project – Notice of Preparation

Dear Mr. Vollmann:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the project referenced above. The proposed infill project would demolish the site's existing building and adjacent surface parking lot and construct two buildings of approximately 330 apartment units and 3,000 square feet of ground floor commercial. The project is located within one-half mile of the Lake Merritt Bay Area Rapid Transit District (BART) station. Interstate 880 (I-880) is within a 200-foot radius and there are I-880/I-980 on- and off-ramp intersections located between 5th Street, 6th Street, and Jackson Street.

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Local Development-Intergovernmental Review Program reviews land use projects and plans to ensure consistency with our mission and state planning priorities of infill, conservation, and efficient development. To ensure a safe and efficient transportation system, we provide these comments consistent with the State's smart mobility goals that support a vibrant economy, and build communities, not sprawl. The following comments are based on the Notice of Preparation.

Lead Agency
As the lead agency, the City of Oakland (City) is responsible for all project mitigation. The identified lead agency contact and monitoring should be fully discussed for all proposed mitigation measures.

This information should also be presented in the Mitigation Monitoring and Reporting Plan of the environmental document. Required roadway improvements should be completed prior to issuance of the Certificate of Occupancy. Since an encroachment permit is required for work in the State right-of-way (ROW), and Caltrans will not issue a permit until our concerns are adequately addressed, we strongly recommend that the City work with both the applicant and Caltrans to ensure that our concerns are resolved during the environmental process, and in any case prior to submittal of an encroachment permit application. Further comments will be provided during the encroachment permit process; please see the end of this letter for more information.

Traffic Impact Study
The environmental document should include an analysis of the travel demand expected from the proposed project. Early collaboration, such as submitting the traffic study prior to the environmental document, leads to better outcomes for all stakeholders. We are in the process of updating our *Guide for the Preparation of Traffic Impact Studies* (TIS Guide) for consistency with SB 743, but meanwhile recommend using the Caltrans TIS Guide for determining which scenarios and methodologies to use in the analysis, available at:
http://dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

Please ensure that a Traffic Impact Study is prepared providing the information detailed below:

1. Vicinity map, regional location map, and a site plan clearly showing project access in relation to nearby State roadways. Ingress and egress for all project components should be clearly identified. Clearly identify the State right-of-way (ROW). Project driveways, local roads and intersections, car/bike parking, and transit facilities should be mapped.

2. Project-related trip generation, distribution, and assignment including per capita use of transit, rideshare or active transportation modes and vehicle miles traveled (VMT) reduction factors. The assumptions and methodologies used to develop this information should be detailed in the study, utilize the latest place-based research, and be supported with appropriate documentation.

3. Schematic illustration of walking, biking and auto conditions at the project site and study area roadways, trip distribution percentages and volumes as well as intersection geometrics, (i.e., lane configurations for AM and PM peak periods) for existing, existing plus project, 2035 cumulative and 2035 cumulative plus project scenarios. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect study area roadways and intersections. Potential safety issues for all road users should be identified and fully mitigated.

4. The project site building potential as identified in the General Plan. The project's consistency with both the Circulation Element of the General Plan and the Congestion Management Agency's Congestion Management Plan should be evaluated.

5. Mitigation for any roadway sections or intersection with increasing VMT should be identified. Impacts on pedestrians and bicyclists resulting from any projected VMT increases, or secondary impacts from traffic mitigation, should be analyzed. The analysis should describe any pedestrian and bicycle mitigation measures and safety countermeasures that would be needed as a means of maintaining and improving access to transit facilities, and reducing vehicle trips and traffic impacts to state highways.

Transportation Impact Fees
Please identify any transportation impact fees to be used for project mitigation. Mitigation may include fair share contributions to the regional fee program as applicable and should support the use of transit and active transportation modes. The Alameda County Transportation Commission *2014 Transportation Expenditure Plan* has listed investments including the I-880 Broadway-Jackson Interchange Improvements Project currently under review. In addition, funds are included for I-880 Broadway-Jackson multimodal transportation and circulation improvements at Jack London Square.

The project's fair share contribution, financing, scheduling, implementation responsibilities associated with planned improvements on Caltrans right-of-way (ROW) should be listed, in addition to identifying viable funding sources per General Plan Guidelines.

We recognize the City is in-process of a Citywide Impact Fee Nexus Study and Implementation Strategy. As the City experiences interest in major development projects that require transportation mitigation measures in proportion to the development size and impact, Caltrans encourages the City to ensure a sufficient allocation of contributions toward regional transit improvements in order to better mitigate and plan for the impact of future cumulative growth on the regional transportation system.

Multimodal Planning
As suggested above, please consider pedestrian, bicycling, and transit performance or quality of service measures and modeling as a means of estimating the project impacts to these modes and evaluating mitigation measures and tradeoffs. The analysis should describe any pedestrian and bicycle infrastructure improvements this project will construct as part of its mitigation. Access management considerations should be multimodal and pay special attention in the vicinity of the I-880/I-980 interchange areas that may be a challenge to pedestrians and bicyclists.

Vehicle Trip Reduction
The Metropolitan Transportation Commission (MTC) Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS) identifies transportation system performance targets including the increase of non-auto mode share by 10 percentage points and a decrease auto VMT per capita by 10 percent. As the project site is located within the local Priority

Development Area near transit, all multimodal mitigation measures should be explored, including Transportation Demand Management (TDM) measures, to contribute to these targets.

These TDM policies could include lower parking ratios, car-sharing programs, bicycle parking and showers for employees, and providing transit passes to residents and employees, among others. We recommend the City refer to '*Reforming Parking Policies to Support Smart Growth*', an MTC study funded by Caltrans for sample parking ratios and strategies that support compact growth and Transit Oriented Development. The Study is available at the MTC webpage below: http://www.mtc.ca.gov/planning/smart_growth/parking/parking_seminar/Toolbox-Handbook.pdf

Encroachment Permit
Please be advised that any work or traffic control that encroaches onto the State ROW requires an encroachment permit that is issued by Caltrans. Where construction-related traffic restrictions and detours affect State highways, a Transportation Management Plan or construction TIS may be required. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW must be submitted to the following address: David Salladay, District Office Chief, Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. See the following website for more information: http://www.dot.ca.gov/hq/traffops/developserv/permits

Should you have any questions regarding this letter or require additional information, please contact Sherie George at (510) 286-5535 or by email at sherie.george@dot.ca.gov.

Sincerely,

Pat C

PATRICIA MAURICE
Acting District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

APPENDIX B

Historic Resources –
Building Permit Records

AFFIDAVIT

I hereby CERTIFY that the plans and specifications used in making the application hereon for a Building Permit were prepared by: Jesse Rosenwald

Address 525 Market St. S.F.

and that the Laws of the State of California governing the practice of Architecture, Civil and or Structural Engineering have not been violated in so doing.

Jesse Rosenwald

Address 525 Market St. S.F

Date 2-3-37 Attest

AFFIDAVIT

I hereby make affidavit that the information contained in this application and on the plans and specifications is true and contains a correct description of the proposed work. All said work is to be done in accordance with the State Housing Act. I am authorized to act as agent for the owner.

Subscribed and sworn to before me this

day of 192

Deputy City Clerk

REPORT OF INVESTIGATOR

PLANS CHECKED

Zoning
Setback Line
Fire Limits
Area Limits
Court Areas
Height Limit
Garage Area
Ventilation
Chimneys and Flues
Type of Frame
Exterior Walls
Floor Construction
Soil
Foundation
Retaining Walls
Engineering

APPROVED: Plan Checker

No. 466276

APPLICATION

Brick or Masonry Building

S and W Fine Foods, Inc. Owner

John F. Tulloch Builder

For permit to erect a building located at

426 Jackson St

~~Corner~~ Side of St. Ave.

Entire Block of Jackson

Between 4th St. and 5th St.

Feet of Ave.

Cost $60,000 Fee $90

~~8418~~

Filed ~~68,418~~

ENTERED

ENTERED MAY 17 1937 BUREAU OF PERMITS & LICENSES

Permission is hereby granted to erect, alter or repair the building described in this application in accordance with the Building Ordinances of the City of Oakland, and to the satisfaction of the Building Inspector.

Approved E. U. ROUSSELL Building Inspector

By MB

Issued

2-18-37- Excavating — H
3-8-37- Footings OK — H
F.O.K. 4-13-37 — H
4-23-37 — F OK — H
5-17-37 — R.S. OK — H
6-3-37 — R. [illegible] OK — H
R.O.K. 6-7-37 — H

W.O.K.

L.O.K.

PLASTER C.K.

FINAL O.K. 6-26-37 — H

WRITE IN INK—FILE TWO COPIES

APPLICATION FOR A BUILDING PERMIT

BRICK OR MASONRY BUILDING

Application is hereby made to the Building Department of the City of Oakland for permission to build a one story ~~stone, brick~~, concrete, ~~tile~~ warehouse at 426 Jackson Street in accordance with the plans and specifications filed herewith, and which plans and specifications are to be considered a part of this application. Entire cost of building (this must include everything necessary for the complete construction of the building), $ 60,000 00/100

Building to be occupied as a Warehouse & office

Size of lot 200 by 225 feet.

Size of proposed building 200 feet by 225 Extreme height of building 18'-0"± feet.

What class of building is proposed? Class "C"

Is there any other building on the same lot? No

Are piles or other special form of foundation to be used? No.

Size of foundation As per drawings

Exterior wall construction of Concrete

Thickness of wall 6"

Height of wall to roof 13'-0" to 14'-3"

Interior construction of Wood

Floor constructed of Concrete

Roof construction of Wood

Roof covering of Asphalt, Felt, Gravel

Is interior of building to be plastered? Partly

Are there any elevators? No

Is sidewalk space to be excavated? No

Is there a garage in the building? No

City Manager Permit Number

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgements, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit, or from the use of occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions of this permit, and provisions of the Ordinances of the City of Oakland.

Contractor John T. Tulloch

Address

Consulting Engineer ~~Architect~~ Jesse Rosenwald

Address 525 Market St San Francisco
Douglas 7949

S and W Fine Foods Inc. Owner

Address Third & Alice St. Oakland

By Jesse Rosenwald Consulting Engineer

Ordinance 1485 N.S., Section 86: "When a building is ready for lathing or sheathing on the inside, the Building Inspector shall be notified. The rough STUDDING SHALL NOT BE COVERED or in any way concealed from view until inspection has been made and the written approval of the Building Inspector obtained."

The department will call up telephone No. Douglas 7949 if any alterations or changes are necessary on the plans submitted.

State License No.

City License No.

PLOT PLAN

REPORT OF INVESTIGATOR

PLANS CHECKED

Zoning
Setback Line
Fire Limits
Area Limit
Court Areas
Height Limit
Garage Area
Ventilation
Chimneys and Flues
Type of Frame
Exterior Walls
Floor Construction
Soil
Foundation
Retaining Walls
Engineering

APPROVED: ______ Plan Checker

AFFIDAVIT

...eby make affidavit that the information ...ed in this application and on the plans ...ecifications is true and contains a cor... ...scription of the proposed work. All said ...is to be done in accordance with the ...Housing Act. I am authorized to act as ...for the owner.

...ribed and sworn to before me this

...day of ______ 193__

Deputy City Clerk

No. A70412

APPLICATION

Permit for alterations

At N W Corner Smith & Jackson st
(House Number)
#426 Jackson st

Safeway Stores Inc Owner

Frederick Anderson Contractor

Cost $ 1000.00 Fee $ 4.00

NOV 18 1937

Issued

ENTERED NOV 19 1937 BUREAU PERMITS & LICENSES

Permission is hereby granted to erect, alter or repair the building described in this application in accordance with the Building Ordinances of the City of Oakland, and to the satisfaction of the Building Inspector.

Approved

E. U. ROUSSELL
Building Inspector

By WB

Issued

F. O. K.

R. O. K. 11-30-37

W. O. K.

L. O. K.

PLASTER O. K.

FINAL O. K. Jan 15/38

WRITE IN INK—FILE TWO COPIES

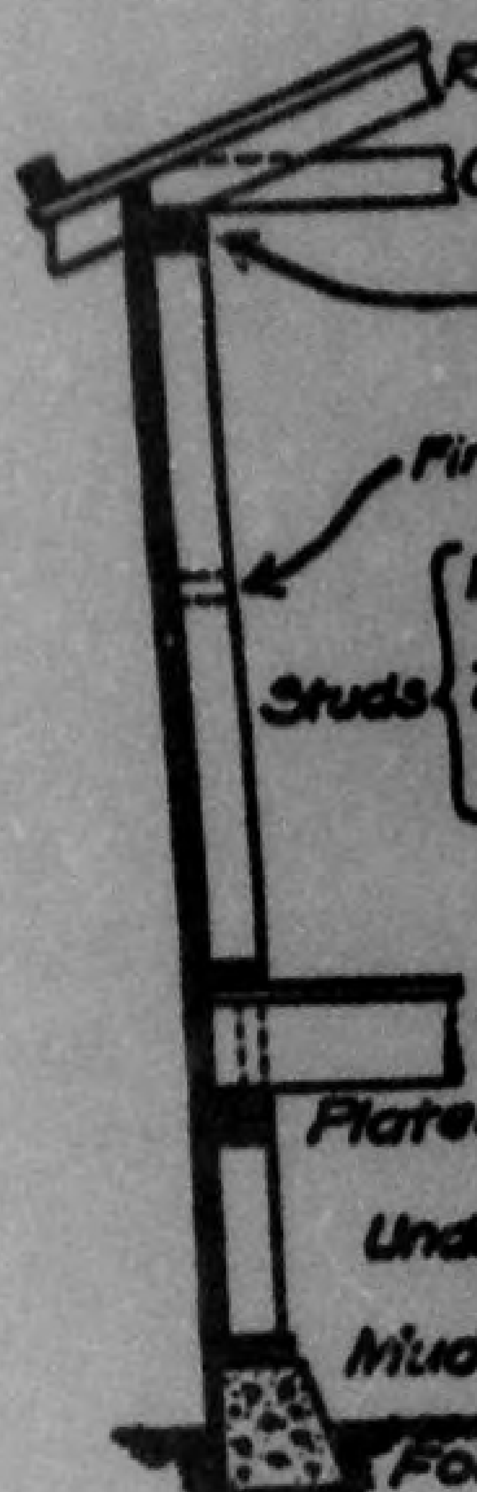
APPLICATION FOR A BUILDING PERMIT

APPLICATION IS HEREBY MADE TO THE BUILDING DEPARTMENT OF THE CITY OF OAKLAND FOR PERMISSION TO DO THE FOLLOWING WORK AT

Number North West corner Tenth and Jackson Sts. Street / Ave

WRITE PLAINLY FULL DESCRIPTION OF WORK TO BE DONE
All new construction must be described as to size, span and spacing

Installation of 4" Terra Cotta Partitions - 12' high forming Toilet Room and rest Room



Roof Covering

Rafters.

Ceiling Joist.

Plates.

Fire Blocks.

Studs: 1st. Story. 4" hollow tile

2nd. Story.

3rd. Story.

Plate

Fl. Joist.

Plates

Underpinning.

Mudsill, R.W.

Foundation.

Entire cost of work $ 1000.00
(This must include everything necessary for complete construction of work)

Building now used as Warehouse

Building to be used as Warehouse. By

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit, or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

Contractor (if any) A. Frederick Anderson.
Address 1093 Longridge Road.
Designer
Address

Owner Safeway Stores
Address Tenth and Jackson sts.
By A. Frederick Anderson.

Ordinance 1485 N.S., Section 86: "When a building is ready for lathing or sheathing on the inside, the Building Inspector shall be notified. The rough STUDDING SHALL NOT BE COVERED or in any way concealed from view until inspection has been made and the written approval of the Building Inspector obtained."

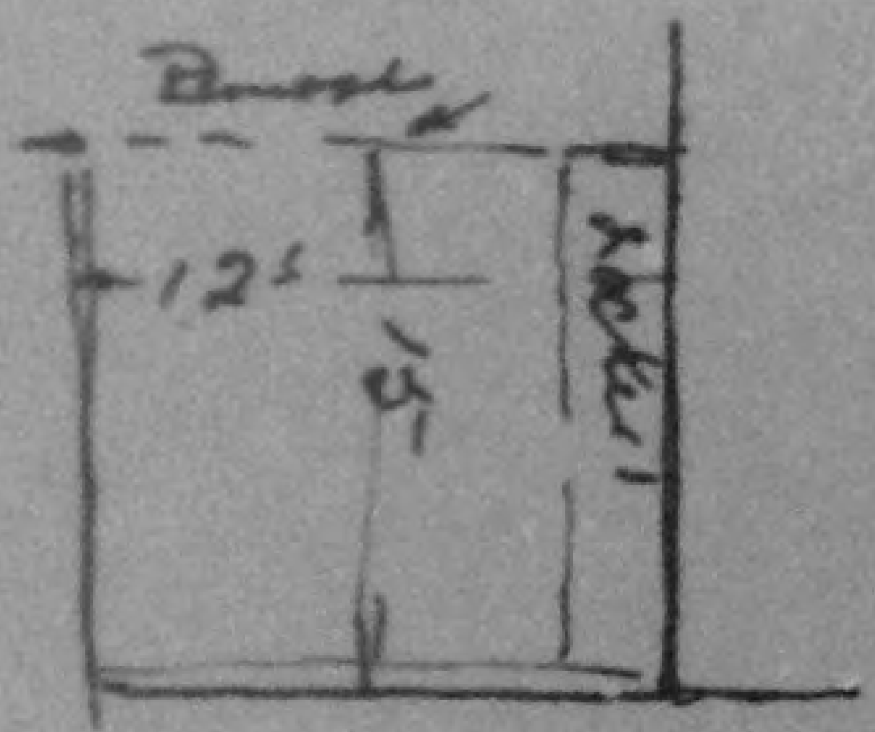
The department will call up Telephone No. .... if any alterations or changes are necessary on the plans submitted.

STATE LICENSE NO. 1543 CITY LICENSE NO.

Form C10—154—I.C.P.Co.—7368

160

PLOT PLAN



REPORT OF INVESTIGATOR

PLANS CHECKED

Zoning
Setback Line
Fire Limits
Area Limit
Court Areas
Height Limit
Garage Area
Ventilation
Chimneys and Flues
Type of Frame
Exterior Walls
Floor Construction
Soil
Foundation
Retaining Walls
Engineering

APPROVED: ________ Plan Checker

AFFIDAVIT

I hereby make affidavit that the information contained in this application and on the plans and specifications is true and contains a correct description of the proposed work. All said work is to be done in accordance with the State Housing Act. I am authorized to act as agent for the owner.

Subscribed and sworn to before me this

____ day of ________ 194__

________ Deputy City Clerk

No. B 1942

APPLICATION

Permit for Alter.

At 430 Jackson St (House Number)

S. W. Lee Owner

B. F. Lee Contractor

Cost $ 400.00 Fee $ 2.00

Issued APR -5 1944

FEE PAID OAKLAND BUILDING DEPT.

Permission is hereby granted to erect, alter or repair the building described in this application in accordance with the Building Ordinances of the City of Oakland, and to the satisfaction of the Building Inspector.

Approved E. U. ROUSSELL Chief Building Inspector

By MB

THIS PERMIT DOES NOT COVER ANY ELECTRICAL OR PLUMBING WORK.

F. O. K.

R. O. K.

W. O. K.

L. O. K.

PLASTER O. K.

FINAL O. K. 6/19/44

WRITE IN INK—FILE TWO COPIES

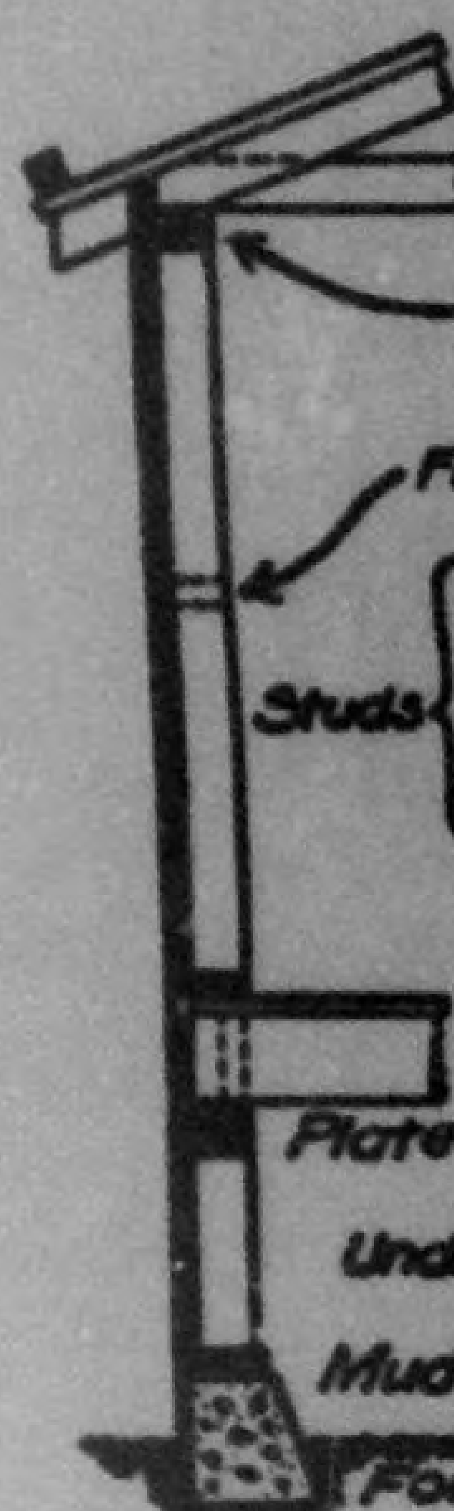
APPLICATION FOR A BUILDING PERMIT

APPLICATION IS HEREBY MADE TO THE BUILDING DEPARTMENT OF THE CITY OF OAKLAND FOR PERMISSION TO DO THE FOLLOWING WORK AT

Number 430 Jackson Street Ave.

WRITE PLAINLY FULL DESCRIPTION OF WORK TO BE DONE
All new construction must be described as to size, span and spacing

Alteration Ladies locker & dressing room
addition 12 - 15'-0 in S & W warehouse
(Interior alteration only)



Roof Covering.
Rafters.
Ceiling Joist. 2×4 16 oC
Plates. " "
Fire Blocks. Stud 2×4 " "
Studs 1st. Story.
Studs 2nd. Story.
Studs 3rd. Story.
Plate Plate - bolt to concrete floor
Fl. Joist.
Plates
Underpinning.
Mudsill, R.W.
Foundation.

Entire cost of work $ 400.00
(This must include everything necessary for complete construction of work)

Building now used as
Building to be used as Dressing By S & W Employees

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit, or from the use or occupancy of any sidewalk, street or sub-sidewalk or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

Contractor Bing Lee (If Any)
Address 2813 Humboldt
Architect
Address

Owner S & W Co. Mr Hasenkamp Manager
Address 430 Jackson St
By B. Lee

Ordinance 1485 N.S., Section 86: "When a building is ready for lathing or sheathing on the inside, the Building Inspector shall be notified. The rough STUDDING SHALL NOT BE COVERED or in any way concealed from view until inspection has been made and the written approval of the Building Inspector obtained."

The department will call up Telephone No. KE 21684 if any alterations or changes are necessary on the plans submitted.

STATE LICENSE No. 46746 CITY LICENSE No. 2073

Form C19

PLOT PLAN

AFFIDAVIT

I hereby make affidavit that the information contained in this application and on the plans and specifications is true and contains a correct description of the proposed work. All said work is to be done in accordance with the State Housing Act. I am authorized to act as agent for the owner.

Subscribed and sworn to before me this

day of 194

Deputy City Clerk

REPORT OF INVESTIGATOR

PLANS CHECKED

Zoning
Setback Line
Fire Limits
Area Limit
Court Areas
Height Limit
Garage Area
Ventilation
Chimneys and Flues
Type of Frame
Exterior Walls
Floor Construction
Soil
Foundation
Retaining Walls
Engineering

APPROVED: Plan Checker

INSPECTED

No. B19562

APPLICATION

Permit for Alterations

At SW Cor. 5th & Jackson Sts.
(House Number)

430 Jackson St

S & W Fine Foods Inc. Owner

C .H. Threms Contractor

Cost $ 1100.00 Fee $ 9.60

Issued JAN 20 1948

FEE PAID TREASURER OAKLAND JAN 20 1948 CITY OF OAKLAND

Permission is hereby granted to erect, alter or repair the building described in this application in accordance with the Building Ordinances of the City of Oakland, and to the satisfaction of the Building Inspector.

Approved E. U. ROUSSELL
Chief Building Inspector

By

THIS PERMIT DOES NOT COVER ANY ELECTRICAL OR PLUMBING WORK

F. O. K.

R. O. K. 2-2-48 [illegible]

W. O. K.

L. O. K.

PLASTER O. K.

FINAL O. K. 3-23-48 [illegible]

WRITE IN INK—FILE TWO COPIES

APPLICATION FOR A BUILDING PERMIT

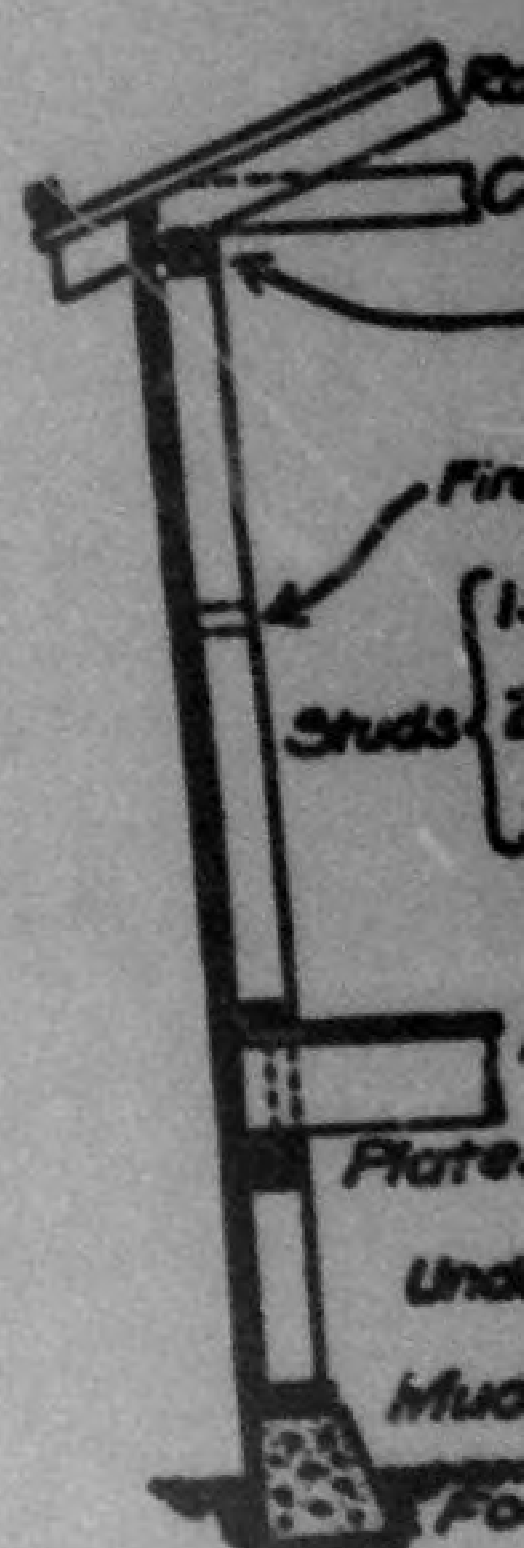
APPLICATION IS HEREBY MADE TO THE BUILDING DEPARTMENT OF THE CITY OF OAKLAND FOR PERMISSION TO DO THE FOLLOWING WORK AT

Number South West Corner Fifth & Jackson Streets 430 Jackson Street/Ave.

WRITE PLAINLY FULL DESCRIPTION OF WORK TO BE DONE

All new construction must be described as to size, span and spacing

Const new Lunch Room approx size 11'-0" x 20'-0" 2 x 4 Studs, T & G boards one side, Sheetrock one side, use existing floor and 2 walls. Remove one partition, 2 x 4 studs approx 12'-0" long, repair asphalt tile floor. Const new partition of 2 x 4 studs, sheetrock 2 sides, approx 9'-6" long.



Roof Covering.

Rafters.

Ceiling Joist. 2 x 4 - 16" ctrs.

Plates. 2 - 2 x 4

2 x 4

Fire Blocks 2 x 4

Studs *1st. Story.* none

2nd. Story. none

3rd. Story.

Plate 2 x 4

Fl. Joist.

Plates

Underpinning.

Mudsill, R.W.

Foundation.

Entire cost of work (This must include everything for complete construction of work) $1100.00

Building now used as Office & Whse

Building to be used as Same By S & W Fine Foods inc.

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit, or from the use or occupancy of any sidewalk, street or sub-sidewalk or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

Contractor C. H. Threms

Address (If any) 1021 - 6th Avenue

Architect

Address

Owner S & W Fine Foods inc.

Address Fifth & Jackson Streets

By C H Threms

Ordinance 1485 N.S., Section 86: "When a building is ready for lathing or sheathing on the inside, the Building Inspector shall be notified. The rough STUDDING SHALL NOT BE COVERED or in any way concealed from view until inspection has been made and the written approval of the Building Inspector obtained."

The department will call up Telephone No. [illegible] TW 4 - 9608 if any alterations or changes are necessary on the plans submitted.

STATE LICENSE No. 5[illegible]0 CITY LICENSE No. 14318

Form C18

PLOT PLAN

Inspector's No. B70155

APPLICATION FOR A PERMIT TO ALTER, REPAIR, ADD TO OR WRECK A BUILDING

Case No.
Plan. Com.

R C Lucas Co Owner

John J Moore Co Contractor

Job Location

No. 430 Jackson St

Cost $ 10000 Fee $ 46

Cost of work to be checked before final inspection

Date AUG 21 1957

TREASURER
PAID
AUG 22 1957
CITY OF OAKLAND

Permission is hereby granted to alter, repair, add to or wreck the building or structure described in this application in accordance with Ordinance No. 2745 C.M.S., and all other Ordinances related thereto in the City of Oakland, and to the satisfaction of the Building Inspector.

LAWRENCE A. LANE

Building Inspector.

Approved

By

F. O. K.

R. O. K.

W. O. K.

L. O. K.

PLASTER O. K.

FINAL O. K. 10-23-57-

"WARNING: This proposed construction may be in violation of National Production Authority Orders, or other Federal restrictions or prohibitions. You are cautioned to consult with appropriate Federal authorities before commencing the work authorized by this permit.

Above Warning Noted:

Permittee"

Case No. ____ Plan Com. ____

City Manager's Permit ____

WRITE IN INK — FILE TWO COPIES

Application to Alter, Repair, Add to Or Wreck a Building

CITY OF OAKLAND, BUILDING DEPARTMENT

Number 5th & Jackson Streets, Oakland - 430 Jackson St. Avenue Street

1. Type of Building I, II, III, IV, V
2. Type of Occupancy A, B, C, D, E, F, G, H, I, J
3. City Zone A, B, C, D, E, F, G, H, I
4. Fire Zone 1, 2, 3, 4
5. If in Port Area, file three applications.

For Office Use Only

6. Present use of building OFFICES & WAREHOUSE (Store, Dwelling, Apartment House, Hotel or other purposes) Families ____ Rooms ____
7. Proposed use of Building OFFICES & WAREHOUSE (Store, Dwelling, Apartment House, Hotel or other purposes) Families ____ Rooms 13
8. State how many buildings now on lot and give use of each one - offices and warehouse (Store, Dwelling, Apartment House, Hotel or other purposes)
9. Size of existing Building ____ x ____ Number of stories high one
10. Describe briefly all proposed construction work: interior painting and decorating, minor plumbing and electrical, heating and ventilation, addition of one new room. new office partition & display room - one hour 5/8" sheetrock

11. Footing: Width ____ Depth in Ground ____ Width of Wall ____ Mudsill ____
Size of Studs 2x4 @ 16" o.c. Size of Floor Joists ____ @ ____
Size of Rafters ____ @ ____ Roof Covering ____

12. VALUATION OF PROPOSED WORK:

Including all labor and material and all permanent lighting, heating, ventilating, water supply, plumbing, fire sprinkler, electric wiring and elevator equipment therein or thereon, $ 10,000.00

COST OF WORK TO BE CHECKED BEFORE FINAL INSPECTION

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

Contractor (if any) THE JOHN J. MOORE CO.

Address 959 - 33d Street

Certified Architect ____ State License No. ____

Licensed Engineer ____ State License No. ____

I hereby acknowledge that I have read this application and state that the above is correct and agree to comply with all City ordinances and State laws regulating building construction.

Signature of Owner R. C. Lucas Co

Address 430 Jackson St

Authorized Agent Edward ____

Do not lath, sheath, or otherwise conceal any portion of walls or ceiling until the inspection card has been signed by the ELECTRICAL and PLUMBING INSPECTORS. Following the approval of the ELECTRICAL and PLUMBING INSPECTORS, call the BUILDING INSPECTOR before proceeding further with the work.

The Department will call up Telephone No. OL 3-2373 if any alterations or changes are necessary on the plans submitted.

CONTRACTOR'S STATE LICENSE No. 74172 AND CITY LICENSE No. 21947

If the work herein described is not commenced within sixty (60) days after the issuing of this permit, this permit becomes null and void as provided in Section 19 of Part 1 of Ordinance 2745 C.M.S.

Form NS 165

PLOT PLAN

Inspected No. B83426 Vec

APPLICATION FOR A PERMIT TO ALTER, REPAIR, ADD TO OR WRECK A BUILDING

Case No. ....
Plan. Com.

R. C. Lucas Owner

Aladdin Heat Contractor

Job Location

No. 430 Jackson St

Cost $ 2000.- Fee $ 14.00

Checking Fee 3.00

TREASURER PAID SEP 11 1959 CITY OF OAKLAND

Total Fee $ 17.00

Cost of work to be checked before final inspection

Date

Permission is hereby granted to alter, repair, add to or wreck the building or structure described in this application in accordance with Ordinance No. 5419 C.M.S., and all other Ordinances related thereto in the City of Oakland, and to the satisfaction of the Building Inspector.

Approved

LAWRENCE A. LANE,
Building Inspector.

By Em

F. O. K.

R. O. K.

W. O. K.

L. O. K.

PLASTER O. K.
No card for inspection

FINAL ~~O. K.~~ 12-5-59 [illegible]

Case No. ______
Plan. Com.

City Manager's Permit ______

WRITE IN INK — FILE TWO COPIES

Application to Alter, Repair, Add to Or Wreck a Building

CITY OF OAKLAND, BUILDING DEPARTMENT

Number 430 JACKSON ST Avenue / Street

1. Type of Building I, II, III, IV, V
2. Type of Occupancy A, B, C, D, E, F, G, H, I, J
3. City Zone A, B, C, D, E, F, G, H, I
4. Fire Zone 1, 2, 3, 4
5. If in Port Area, file three applications.

For Office Use Only

6. Present use of building WAREHOUSE (Store, Dwelling, Apartment House, Hotel or other purposes) Families ______ Rooms ______
7. Proposed use of Building WAREHOUSE (Store, Dwelling, Apartment House, Hotel or other purposes) Families ______ Rooms ______
8. State how many buildings now on lot and give use of each ONE (Store, Dwelling, Apartment House, Hotel or other purposes)
9. Size of existing Building ______ x ______ Number of stories high ONE
10. Describe briefly all proposed construction work: RELOCATE EXISTING LOADING CANOPY 3'-0 HIGHER

11. Footing: Width ______ Depth in Ground ______ Width of Wall ______ Mudsill ______
Studs ______ @ ______ Floor Joists ______ @ ______ Ceiling Joists ______ @ ______
Rafters ______ @ ______ Roof Covering ______

12. **VALUATION OF PROPOSED WORK:**

Including all labor and material and all permanent lighting, heating, ventilating, water supply, plumbing, fire sprinkler, electric wiring and elevator equipment therein or thereon, $ 2000.—

COST OF WORK TO BE CHECKED BEFORE FINAL INSPECTION

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

Contractor (if any) [illegible] Corp.

Address 1111 [illegible] Ave 137th S.L.

Certified Architect ______ State License No. ______

Licensed Engineer ______ State License No. ______

I hereby acknowledge that I have read this application and state that the above is correct and agree to comply with all City ordinances and State laws regulating building construction.

Signature of Owner R. C. Lucas Co.

Address 430 Jackson St, Oak.

Authorized Agent [illegible]

Do not lath, sheath, or otherwise conceal any portion of walls or ceiling until the inspection card has been signed by the ELECTRICAL and PLUMBING INSPECTORS. Following the approval of the ELECTRICAL and PLUMBING INSPECTORS, call the BUILDING INSPECTOR before proceeding further with the work.

The Department will call up Telephone No. FE 7-6711 if any alterations or changes are necessary on the plans submitted.

CONTRACTOR'S STATE LICENSE No. 614 AND CITY LICENSE No. 12628 Exp. 7/60

If the work herein described is not commenced within one hundred twenty (120) days after the issuing of this permit, this permit becomes null and void as provided in Section 302(d) of Part 1 of Ordinance 5419 C.M.S.

430 JACKSON ST.

BUILDING & HOUSING DEPARTMENT — CITY OF OAKLAND
WRITE IN INK - FILE ALL COPIES

Inspector

C 2216

FOR OFFICE USE ONLY

HOUSING DIVISION
FIRE MARSHAL APPROVAL
CITY MANAGER PERMIT NO.
MOVING PERMIT NUMBER
PORT OF OAKLAND APPROVAL
PLUMBING PERMIT NO.
HEALTH DEPT. APPROVAL
ZONING OR PLANNING NO.
BOARD OF EXAM. & APPEALS ITEM NO. DATE
HOUSING ADVISORY & APPEALS RES. NO.

DATE 5/22/62

DATE ISSUED MAY 22 1962

PERMIT NO.

APPLICATION FOR PERMIT TO:

ALTER ___ ADD TO ___ NEW CONSTR. ___
REPAIR ___ WRECK ___ OTHER ___

JOB LOCATION 430 Jackson ST.
OWNER'S NAME P. C. Lucas
OWNER'S ADDRESS 6075 Manchester Dr
OWNER'S PHONE NO. OL 3-9265

FIELD CHECK BY VWG DATE 5-22-61
Approved YES NO
REMARKS (conditions noted)

VALUE:
$ 150 —

FEES:
General Fee $ 3 —
Checking Fee $
TOTAL FEES $ 3 —

ADDITIONAL COST:
$
Date

Add'l Fee $
Add'l Checking Fee $

TOTAL VALUE:
$
TOTAL FEES $

PLAN FILED Yes ___ No ✓ SURVEYS FILED Yes ___ No ✓
MAP NO. ___ TRACT NAME/NO.
TYPE OF BUILDING I II III IV V H.T. 1 hr. N
OCCUPANCY GROUP A B C D E F G H I J DIV. 1 2 3 4 5
ZONING DISTRICT AA A B CC C D E F G H I S-1 L T UR
FIRE ZONE 1 2 3 4
PRIOR CERTIFICATE OF OCCUPANCY NO. ___ DATE

NEW CONSTRUCTION

Size of new building ___ x ___
Height to highest point
No. of Stories
Specific type of Occupancy
Show how many buildings now on lot and give use of each

Number of Families
Size of Lot ___ x ___
Material of Exterior Walls

Footing Width ___ Depth in Ground ___ Width of Wall ___ Mudsill
Studs ___ x ___ @ ___ ctrs. Floor Joists ___ x ___ @ ___ ctrs. Ceiling Joists ___ x ___ @ ___ ctrs.
Rafters ___ x ___ @ ___ ctrs. Roof Covering

VALUATION OF PROPOSED WORK:
Including all labor and material and all permanent lighting, heating, ventilating, water supply, plumbing, fire sprinkler, electric wiring and elevator equipment therein or thereon, $ 150 —

COST OF WORK TO BE CHECKED BEFORE FINAL INSPECTION.

GENERAL INSTRUCTIONS: If the work herein described is not commenced within one hundred twenty (120) days after the issuing of this permit, or if the work is suspended or abandoned at any time after the work is commenced for a period of one hundred twenty (120) days, this permit shall expire by limitation and become null and void as provided in the Oakland Building Code.

Permission is hereby granted to do the work described in this application in accordance with the provisions of the Oakland Building Code and related ordinances.

Approved: LAWRENCE A. LANE
Building Inspector
By

ADDITION ALTERATION REPAIR

Present use of building "Ware house" — Families ___ Rms.
Proposed use of building Same Families ___ Rms.
Size of existing building ___ x ___ Number of stories high one
Describe briefly all proposed construction work: To construct a two partitions 12 & 16 ft. in length, 10' high. 2x4 studding, 5/8" sheetrock both sides.

CONTRACTOR (if any) ___ Certified Architect
Address
Phone No. ___ Licensed Civil Engineer
State License No. ___ City License No.

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

P. C. Lucas
Signature of Applicant

TO BE SIGNED ONLY WHEN ISSUED TO OWNER.

I hereby certify that I am the applicant for a Building Permit, and that in the performance of the work for which such permit is issued, I will not employ any person or persons in any manner so as to become subject to the provisions of the Labor Code of the State of California relating to workmens compensation insurance.

Signature of Owner

DEPARTMENT COPY
FORM 109-6 - 3-60

FOR INSPECTIONS TELEPHONE TE 2-3600, LOCAL 301

PLOT PLAN

APPROVAL REQUIRED BY STREET AND ENGINEERING DEPARTMENT:

There are no PROPOSED STREET OPENINGS, PUBLIC EASEMENTS OF RECORD

or ______________________________

in this Department which are in conflict with this application.

REMARKS: ______________________________

____

STREET AND ENGINEERING DEPARTMENT

By ______________________ Date ______________

FORMS OK

LATH OK

ROUGH OK

GYPSUM PLASTER OK

WIRE OK

FINAL OK 9-7-62

FIREPLACE OK

TREASURER

PAID

MAY 23 1962

CITY OF OAKLAND

414 - JACKSON ST.

FOR OFFICE USE ONLY

BUILDING & HOUSING DEPARTMENT — CITY OF OAKLAND
WRITE IN INK · FILE ALL COPIES

Inspected
C22300

VALUE: $ 750.00

Address Fee $
General Fee $ 7.50
Checking Fee $
TOTAL FEES $ 7.50

DATE FILED APR 21 1965
DATE ISSUED
PERMIT NO.

APPLICATION FOR PERMIT TO:

ALTER ____ ADD TO ____ NEW CONSTR ____
REPAIR ____ WRECK ____ OTHER ____

JOB LOCATION 414 Jackson
OWNER'S NAME Safe Way Stores
OWNER'S ADDRESS Same
OWNER'S PHONE NO. H14-474

FIELD CHECK BY ____ DATE ____ NO. ____
Approved YES ____
REMARKS (conditions noted) ____

ADDITIONAL COST: $ ____ Add'l Fee $ ____ Add'l Checking Fee $ ____
Date ____

TOTAL VALUE: $ ____ TOTAL FEES $ ____

SURVEYS FILED Yes ____ No ✓
PLAN FILED Yes ✓ No ____
TRACT NAME NO. ____
MAP NO. ____
TYPE OF BUILDING I II III IV V H1 ... N
OCCUPANCY GROUP A B C D E F G H I ... DIV 1 2 3 4 5
ZONING DISTRICT AA A B C ... R
FIRE ZONE 1 2 3

NEW CONSTRUCTION

Size of new building ____ x ____
Height to highest point ____
No. of Stories ____
Specific type of Occupancy ____
State how many buildings now on lot and give use of each ____
Number of Families ____
Size of Lot ____ x ____
Material of Exterior Walls ____

Footing Width ____ Depth in Ground ____ Width of Wall ____ Mudsill ____
Studs ____ x ____ @ ____ ctrs. Floor Joists ____ x ____ @ ____ ctrs. Ceiling Joists ____ x ____ @ ____ ctrs.
Rafters ____ x ____ @ ____ ctrs. Roof covering ____

VALUATION OF PROPOSED WORK: Including all labor and material and all permanent lighting, heating, ventilating, water supply, plumbing, fire sprinkler, electric wiring and elevator equipment therein or thereon, $ 750—

COST OF WORK TO BE CHECKED BEFORE FINAL INSPECTION.

GENERAL INSTRUCTIONS: If the work herein described is not commenced within one hundred twenty (120) days after the issuing of this permit, or if the work is suspended or abandoned at any time after the work is commenced for a period of one hundred twenty (120) days, this permit shall expire by limitation and become null and void as provided in the Oakland Building Code.

Permission is hereby granted to do the work described in this application in accordance with the provisions of the Oakland Building Code and related ordinances.

Approved: LAWRENCE A. LANE, Building Inspector
By 2 L CHD.

ADDITION ALTERATION REPAIR

Present use of building Offices Families ____ Rms ____
Proposed use of building Ofices Families ____ Rms ____
Size of existing building ____ x ____ Number of stories high ____
Describe briefly all proposed construction work
Room 35 - 2nd Floor
2x4 Not Relocat 2 offices
3/8 Sheetrock
Relocat Lights
Relocat Sprinkler

Contractor: (if any) John R. Kay Certified Architect
Address 1404 Franklin Licensed Civil Engineer
Phone No. GL 1-9301
State License No. 124995 City License No. ____ Dec 31, 65

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

John R. Kay
Signature of Applicant

TO BE SIGNED ONLY WHEN ISSUED TO OWNER

I hereby certify that I am the applicant for a Building Permit, and that in the performance of the work for which such permit is issued, I will not employ any person or persons in any manner so as to become subject to the provisions of the Labor Code of the State of California relating to workmen's compensation insurance.

Signature of Owner ____

FOR INSPECTIONS TELEPHONE 273-3441

DEPARTMENT COPY

APPROVAL REQUIRED BY STREET AND ENGINEERING DEPARTMENT:

There are no PROPOSED STREET OPENINGS, PUBLIC EASEMENTS OF RECORD or ______ in this Department which are in conflict with this application.

REMARKS: ______

STREET AND ENGINEERING DEPARTMENT

By ______ Date ______

PLOT PLAN

FORMS OK

LATH OK

ROUGH OK 4/21/65 – HH,

GYPSUM PLASTER OK

WIRE OK

FINAL OK 8/24/65 HH

TREASURER
PAID
APR 22 1965
CITY OF OAKLAND

FIREPLACE OK

430 JACKSON ST.

Receipt No.

BUILDING & HOUSING DEPARTMENT — CITY OF OAKLAND
WRITE IN INK - FILE ALL COPIES

Inspected

FOR OFFICE USE ONLY

DATE FILED ________ C79836

DATE ISSUED SEP -4

APPLICATION FOR PERMIT TO:

NEW CONSTR. ____

ALTER ____ ADD ____ OTHER ____

REPAIR ____ WRECK ____

JOB LOCATION 430 - Jackson

OWNER'S NAME Safeway Store

OWNER'S ADDRESS 401 Oakland

OWNER'S PHONE NO. 444-4711 - EXT. 436

FIELD CHECK BY ________ DATE ________

Approved YES ________

REMARKS (conditions noted) ________

HOUSING DIVISION ____
FIRE MARSHAL APPROVAL ____
SPECIAL ACTIVITY PERMIT NO. ____
WIRING PERMIT NO. ____
PORT OF OAKLAND APPROVAL ____
PLUMBING PERMIT NO. ____
HEALTH DEPT. APPROVAL ____
B OF E & A ITEM NO. ____
H.A.R.B. REL. NO. ____
ZONING OR PLANNING NO. ____

VALUE: $ 750 -

B. R. Tax $ .50
SMIP $ ____
Address Fee $ ____
General Fee $ 10.00
Checking Fee $ ____
TOTAL FEES $ 10.50

ADDITIONAL COST: $ ____
Date ____
Add'l Fee $ ____
Add'l ____
Checking Fee $ ____
Add'l SMIP $ ____

TOTAL VALUE: $ ____
TOTAL FEES $ ____

PLAN FILED Yes ____ No ✓ SURVEYS FILED Yes ____ No ✓

MAP NO. 160 - TRACT NAME/NO. ____

TYPE OF BUILDING I II III IV V H.T. 1 hr. N

OCCUPANCY GROUP A B ____ C D ____ E ____ F2 G H I J ____

ZONING DISTRICT R ____ C ____ M ____ S ____

FIRE ZONE 1 2 3

ADDITION ALTERATION REPAIR

NEW CONSTRUCTION

Size of new building ____ x ____
Height to highest point ____
No. of Stories ____
Specific type of Occupancy ____
State how many buildings now on lot and give use of each ____

Number of Families ____
Size of Lot ____ x ____
Material of Exterior Walls ____

Footing Width ____ Depth in Ground ____ Width of Wall ____ Mudsill ____
Studs ____ x ____ @ ____ ctrs. Floor Joists ____ x ____ @ ____ ctrs. Ceiling Joists ____ x ____ @ ____ ctrs.
Rafters ____ x ____ @ ____ ctrs. Roof Covering ____

VALUATION OF PROPOSED WORK: $ ____
Including all labor and material and all permanent lighting, heating, ventilating, water supply, plumbing, fire sprinkler, electric wiring and elevator equipment therein or thereon.

COST OF WORK TO BE CHECKED BEFORE FINAL INSPECTION.

Permission is hereby granted to do the work described in this application in accordance with the provisions of the Oakland Building Code and related ordinances.

Approved: LAWRENCE A. LANE
Chief Building Inspector

By WEC

Present use of building Empty Warehouse & office Families 0 Rms.

Proposed use of building OFFICE Families 0 Rms.

Size of existing building ____ x ____ Number of stories high ____

Describe briefly all proposed construction work: Remove existing non bearing partitions.

Certified Architect

Contractor: (if any) Wayfore Smith

Address 3111 East 7th St. Oakland

Licensed Civil Engineer

Phone No. 534-3443

State License No. 227482 City License Exp. 3-31-75

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

X Wayfore Smith
Signature of Applicant

TO BE SIGNED ONLY WHEN ISSUED TO OWNER.

I hereby certify that I am the applicant for a Building Permit, and that in the performance of the work for which such permit is issued, I will not employ any person or persons in any manner so as to become subject to the provisions of the Labor Code of the State of California relating to workmen's compensation insurance.

Signature of Owner

CONSTRUCTION LENDER
(If none, write none)

Name ____
Branch ____
Street Address ____
City ____ State ____ Zip ____

FOR INSPECTIONS TELEPHONE 273-3441

DEPARTMENT COPY

APPROVAL REQUIRED BY OFFICE OF PUBLIC WORKS:

There are no PROPOSED STREET OPENINGS, PUBLIC EASEMENTS OF RECORD

or ____

in this Office which are in conflict with this application.

REMARKS: ____

OFFICE OF PUBLIC WORKS

By ____________________ Date __________

FORMS OK

FIREPLACE OK

WIRE (EXT.) OK

LATH (INT.) OK

ROUGH OK

GYPSUM BD. OK
PLASTER OK

FINAL OK CCS 9/27/54

PLOT PLAN

FOR OFFICE USE ONLY

HOUSING DIVISION
FIRE MARSHAL APPROVAL E.B. [illegible]
SPECIAL ACTIVITY PERMIT NO.
MOVING PERMIT NO.
PORT OF OAKLAND APPROVAL
FILL WIRING PERMIT NO.
HEALTH DEPT. APPROVAL
B OF E & A ITEM NO.
H.A.B.A.S REG. NO.
ZONING OR PLANNING NO. M30-? Approved per plan [illegible] 9/6/74

BUILDING & HOUSING DEPARTMENT — CITY OF OAKLAND
WRITE IN INK - FILE ALL COPIES
Inspected

DATE FILED Sep 6 1974
DATE ISSUED SEP -6 1974 PERMIT NO. C79871

APPLICATION FOR PERMIT TO:

ALTER ✓ ADD TO ____ NEW CONSTR. ____
REPAIR ____ WRECK ____ OTHER ____

JOB LOCATION 430 JACKSON
OWNER'S NAME Safeway Stores
OWNER'S ADDRESS 401 Jackson
OWNER'S PHONE NO. 444-4711 - EXT. 436
FIELD CHECK BY CCE
Approved YES ✓ DATE 9/6/74
REMARKS (conditions noted)

430 JACKSON ST.

VALUE: $45,000

B. R. Tax $
SMIP $ 2.15
Address Fee $
General Fee $ 154.50
Checking Fee $ 92.70 9S473

ADDITIONAL COST: $
TOTAL FEES $ 250.35
Add'l Fee $
Date
Add'l Checking Fee $
Add'l SMIP $

TOTAL VALUE: $
TOTAL FEES $

PLAN FILED Yes ✓ No
MAP NO. 160 TRACT NAME/NO.
SURVEYS FILED Yes No ✓
TYPE OF BUILDING I II (III) IV V H.T. 1 hr. N
OCCUPANCY GROUP A B C D E (F2) G H I J
ZONING DISTRICT R C M30 S
FIRE ZONE 1 (3)

NEW CONSTRUCTION

Size of new building ____ x ____
Height to highest point
No. of Stories
Specific type of Occupancy
State how many buildings now on lot and give use of each
Number of Families
Size of Lot
Material of Exterior Walls ____ x ____
Footing Width ____ Depth in Ground
Studs ____ x ____ @ ____ ctrs. Floor Joists ____ x ____ @ ____ ctrs. Width of Wall ____ Mudsill
Rafters ____ x ____ @ ____ ctrs. Roof Covering ____ Ceiling Joists ____ x ____ @ ____ ctrs.

VALUATION OF PROPOSED WORK: $ 45000.00
Including all labor and material and all permanent lighting, heating, ventilating, water supply, plumbing, fire sprinkler, electric wiring and elevator equipment therein or thereon.

COST OF WORK TO BE CHECKED BEFORE FINAL INSPECTION.

Permission is hereby granted to do the work described in this application in accordance with the provisions of the Oakland Building Code and related ordinances.

Approved: LAWRENCE A. LANE
Chief Building Inspector
By BMT

ADDITION **ALTERATION** REPAIR

Present use of building OFFICES ____ Families ____ Rms.
Proposed use of building OFFICES ____ Families ____ Rms.
Size of existing building 150 x 200 Number of stories high 1
Describe briefly all proposed construction work: install partitions to create office space in existing warehouse.

TO BE SIGNED ONLY WHEN ISSUED TO OWNER.

I hereby certify that I am the applicant for a Building Permit, and that in the performance of the work for which such permit is issued, I will not employ any person or persons in any manner so as to become subject to the provisions of the Labor Code of the State of California relating to workmen compensation insurance.

Signature of Owner

CONSTRUCTION LENDER
(If none, write none)

Name
Branch
Street Address
City State Zip

Contractor: (if any) Wayne Smith
Address 3111 EAST 7th St. OAKLAND
Phone No. 536-3443
State License No. 227482 City License Exp. 3-31-75

Certified Architect
Licensed Civil Engineer

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

Wayne Smith
Signature of Applicant

DEPARTMENT COPY

FOR INSPECTIONS TELEPHONE 273-3441

APPROVAL REQUIRED BY OFFICE OF PUBLIC WORKS:

There are no PROPOSED STREET OPENINGS, PUBLIC EASEMENTS OF RECORD

or ______________________________

in this Office which are in conflict with this application.

REMARKS: ______________________________

____

OFFICE OF PUBLIC WORKS

By ______________________ Date ______________

PLOT PLAN

FORMS OK

ROUGH OK

CCS 9/17/74 R OK in sec 1 north West Corner except where PL is req.
CCS 9/27/74 3/4 Sec 2 Frame OK
CCS 10/4/74 all ok in 2nd sec.
CCS 10/10/74 R Frame in Bath
[illegible] OK
CCS 10/11/74 [illegible] OK
CCS 7/10/75 new [illegible]
[illegible] Check [illegible] when [illegible]

FIREPLACE OK

WIRE (EXT.) OK

LATH (INT.) OK

GYPSUM BD. OK
~~PLASTER OK~~ CCS 9/20/74
Sec 1. all ok
Sec 2 OK except top of Corridor

FINAL OK 11-20-75 [illegible]

CITY OF OAKLAND
BUILDING AND HOUSING DEPARTMENT

INTER-DEPARTMENTAL CORRESPONDENCE

To: Fire Marshal Attention: Insp O'Brien Date: 10/30/75

From: C Staton Division: Bldg

Re: Address 430 Jackson St

Owner Safeway Stores Inc Address same Phone 444 4711 Ex 436

Contractor Wayne Smith Address 3111 E 7th St Phone 536 3443

Please Reply to Following:

Any objection to a final on permits
C 79871
C 80847
C 84446
all work that was done so far.

Signed C Staton
Title Bldg Insp

REPLY

No objection to a final on these permits.

RECEIVED
NOV 1 2 1975
Building and Housing Department
Oakland, California

Signed Thomas C O'Brien OCF
Title Fire Insp
Date 11-6-75

ORIGINAL—RETURN TO OFFICE OF ORIGIN

229-3 (7/60)

430 JACKSON ST

FOR OFFICE USE ONLY

HOUSING DIVISION
FIRE MARSHAL APPROVAL T. O'Brien 12-26-74
SPECIAL ACTIVITY PERMIT NO.
MOVING PERMIT NO.
PORT OF OAKLAND APPROVAL
PLUMBING PERMIT NO.
HEALTH DEPT. APPROVAL
OF S & A ITEM NO.
H A & B RES. NO.
ZONING OR PLANNING NO. as per plan
Interior alter only
12-30-74

BUILDING & HOUSING DEPARTMENT — CITY OF OAKLAND
WRITE IN INK - FILE ALL COPIES

DATE FILED
DATE ISSUED NOV -5 1974 PERMIT NO. 80847
Inspected

APPLICATION FOR PERMIT TO:

ALTER ___ ADD TO ___ NEW CONSTR. ___
REPAIR ___ WRECK ___ OTHER ___

JOB LOCATION 430 . JACKSON
OWNER'S NAME SAFEWAY STORES INC
OWNER'S ADDRESS 401 JACKSON
OWNER'S PHONE NO.

FIELD CHECK BY CCS DATE 12/26/74
Approved YES ✓
REMARKS (conditions noted)

VALUE:
$ 15,000

B. R. Tax $
SMIP $ 1.05
Address Fee $
General Fee $ 72.00
Checking Fee $ 43.20
TOTAL FEES $ 116.25

ADDITIONAL COST:
$ 22,000
Add'l Fee $ 62.50
Add'l
Date 12-19-74 Checking Fee $ 37.50
Add'l SMIP $ 1.54

TOTAL VALUE:
$ 37,000
TOTAL FEES $ 217.85

PLAN FILED Yes ✓ No ___ SURVEYS FILED Yes ___ No ✓
MAP NO. 160 TRACT NAME/NO. –
TYPE OF BUILDING I II III IV V H.T. 1 hr. N
OCCUPANCY GROUP A B ___ C D ___ E ___ F 2 G H I J
ZONING DISTRICT R ___ C ___ M 30 S ___
FIRE ZONE 1 2 3

ADDITION ALTERATION REPAIR

NEW CONSTRUCTION

Size of new building ___ x ___ Number of Families ___
Height to highest point ___ Size of Lot ___ x ___
No. of Stories ___ Material of Exterior Walls ___
Specific type of Occupancy ___
State how many buildings now on lot
and give use of each ___
Footing Width ___ Depth in Ground ___ Width of Wall ___ Mudsill ___
Studs ___ x ___ @ ___ ctrs. Floor Joists ___ x ___ @ ___ ctrs. Ceiling Joists ___ x ___ @ ___ ctrs.
Rafters ___ x ___ @ ___ ctrs. Roof Covering ___

VALUATION OF PROPOSED WORK: $ ___
Including all labor and material and all permanent lighting, heating, ventilating, water supply, plumbing, fire sprinkler, electric wiring and elevator equipment therein or thereon.

COST OF WORK TO BE CHECKED BEFORE FINAL INSPECTION.

Permission is hereby granted to do the work described in this application in accordance with the provisions of the Oakland Building Code and related ordinances.

Approved: LAWRENCE A. LANE
Chief Building Inspector
By WOZ

Present use of building OFFICES . Families 0 Rms
Proposed use of building OFFICES Families 0 Rms
Size of existing building ___ x ___ Number of stories high ___
Describe briefly all proposed construction work:
add 6 - private offices ADDITION OF
4TH PHASE AS PER PLANS SUBMITTED

Contractor: (if any) WAYNE SMITH Certified Architect
Address 3111 E 7th St.
Phone No. 536-3443 Licensed Civil Engineer
State License No 287432 City License Exp. 3/31/75 None

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

Wayne Smith
Signature of Applicant

TO BE SIGNED ONLY WHEN ISSUED TO OWNER.	CONSTRUCTION LENDER (If none, write none)
I hereby certify that I am the applicant for a Building Permit, and that in the performance of the work for which such permit is issued, I will not employ any person or persons in any manner so as to become subject to the provisions of the Labor Code of the State of California relating to workmens compensation insurance.	Name
	Branch
	Street Address
Signature of Owner	City State Zip

DEPARTMENT COPY

FOR INSPECTIONS TELEPHONE 273-3441

FORM 249-4 (REV. 8-73)

APPROVAL REQUIRED BY OFFICE OF PUBLIC WORKS:

There are no PROPOSED STREET OPENINGS, PUBLIC EASEMENTS OF RECORD

or ____

in this Office which are in conflict with this application.

REMARKS: ____

OFFICE OF PUBLIC WORKS

By ______________________ Date ______________

PLOT PLAN

FORMS OK

CCS 1/7/75 OK on openings

FIREPLACE OK

WIRE (EXT.) OK

LATH (INT.) OK

ROUGH OK

CCS 11/6/74 all except front portion

CCS 11/22/74 all ok

CCS 1/7/75 R OK 4th stage

GYPSUM BD. OK

~~PLASTER OK~~ CCS 11/22/74 OK

CCS 7/10/75 new unit to go in. Check FM when done

FINAL OK 11-20-75

430 Jackson St.

Receipt No.

FOR OFFICE USE ONLY

HOUSING DIVISION
FIRE MARSHAL APPROVAL E B Hany
SPECIAL ACTIVITY PERMIT NO.
MOVING PERMIT NO.
PORT OF OAKLAND APPROVAL
PLUMBING PERMIT NO.
HEALTH DEPT. APPROVAL
B OF E & A ITEM NO.
H A B A B RES. NO.
ZONING OR PLANNING NO. as per plan submitted
7-10-75

BUILDING & HOUSING DEPARTMENT — CITY OF OAKLAND

WRITE IN INK - FILE ALL COPIES Inspected

DATE FILED 1975
DATE ISSUED JUL 10 1975 PERMIT NO. CB4446

APPLICATION FOR PERMIT TO:

ALTER ✓ ADD TO NEW CONSTR.
REPAIR WRECK OTHER

JOB LOCATION 430 Jackson Street Oak
OWNER'S NAME Safeway Stores Inc.
OWNER'S ADDRESS 430 Jackson St. Oak.
OWNER'S PHONE NO. 444-4711-Ext 436

FIELD CHECK BY DATE
Approved YES
REMARKS (conditions noted)

VALUE: $7,500.00

B. R. Tax $
SMIP $ .53
Address Fee $
General Fee $ 42.—
Checking Fee $ 25.20

TOTAL FEES $ 67.73

ADDITIONAL COST:
$ Add'l Fee $
Add'l
Date Checking Fee $
Add'l SMIP $

TOTAL VALUE:
$ TOTAL FEES $

PLAN FILED Yes ✓ No SURVEYS FILED Yes No ✓
MAP NO. 160 TRACT NAME/NO.
TYPE OF BUILDING I II III IV V H.T. 1 hr. N
OCCUPANCY GROUP A B C D E F 2 G H I J
ZONING DISTRICT R C M S
FIRE ZONE 1 2 3

NEW CONSTRUCTION

Size of new building x
Height to highest point
No. of Stories
Specific type of Occupancy
State how many buildings now on lot and give use of each
Number of Families
Size of Lot x
Material of Exterior Walls
Footing Width Depth in Ground Width of Wall Mudsill
Studs x @ ctrs. Floor Joists x @ ctrs. Ceiling Joists x @ ctrs.
Rafters x @ ctrs. Roof Covering

VALUATION OF PROPOSED WORK: $

Including all labor and material and all permanent lighting, heating, ventilating, water supply, plumbing, fire sprinkler, electric wiring and elevator equipment therein or thereon.

COST OF WORK TO BE CHECKED BEFORE FINAL INSPECTION.

Permission is hereby granted to do the work described in this application in accordance with the provisions of the Oakland Building Code and related ordinances.

Approved: LAWRENCE A. LANE
Chief Building Inspector
By RC

ADDITION ALTERATION REPAIR

Present use of building Offices Families Rms.
Proposed use of building Offices Families Rms.
Size of existing building x Number of stories high one
Describe briefly all proposed construction work: Build stairs for fire escape, install partition to create 3 rooms.

TO BE SIGNED ONLY WHEN ISSUED TO OWNER.

I hereby certify that I am the applicant for a Building Permit, and that in the performance of the work for which such permit is issued, I will not employ any person or persons in any manner so as to become subject to the provisions of the Labor Code of the State of California relating to workmens compensation insurance.

Signature of Owner

CONSTRUCTION LENDER
(If none, write none)

Name
Branch
Street Address
City State Zip

Contractor: (if any) Wayne Smith Certified Architect
Address 3111 East 7th Street
Phone No. 536-3443 Licensed Civil Engineer
State License No. 227482 City License Exp. 3/30/76

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

W. Ayford Lopez
Signature of Applicant

FORM 339-A REV. 6-73 DEPARTMENT COPY

FOR INSPECTIONS TELEPHONE 273-3441

PLOT PLAN

APPROVAL REQUIRED BY OFFICE OF PUBLIC WORKS:

There are no PROPOSED STREET OPENINGS, PUBLIC EASEMENTS OF RECORD

or ______________________________

in this Office which are in conflict with this application.

REMARKS: ______________________________

OFFICE OF PUBLIC WORKS

By ____________________ Date ____________

FORMS OK

FIREPLACE OK

WIRE (EXT.) OK

LATH (INT.) OK

ROUGH OK

GYPSUM BD. OK
PLASTER OK

FINAL OK 11-20-75 GMcA

BUILDING & HOUSING DEPARTMENT — CITY OF OAKLAND
WRITE IN INK · FILE ALL COPIES

DATE FILED 2-10-76
DATE ISSUED FEB 13 1976 PERMIT NO. C87960

APPLICATION FOR PERMIT TO:
ALTER ✓ ADD TO NEW CONSTR.
REPAIR WRECK OTHER

JOB LOCATION 425 Madison St
OWNER'S NAME Safeway Stores Inc
OWNER'S ADDRESS 425 Madison St
OWNER'S PHONE NO. 891-3571

425 MADISON

VALUE

$ 25000

ADDITIONAL COST

TOTAL VALUE

NEW CONSTRUCTION

Number of families
Size of lot
Material of Exterior Walls

VALUATION OF PROPOSED WORK: $ 12,000

ADDITION ALTERATION REPAIR

Present use of building Offices
Proposed use of building Office

Size of existing building

Describe briefly all proposed construction work: Install Partitions to create separate offices
Install acoustical ceiling
Remodel existing [illegible]

Contractor Wayne Smith
Address 3111 E 7th St, Oakland
Phone No. 536 3443
State License No. 227486 City License No. 373226

CONSTRUCTION LENDER

FOR INSPECTIONS TELEPHONE 273-3441

BUILDING INSPECTION — CITY OF OAKLAND

WRITE IN INK - FILE ALL COPIES

PERMIT NO. C30076

APPLICATION FOR PERMIT TO:

ADD TO ___ NEW CONSTR. ___

WRECK ___ OTHER ___

425 MADISON ST.

SAFEWAY STORES INC.

425 MADISON

B - 3

DATE ___

NEW CONSTRUCTION

CONSTRUCTION LENDER

425 MADISON ST

VALUE

$ 20,000

R.R. Tax $

SMIP $ 14

Add'l Fee $ 130

General Fee $ 82.50

Checking Fee $

TOTAL FEES $ 222

ADDITIONAL COST

$

Date

Add'l Fee $

Checking Fee $

Add'l SMIP $

TOTAL VALUE

$

TOTAL FEES $

PLAN FILED Yes ✓ No ___ SURVEYS FILED Yes ___ No ___

MAP NO. ___ TRACT NAME/NO. ___

TYPE OF BUILDING I II III IV V

OCCUPANCY GROUP A B C D ...

ZONING DISTRICT

FIRE ZONE 1 2 3

ADDITION ALTERATION REPAIR

Present use of building OFFICES

Proposed use of building SAME

Size of existing building ___ x ___ Number of stories high 1

Describe briefly all proposed construction work: COVERING 2 ...

DECAPING COMPLETE ROOF ...

THE EXISTING BLDG

Contractor EDW F ANDERSEN

Address 1033 YOUNG BLVD AVE

Phone No. 653 7776

State License No. 87540 City License Exp. 77

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may in any wise accrue against the City in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

FOR INSPECTIONS TELEPHONE 273-3441

425 Madison St.

FOR OFFICE USE ONLY

HOUSING CONSERVATION
FIRE MARSHAL APPROVAL Q.P.B.
SPECIAL ACTIVITY PERMIT NO.
MOVING PERMIT NO.
PORT OF OAKLAND APPROVAL
PLUMBING PERMIT NO.
HEALTH DEPT. APPROVAL
B. OF E. & A. ITEM NO.
H. A. & A. B. REF. NO.
ZONING OR PLANNING NO.

BUILDING INSPECTION — CITY OF OAKLAND
WRITE IN INK - FILE ALL COPIES

Inspected

DATE FILED 2-21-79
DATE ISSUED PERMIT NO.

APPLICATION FOR PERMIT TO:

ALTER X ADD TO NEW CONSTR.
REPAIR WRECK OTHER

JOB LOCATION 425 MADISON ST.
OWNER'S NAME SAFEWAY STORES, INC.
OWNER'S ADDRESS 4TH & JACKSON ST.
OWNER'S PHONE NO. 891-3000

FIELD CHECK BY DATE
Approved YES
REMARKS (conditions noted)

VALUE
$ 30,000

B. R. Tax $
SMIP $
Address Fee $
General Fee $
Checking Fee $
TOTAL FEES $

ADDITIONAL COST
$
Add'l Fee $
Add'l
Date
Checking Fee $
Add'l SMIP $
TOTAL VALUE
$
TOTAL FEES $

PLAN FILED Yes ✓ No SURVEYS FILED Yes No
MAP NO. TRACT NAME/NO.
TYPE OF BUILDING I II III IV V
OCCUPANCY GROUP A E I H B R M
ZONING R C M S
FIRE ZONE 1 2 3

NEW CONSTRUCTION

Size of new building x
Height to highest point
No. of Stories
Specific type of Occupancy
State how many buildings now on lot and give use of each
Footing Width Depth in Ground Width of Wall Mudsill
Studs @ ctrs. Floor Joists @ ctrs. Ceiling Joists @ ctrs.
Rafters @ ctrs. Roof Covering

Number of Families
Size of Lot x
Material of Exterior Walls

VALUATION OF PROPOSED WORK: $ 30,000 —
Including all labor and material and all permanent lighting, heating, ventilating, water supply, plumbing, fire sprinkler, electric wiring and elevator equipment therein or thereon.

COST OF WORK TO BE CHECKED BEFORE FINAL INSPECTION.

Permission is hereby granted to do the work described in this application in accordance with the provisions of the Oakland Building Code and related ordinances.

Approved JAMES W. BARCHMAN
Chief Building Inspector

By

TO BE SIGNED ONLY WHEN ISSUED TO OWNER

I hereby certify that I am the applicant for a Building Permit, and that in the performance of the work for which such permit is issued, I will not employ any person or persons in any manner so as to become subject to the provisions of the Labor Code of the State of California relating to workmen's compensation insurance.

Signature of Owner

CONSTRUCTION LENDER
(If none, write none)

Name
Branch
Street Address
City State Zip

~~ADDITION~~ ALTERATION ~~REPAIR~~

Present use of building OFFICES —
Proposed use of building SAME —
Size of existing building x Number of stories high
Describe briefly all proposed construction work ALTERATION TO LOBBY, REST ARCS.

Contractor ERIC F. ANDERSON INC
Address 1033 YERBA BUENA —
Phone No. 653-7776 —
State License No. 87990 C. License Exp. DEC '79

I hereby agree to save, indemnify and keep harmless the City of Oakland and its officers, employees and agents against all liabilities, judgments, costs and expenses which may accrue against the City in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street or sub-sidewalk, or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted.

James S. ... agent

FOR INSPECTIONS TELEPHONE 273-3441

DEPARTMENT COPY

BUILDING INSPECTION - CITY OF OAKLAND
WRITE IN INK - FILE ALL COPIES

DATE FILED 3-26-86
DATE ISSUED 4-9-2
PERMIT NO. LJ4803

APPLICATION FOR PERMIT TO:

ALTER ✓ ADD TO ____ NEW CONSTR ____
REPAIR ____ WRECK ____ OTHER ____

JOB LOCATION 430 JACKSON ST
OWNER'S NAME SAFEWAY STORES
OWNER'S ADDRESS SAME
OWNER'S PHONE NO. 891-3561

FIELD CHECK BY ____ DATE ____
Approved YES ____
REMARKS ____

NEW CONSTRUCTION

Number of Families ____
Size of Lot ____ x ____
Material of Exterior Walls ____

VALUATION OF PROPOSED WORK $ 75,000

COST OF WORK TO BE CHECKED BEFORE FINAL INSPECTION

CONSTRUCTION LENDER

FOR INSPECTIONS TELEPHONE 273-3441

430 - JACKSON ST

VALUE:

$ 75,000

ADDITIONAL COST:

TOTAL VALUE:

PLAN FILED Yes ✓ No ____
MAP NO. ____
TYPE OF BUILDING
OCCUPANCY GROUP
ZONING M-30
FIRE ZONE 1 2 3

ADDITION ALTERATION REPAIR

Present use of building OFFICES
building SAME
building 200 x 299

OFFICES IN VACANT SPACE

Contractor ERIC F. ANDERSON INC
Address 1033 YERBA BUENA AVE OAKLAND
Phone No. 653-2226
State license No. 82540

CITY OF OAKLAND

BUILDING PERMIT APPLICATION

43. Jackson St

425 Madison St

201 [illegible]

OWNER: Safeway Stores Inc
4th & Jackson St
Oakland

ARCH./ENGR.: Safeway Stores Inc
4th & Jackson St
Oakland

CONTRACTOR: License No. 82540 — City Business Tax 7579
Erie F. Anderson Inc
1033 Yerba Buena St
Oakland Ca. 94608
Malcolm E McFarland

DATE FILED 10-8-82 PERMIT NUMBER
DATE ISSUED OCT 20 [illegible]

☐ NEW ☐ REPAIR ☐ ADDITION
☐ MOVE ☒ ALTERATION ☐ DEMOLITION
☐ OTHER

DESCRIBE BRIEFLY ALL PROPOSED CONSTRUCTION WORK

1st Fl Office Alter
Phase II

See Comments on p A-1

Valuation of Proposed Work $ 12,000
Include all labor and materials, all lighting, heating, ventilation, water supply, plumbing, electrical, fire sprinkler, elevator equipment therein and thereon.

Plan Filed Yes Survey Filed No
Size of Bldg. x
No. of Stories
Height at Highest Point
Type of Occupancy
Number of Units
Number of Bldgs. on lot
Use of each
Lot Size
Present Use of Bldg.
Proposed Use of Bldg.
Type of Bldg. I II III IV V
Occupancy Group
Division
Zoning
Roof Covering
Exterior Wall

OWNER/BUILDER

WORKER'S COMPENSATION

x Malcolm E McFarland

LENDER

NONE

APPLICANT

x Malcolm E McFarland 10-20

DATE	OFFICIAL USE ONLY
10/8/82	HOUSING CONSERVATION
	FIRE MARSHAL
	SPECIAL ACTIVITY
	PORT OF OAKLAND

430 Jackson

CITY OF OAKLAND

OAKLAND, CALIF. 9461[illegible]
PHONE (415) 273-3441

BUILDING PERMIT APPLICATION

THIS IS YOUR PERMIT WHEN PROPERLY FILLED OUT, SIGNED, VALIDATED & FEES PAID

OWNER

Name: Safeway Stores 891-3000
Address: 435 Harrison St 94612
City: Oakland Calif

ARCH. / ENGR.

Name: Same as above

CONTRACTOR

License No.: 8254 B-1
Name: Eric F. Anderson Inc
Address: 1083 Yerba Buena Ave
City: Oakland Calif 94608 653-7776
Signature: James S Muche Date: 7-7-81

OWNER/BUILDER

WORKER'S COMPENSATION

X James S Muche 7-7-81

LENDER

APPLICANT

James S Muche 7-7-81

DATE ISSUED -7 DATE PAID

NEW	REPAIR	X ADDITION
MOVE	ALTERATION	DEMOLITION
OTHER		

321414

DESCRIBE BRIEFLY ALL PROPOSED CONSTRUCTION WORK

Add four additional offices - Construct new area corridor [illegible]

Plan filed: Yes Survey filed:
Size of Bldg:
No. of Stories: Number of Units:
Height of Highest Point:
Proposed Use of Bldg:
Present Use of Bldg:
Number of Bldgs. on lot:
Use of each:
Lot Size:
TYPE OF BUILDING I II III IV V F.R. H.T. 1-HR N
OCCUPANCY GROUP A B E H I R M
ZONING R C M-20 S
Roof Covering:
Exterior Wall:
Valuation of Proposed Work $ 12,000
Include all labor and materials, all lighting, heating, ventilation, water supply, plumbing, electrical, fire sprinklers, elevator equipment therein and thereon.

VALUE:	B.R. Tax	$
	H. P. Rev.	$
	Checking Fee	$
$	TOTAL	$
	General Fee	$ 143
	Checking Fee	$ 63
	Misc. Sur.	$ 2.10
ADDITIONAL COST:	SMIP	$ .84
	Address Fee	$
$	TOTAL	$ 170.94
Date	Add'l. Fee	$
TOTAL VALUE:	Add'l. Ck. Fee	$
	Add'l. SMIP	$
$	Add'l. Sur.	$
	TOTAL	$

DATE	OFFICIAL USE ONLY	
	HOUSING CONSERVATION	
7/7/8	FIRE MARSHAL	
	SPECIAL ACTIVITY NO.	
	MOVING PERMIT NO.	
	PORT OF OAKLAND	
	PLUMBING PERMIT NO.	
	HEALTH DEPT.	
	BE&A ITEM NO.	
	HA&AB RES. NO.	
7/7/81	ZONING & PLANNING	
	OTHER	
interior partitions		
	APPLICATION APPROVED	
	BY	
	FIELD CHECK	
[illegible]	FINAL INSPECTION	

321414 435 MAD 800

CITY OF OAKLAND

INSPECTIONAL SERVICES DEPARTMENT
CITY HALL 11TH FLOOR
14TH & WASHINGTON ST.
OAKLAND, CALIF. 94612
PHONE (415) 273-3441

BUILDING PERMIT APPLICATION

THIS IS YOUR PERMIT WHEN PROPERLY FILLED OUT, SIGNED, VALIDATED & FEES PAID

D283310

JOB ADDRESS: 430 Jackson St. Oakland

OWNER
NAME: Safeway Stores Inc. 891-3577
ADDRESS: 201 - 4th St. 94660
Oakland, Calif.

ARCH. ENGR.
NAME: Safeway Stores Inc.

CONTRACTOR
LICENSE # 1484 / 8V540
CITY BUSINESS TAX # 07579
NAME: Eric F. Anderson Inc
ADDRESS: 1033 Yerba Buena St. 94608 653-2146
CITY: Oakland.
DATE: 3-10-83
SIGNATURE: James S. Hicks

OWNER/BUILDER

11-1-83

WORKER'S COMPENSATION

X

☐ NEW ☐ REPAIR ☐ ADDITION ✓ ALTERATION ☐ OTHER

DESCRIBE BRIEFLY ALL PROPOSED CONSTRUCTION WORK:
Alteration to exist offices -

Plan Filed ✓

Proposed Use of Bldg. OFFICE
Present Use of Bldg. OFFICE

TYPE OF BUILDING
OCCUPANCY GROUP B-2

Valuation of Proposed Work $ 30,000

VALUE: 30,000—

TOTAL 207.67

ADDITIONAL COST

TOTAL VALUE

D283310 Inspected

ADDRESS 430 Jackson St.

CITY OF OAKLAND

BUILDING PERMIT APPLICATION

D32223

425 Madison St

Safeway Stores, Inc
430 Jackson St, Hall
Oakland, Ca

92540
Eric F. Anderson, Inc
1033 Yerba Buena Ave. 653 2226
Oakland, Ca
Malcolm F McFarland 3-14-84

Interior Alterations

No. of Stories 1

TYPE OF BUILDING

OCCUPANCY GROUP

ZONING

Valuation of Proposed Work $ 70,000

VALUE

7,000
50,000

	262	10
TOTAL $	213	10
	338	50
	6	77
	4	96
	50	77
TOTAL $	400	44

ADDITIONAL COST

TOTAL VALUE

TOTAL $

Malcolm F McFarland 3-14-84

DATE	OFFICIAL USE ONLY	
	FIRE MARSHAL	
3-14-84		

D32223

425 Madison

CITY OF OAKLAND

BUILDING PERMIT APPLICATION

425 Jackson Street, Oakland, Ca

OWNER
Safeway Stores, Inc.
201 4th St 415-891-3000
Oakland 94660

ARCH/ENGR
Safeway Stores, Inc.

CONTRACTOR
82540 4/30/86 A84 008579
Eric F. Anderson, Inc.
1033 Yerba Buena Ave.
Oakland, Ca. 94608 415-653-2226
Malcolm F. McFarland 1-30-85

Demolish & Remove Non Load Bearing Partitions & Suspended Ceilings & Install new suspended ceiling with 2x4 T-Bar Light Fixtures

Present Use of Bldg. Comm

Valuation of Proposed Work $ 42,000.—

VALUE 42,000

TOTAL 152.70

ADDITIONAL COST

TOTAL

TOTAL VALUE

TOTAL

WORKER'S COMPENSATION
PC 966247 Republic Ind. 4/1/85
Malcolm F. McFarland 1-30-85

DATE | OFFICIAL USE ONLY

4/30/85 licenses

APPLICANT
Malcolm F. McFarland 1-30-85
Oakland Ca. 94662 415-533-0825

16321

ADDRESS 430 Jackson

PTS100-01 UPDATE/QUERY PROJECT INFORMATION 4/03/15 08:06:52

Applic#* B8803950 Type: 5
Date Filed: 08/30/88 Disposition: F FINALED 01/12/90

	NUMBER	STREET NAME	SUFFIX*	SUITE	ASSESSOR PARCEL#
Site addr: 1)	430	JACKSON	ST		001 -0161-001-00
2)					
3)					

Bldg: Floor: Prcl Cond: Cond Aprvl: Viol:
Proj Descr: EXPAND COMP RM;DEMO PARTITIONS;FRAME DOOR OPENINGS; MISC PC:

Insp Div: BD-INSP Dist: 01 Scope Includes: BLDG ELEC MECH PLMB
Track:

		Lic#	Phone#	Applicant
Owner:	SAFEWAY STORES			
Contractor:	ANDERSON, ERIC F. INC.	082540	(510)430-8404	X
Arch/Engr:				
Agent:	ERIC ANDERSON INC		( )430-8404	

Applicant Addr:
City/State: Zip: No Fee:
Wrkrs Comp* NA
Other Related Applic#s: M8901534

F3=Ext F23=Dsc F24=Com
987 Business Tax License Expired

PTS100-01 UPDATE/QUERY PROJECT INFORMATION 4/03/15 08:06:53

Applic#* B8804344 Type: 5
Date Filed: 09/23/88 Disposition: F FINALED 09/15/89

	NUMBER	STREET NAME	SUFFIX*	SUITE	ASSESSOR PARCEL#
Site addr: 1)	430	JACKSON	ST		001 -0161-001-00
2)					
3)					

Bldg: Floor: Prcl Cond: Cond Aprvl: Viol:
Proj Descr: REMODEL TENANT IMPROVEMENTS PC:

Insp Div: BD-INSP Dist: 01 Scope Includes: BLDG ELEC MECH PLMB
Track:

		Lic#	Phone#	Applicant
Owner:	SAFEWAY STORES, INC.		( )891-3000	
Contractor:	ANDERSON, ERIC F. INC.	082540	(510)430-8404	X
Arch/Engr:				
Agent:	ERIC F. ANDERSON, INC.		( )430-8404	

Applicant Addr: No Fee:
City/State: Zip: Wrkrs Comp* NA
Other Related Applic#s:

F3=Ext F23=Dsc F24=Com
987 Business Tax License Expired

PTS100-01 UPDATE/QUERY PROJECT INFORMATION 4/03/15 08:06:55

Applic#* B9001275 Type: 5
Date Filed: 03/16/90 Disposition: F FINALED 06/24/91

	NUMBER	STREET NAME	SUFFIX*	SUITE	ASSESSOR PARCEL#
Site addr: 1)	430	JACKSON	ST		001 -0161-001-00
2)					
3)					

Bldg: Floor: Prcl Cond: Cond Aprvl: Viol:
Proj Descr: ADD HANDICAP RAMP, MEN & WOMANS SHOWER REARRANGE OFFICE SPAC PC:

Insp Div: BD-INSP Dist: 01 Scope Includes: BLDG ELEC MECH PLMB
Track:

		Lic#	Phone#	Applicant
Owner:	SAFEWAY STORES INC		( )890-3057	
Contractor:	ANDERSON, ERIC F. INC.	082540	(510)430-8404	X
Arch/Engr:				
Agent:				

Applicant Addr: No Fee:
City/State: Zip: Wrkrs Comp* NA
Other Related Applic#s: M9001412

F3=Ext F23=Dsc F24=Com
987 Business Tax License Expired

PTS100-01 UPDATE/QUERY PROJECT INFORMATION 4/03/15 08:06:57

Applic#* B9103286 Type: 5
Date Filed: 06/28/91 Disposition: F FINALED 11/15/91

	NUMBER	STREET NAME	SUFFIX*	SUITE	ASSESSOR PARCEL#
Site addr: 1)	430	JACKSON	ST		001 -0161-001-00
2)					
3)					

Bldg: Floor: Prcl Cond: Cond Aprvl: Viol:
Proj Descr: REMODEL INTERIOR OFFICE SPACE (SAFEWAY OFFICES) PC:

Insp Div: BD-INSP Dist: FC Scope Includes: BLDG ELEC MECH PLMB
Track:

		Lic#	Phone#	Applicant
Owner:	SAFEWAY INC		( )891-3057	
Contractor:	ANDERSON, ERIC F. INC.	082540	(415)430-8404	X
Arch/Engr:				
Agent:				

Applicant Addr: No Fee:
City/State: Zip: Wrkrs Comp* NA
Other Related Applic#s:

F3=Ext F23=Dsc F24=Com
987 Business Tax License Expired

PTS100-01 UPDATE/QUERY PROJECT INFORMATION 4/03/15 08:06:59

Applic#* B9103936 Type: 5
Date Filed: 08/07/91 Disposition: F FINALED 10/23/91

	NUMBER	STREET NAME	SUFFIX*	SUITE	ASSESSOR PARCEL#
Site addr: 1)	430	JACKSON	ST		001 -0161-001-00
2)					
3)					

Bldg: Floor: Prcl Cond: Cond Aprvl: Viol:
Proj Descr: REMODEL INTERIOR OFFICE SPACE REMOVE INTERIOR WALLS PC:

Insp Div: BD-INSP Dist: 01 Scope Includes: BLDG ELEC MECH PLMB
Track:

		Lic#	Phone#	Applicant
Owner:	SAFEWAY INC		( )891-3057	
Contractor:	ANDERSON, ERIC F. INC.	082540	(415)430-8404	X
Arch/Engr:				
Agent:				

Applicant Addr: 1066 BEECHER ST. No Fee:
City/State: SAN LEANDRO, CA Zip: 94577 Wrkrs Comp* NA
Other Related Applic#s:

F3=Ext F23=Dsc F24=Com
987 Business Tax License Expired

PTS100-01 UPDATE/QUERY PROJECT INFORMATION 4/03/15 08:07:00

Applic#* B9104573 Type: 5
Date Filed: 09/12/91 Disposition: F FINALED 11/19/91

	NUMBER	STREET NAME	SUFFIX*	SUITE	ASSESSOR PARCEL#
Site addr: 1)	430	JACKSON	ST		001 -0161-001-00
2)					
3)					

Bldg: Floor: Prcl Cond: Cond Aprvl: Viol:
Proj Descr: REMODEL INTERIOR OFFICE SPACE INC. REPLACE NON-BEARING WALL PC:

Insp Div: BD-INSP Dist: 01 Scope Includes: BLDG ELEC MECH PLMB
Track:

		Lic#	Phone#	Applicant
Owner:	SAFEWAY INC		( )891-3057	
Contractor:	ANDERSON, ERIC F. INC.	082540	(510)430-8404	X
Arch/Engr:				
Agent:				

Applicant Addr: No Fee:
City/State: Zip: Wrkrs Comp* NA
Other Related Applic#s:

F3=Ext F23=Dsc F24=Com
987 Business Tax License Expired

PTS100-01 UPDATE/QUERY PROJECT INFORMATION 4/03/15 08:07:02

Applic#* B9104656 Type: 5
Date Filed: 09/13/91 Disposition: F FINALED 11/27/91

	NUMBER	STREET NAME	SUFFIX*	SUITE	ASSESSOR PARCEL#
Site addr: 1)	430	JACKSON	ST		001 -0161-001-00
2)					
3)					

Bldg: Floor: Prcl Cond: Cond Aprvl: Viol:
Proj Descr: REMODELING EXISTING LUNCH ROOM PC:

Insp Div: BD-INSP Dist: 01 Scope Includes: BLDG ELEC MECH PLMB
Track:

		Lic#	Phone#	Applicant
Owner:	SAFEWAY INC.		( )891-3057	
Contractor:	ANDERSON, ERIC F. INC.	082540	(415)430-8404	X
Arch/Engr:				
Agent:				

Applicant Addr: No Fee:
City/State: Zip: Wrkrs Comp* NA
Other Related Applic#s:

F3=Ext F23=Dsc F24=Com
987 Business Tax License Expired

PTS100-01 UPDATE/QUERY PROJECT INFORMATION 4/03/15 08:07:04

Applic#* B9800188 Type: 5
Date Filed: 01/20/98 Disposition: F FINALED 07/20/98

	NUMBER	STREET NAME	SUFFIX*	SUITE	ASSESSOR PARCEL#
Site addr: 1)	430	JACKSON	ST		001 -0161-001-00
2)					
3)					

Bldg: Floor: Prcl Cond: Cond Aprvl: Viol:
Proj Descr: Demolition of all interior non bearing walls. PC:

Insp Div: BD-INSP Dist: 02 Scope Includes: BLDG ELEC MECH PLMB
Track:

		Lic#	Phone#	Applicant
Owner:	SAFEWAY STORES INCORPORATED			
Contractor:	ANDERSON, ERIC F. INC.	082540	(510)430-8404	X
Arch/Engr:				
Agent:				

Applicant Addr: 1066 BEECHER ST. No Fee:
City/State: SAN LEANDRO, CA Zip: 94577 Wrkrs Comp* NA
Other Related Applic#s: B9801097 CGS980120 P9800861 E9801548 M9800809
B9901504 E9901303 M9900624

F3=Ext F23=Dsc F24=Com
987 Business Tax License Expired

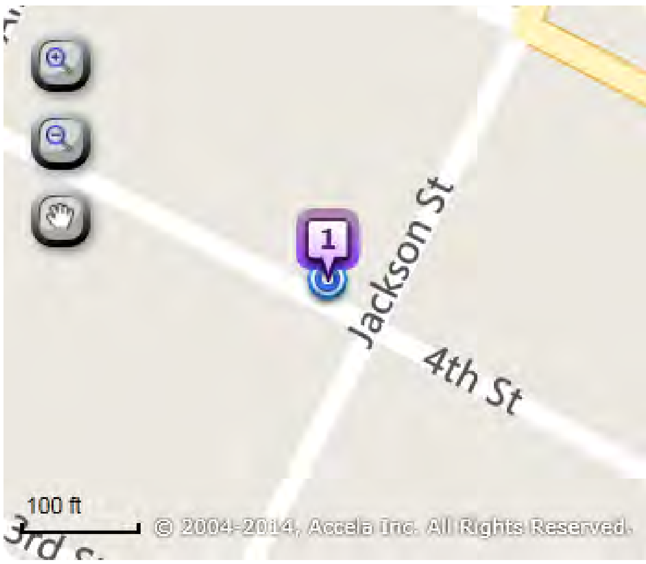
Record B9801097:
Non-Residential Building - Alteration

April 6, 1998

Record Status: Final

Work Location

200 4TH ST
OAKLAND CA



Record Details

Applicant:

1066 BEECHER ST.
SAN LEANDRO, CA, 945770000

Licensed Professional:

ANDERSON, ERIC F. INC.
1066 BEECHER ST.
SAN LEANDRO, CA, 945770000
Contractor 082540

Project Description:

Interior remodel - With additional bathrooms, new t-bar ceiling, new walls, existing H.V.A.C., sprinkler's and new entrance.

More Details

Additional Information

Job Value($):
$800,000.00

Application Information

EXISTING BUILDING INFORMATION

Building Use 1:	Miscellaneous Service Facility

PROPOSED BUILDING INFORMATION

Number of Buildings on Lot:	1
Number of Stories:	1
Fire Sprinklers:	No

Occupancy Group 1:	B
Building Use 1:	Miscellaneous Service Facility

Application Information Table

SPECIAL INSPECTIONS

Special Inspection:	STRUCTURAL STEEL
Inspection Stage:	2. Frame
Comment:	WELDING -
Prescribed By:	ADP
Prescribed:	05/12/1998

Inspections

Upcoming

You have not added any inspections.
Click the link above to schedule or request one.

Completed (25)

APPROVED - 6; CORRECTION NOTICE - 2; NO ACCESS/NO PLANS - 3; No Status - 1; PARTIAL APPROVAL - 13

CORRECTION NOTICE FINAL BUILDING 04P (298136) View Details
Result by: RP on 04/09/1999 at 12:00 AM

PARTIAL APPROVAL FINAL BUILDING 04P (298135) View Details
Result by: JP on 12/04/1998 at 12:00 AM

APPROVED FINAL BUILDING 04P (298137) View Details
Result by: JP on 04/16/1999 at 12:00 AM

No Status Frame (299512) View Details
Result by: RP on 08/27/1998 at 12:00 AM

CORRECTION NOTICE FINAL BUILDING 04P (299511) View Details
Result by: RP on 08/26/1998 at 12:00 AM

< Prev 1 2 3 4 5 Next >

Processing Status

Attachments

Related Records

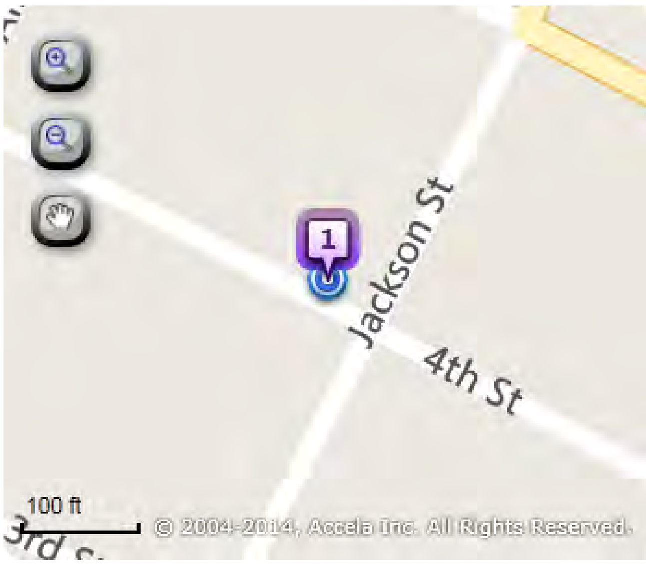
Record B9901504:
Non-Residential Building - Alteration

April 26, 1999

Record Status: Final

Work Location

200 4TH ST
OAKLAND CA



Record Details

Applicant:
4463A STONERIDGE DR
PLEASANTON, CA, 945880000

Licensed Professional:
G H GROUP INC
5933 CORONADO LN, #1-B
PLEASANTON, CA, 945880000
Contractor 521142

Project Description:
Interior remodel - new t-bar ceilings, lights, 3 hvac units, sprinkler's.

More Details

Additional Information

Job Value($):
$50,000.00

Application Information

EXISTING BUILDING INFORMATION

Building Use 1:	Office

PROPOSED BUILDING INFORMATION

Number of Buildings on Lot:	1
Number of Stories:	1
Fire Sprinklers:	No

Occupancy Group 1:	B
Building Use 1:	Office

Inspections

Upcoming

You have not added any inspections.
Click the link above to schedule or request one.

Completed (3)

APPROVED - 2; CORRECTION NOTICE - 1

APPROVED FINAL BUILDING 04P (332494) View Details
Result by: RP on 05/20/1999 at 12:00 AM

CORRECTION NOTICE LATH/CEILING 03N (332493) View Details
Result by: RP on 05/14/1999 at 12:00 AM

APPROVED FIELD CHECK 00N (332492) View Details
Result by: MM on 04/27/1999 at 12:00 AM

Processing Status

Attachments

Related Records

Register for an Account | Login

Global Search...

Home Building Enforcement Planning

Search Building Records

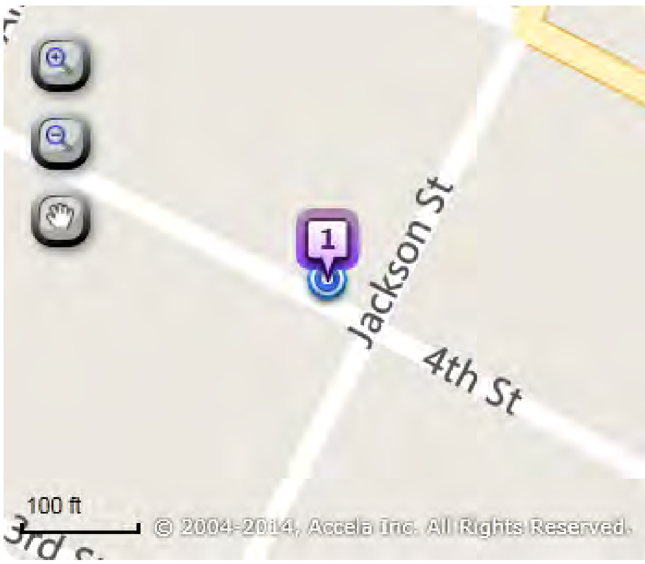
November 5, 2002

Record B0205225:
Non-Residential Building - Alteration

Record Status: Final

Work Location

200 4TH ST
OAKLAND CA



Record Details

Applicant:
5826 BRISA ST.
LIVERMORE, CA, 945500000

Licensed Professional:
SHAMES CONSTRUCTION CO LTD
5826 BRISA ST.
LIVERMORE, CA, 945500000
Contractor 532518

Project Description:
ALTER ROOF FOR A/C UNIT

More Details

Additional Information

Job Value($):
$10,000.00

Application Information

EXISTING BUILDING INFORMATION

Building Use 1:	Miscellaneous Service Facility

PROPOSED BUILDING INFORMATION

Number of Buildings on Lot:	1
Number of Stories:	1
Fire Sprinklers:	No
Occupancy Group 1:	B
Building Use 1:	Miscellaneous Service Facility

Inspections

Upcoming

You have not added any inspections.
Click the link above to schedule or request one.

Completed (2)

APPROVED - 2

APPROVED FINAL BUILDING 04P (36224)
Result by: JP on 01/13/2003 at 12:00 AM
View Details

APPROVED ROUGH 03P (36223)
Result by: SB on 12/17/2002 at 12:00 AM
View Details

Processing Status

Attachments

Related Records

APPENDIX C

Traffic and Transportation –
Level of Service Calculations

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	260	366	373	0	0	0	0	170	33	66	69	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						5.5		5.5	5.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.94						0.98		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4739						1822		1770	1863	
Flt Permitted		0.99						1.00		0.62	1.00	
Satd. Flow (perm)		4739						1822		1163	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	260	366	373	0	0	0	0	170	33	66	69	0
RTOR Reduction (vph)	0	143	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	856	0	0	0	0	0	194	0	66	69	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		34.5						29.5		29.5	29.5	
Effective Green, g (s)		34.5						29.5		29.5	29.5	
Actuated g/C Ratio		0.46						0.39		0.39	0.39	
Clearance Time (s)		5.5						5.5		5.5	5.5	
Lane Grp Cap (vph)		2179						716		457	732	
v/s Ratio Prot								c0.11			0.04	
v/s Ratio Perm		0.18								0.06		
v/c Ratio		0.39						0.27		0.14	0.09	
Uniform Delay, d1		13.3						15.4		14.6	14.3	
Progression Factor		1.00						1.00		0.68	0.70	
Incremental Delay, d2		0.5						0.9		0.7	0.3	
Delay (s)		13.9						16.4		10.7	10.3	
Level of Service		B						B		B	B	
Approach Delay (s)		13.9			0.0			16.4			10.5	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	2	279	50	232	238	0	0	158	1262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.5	5.5	5.5	5.5	5.5			5.5	4.0
Lane Util. Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1593	1676	1425	1593	1676			1676	1425
Flt Permitted				0.95	1.00	1.00	0.66	1.00			1.00	1.00
Satd. Flow (perm)				1593	1676	1425	1101	1676			1676	1425
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	2	279	50	232	238	0	0	158	1262
RTOR Reduction (vph)	0	0	0	0	0	37	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	2	279	13	232	238	0	0	158	1262
Turn Type				Split	NA	Perm	Perm	NA			NA	Free
Protected Phases				8	8			2			6	
Permitted Phases						8	2					Free
Actuated Green, G (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Effective Green, g (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Actuated g/C Ratio				0.26	0.26	0.26	0.59	0.59			0.59	1.00
Clearance Time (s)				5.5	5.5	5.5	5.5	5.5			5.5	
Lane Grp Cap (vph)				414	435	370	653	994			994	1425
v/s Ratio Prot				0.00	0.17			0.14			0.09	
v/s Ratio Perm						0.01	0.21					c0.89
v/c Ratio				0.00	0.64	0.04	0.36	0.24			0.16	0.89
Uniform Delay, d1				20.6	24.6	20.7	7.9	7.2			6.8	0.0
Progression Factor				1.00	1.00	1.00	1.22	1.22			1.00	1.00
Incremental Delay, d2				0.0	7.1	0.2	1.4	0.5			0.3	8.4
Delay (s)				20.6	31.7	20.9	11.0	9.4			7.2	8.4
Level of Service				C	C	C	B	A			A	A
Approach Delay (s)		0.0			30.0			10.2			8.3	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	219	555	126	0	0	0	0	228	70	2	98	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.95			1.00	
Frt		0.98						0.96			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4919						3415			1861	
Flt Permitted		0.99						1.00			0.99	
Satd. Flow (perm)		4919						3415			1851	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	219	555	126	0	0	0	0	228	70	2	98	0
RTOR Reduction (vph)	0	50	0	0	0	0	0	47	0	0	0	0
Lane Group Flow (vph)	0	850	0	0	0	0	0	251	0	0	100	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases										6		
Actuated Green, G (s)		22.0						15.0			15.0	
Effective Green, g (s)		22.0						15.0			15.0	
Actuated g/C Ratio		0.49						0.33			0.33	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		2404						1138			617	
v/s Ratio Prot		c0.17						c0.07				
v/s Ratio Perm											0.05	
v/c Ratio		0.35						0.22			0.16	
Uniform Delay, d1		7.1						10.8			10.6	
Progression Factor		1.00						1.00			1.16	
Incremental Delay, d2		0.4						0.4			0.6	
Delay (s)		7.5						11.2			12.8	
Level of Service		A						B			B	
Approach Delay (s)		7.5			0.0			11.2			12.8	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	81	66	567	116	358	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.90	0.85		1.00				
Flt Protected					0.99	1.00		0.99				
Satd. Flow (prot)					2724	1297		3147				
Flt Permitted					0.99	1.00		0.99				
Satd. Flow (perm)					2724	1297		3147				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	81	66	567	116	358	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	138	138	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	293	145	0	474	0	0	0	0
Turn Type				Split	NA	Perm	Split	NA				
Protected Phases				8	8		2	2				
Permitted Phases						8						
Actuated Green, G (s)					22.0	22.0		15.0				
Effective Green, g (s)					22.0	22.0		15.0				
Actuated g/C Ratio					0.49	0.49		0.33				
Clearance Time (s)					4.0	4.0		4.0				
Lane Grp Cap (vph)					1331	634		1049				
v/s Ratio Prot					0.11			c0.15				
v/s Ratio Perm						c0.11						
v/c Ratio					0.22	0.23		0.45				
Uniform Delay, d1					6.6	6.6		11.8				
Progression Factor					1.00	1.00		0.87				
Incremental Delay, d2					0.4	0.8		1.4				
Delay (s)					7.0	7.5		11.6				
Level of Service					A	A		B				
Approach Delay (s)		0.0			7.2			11.6			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	232	484	287	0	0	0	0	416	28	106	82	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						5.5		5.5	5.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.96						0.99		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4811						1847		1770	1863	
Flt Permitted		0.99						1.00		0.34	1.00	
Satd. Flow (perm)		4811						1847		642	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	232	484	287	0	0	0	0	416	28	106	82	0
RTOR Reduction (vph)	0	96	0	0	0	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	907	0	0	0	0	0	441	0	106	82	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		34.5						29.5		29.5	29.5	
Effective Green, g (s)		34.5						29.5		29.5	29.5	
Actuated g/C Ratio		0.46						0.39		0.39	0.39	
Clearance Time (s)		5.5						5.5		5.5	5.5	
Lane Grp Cap (vph)		2213						726		252	732	
v/s Ratio Prot								c0.24			0.04	
v/s Ratio Perm		0.19								0.17		
v/c Ratio		0.41						0.61		0.42	0.11	
Uniform Delay, d1		13.5						18.1		16.5	14.4	
Progression Factor		1.00						1.00		0.68	0.72	
Incremental Delay, d2		0.6						3.8		5.1	0.3	
Delay (s)		14.0						21.9		16.3	10.7	
Level of Service		B						C		B	B	
Approach Delay (s)		14.0			0.0			21.9			13.9	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	9	322	44	309	368	0	0	176	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.5	5.5	5.5	5.5	5.5			5.5	4.0
Lane Util. Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1593	1676	1425	1593	1676			1676	1425
Flt Permitted				0.95	1.00	1.00	0.65	1.00			1.00	1.00
Satd. Flow (perm)				1593	1676	1425	1083	1676			1676	1425
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	9	322	44	309	368	0	0	176	425
RTOR Reduction (vph)	0	0	0	0	0	33	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	9	322	11	309	368	0	0	176	425
Turn Type				Split	NA	Perm	Perm	NA			NA	Free
Protected Phases				8	8			2			6	
Permitted Phases						8	2					Free
Actuated Green, G (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Effective Green, g (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Actuated g/C Ratio				0.26	0.26	0.26	0.59	0.59			0.59	1.00
Clearance Time (s)				5.5	5.5	5.5	5.5	5.5			5.5	
Lane Grp Cap (vph)				414	435	370	642	994			994	1425
v/s Ratio Prot				0.01	c0.19			0.22			0.10	
v/s Ratio Perm						0.01	c0.29					0.30
v/c Ratio				0.02	0.74	0.03	0.48	0.37			0.18	0.30
Uniform Delay, d1				20.7	25.4	20.7	8.7	7.9			6.9	0.0
Progression Factor				1.00	1.00	1.00	0.67	0.70			1.00	1.00
Incremental Delay, d2				0.1	10.8	0.2	2.2	0.9			0.4	0.5
Delay (s)				20.7	36.2	20.9	8.0	6.5			7.3	0.5
Level of Service				C	D	C	A	A			A	A
Approach Delay (s)		0.0			34.0			7.2			2.5	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	207	854	118	0	0	0	0	395	73	4	88	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.95			1.00	
Frt		0.98						0.98			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4965						3456			1859	
Flt Permitted		0.99						1.00			0.98	
Satd. Flow (perm)		4965						3456			1824	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	207	854	118	0	0	0	0	395	73	4	88	0
RTOR Reduction (vph)	0	30	0	0	0	0	0	34	0	0	0	0
Lane Group Flow (vph)	0	1149	0	0	0	0	0	434	0	0	92	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases										6		
Actuated Green, G (s)		22.0						15.0			15.0	
Effective Green, g (s)		22.0						15.0			15.0	
Actuated g/C Ratio		0.49						0.33			0.33	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		2427						1152			608	
v/s Ratio Prot		c0.23						c0.13				
v/s Ratio Perm											0.05	
v/c Ratio		0.47						0.38			0.15	
Uniform Delay, d1		7.6						11.4			10.5	
Progression Factor		1.00						1.00			1.18	
Incremental Delay, d2		0.7						0.9			0.5	
Delay (s)		8.3						12.4			13.0	
Level of Service		A						B			B	
Approach Delay (s)		8.3			0.0			12.4			13.0	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	64	80	478	134	481	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.91	0.85		1.00				
Flt Protected					0.99	1.00		0.99				
Satd. Flow (prot)					2743	1297		3151				
Flt Permitted					0.99	1.00		0.99				
Satd. Flow (perm)					2743	1297		3151				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	64	80	478	134	481	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	84	84	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	299	155	0	615	0	0	0	0
Turn Type				Split	NA	Perm	Split	NA				
Protected Phases				8	8		2	2				
Permitted Phases						8						
Actuated Green, G (s)					22.0	22.0		15.0				
Effective Green, g (s)					22.0	22.0		15.0				
Actuated g/C Ratio					0.49	0.49		0.33				
Clearance Time (s)					4.0	4.0		4.0				
Lane Grp Cap (vph)					1341	634		1050				
v/s Ratio Prot					0.11			c0.20				
v/s Ratio Perm						c0.12						
v/c Ratio					0.22	0.24		0.59				
Uniform Delay, d1					6.6	6.7		12.4				
Progression Factor					1.00	1.00		0.65				
Incremental Delay, d2					0.4	0.9		2.2				
Delay (s)					7.0	7.6		10.3				
Level of Service					A	A		B				
Approach Delay (s)		0.0			7.2			10.3			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	260	366	377	0	0	0	0	196	55	66	76	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						5.5		5.5	5.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.94						0.97		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4737						1808		1770	1863	
Flt Permitted		0.99						1.00		0.57	1.00	
Satd. Flow (perm)		4737						1808		1053	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	260	366	377	0	0	0	0	196	55	66	76	0
RTOR Reduction (vph)	0	145	0	0	0	0	0	13	0	0	0	0
Lane Group Flow (vph)	0	858	0	0	0	0	0	238	0	66	76	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		34.5						29.5		29.5	29.5	
Effective Green, g (s)		34.5						29.5		29.5	29.5	
Actuated g/C Ratio		0.46						0.39		0.39	0.39	
Clearance Time (s)		5.5						5.5		5.5	5.5	
Lane Grp Cap (vph)		2179						711		414	732	
v/s Ratio Prot								c0.13			0.04	
v/s Ratio Perm		0.18								0.06		
v/c Ratio		0.39						0.33		0.16	0.10	
Uniform Delay, d1		13.4						15.9		14.7	14.4	
Progression Factor		1.00						1.00		0.70	0.71	
Incremental Delay, d2		0.5						1.3		0.8	0.3	
Delay (s)		13.9						17.2		11.1	10.6	
Level of Service		B						B		B	B	
Approach Delay (s)		13.9			0.0			17.2			10.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	7	279	50	251	245	0	0	159	1262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.5	5.5	5.5	5.5	5.5			5.5	4.0
Lane Util. Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1593	1676	1425	1593	1676			1676	1425
Flt Permitted				0.95	1.00	1.00	0.66	1.00			1.00	1.00
Satd. Flow (perm)				1593	1676	1425	1100	1676			1676	1425
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	7	279	50	251	245	0	0	159	1262
RTOR Reduction (vph)	0	0	0	0	0	37	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	7	279	13	251	245	0	0	159	1262
Turn Type				Split	NA	Perm	Perm	NA			NA	Free
Protected Phases				8	8			2			6	
Permitted Phases						8	2					Free
Actuated Green, G (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Effective Green, g (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Actuated g/C Ratio				0.26	0.26	0.26	0.59	0.59			0.59	1.00
Clearance Time (s)				5.5	5.5	5.5	5.5	5.5			5.5	
Lane Grp Cap (vph)				414	435	370	652	994			994	1425
v/s Ratio Prot				0.00	0.17			0.15			0.09	
v/s Ratio Perm						0.01	0.23					c0.89
v/c Ratio				0.02	0.64	0.04	0.38	0.25			0.16	0.89
Uniform Delay, d1				20.6	24.6	20.7	8.0	7.3			6.9	0.0
Progression Factor				1.00	1.00	1.00	1.15	1.16			1.00	1.00
Incremental Delay, d2				0.1	7.1	0.2	1.6	0.6			0.3	8.4
Delay (s)				20.7	31.7	20.9	10.9	9.0			7.2	8.4
Level of Service				C	C	C	B	A			A	A
Approach Delay (s)		0.0			29.9			9.9			8.3	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	222	573	126	0	0	0	0	229	76	2	98	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.95			1.00	
Frt		0.98						0.96			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4922						3407			1861	
Flt Permitted		0.99						1.00			0.99	
Satd. Flow (perm)		4922						3407			1851	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	222	573	126	0	0	0	0	229	76	2	98	0
RTOR Reduction (vph)	0	48	0	0	0	0	0	51	0	0	0	0
Lane Group Flow (vph)	0	873	0	0	0	0	0	254	0	0	100	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases										6		
Actuated Green, G (s)		22.0						15.0			15.0	
Effective Green, g (s)		22.0						15.0			15.0	
Actuated g/C Ratio		0.49						0.33			0.33	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		2406						1135			617	
v/s Ratio Prot		c0.18						c0.07				
v/s Ratio Perm											0.05	
v/c Ratio		0.36						0.22			0.16	
Uniform Delay, d1		7.1						10.8			10.6	
Progression Factor		1.00						1.00			1.17	
Incremental Delay, d2		0.4						0.5			0.6	
Delay (s)		7.6						11.3			12.9	
Level of Service		A						B			B	
Approach Delay (s)		7.6			0.0			11.3			12.9	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	81	71	567	116	363	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.90	0.85		1.00				
Flt Protected					0.99	1.00		0.99				
Satd. Flow (prot)					2728	1297		3147				
Flt Permitted					0.99	1.00		0.99				
Satd. Flow (perm)					2728	1297		3147				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	81	71	567	116	363	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	135	135	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	301	148	0	479	0	0	0	0
Turn Type				Split	NA	Perm	Split	NA				
Protected Phases				8	8		2	2				
Permitted Phases						8						
Actuated Green, G (s)					22.0	22.0		15.0				
Effective Green, g (s)					22.0	22.0		15.0				
Actuated g/C Ratio					0.49	0.49		0.33				
Clearance Time (s)					4.0	4.0		4.0				
Lane Grp Cap (vph)					1333	634		1049				
v/s Ratio Prot					0.11			c0.15				
v/s Ratio Perm						c0.11						
v/c Ratio					0.23	0.23		0.46				
Uniform Delay, d1					6.6	6.6		11.8				
Progression Factor					1.00	1.00		0.88				
Incremental Delay, d2					0.4	0.9		1.4				
Delay (s)					7.0	7.5		11.7				
Level of Service					A	A		B				
Approach Delay (s)		0.0			7.2			11.7			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	232	484	307	0	0	0	0	426	40	106	110	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						5.5		5.5	5.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.95						0.99		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4802						1841		1770	1863	
Flt Permitted		0.99						1.00		0.32	1.00	
Satd. Flow (perm)		4802						1841		598	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	232	484	307	0	0	0	0	426	40	106	110	0
RTOR Reduction (vph)	0	103	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	920	0	0	0	0	0	462	0	106	110	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		34.5						29.5		29.5	29.5	
Effective Green, g (s)		34.5						29.5		29.5	29.5	
Actuated g/C Ratio		0.46						0.39		0.39	0.39	
Clearance Time (s)		5.5						5.5		5.5	5.5	
Lane Grp Cap (vph)		2208						724		235	732	
v/s Ratio Prot								c0.25			0.06	
v/s Ratio Perm		0.19								0.18		
v/c Ratio		0.42						0.64		0.45	0.15	
Uniform Delay, d1		13.5						18.4		16.8	14.7	
Progression Factor		1.00						1.00		0.73	0.75	
Incremental Delay, d2		0.6						4.3		6.1	0.4	
Delay (s)		14.1						22.7		18.4	11.5	
Level of Service		B						C		B	B	
Approach Delay (s)		14.1			0.0			22.7			14.9	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	30	322	44	317	371	0	0	183	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.5	5.5	5.5	5.5	5.5			5.5	4.0
Lane Util. Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1593	1676	1425	1593	1676			1676	1425
Flt Permitted				0.95	1.00	1.00	0.64	1.00			1.00	1.00
Satd. Flow (perm)				1593	1676	1425	1076	1676			1676	1425
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	30	322	44	317	371	0	0	183	425
RTOR Reduction (vph)	0	0	0	0	0	33	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	30	322	11	317	371	0	0	183	425
Turn Type				Split	NA	Perm	Perm	NA			NA	Free
Protected Phases				8	8			2			6	
Permitted Phases						8	2					Free
Actuated Green, G (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Effective Green, g (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Actuated g/C Ratio				0.26	0.26	0.26	0.59	0.59			0.59	1.00
Clearance Time (s)				5.5	5.5	5.5	5.5	5.5			5.5	
Lane Grp Cap (vph)				414	435	370	638	994			994	1425
v/s Ratio Prot				0.02	c0.19			0.22			0.11	
v/s Ratio Perm						0.01	c0.29					0.30
v/c Ratio				0.07	0.74	0.03	0.50	0.37			0.18	0.30
Uniform Delay, d1				20.9	25.4	20.7	8.8	8.0			7.0	0.0
Progression Factor				1.00	1.00	1.00	0.65	0.69			1.00	1.00
Incremental Delay, d2				0.3	10.8	0.2	2.3	0.9			0.4	0.5
Delay (s)				21.3	36.2	20.9	8.1	6.4			7.4	0.5
Level of Service				C	D	C	A	A			A	A
Approach Delay (s)		0.0			33.4			7.2			2.6	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	864	118	0	0	0	0	395	73	4	97	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.95			1.00	
Frt		0.99						0.98			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4966						3456			1859	
Flt Permitted		0.99						1.00			0.98	
Satd. Flow (perm)		4966						3456			1828	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	209	864	118	0	0	0	0	395	73	4	97	0
RTOR Reduction (vph)	0	30	0	0	0	0	0	34	0	0	0	0
Lane Group Flow (vph)	0	1161	0	0	0	0	0	434	0	0	101	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases										6		
Actuated Green, G (s)		22.0						15.0			15.0	
Effective Green, g (s)		22.0						15.0			15.0	
Actuated g/C Ratio		0.49						0.33			0.33	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		2427						1152			609	
v/s Ratio Prot		c0.23						c0.13				
v/s Ratio Perm											0.06	
v/c Ratio		0.48						0.38			0.17	
Uniform Delay, d1		7.7						11.4			10.6	
Progression Factor		1.00						1.00			1.20	
Incremental Delay, d2		0.7						0.9			0.6	
Delay (s)		8.4						12.4			13.3	
Level of Service		A						B			B	
Approach Delay (s)		8.4			0.0			12.4			13.3	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	73	100	478	134	483	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.91	0.85		1.00				
Flt Protected					0.99	1.00		0.99				
Satd. Flow (prot)					2761	1297		3151				
Flt Permitted					0.99	1.00		0.99				
Satd. Flow (perm)					2761	1297		3151				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	73	100	478	134	483	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	83	83	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	329	156	0	617	0	0	0	0
Turn Type				Split	NA	Perm	Split	NA				
Protected Phases				8	8		2	2				
Permitted Phases						8						
Actuated Green, G (s)					22.0	22.0		15.0				
Effective Green, g (s)					22.0	22.0		15.0				
Actuated g/C Ratio					0.49	0.49		0.33				
Clearance Time (s)					4.0	4.0		4.0				
Lane Grp Cap (vph)					1349	634		1050				
v/s Ratio Prot					0.12			c0.20				
v/s Ratio Perm						c0.12						
v/c Ratio					0.24	0.25		0.59				
Uniform Delay, d1					6.7	6.7		12.4				
Progression Factor					1.00	1.00		0.65				
Incremental Delay, d2					0.4	0.9		2.2				
Delay (s)					7.1	7.6		10.3				
Level of Service					A	A		B				
Approach Delay (s)		0.0			7.3			10.3			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	438	514	0	0	0	0	236	41	66	99	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						5.5		5.5	5.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.94						0.98		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4717						1826		1770	1863	
Flt Permitted		0.99						1.00		0.53	1.00	
Satd. Flow (perm)		4717						1826		994	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	311	438	514	0	0	0	0	236	41	66	99	0
RTOR Reduction (vph)	0	166	0	0	0	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	1097	0	0	0	0	0	269	0	66	99	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		34.5						29.5		29.5	29.5	
Effective Green, g (s)		34.5						29.5		29.5	29.5	
Actuated g/C Ratio		0.46						0.39		0.39	0.39	
Clearance Time (s)		5.5						5.5		5.5	5.5	
Lane Grp Cap (vph)		2169						718		390	732	
v/s Ratio Prot								c0.15			0.05	
v/s Ratio Perm		0.23								0.07		
v/c Ratio		0.51						0.37		0.17	0.14	
Uniform Delay, d1		14.3						16.2		14.8	14.6	
Progression Factor		1.00						1.00		0.67	0.69	
Incremental Delay, d2		0.8						1.5		0.9	0.4	
Delay (s)		15.1						17.7		10.9	10.4	
Level of Service		B						B		B	B	
Approach Delay (s)		15.1			0.0			17.7			10.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	2	311	56	298	281	0	0	206	1408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.5	5.5	5.5	5.5	5.5			5.5	4.0
Lane Util. Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1593	1676	1425	1593	1676			1676	1425
Flt Permitted				0.95	1.00	1.00	0.63	1.00			1.00	1.00
Satd. Flow (perm)				1593	1676	1425	1054	1676			1676	1425
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	2	311	56	298	281	0	0	206	1408
RTOR Reduction (vph)	0	0	0	0	0	41	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	2	311	15	298	281	0	0	206	1408
Turn Type				Split	NA	Perm	Perm	NA			NA	Free
Protected Phases				8	8			2			6	
Permitted Phases						8	2					Free
Actuated Green, G (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Effective Green, g (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Actuated g/C Ratio				0.26	0.26	0.26	0.59	0.59			0.59	1.00
Clearance Time (s)				5.5	5.5	5.5	5.5	5.5			5.5	
Lane Grp Cap (vph)				414	435	370	625	994			994	1425
v/s Ratio Prot				0.00	0.19			0.17			0.12	
v/s Ratio Perm						0.01	0.28					c0.99
v/c Ratio				0.00	0.71	0.04	0.48	0.28			0.21	0.99
Uniform Delay, d1				20.6	25.2	20.7	8.6	7.5			7.1	0.0
Progression Factor				1.00	1.00	1.00	1.23	1.21			1.00	1.00
Incremental Delay, d2				0.0	9.7	0.2	2.4	0.6			0.5	21.2
Delay (s)				20.6	34.9	20.9	13.0	9.7			7.5	21.2
Level of Service				C	C	C	B	A			A	C
Approach Delay (s)		0.0			32.7			11.4			19.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	269	682	155	0	0	0	0	608	233	3	259	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.95			1.00	
Frt		0.98						0.96			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4919						3392			1862	
Flt Permitted		0.99						1.00			0.99	
Satd. Flow (perm)		4919						3392			1845	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	269	682	155	0	0	0	0	608	233	3	259	0
RTOR Reduction (vph)	0	50	0	0	0	0	0	89	0	0	0	0
Lane Group Flow (vph)	0	1056	0	0	0	0	0	752	0	0	262	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases										6		
Actuated Green, G (s)		22.0						15.0			15.0	
Effective Green, g (s)		22.0						15.0			15.0	
Actuated g/C Ratio		0.49						0.33			0.33	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		2404						1130			615	
v/s Ratio Prot		c0.21						c0.22				
v/s Ratio Perm											0.14	
v/c Ratio		0.44						0.67			0.43	
Uniform Delay, d1		7.5						12.9			11.7	
Progression Factor		1.00						1.00			1.19	
Incremental Delay, d2		0.6						3.1			2.1	
Delay (s)		8.1						16.0			16.0	
Level of Service		A						B			B	
Approach Delay (s)		8.1			0.0			16.0			16.0	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	179	61	527	150	482	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.92	0.85		1.00				
Flt Protected					0.98	1.00		0.99				
Satd. Flow (prot)					2762	1297		3148				
Flt Permitted					0.98	1.00		0.99				
Satd. Flow (perm)					2762	1297		3148				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	179	61	527	150	482	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	83	83	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	421	180	0	632	0	0	0	0
Turn Type				Split	NA	Perm	Split	NA				
Protected Phases				8	8		2	2				
Permitted Phases						8						
Actuated Green, G (s)					22.0	22.0		15.0				
Effective Green, g (s)					22.0	22.0		15.0				
Actuated g/C Ratio					0.49	0.49		0.33				
Clearance Time (s)					4.0	4.0		4.0				
Lane Grp Cap (vph)					1350	634		1049				
v/s Ratio Prot					c0.15			c0.20				
v/s Ratio Perm						0.14						
v/c Ratio					0.31	0.28		0.60				
Uniform Delay, d1					6.9	6.8		12.5				
Progression Factor					1.00	1.00		0.79				
Incremental Delay, d2					0.6	1.1		2.0				
Delay (s)					7.5	7.9		11.9				
Level of Service					A	A		B				
Approach Delay (s)		0.0			7.7			11.9			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	298	622	450	0	0	0	0	691	39	106	117	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						5.5		5.5	5.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.95						0.99		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4783						1849		1770	1863	
Flt Permitted		0.99						1.00		0.14	1.00	
Satd. Flow (perm)		4783						1849		253	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	298	622	450	0	0	0	0	691	39	106	117	0
RTOR Reduction (vph)	0	117	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1253	0	0	0	0	0	728	0	106	117	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		34.5						29.5		29.5	29.5	
Effective Green, g (s)		34.5						29.5		29.5	29.5	
Actuated g/C Ratio		0.46						0.39		0.39	0.39	
Clearance Time (s)		5.5						5.5		5.5	5.5	
Lane Grp Cap (vph)		2200						727		99	732	
v/s Ratio Prot								0.39			0.06	
v/s Ratio Perm		0.26								c0.42		
v/c Ratio		0.57						1.00		1.07	0.16	
Uniform Delay, d1		14.8						22.8		22.8	14.7	
Progression Factor		1.00						1.00		0.69	0.70	
Incremental Delay, d2		1.1						33.6		110.1	0.5	
Delay (s)		15.9						56.3		125.8	10.7	
Level of Service		B						E		F	B	
Approach Delay (s)		15.9			0.0			56.3			65.4	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	33.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	11	389	53	474	434	0	0	248	514
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.5	5.5	5.5	5.5	5.5			5.5	4.0
Lane Util. Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1593	1676	1425	1593	1676			1676	1425
Flt Permitted				0.95	1.00	1.00	0.61	1.00			1.00	1.00
Satd. Flow (perm)				1593	1676	1425	1014	1676			1676	1425
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	11	389	53	474	434	0	0	248	514
RTOR Reduction (vph)	0	0	0	0	0	39	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	11	389	14	474	434	0	0	248	514
Turn Type				Split	NA	Perm	Perm	NA			NA	Free
Protected Phases				8	8			2			6	
Permitted Phases						8	2					Free
Actuated Green, G (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Effective Green, g (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Actuated g/C Ratio				0.26	0.26	0.26	0.59	0.59			0.59	1.00
Clearance Time (s)				5.5	5.5	5.5	5.5	5.5			5.5	
Lane Grp Cap (vph)				414	435	370	601	994			994	1425
v/s Ratio Prot				0.01	c0.23			0.26			0.15	
v/s Ratio Perm						0.01	c0.47					0.36
v/c Ratio				0.03	0.89	0.04	0.79	0.44			0.25	0.36
Uniform Delay, d1				20.7	26.8	20.7	11.7	8.4			7.3	0.0
Progression Factor				1.00	1.00	1.00	0.59	0.59			1.00	1.00
Incremental Delay, d2				0.1	23.4	0.2	4.8	0.6			0.6	0.7
Delay (s)				20.8	50.2	20.9	11.7	5.5			7.9	0.7
Level of Service				C	D	C	B	A			A	A
Approach Delay (s)		0.0			46.1			8.7			3.0	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	246	1016	140	0	0	0	0	917	396	6	261	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.95			1.00	
Frt		0.99						0.95			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4966						3379			1861	
Flt Permitted		0.99						1.00			0.60	
Satd. Flow (perm)		4966						3379			1111	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	246	1016	140	0	0	0	0	917	396	6	261	0
RTOR Reduction (vph)	0	30	0	0	0	0	0	45	0	0	0	0
Lane Group Flow (vph)	0	1372	0	0	0	0	0	1268	0	0	267	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases										6		
Actuated Green, G (s)		22.0						15.0			15.0	
Effective Green, g (s)		22.0						15.0			15.0	
Actuated g/C Ratio		0.49						0.33			0.33	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		2427						1126			370	
v/s Ratio Prot		c0.28						c0.38				
v/s Ratio Perm											0.24	
v/c Ratio		0.57						1.13			0.72	
Uniform Delay, d1		8.1						15.0			13.2	
Progression Factor		1.00						1.00			1.24	
Incremental Delay, d2		1.0						68.4			11.3	
Delay (s)		9.1						83.4			27.6	
Level of Service		A						F			C	
Approach Delay (s)		9.1			0.0			83.4			27.6	
Approach LOS		A			A			F			C	

Intersection Summary			
HCM 2000 Control Delay	43.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	198	85	506	163	678	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.93	0.85		1.00				
Flt Protected					0.98	1.00		0.99				
Satd. Flow (prot)					2784	1297		3155				
Flt Permitted					0.98	1.00		0.99				
Satd. Flow (perm)					2784	1297		3155				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	198	85	506	163	678	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	37	37	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	499	216	0	841	0	0	0	0
Turn Type				Split	NA	Perm	Split	NA				
Protected Phases				8	8		2	2				
Permitted Phases						8						
Actuated Green, G (s)					22.0	22.0		15.0				
Effective Green, g (s)					22.0	22.0		15.0				
Actuated g/C Ratio					0.49	0.49		0.33				
Clearance Time (s)					4.0	4.0		4.0				
Lane Grp Cap (vph)					1361	634		1051				
v/s Ratio Prot					c0.18			c0.27				
v/s Ratio Perm						0.17						
v/c Ratio					0.37	0.34		0.80				
Uniform Delay, d1					7.2	7.1		13.6				
Progression Factor					1.00	1.00		0.92				
Incremental Delay, d2					0.8	1.5		0.6				
Delay (s)					7.9	8.5		13.1				
Level of Service					A	A		B				
Approach Delay (s)		0.0			8.1			13.1			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	438	518	0	0	0	0	262	63	66	106	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						5.5		5.5	5.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.94						0.97		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4716						1814		1770	1863	
Flt Permitted		0.99						1.00		0.48	1.00	
Satd. Flow (perm)		4716						1814		889	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	311	438	518	0	0	0	0	262	63	66	106	0
RTOR Reduction (vph)	0	167	0	0	0	0	0	12	0	0	0	0
Lane Group Flow (vph)	0	1100	0	0	0	0	0	313	0	66	106	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		34.5						29.5		29.5	29.5	
Effective Green, g (s)		34.5						29.5		29.5	29.5	
Actuated g/C Ratio		0.46						0.39		0.39	0.39	
Clearance Time (s)		5.5						5.5		5.5	5.5	
Lane Grp Cap (vph)		2169						713		349	732	
v/s Ratio Prot								c0.17			0.06	
v/s Ratio Perm		0.23								0.07		
v/c Ratio		0.51						0.44		0.19	0.14	
Uniform Delay, d1		14.3						16.7		14.9	14.6	
Progression Factor		1.00						1.00		0.68	0.70	
Incremental Delay, d2		0.9						2.0		1.2	0.4	
Delay (s)		15.1						18.7		11.3	10.6	
Level of Service		B						B		B	B	
Approach Delay (s)		15.1			0.0			18.7			10.9	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	7	311	56	317	288	0	0	207	1408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.5	5.5	5.5	5.5	5.5			5.5	4.0
Lane Util. Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1593	1676	1425	1593	1676			1676	1425
Flt Permitted				0.95	1.00	1.00	0.63	1.00			1.00	1.00
Satd. Flow (perm)				1593	1676	1425	1053	1676			1676	1425
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	7	311	56	317	288	0	0	207	1408
RTOR Reduction (vph)	0	0	0	0	0	41	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	7	311	15	317	288	0	0	207	1408
Turn Type				Split	NA	Perm	Perm	NA			NA	Free
Protected Phases				8	8			2			6	
Permitted Phases						8	2					Free
Actuated Green, G (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Effective Green, g (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Actuated g/C Ratio				0.26	0.26	0.26	0.59	0.59			0.59	1.00
Clearance Time (s)				5.5	5.5	5.5	5.5	5.5			5.5	
Lane Grp Cap (vph)				414	435	370	624	994			994	1425
v/s Ratio Prot				0.00	0.19			0.17			0.12	
v/s Ratio Perm						0.01	0.30					c0.99
v/c Ratio				0.02	0.71	0.04	0.51	0.29			0.21	0.99
Uniform Delay, d1				20.6	25.2	20.7	8.9	7.5			7.1	0.0
Progression Factor				1.00	1.00	1.00	1.17	1.15			1.00	1.00
Incremental Delay, d2				0.1	9.7	0.2	2.6	0.7			0.5	21.2
Delay (s)				20.7	34.9	20.9	13.0	9.3			7.6	21.2
Level of Service				C	C	C	B	A			A	C
Approach Delay (s)		0.0			32.5			11.2			19.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	272	700	155	0	0	0	0	609	239	3	259	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.95			1.00	
Frt		0.98						0.96			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4921						3390			1862	
Flt Permitted		0.99						1.00			0.99	
Satd. Flow (perm)		4921						3390			1845	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	272	700	155	0	0	0	0	609	239	3	259	0
RTOR Reduction (vph)	0	48	0	0	0	0	0	93	0	0	0	0
Lane Group Flow (vph)	0	1079	0	0	0	0	0	755	0	0	262	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases										6		
Actuated Green, G (s)		22.0						15.0			15.0	
Effective Green, g (s)		22.0						15.0			15.0	
Actuated g/C Ratio		0.49						0.33			0.33	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		2405						1130			615	
v/s Ratio Prot		c0.22						c0.22				
v/s Ratio Perm											0.14	
v/c Ratio		0.45						0.67			0.43	
Uniform Delay, d1		7.5						12.9			11.7	
Progression Factor		1.00						1.00			1.20	
Incremental Delay, d2		0.6						3.1			2.1	
Delay (s)		8.1						16.0			16.1	
Level of Service		A						B			B	
Approach Delay (s)		8.1			0.0			16.0			16.1	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	179	66	527	150	487	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.92	0.85		1.00				
Flt Protected					0.98	1.00		0.99				
Satd. Flow (prot)					2765	1297		3148				
Flt Permitted					0.98	1.00		0.99				
Satd. Flow (perm)					2765	1297		3148				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	179	66	527	150	487	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	82	82	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	427	181	0	637	0	0	0	0
Turn Type				Split	NA	Perm	Split	NA				
Protected Phases				8	8		2	2				
Permitted Phases						8						
Actuated Green, G (s)					22.0	22.0		15.0				
Effective Green, g (s)					22.0	22.0		15.0				
Actuated g/C Ratio					0.49	0.49		0.33				
Clearance Time (s)					4.0	4.0		4.0				
Lane Grp Cap (vph)					1351	634		1049				
v/s Ratio Prot					c0.15			c0.20				
v/s Ratio Perm						0.14						
v/c Ratio					0.32	0.29		0.61				
Uniform Delay, d1					7.0	6.8		12.5				
Progression Factor					1.00	1.00		0.79				
Incremental Delay, d2					0.6	1.1		2.1				
Delay (s)					7.6	8.0		12.0				
Level of Service					A	A		B				
Approach Delay (s)		0.0			7.7			12.0			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	298	622	470	0	0	0	0	701	51	106	145	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						5.5		5.5	5.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.95						0.99		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4776						1846		1770	1863	
Flt Permitted		0.99						1.00		0.14	1.00	
Satd. Flow (perm)		4776						1846		253	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	298	622	470	0	0	0	0	701	51	106	145	0
RTOR Reduction (vph)	0	123	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	1267	0	0	0	0	0	748	0	106	145	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		34.5						29.5		29.5	29.5	
Effective Green, g (s)		34.5						29.5		29.5	29.5	
Actuated g/C Ratio		0.46						0.39		0.39	0.39	
Clearance Time (s)		5.5						5.5		5.5	5.5	
Lane Grp Cap (vph)		2196						726		99	732	
v/s Ratio Prot								0.41			0.08	
v/s Ratio Perm		0.27								c0.42		
v/c Ratio		0.58						1.03		1.07	0.20	
Uniform Delay, d1		14.9						22.8		22.8	15.0	
Progression Factor		1.00						1.00		0.74	0.72	
Incremental Delay, d2		1.1						41.5		110.1	0.6	
Delay (s)		16.0						64.3		126.9	11.4	
Level of Service		B						E		F	B	
Approach Delay (s)		16.0			0.0			64.3			60.2	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	114.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	32	389	53	482	437	0	0	255	514
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.5	5.5	5.5	5.5	5.5			5.5	4.0
Lane Util. Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1593	1676	1425	1593	1676			1676	1425
Flt Permitted				0.95	1.00	1.00	0.60	1.00			1.00	1.00
Satd. Flow (perm)				1593	1676	1425	1008	1676			1676	1425
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	32	389	53	482	437	0	0	255	514
RTOR Reduction (vph)	0	0	0	0	0	39	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	32	389	14	482	437	0	0	255	514
Turn Type				Split	NA	Perm	Perm	NA			NA	Free
Protected Phases				8	8			2			6	
Permitted Phases						8	2					Free
Actuated Green, G (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Effective Green, g (s)				19.5	19.5	19.5	44.5	44.5			44.5	75.0
Actuated g/C Ratio				0.26	0.26	0.26	0.59	0.59			0.59	1.00
Clearance Time (s)				5.5	5.5	5.5	5.5	5.5			5.5	
Lane Grp Cap (vph)				414	435	370	598	994			994	1425
v/s Ratio Prot				0.02	c0.23			0.26			0.15	
v/s Ratio Perm						0.01	c0.48					0.36
v/c Ratio				0.08	0.89	0.04	0.81	0.44			0.26	0.36
Uniform Delay, d1				21.0	26.8	20.7	11.9	8.4			7.3	0.0
Progression Factor				1.00	1.00	1.00	0.58	0.58			1.00	1.00
Incremental Delay, d2				0.4	23.4	0.2	4.9	0.6			0.6	0.7
Delay (s)				21.3	50.2	20.9	11.8	5.4			7.9	0.7
Level of Service				C	D	C	B	A			A	A
Approach Delay (s)		0.0			45.0			8.8			3.1	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	114.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	248	1026	140	0	0	0	0	917	396	6	270	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.95			1.00	
Frt		0.99						0.95			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4966						3379			1861	
Flt Permitted		0.99						1.00			0.60	
Satd. Flow (perm)		4966						3379			1112	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	248	1026	140	0	0	0	0	917	396	6	270	0
RTOR Reduction (vph)	0	30	0	0	0	0	0	44	0	0	0	0
Lane Group Flow (vph)	0	1384	0	0	0	0	0	1269	0	0	276	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases										6		
Actuated Green, G (s)		22.0						15.0			15.0	
Effective Green, g (s)		22.0						15.0			15.0	
Actuated g/C Ratio		0.49						0.33			0.33	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		2427						1126			370	
v/s Ratio Prot		c0.28						c0.38				
v/s Ratio Perm											0.25	
v/c Ratio		0.57						1.13			0.75	
Uniform Delay, d1		8.2						15.0			13.3	
Progression Factor		1.00						1.00			1.24	
Incremental Delay, d2		1.0						68.9			12.5	
Delay (s)		9.1						83.9			29.0	
Level of Service		A						F			C	
Approach Delay (s)		9.1			0.0			83.9			29.0	
Approach LOS		A			A			F			C	

Intersection Summary			
HCM 2000 Control Delay	43.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	207	105	506	163	680	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.93	0.85		1.00				
Flt Protected					0.98	1.00		0.99				
Satd. Flow (prot)					2797	1297		3155				
Flt Permitted					0.98	1.00		0.99				
Satd. Flow (perm)					2797	1297		3155				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	207	105	506	163	680	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	37	37	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	523	221	0	843	0	0	0	0
Turn Type				Split	NA	Perm	Split	NA				
Protected Phases				8	8		2	2				
Permitted Phases						8						
Actuated Green, G (s)					22.0	22.0		15.0				
Effective Green, g (s)					22.0	22.0		15.0				
Actuated g/C Ratio					0.49	0.49		0.33				
Clearance Time (s)					4.0	4.0		4.0				
Lane Grp Cap (vph)					1367	634		1051				
v/s Ratio Prot					c0.19			c0.27				
v/s Ratio Perm						0.17						
v/c Ratio					0.38	0.35		0.80				
Uniform Delay, d1					7.2	7.1		13.6				
Progression Factor					1.00	1.00		0.92				
Incremental Delay, d2					0.8	1.5		0.6				
Delay (s)					8.0	8.6		13.1				
Level of Service					A	A		B				
Approach Delay (s)		0.0			8.2			13.1			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX D

Transportation –
Memo: Intersection Operation Results
Comparison to LMSP

MEMORANDUM

Date: June 17, 2015

To: Lynette Dias and Hayley Cox, Urban Planning Partners, Inc.

From: Huma Husain and Sam Tabibnia

Subject: 200 4th Street – Intersection Operation Results Comparison

OK15-0045

We recently submitted the Jack London Square 4th & Madison Project Administrative Draft EIR (EIR) for review. The intersection analysis for the EIR was based on the analysis completed for the Jack London Square Redevelopment Project Addendum to the 2004 EIR (JLS). These intersection results differ from those presented in the Lake Merritt Station Area Plan EIR (LMSP). This memorandum summarizes the differences between the JLS and LMSP intersection analysis results and assumptions and summarizes those that were used for the 4th and Madison EIR. The memo focuses on the following four study intersections:

- Jackson Street/5th Street
- Jackson Street/6th Street
- Oak Street/5th Street
- Oak Street/6th Street

Table 1 compares the delay and levels of service (LOS) results from the LMSP and JLS traffic studies at these four intersections. As shown in the table, the results of the LOS analysis have some significant differences, particularly in the Cumulative 2035 plus Project scenarios. The JLS study reports the four study intersections operating at LOS C or better under all analyzed scenarios, while the LMSP study reports LOS E or LOS F for the four study intersections under the Cumulative 2035 plus Project scenario. The differences in results between the two studies can generally be attributed to the following:

- LMSP assumes a peak hour factor for each intersection turning movement while JLS assumes a global peak hour factor of 1.0. This difference has a substantial effect on LOS.
- LMSP generally used higher Cumulative 2035 traffic volumes.
- LMSP assumptions, such as use of pedestrian volumes, lost time, and cycle lengths, contribute to a higher intersection delay than JLS.
- LMSP and JLS assume different lane configurations for all four intersections.

This remainder of this memorandum compares the intersection volumes, analysis assumptions, and lane configurations in further detail for Existing and Cumulative 2035 plus Project scenarios for the two projects.

For the 4th and Madison EIR analysis, we used JLS intersection volumes and assumptions as a base because they were the latest published data; however, we adjusted factors, such as the lane configurations and cycle lengths, to reflect actual existing conditions.

TABLE 1 – INTERSECTION LOS COMPARISON

Scenario[1]	Jackson/5th		Jackson/6th		Oak/5th		Oak/6th	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
LMSP EIR								
EX AM	15.9	B	15.9	B	12.3	B	11.1	B
EX PM	25.5	C	18.5	B	43.1	D	9.0	A
2035 + P AM	**58.4**	**E**	**412.8**	**F**	**148.4**	**F**	**395.3**	**F**
2035 + P PM	**113.2**	**F**	**187.1**	**F**	**129.0**	**F**	**451.6**	**F**
JLS ADDENDUM								
EX AM	13.9	B	11.9	B	8.8	A	8.9	A
EX PM	16.2	B	11.6	B	9.7	A	8.8	A
2035 + P AM	15.2	B	19.5	B	12.3	B	9.9	A
2035 + P PM	30.9	C	14.6	B	31.8	C	11.1	B

1. EX = Existing Scenario, 2035+P = Cumulative 2035 plus Project scenario
Source: Jack London Square EIR Addendum and Lake Merritt Specific Plan EIR

INTERSECTION VOLUMES

Table 2 summarizes the AM and PM peak hour intersection volumes for the two projects. LMSP used volumes collected in 2012 and JLS used volumes collected in 2013. The volumes under Existing conditions do not vary by more than five percent between the two projects, which is within the expected day-to-day fluctuation in traffic volumes, with the exception of the Jackson Street/6th Street intersection during the AM peak hour, where LMSP has 24 percent less volume. For this intersection, JLS has more than double the southbound right-turn volume.

TABLE 2: PEAK HOUR INTERSECTION VOLUMES

Scenario[1]	Jackson/5th			Jackson/6th			Oak/5th			Oak/6th		
	LMSP	JLS	% Diff	LMSP	JLS	% Diff	LMSP	JLS	% Diff	LMSP	JLS	% Diff
EX AM	1,342	1,337	0%	1,796	2,221	-24%	1,306	1,298	1%	1,196	1,188	1%
EX PM	1,596	1,635	-2%	1,588	1,635	-3%	1,790	1,739	3%	1,304	1,237	5%
2035 + P AM	1,676	1,695	-1%	2,286	2,575	-13%	2,221	2,242	-1%	2,150	1,381	36%
2035 + P PM	2,650	2,319	13%	2,413	2,107	13%	2,416	2,934	-21%	2,207	1,630	26%

1. EX = Existing Scenario, 2035+P = Cumulative 2035 plus Project scenario

Source: Jack London Square EIR Addendum and Lake Merritt Specific Plan

Both reports used the Alameda County Transportation Commission's 2009 Travel Demand Model to forecast 2035 volumes. Under Cumulative 2035 plus Project conditions, the volume differences are more varied across the two reports and peak hours. During the AM peak hour, JLS forecasts are higher at all intersections except the Oak Street/6th Street intersection, where the northbound approach volume for LMSP is more than double the JLS northbound approach volume. During the PM peak hour, LMSP forecasts are higher at all intersections except the Oak Street/5th Street intersection, where the northbound and southbound approach volumes are nearly double for JLS.

INTERSECTION ANALYSIS ASSUMPTIONS

Both JLS and LMSP analyzed the four intersections using Synchro 8 software and HCM 2000. However, the projects differed in the following assumptions:

- Peak Hour Factor (PHF) – As specified by the City of Oakland Transportation Impact Study Guidelines, JLS uses a universal PHF of 1.0. The PHF for LMSP varies by intersection movement, which generally ranges between 0.80 and 0.95. Consistent with the JLS assumptions and City's guidelines, we used a PHF of 1.0.
- Conflicting Pedestrian Volumes – LMSP accounts for pedestrian volumes. JLS does not. We included the LMSP pedestrian volumes in our analysis.
- Total Lost Time – LMSP uses a universal lost time of 4.0 seconds. JLS uses 5.5 seconds for the Jackson Street intersections and 4.0 seconds for the Oak Street intersections. Our analysis is consistent with the JLS assumptions.
- Cycle Length/Signal Timings – LMSP and JLS use different cycle lengths and signal timings. Based on our review of City's signal timing sheets and field observations, the LMSP assumptions are correct. We used these assumptions in our analysis.

INTERSECTION LANE CONFIGURATIONS

The JLS and LMSP projects assume different lane configurations at each of the four study intersections. The lane configurations do not change between Existing and Cumulative 2035 plus Project scenarios in either report. The differences are as follows:

- **Jackson Street/5th Street** – JLS assumes two southbound lanes, one through lane and one left-turn only lane. LMSP assumes one southbound shared left-turn/through lane. The LMSP configuration is correct and is used in our analysis.
- **Jackson Street/6th Street** - JLS includes the westbound right-turn only movement as part of the signalized intersection, while LMSP includes this movement as a stop-

controlled right-turn, not controlled by the signal. For JLS, the southbound approach is configured with two lanes, a through lane and right-turn only lane. The LMSP includes two southbound lanes, a shared through/right-turn lane and a channelized right-turn only lane with a yield bar and merge lane in the westbound movement. The LMSP configuration is correct and is used in our analysis.

- **Oak Street/5th Street** – JLS assumes three eastbound lanes, one shared through/right-turn lane, one through lane, and one through/left-turn lane. LMSP assumes three eastbound lanes as well, but shows a right-turn only lane instead of a shared through/right-turn lane. In the northbound direction, JLS assumes two lanes, one through lane and one shared through/right-turn lane. LMSP assumes one northbound shared lane. The JLS configuration is correct and is used in our analysis.
- **Oak Street/6th Street** – JLS does not include the one-way westbound 6th Street approach. LMSP includes this approach. The LMSP configuration is correct and is used for our analysis.

Please contact us with questions or concerns.

APPENDIX E

Air Quality and Greenhouse Gas Emissions – CalEEMod, Report, HRA Dispersion Model and ISCST3 Model

Jack London Square 4th and Madison Project

San Francisco Bay Area Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	11.73	1000sqft	0.00	11,734.00	0
Enclosed Parking with Elevator	147.00	1000sqft	3.37	147,000.00	0
Health Club	4.10	1000sqft	0.00	4,104.00	0
Apartments Mid Rise	330.00	Dwelling Unit	2.07	362,455.00	944
Convenience Market (24 Hour)	2.96	1000sqft	0.00	2,962.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - In accordance with CalEEMod Guidelines, the total lot acreage (2.07 acres) was assigned to the residential portion. The default square footage for the residential portion changed based on the project description.

Construction Phase - No site preparation (i.e., vegetation removal) included in the project.

Demolition -

Architectural Coating - BAAQMD Regulation 8, Rule 3: Architechtural Coatings. Assumed nonflat-high-gloss coatings.

Vehicle Trips - Fehr & Peers, 2015. Assigned the 1,324 daily trips to residential.

Woodstoves - No woodstoves or fireplaces.

Area Coating - BAAQMD Regulation 8, Rule 3: Architechtural Coatings. Assumed nonflat-high-gloss coatings.

Water And Wastewater - EBMUD services at the project site and applies 100 percent aerobic process and 100 percent cogeneration

Construction Off-road Equipment Mitigation - Incorporates SCA for dust control and off-road heavy diesel engines meet CARB's most recent certification standard.

Mobile Land Use Mitigation -

Area Mitigation - BAAQMD Reg 8, Rule 3

Waste Mitigation -

Grading - Total acres adjusted to project size.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	15
tblAreaCoating	Area_EF_Residential_Exterior	250	15
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	150

tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	230.00
tblGrading	AcresOfGrading	3.00	2.07
tblLandUse	LandUseSquareFeet	11,730.00	11,734.00
tblLandUse	LandUseSquareFeet	4,100.00	4,104.00
tblLandUse	LandUseSquareFeet	330,000.00	362,455.00
tblLandUse	LandUseSquareFeet	2,960.00	2,962.00
tblLandUse	LotAcreage	0.27	0.00
tblLandUse	LotAcreage	0.09	0.00
tblLandUse	LotAcreage	8.68	2.07

tblLandUse	LotAcreage	0.07	0.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	WD_TR	6.59	4.01
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	2.9698	4.1616	5.1807	8.8100e-003	0.4189	0.2238	0.6427	0.1140	0.2132	0.3272	0.0000	730.2329	730.2329	0.0815	0.0000	731.9442
2017	2.2787	6.2100e-003	0.0119	2.0000e-005	1.3800e-003	4.4000e-004	1.8300e-003	3.7000e-004	4.4000e-004	8.1000e-004	0.0000	1.8459	1.8459	1.3000e-004	0.0000	1.8486
Total	**5.2485**	**4.1678**	**5.1926**	**8.8300e-003**	**0.4203**	**0.2242**	**0.6445**	**0.1144**	**0.2137**	**0.3280**	**0.0000**	**732.0788**	**732.0788**	**0.0816**	**0.0000**	**733.7928**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	2.5473	1.4108	4.8820	8.8100e-003	0.3640	0.0184	0.3824	0.0991	0.0173	0.1164	0.0000	730.2326	730.2326	0.0815	0.0000	731.9438
2017	2.2779	1.0700e-003	0.0118	2.0000e-005	1.2800e-003	2.0000e-005	1.3000e-003	3.4000e-004	2.0000e-005	3.6000e-004	0.0000	1.8459	1.8459	1.3000e-004	0.0000	1.8486
Total	**4.8253**	**1.4119**	**4.8938**	**8.8300e-003**	**0.3653**	**0.0184**	**0.3837**	**0.0994**	**0.0173**	**0.1167**	**0.0000**	**732.0785**	**732.0785**	**0.0816**	**0.0000**	**733.7925**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	8.06	66.12	5.76	0.00	13.10	91.79	40.47	13.06	91.91	64.42	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

<u>Unmitigated Operational</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.7282	0.0377	3.1251	1.3900e-003		0.1140	0.1140		0.1140	0.1140	11.7297	12.7312	24.4609	0.0436	4.5000e-004	25.5159
Energy	0.0177	0.1522	0.0720	9.6000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	589.3356	589.3356	0.0221	7.0800e-003	591.9957
Mobile	1.9991	3.5674	17.1445	0.0309	2.1063	0.0452	2.1515	0.5653	0.0416	0.6069	0.0000	2,308.1801	2,308.1801	0.0968	0.0000	2,310.2135
Waste						0.0000	0.0000		0.0000	0.0000	39.5792	0.0000	39.5792	2.3391	0.0000	88.6995
Water						0.0000	0.0000		0.0000	0.0000	8.5080	49.7183	58.2263	0.0315	0.0190	64.7684
Total	**4.7450**	**3.7572**	**20.3416**	**0.0333**	**2.1063**	**0.1715**	**2.2777**	**0.5653**	**0.1679**	**0.7331**	**59.8169**	**2,959.9652**	**3,019.7821**	**2.5331**	**0.0265**	**3,081.1929**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.5948	0.0287	2.4692	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	4.0055	4.0055	3.9700e-003	0.0000	4.0889
Energy	0.0177	0.1522	0.0720	9.6000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	589.3356	589.3356	0.0221	7.0800e-003	591.9957
Mobile	1.9313	3.1128	15.6174	0.0259	1.7377	0.0384	1.7761	0.4663	0.0353	0.5017	0.0000	1,927.9712	1,927.9712	0.0831	0.0000	1,929.7169
Waste						0.0000	0.0000		0.0000	0.0000	19.7896	0.0000	19.7896	1.1695	0.0000	44.3497
Water						0.0000	0.0000		0.0000	0.0000	8.5080	49.7183	58.2263	0.0317	0.0190	64.7819
Total	**4.5438**	**3.2936**	**18.1586**	**0.0269**	**1.7377**	**0.0641**	**1.8017**	**0.4663**	**0.0610**	**0.5274**	**28.2976**	**2,571.0306**	**2,599.3282**	**1.3104**	**0.0261**	**2,634.9332**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	4.24	12.34	10.73	19.05	17.50	62.64	20.90	17.50	63.64	28.07	52.69	13.14	13.92	48.27	1.58	14.48

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Grading	Grading	1/29/2016	2/5/2016	5	6	
3	Building Construction	Building Construction	2/6/2016	12/23/2016	5	230	
4	Architectural Coating	Architectural Coating	12/24/2016	1/6/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.07

Acres of Paving: 0

Residential Indoor: 733,971; Residential Outdoor: 244,657; Non-Residential Indoor: 248,700; Non-Residential Outdoor: 82,900 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	273.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	306.00	62.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	61.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0295	0.0000	0.0295	4.4700e-003	0.0000	4.4700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0291	0.2826	0.2150	2.4000e-004		0.0175	0.0175		0.0163	0.0163	0.0000	22.5629	22.5629	5.7000e-003	0.0000	22.6827
Total	**0.0291**	**0.2826**	**0.2150**	**2.4000e-004**	**0.0295**	**0.0175**	**0.0470**	**4.4700e-003**	**0.0163**	**0.0208**	**0.0000**	**22.5629**	**22.5629**	**5.7000e-003**	**0.0000**	**22.6827**

3.2 Demolition - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2300e-003	0.0409	0.0353	1.0000e-004	2.3000e-003	5.3000e-004	2.8300e-003	6.3000e-004	4.9000e-004	1.1200e-003	0.0000	9.3642	9.3642	7.0000e-005	0.0000	9.3656
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	7.1000e-004	6.9200e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0702	1.0702	6.0000e-005	0.0000	1.0714
Total	**3.7200e-003**	**0.0416**	**0.0422**	**1.1000e-004**	**3.4800e-003**	**5.4000e-004**	**4.0200e-003**	**9.4000e-004**	**5.0000e-004**	**1.4400e-003**	**0.0000**	**10.4343**	**10.4343**	**1.3000e-004**	**0.0000**	**10.4370**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0133	0.0000	0.0133	2.0100e-003	0.0000	2.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8400e-003	0.0123	0.1484	2.4000e-004		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	22.5628	22.5628	5.7000e-003	0.0000	22.6826
Total	**2.8400e-003**	**0.0123**	**0.1484**	**2.4000e-004**	**0.0133**	**3.8000e-004**	**0.0137**	**2.0100e-003**	**3.8000e-004**	**2.3900e-003**	**0.0000**	**22.5628**	**22.5628**	**5.7000e-003**	**0.0000**	**22.6826**

3.2 Demolition - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2300e-003	0.0409	0.0353	1.0000e-004	2.1400e-003	5.3000e-004	2.6800e-003	5.9000e-004	4.9000e-004	1.0800e-003	0.0000	9.3642	9.3642	7.0000e-005	0.0000	9.3656
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	7.1000e-004	6.9200e-003	1.0000e-005	1.0900e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0702	1.0702	6.0000e-005	0.0000	1.0714
Total	**3.7200e-003**	**0.0416**	**0.0422**	**1.1000e-004**	**3.2300e-003**	**5.4000e-004**	**3.7800e-003**	**8.8000e-004**	**5.0000e-004**	**1.3800e-003**	**0.0000**	**10.4343**	**10.4343**	**1.3000e-004**	**0.0000**	**10.4370**

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0192	0.0000	0.0192	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5600e-003	0.0898	0.0589	6.0000e-005		5.0000e-003	5.0000e-003		4.6000e-003	4.6000e-003	0.0000	5.8222	5.8222	1.7600e-003	0.0000	5.8590
Total	**8.5600e-003**	**0.0898**	**0.0589**	**6.0000e-005**	**0.0192**	**5.0000e-003**	**0.0242**	**0.0101**	**4.6000e-003**	**0.0147**	**0.0000**	**5.8222**	**5.8222**	**1.7600e-003**	**0.0000**	**5.8590**

3.3 Grading - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.6000e-004	1.6000e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2470	0.2470	1.0000e-005	0.0000	0.2472
Total	**1.1000e-004**	**1.6000e-004**	**1.6000e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2470**	**0.2470**	**1.0000e-005**	**0.0000**	**0.2472**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.6200e-003	0.0000	8.6200e-003	4.5200e-003	0.0000	4.5200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5000e-004	3.2500e-003	0.0381	6.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	5.8221	5.8221	1.7600e-003	0.0000	5.8590
Total	**7.5000e-004**	**3.2500e-003**	**0.0381**	**6.0000e-005**	**8.6200e-003**	**1.0000e-004**	**8.7200e-003**	**4.5200e-003**	**1.0000e-004**	**4.6200e-003**	**0.0000**	**5.8221**	**5.8221**	**1.7600e-003**	**0.0000**	**5.8590**

3.3 Grading - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.6000e-004	1.6000e-003	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2470	0.2470	1.0000e-005	0.0000	0.2472
Total	**1.1000e-004**	**1.6000e-004**	**1.6000e-003**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2470**	**0.2470**	**1.0000e-005**	**0.0000**	**0.2472**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4253	2.8327	1.9224	2.8600e-003		0.1870	0.1870		0.1790	0.1790	0.0000	245.3987	245.3987	0.0565	0.0000	246.5861
Total	**0.4253**	**2.8327**	**1.9224**	**2.8600e-003**		**0.1870**	**0.1870**		**0.1790**	**0.1790**	**0.0000**	**245.3987**	**245.3987**	**0.0565**	**0.0000**	**246.5861**

3.4 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0908	0.7146	1.0547	1.7000e-003	0.0459	0.0107	0.0566	0.0132	9.8000e-003	0.0230	0.0000	154.1928	154.1928	1.2400e-003	0.0000	154.2188
Worker	0.1334	0.1934	1.8731	3.8000e-003	0.3192	2.6700e-003	0.3219	0.0849	2.4500e-003	0.0874	0.0000	289.6815	289.6815	0.0160	0.0000	290.0166
Total	**0.2242**	**0.9080**	**2.9278**	**5.5000e-003**	**0.3651**	**0.0133**	**0.3784**	**0.0981**	**0.0123**	**0.1103**	**0.0000**	**443.8743**	**443.8743**	**0.0172**	**0.0000**	**444.2354**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0377	0.4443	1.7111	2.8600e-003		4.0200e-003	4.0200e-003		4.0200e-003	4.0200e-003	0.0000	245.3984	245.3984	0.0565	0.0000	246.5858
Total	**0.0377**	**0.4443**	**1.7111**	**2.8600e-003**		**4.0200e-003**	**4.0200e-003**		**4.0200e-003**	**4.0200e-003**	**0.0000**	**245.3984**	**245.3984**	**0.0565**	**0.0000**	**246.5858**

3.4 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0908	0.7146	1.0547	1.7000e-003	0.0429	0.0107	0.0536	0.0124	9.8000e-003	0.0222	0.0000	154.1928	154.1928	1.2400e-003	0.0000	154.2188
Worker	0.1334	0.1934	1.8731	3.8000e-003	0.2944	2.6700e-003	0.2971	0.0788	2.4500e-003	0.0813	0.0000	289.6815	289.6815	0.0160	0.0000	290.0166
Total	**0.2242**	**0.9080**	**2.9278**	**5.5000e-003**	**0.3373**	**0.0133**	**0.3506**	**0.0913**	**0.0123**	**0.1035**	**0.0000**	**443.8743**	**443.8743**	**0.0172**	**0.0000**	**444.2354**

3.5 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2773					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2000e-004	5.9300e-003	4.7100e-003	1.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.6383	0.6383	8.0000e-005	0.0000	0.6399
Total	**2.2783**	**5.9300e-003**	**4.7100e-003**	**1.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**0.6383**	**0.6383**	**8.0000e-005**	**0.0000**	**0.6399**

3.5 Architectural Coating - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	8.4000e-004	8.1200e-003	2.0000e-005	1.3800e-003	1.0000e-005	1.3900e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.2554	1.2554	7.0000e-005	0.0000	1.2568
Total	**5.8000e-004**	**8.4000e-004**	**8.1200e-003**	**2.0000e-005**	**1.3800e-003**	**1.0000e-005**	**1.3900e-003**	**3.7000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.2554**	**1.2554**	**7.0000e-005**	**0.0000**	**1.2568**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2773					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0000e-005	3.2000e-004	4.5800e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.6383	0.6383	8.0000e-005	0.0000	0.6399
Total	**2.2774**	**3.2000e-004**	**4.5800e-003**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.6383**	**0.6383**	**8.0000e-005**	**0.0000**	**0.6399**

3.5 Architectural Coating - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	8.4000e-004	8.1200e-003	2.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.2554	1.2554	7.0000e-005	0.0000	1.2568
Total	**5.8000e-004**	**8.4000e-004**	**8.1200e-003**	**2.0000e-005**	**1.2800e-003**	**1.0000e-005**	**1.2900e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.2554**	**1.2554**	**7.0000e-005**	**0.0000**	**1.2568**

3.5 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2773					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6397
Total	**2.2782**	**5.4600e-003**	**4.6700e-003**	**1.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**	**0.0000**	**0.6383**	**0.6383**	**7.0000e-005**	**0.0000**	**0.6397**

3.5 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	7.5000e-004	7.2200e-003	2.0000e-005	1.3800e-003	1.0000e-005	1.3900e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.2076	1.2076	6.0000e-005	0.0000	1.2089
Total	**5.1000e-004**	**7.5000e-004**	**7.2200e-003**	**2.0000e-005**	**1.3800e-003**	**1.0000e-005**	**1.3900e-003**	**3.7000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.2076**	**1.2076**	**6.0000e-005**	**0.0000**	**1.2089**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2773					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0000e-005	3.2000e-004	4.5800e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6397
Total	**2.2774**	**3.2000e-004**	**4.5800e-003**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.6383**	**0.6383**	**7.0000e-005**	**0.0000**	**0.6397**

3.5 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	7.5000e-004	7.2200e-003	2.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.2076	1.2076	6.0000e-005	0.0000	1.2089
Total	**5.1000e-004**	**7.5000e-004**	**7.2200e-003**	**2.0000e-005**	**1.2800e-003**	**1.0000e-005**	**1.2900e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.2076**	**1.2076**	**6.0000e-005**	**0.0000**	**1.2089**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9313	3.1128	15.6174	0.0259	1.7377	0.0384	1.7761	0.4663	0.0353	0.5017	0.0000	1,927.9712	1,927.9712	0.0831	0.0000	1,929.7169
Unmitigated	1.9991	3.5674	17.1445	0.0309	2.1063	0.0452	2.1515	0.5653	0.0416	0.6069	0.0000	2,308.1801	2,308.1801	0.0968	0.0000	2,310.2135

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,323.30	2,362.80	2003.10	3,502,391	2,889,507
Convenience Market (24 Hour)	2,184.45	2,554.78	2245.01	1,710,506	1,411,184
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	129.15	27.80	11.50	233,865	192,941
Health Club	135.01	85.57	109.59	214,780	177,195
Total	3,771.91	5,030.94	4,369.20	5,661,542	4,670,828

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546229	0.063048	0.174586	0.122573	0.033968	0.004845	0.015596	0.024745	0.002089	0.003270	0.006707	0.000678	0.001667

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	414.3342	414.3342	0.0187	3.8800e-003	415.9293
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	414.3342	414.3342	0.0187	3.8800e-003	415.9293
NaturalGas Mitigated	0.0177	0.1522	0.0720	9.6000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.0014	175.0014	3.3500e-003	3.2100e-003	176.0664
NaturalGas Unmitigated	0.0177	0.1522	0.0720	9.6000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.0014	175.0014	3.3500e-003	3.2100e-003	176.0664

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market (24 Hour)	14217.6	8.0000e-005	7.0000e-004	5.9000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7587	0.7587	1.0000e-005	1.0000e-005	0.7633
General Office Building	238083	1.2800e-003	0.0117	9.8000e-003	7.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	12.7050	12.7050	2.4000e-004	2.3000e-004	12.7823
Health Club	105391	5.7000e-004	5.1700e-003	4.3400e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.6241	5.6241	1.1000e-004	1.0000e-004	5.6583
Apartments Mid Rise	2.92171e+006	0.0158	0.1346	0.0573	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	155.9136	155.9136	2.9900e-003	2.8600e-003	156.8625
Total		**0.0177**	**0.1522**	**0.0720**	**9.6000e-004**		**0.0122**	**0.0122**		**0.0122**	**0.0122**	**0.0000**	**175.0014**	**175.0014**	**3.3500e-003**	**3.2000e-003**	**176.0664**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market (24 Hour)	14217.6	8.0000e-005	7.0000e-004	5.9000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7587	0.7587	1.0000e-005	1.0000e-005	0.7633
General Office Building	238083	1.2800e-003	0.0117	9.8000e-003	7.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	12.7050	12.7050	2.4000e-004	2.3000e-004	12.7823
Health Club	105391	5.7000e-004	5.1700e-003	4.3400e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.6241	5.6241	1.1000e-004	1.0000e-004	5.6583
Apartments Mid Rise	2.92171e+006	0.0158	0.1346	0.0573	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	155.9136	155.9136	2.9900e-003	2.8600e-003	156.8625
Total		**0.0177**	**0.1522**	**0.0720**	**9.6000e-004**		**0.0122**	**0.0122**		**0.0122**	**0.0122**	**0.0000**	**175.0014**	**175.0014**	**3.3500e-003**	**3.2000e-003**	**176.0664**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.19307e+006	347.0764	0.0157	3.2500e-003	348.4126
Convenience Market (24 Hour)	34388.8	10.0041	4.5000e-004	9.0000e-005	10.0426
General Office Building	162868	47.3802	2.1400e-003	4.4000e-004	47.5625
Health Club	33940.1	9.8736	4.5000e-004	9.0000e-005	9.9116
Total		**414.3342**	**0.0187**	**3.8700e-003**	**415.9293**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.19307e +006	347.0764	0.0157	3.2500e-003	348.4126
Convenience Market (24 Hour)	34388.8	10.0041	4.5000e-004	9.0000e-005	10.0426
General Office Building	162868	47.3802	2.1400e-003	4.4000e-004	47.5625
Health Club	33940.1	9.8736	4.5000e-004	9.0000e-005	9.9116
Total		**414.3342**	**0.0187**	**3.8700e-003**	**415.9293**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.5948	0.0287	2.4692	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	4.0055	4.0055	3.9700e-003	0.0000	4.0889
Unmitigated	2.7282	0.0377	3.1251	1.3900e-003		0.1140	0.1140		0.1140	0.1140	11.7297	12.7312	24.4609	0.0436	4.5000e-004	25.5159

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3011					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0631					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2878	9.0800e-003	0.6559	1.2600e-003		0.1006	0.1006		0.1006	0.1006	11.7297	8.7257	20.4554	0.0396	4.5000e-004	21.4269
Landscaping	0.0762	0.0287	2.4692	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	4.0055	4.0055	3.9700e-003	0.0000	4.0889
Total	**2.7282**	**0.0377**	**3.1251**	**1.3900e-003**		**0.1140**	**0.1140**		**0.1140**	**0.1140**	**11.7297**	**12.7312**	**24.4609**	**0.0436**	**4.5000e-004**	**25.5159**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4555					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0631					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0762	0.0287	2.4692	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	4.0055	4.0055	3.9700e-003	0.0000	4.0889
Total	**2.5948**	**0.0287**	**2.4692**	**1.3000e-004**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**4.0055**	**4.0055**	**3.9700e-003**	**0.0000**	**4.0889**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	58.2263	0.0317	0.0190	64.7819
Unmitigated	58.2263	0.0315	0.0190	64.7684

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	21.5008 / 13.5549	52.1010	0.0282	0.0170	57.9503
Convenience Market (24 Hour)	0.219255 / 0.134382	0.5274	2.9000e-004	1.7000e-004	0.5870
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	2.08482 / 1.27779	5.0147	2.7300e-003	1.6400e-003	5.5818
Health Club	0.242487 / 0.148621	0.5833	3.2000e-004	1.9000e-004	0.6492
Total		**58.2263**	**0.0315**	**0.0190**	**64.7684**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	21.5008 / 13.5549	52.1010	0.0283	0.0170	57.9625
Convenience Market (24 Hour)	0.219255 / 0.134382	0.5274	2.9000e-004	1.7000e-004	0.5871
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	2.08482 / 1.27779	5.0147	2.7500e-003	1.6500e-003	5.5829
Health Club	0.242487 / 0.148621	0.5833	3.2000e-004	1.9000e-004	0.6494
Total		**58.2263**	**0.0317**	**0.0190**	**64.7819**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.7896	1.1695	0.0000	44.3497
Unmitigated	39.5792	2.3391	0.0000	88.6995

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	151.8	30.8140	1.8211	0.0000	69.0562
Convenience Market (24 Hour)	8.9	1.8066	0.1068	0.0000	4.0488
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	10.91	2.2146	0.1309	0.0000	4.9631
Health Club	23.37	4.7439	0.2804	0.0000	10.6314
Total		**39.5792**	**2.3391**	**0.0000**	**88.6995**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	75.9	15.4070	0.9105	0.0000	34.5281
Convenience Market (24 Hour)	4.45	0.9033	0.0534	0.0000	2.0244
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	5.455	1.1073	0.0654	0.0000	2.4816
Health Club	11.685	2.3720	0.1402	0.0000	5.3157
Total		**19.7896**	**1.1695**	**0.0000**	**44.3498**

9.0 Operational Offroad

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

10.0 Vegetation

Summary of AERSCREEN and Health Risk Assessment parameters for Construction DPM and $PM_{2.5}$ Emissions
Jack London Square 4th & Madison

Construction Duration	Quantity	Notes
Total Constrution Work Days	266	CalEEMod
Total Hauling Work Days	20	CalEEMod
Work Hours/Day	8	CalEEMod

AERSCREEN Parameters	Units	Value	Notes
On-Site DPM Emissions	tons	0.0047	CalEEMod exhaust PM_{10}
On-Site $PM_{2.5}$ Emissions	tons	0.0047	CalEEMod exhaust $PM_{2.5}$
Release Height of Area Sources	meters	5	SCAQMD, 2008 (revised)
Block A DPM Emissions	tons	0.0031	Assume 2/3 of total emissions (based on area)
Block A $PM_{2.5}$ Emissions	tons	0.0031	Assume 2/3 of total emissions (based on area)
Block A DPM Emission Rate	gram/second	0.000368	Converted PM_{10} emissions
Block A $PM_{2.5}$ Emission Rate	gram/second	0.000368	Converted exhaust $PM_{2.5}$
Block A Max horizontal dimension	meters	100	Project site dimension
Block A Min horizontal dimension	meters	70	Project site dimension
Block B DPM Emissions	tons	0.0016	Assume 1/3 of total emissions (based on area)
Block B $PM_{2.5}$ Emissions	tons	0.0016	Assume 1/3 of total emissions (based on area)
Block B DPM Emission Rate	gram/second	0.000184	Converted PM_{10} emissions
Block B $PM_{2.5}$ Emission Rate	gram/second	0.000184	Converted exhaust $PM_{2.5}$
Block B Max horizontal dimension	meters	50	Project site dimension
Block B Min horizontal dimension	meters	70	Project site dimension
Haul Road DPM Emissions	tons	0.00053	CalEEMod exhaust PM10
Haul Road PM2.5 Emissions	tons	0.00053	CalEEMod exhaust PM2.5
Haul Road DPM Emission Rate	gram/second	0.00083	Converted PM_{10} emissions
Haul Road PM2.5 Emission Rate	gram/second	0.00083	Converted exhaust $PM_{2.5}$
Haul Road Max horizontal dimension	meters	18.19	5th Street frontage road to I-880
Haul Road Min horizontal dimension	meters	537.7	5th Street frontage road to I-880

Emissions Sources	Pollutant	Max Annual Average Concentration	Notes
On-Site Construction and Off-haul	DPM ($\mu g/m^3$)	0.79	One-hour maximum concentratation
	$PM_{2.5}$ ($\mu g/m^3$)	0.79	One-hour maximum concentratation
On-Site Construction and Off-haul	DPM ($\mu g/m^3$)	0.079	Annual average concentration
	$PM_{2.5}$ ($\mu g/m^3$)	0.079	Annual average concentration

Health Risk Assessment Parameters	Units	Values for a child <2	Source
Annual Exposure Duration (ED)	days/365 days	0.73	Total work days
Daily Exposure Time (ET)	hour/24 hours	0.33	8-hour workday
Exposure Frequency (EF)	days/year	350	OEHHA, 2015
Daily Breathing Rate (DBR)	L/kg-day	658	OEHHA, 2015
Averaging Time (AT)	days	25,550	70 years for residents (OEHHA, 2015)
Age Sensitivity Factor (ASF)	unitless	10	OEHHA, 2015
DPM Cancer Potency Factor (CPF)	$(mg/kg/day)^{-1}$	1.1	OEHHA, 2015
DPM Chronic REL	$\mu g/m^3$	5	OEHHA, 2015
Conversion Factor (CF)	m^3/L	0.000001	OEHHA, 2015

Emissions Source	Health Risk Assessment Target Receptor	Pollutant	Excess Cancer Risk per Million	Chronic Hazard Index
Construction	Child under the age of 2	DPM	1.9	0.16

Notes:
Construction durations based on CalEEMod results.
DPM = diesel particulate matter
$PM_{2.5}$ = particulate matter with aerodynamic resistance diameters equal to or less than 10 microns
REL = reference exposure level
$\mu g/m^3$ = micrograms per cubic meter
L/kg-day = liters per kilogram-day
m^3/L = cubic meters per liter
$(mg/kg/day)^{-1}$ = 1/milligrams per kilograms per day

South Coast Air Quality Management District (SQAMD), 2008 (revised)*Final Localized Significance Threshold Methodology*. July.
Office of Environmental Health Hazard Assessment (OEHHA), 2015*Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. February.

ONSITE Construction ONLY - Tier 4 Equipment

Pollutant	Exhaust PM_{10}	Exhaust $PM_{2.5}$
Units	Ton/yr	Ton/yr
Demo	0.00038	0.00038
Grading	0.00010	0.00010
Building	0.0040	0.0040
Paving	0.00014	0.00014
Arch (2016)	0.000010	0.000010
Arch (2017)	0.000010	0.000010
Total Emissions	**0.0047**	**0.0047**

```
**
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**
** ISCST3 Input Produced by:
** AERMOD View Ver. 8.8.9
** Lakes Environmental Software Inc.
** Date: 3/27/2015
** File: C:\Lakes\AERMOD View\CostPlus\JackLondonSquare_CostPlus
\JackLondonSquare_CostPlus.INP
**
**************************************
**
**
**************************************
** ISCST3 Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\CostPlus
\JackLondonSquare_CostPlus\JackLondonSq
   MODELOPT DFAULT CONC  URBAN
   AVERTIME 1
   POLLUTID PM_10
   TERRHGTS FLAT
   FLAGPOLE 1.50
   RUNORNOT RUN
CO FINISHED
**
**************************************
** ISCST3 Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION BLOCKA       AREA       564319.800  4183336.910
** DESCRSRC BLOCK A
   LOCATION BLOCKB       AREA       564328.970  4183238.850
** DESCRSRC BLOCK B
**
-----------------------------------------------------------------
----
** Line Source Represented by Area Sources
** LINE AREA Source ID = ARLN1
** DESCRSRC Demolition Haul
** PREFIX
** Length of Side = 18.19
** Ratio = 10
** Vertical Dimension = 2.17
** Emission Rate = 8.4845E-08
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** 564447.050, 4183359.332, 0.00, 0.00
** 564556.165, 4183305.357, 0.00, 0.00
** 564680.613, 4183239.391, 0.00, 0.00
** 564680.620, 4183248.051, 0.00, 0.00
** 564561.707, 4183311.612, 0.00, 0.00
** 564450.355, 4183366.196, 0.00, 0.00
**
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   LOCATION A0000002     AREA     564443.017 4183351.179
   LOCATION A0000003     AREA     564551.905 4183297.320
   LOCATION A0000004     AREA     564689.709 4183239.384
   LOCATION A0000005     AREA     564684.908 4183256.073
   LOCATION A0000006     AREA     564565.710 4183319.779
** End of LINE AREA Source ID = ARLN1
** Source Parameters **
   SRCPARAM BLOCKA       5.2571E-08     5.000   100.000    70.000
25.800
   SRCPARAM BLOCKB       5.2571E-08     5.000    50.000    70.000
25.800
** LINE AREA Source ID = ARLN1
   SRCPARAM A0000001     8.4845E-08     0.000     7.649    18.192
114.527     2.169
   SRCPARAM A0000002     8.4845E-08     0.000   121.735    18.192
26.320     2.169
   SRCPARAM A0000003     8.4845E-08     0.000   140.851    18.192
27.926     2.169
   SRCPARAM A0000004     8.4845E-08     0.000     8.660    18.192
-89.954     2.169
   SRCPARAM A0000005     8.4845E-08     0.000   134.835    18.192
-151.875     2.169
   SRCPARAM A0000006     8.4845E-08     0.000   124.010    18.192
-153.886     2.169
**
-----------------------------------------------------------------
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   SRCGROUP ALL
SO FINISHED
**
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** ISCST3 Receptor Pathway
****************************************
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RE STARTING
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   DISCCART    564380.56   4183055.66    1.50
   DISCCART    564405.56   4183055.66    1.50
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DISCCART	564640.92	4183411.35	12.00
DISCCART	564665.92	4183411.35	12.00
DISCCART	564640.92	4183436.35	12.00
DISCCART	564665.92	4183436.35	12.00
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DISCCART	564665.92	4183361.35	6.00
DISCCART	564665.92	4183361.35	12.00
DISCCART	564665.92	4183361.35	18.00
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DISCCART	564518.39	4183565.14	18.00
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DISCCART	564518.39	4183590.14	18.00
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DISCCART	564493.39	4183565.14	1.50
DISCCART	564518.39	4183565.14	1.50
DISCCART	564444.18	4183586.16	1.50
DISCCART	564468.39	4183590.14	1.50
DISCCART	564493.39	4183590.14	1.50
DISCCART	564518.39	4183590.14	1.50
DISCCART	564543.39	4183590.14	1.50
DISCCART	564468.39	4183565.14	6.00
DISCCART	564493.39	4183565.14	6.00
DISCCART	564518.39	4183565.14	6.00
DISCCART	564444.18	4183586.16	6.00
DISCCART	564468.39	4183590.14	6.00
DISCCART	564493.39	4183590.14	6.00
DISCCART	564518.39	4183590.14	6.00
DISCCART	564543.39	4183590.14	6.00
DISCCART	564468.39	4183565.14	12.00
DISCCART	564493.39	4183565.14	12.00
DISCCART	564518.39	4183565.14	12.00

DISCCART	564444.18	4183586.16	12.00
DISCCART	564468.39	4183590.14	12.00
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DISCCART	564543.39	4183590.14	12.00
DISCCART	564493.39	4183540.14	1.50
DISCCART	564518.39	4183540.14	1.50
DISCCART	564493.39	4183540.14	6.00
DISCCART	564518.39	4183540.14	6.00
DISCCART	564493.39	4183540.14	12.00
DISCCART	564518.39	4183540.14	12.00
DISCCART	564493.39	4183540.14	18.00
DISCCART	564518.39	4183540.14	18.00
DISCCART	564315.44	4183535.21	18.00
DISCCART	564340.44	4183535.21	18.00
DISCCART	564365.44	4183535.21	18.00
DISCCART	564291.24	4183556.22	18.00
DISCCART	564315.44	4183560.21	18.00
DISCCART	564340.44	4183560.21	18.00
DISCCART	564365.44	4183560.21	18.00
DISCCART	564390.44	4183560.21	18.00
DISCCART	564315.44	4183585.21	18.00
DISCCART	564340.44	4183585.21	18.00
DISCCART	564315.44	4183535.21	1.50
DISCCART	564340.44	4183535.21	1.50
DISCCART	564365.44	4183535.21	1.50
DISCCART	564291.24	4183556.22	1.50
DISCCART	564315.44	4183560.21	1.50
DISCCART	564340.44	4183560.21	1.50
DISCCART	564365.44	4183560.21	1.50
DISCCART	564390.44	4183560.21	1.50
DISCCART	564315.44	4183585.21	1.50
DISCCART	564340.44	4183585.21	1.50
DISCCART	564315.44	4183535.21	6.00
DISCCART	564340.44	4183535.21	6.00
DISCCART	564365.44	4183535.21	6.00
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DISCCART	564340.44	4183560.21	6.00
DISCCART	564365.44	4183560.21	6.00
DISCCART	564390.44	4183560.21	6.00
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DISCCART	564340.44	4183585.21	6.00
DISCCART	564315.44	4183535.21	12.00
DISCCART	564340.44	4183535.21	12.00
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DISCCART	564291.24	4183556.22	12.00
DISCCART	564315.44	4183560.21	12.00
DISCCART	564340.44	4183560.21	12.00
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DISCCART	564315.44	4183585.21	12.00

DISCCART	564340.44	4183585.21	12.00
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DISCCART	564365.44	4183510.21	1.50
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DISCCART	564403.84	4183580.73	6.00
DISCCART	564402.39	4183608.06	6.00
DISCCART	564403.84	4183580.73	12.00
DISCCART	564402.39	4183608.06	12.00
DISCCART	564403.84	4183580.73	18.00
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DISCCART	564100.62	4183061.91	1.50
DISCCART	564100.62	4183111.91	1.50
DISCCART	564126.39	4183107.81	1.50
DISCCART	564100.62	4183061.91	6.00
DISCCART	564125.62	4183061.91	6.00
DISCCART	564150.62	4183061.91	6.00
DISCCART	564075.62	4183086.91	6.00
DISCCART	564100.62	4183086.91	6.00
DISCCART	564125.62	4183086.91	6.00
DISCCART	564150.62	4183086.91	6.00
DISCCART	564100.62	4183111.91	6.00
DISCCART	564126.39	4183107.81	6.00
DISCCART	564125.62	4183061.91	1.50
DISCCART	564100.62	4183061.91	12.00
DISCCART	564125.62	4183061.91	12.00
DISCCART	564150.62	4183061.91	12.00
DISCCART	564075.62	4183086.91	12.00
DISCCART	564100.62	4183086.91	12.00
DISCCART	564125.62	4183086.91	12.00
DISCCART	564150.62	4183086.91	12.00
DISCCART	564100.62	4183111.91	12.00
DISCCART	564126.39	4183107.81	12.00
DISCCART	564150.62	4183061.91	1.50
DISCCART	564100.62	4183061.91	18.00
DISCCART	564125.62	4183061.91	18.00
DISCCART	564150.62	4183061.91	18.00
DISCCART	564075.62	4183086.91	18.00
DISCCART	564100.62	4183086.91	18.00
DISCCART	564125.62	4183086.91	18.00
DISCCART	564150.62	4183086.91	18.00
DISCCART	564100.62	4183111.91	18.00
DISCCART	564126.39	4183107.81	18.00
DISCCART	564075.62	4183086.91	1.50
DISCCART	564100.62	4183086.91	1.50
DISCCART	564125.62	4183086.91	1.50
DISCCART	564150.62	4183086.91	1.50
DISCCART	564189.29	4183019.60	1.50
DISCCART	564189.29	4183069.60	1.50
DISCCART	564215.06	4183065.50	1.50
DISCCART	564189.29	4183019.60	6.00
DISCCART	564214.29	4183019.60	6.00
DISCCART	564239.29	4183019.60	6.00
DISCCART	564164.29	4183044.60	6.00
DISCCART	564189.29	4183044.60	6.00
DISCCART	564214.29	4183044.60	6.00
DISCCART	564239.29	4183044.60	6.00
DISCCART	564189.29	4183069.60	6.00
DISCCART	564215.06	4183065.50	6.00
DISCCART	564214.29	4183019.60	1.50
DISCCART	564189.29	4183019.60	12.00
DISCCART	564214.29	4183019.60	12.00

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   DISCCART    564164.29   4183044.60   12.00
   DISCCART    564189.29   4183044.60   12.00
   DISCCART    564214.29   4183044.60   12.00
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   DISCCART    564189.29   4183069.60   12.00
   DISCCART    564215.06   4183065.50   12.00
   DISCCART    564239.29   4183019.60    1.50
   DISCCART    564189.29   4183019.60   18.00
   DISCCART    564214.29   4183019.60   18.00
   DISCCART    564239.29   4183019.60   18.00
   DISCCART    564164.29   4183044.60   18.00
   DISCCART    564189.29   4183044.60   18.00
   DISCCART    564214.29   4183044.60   18.00
   DISCCART    564239.29   4183044.60   18.00
   DISCCART    564189.29   4183069.60   18.00
   DISCCART    564215.06   4183065.50   18.00
   DISCCART    564164.29   4183044.60    1.50
   DISCCART    564189.29   4183044.60    1.50
   DISCCART    564214.29   4183044.60    1.50
   DISCCART    564239.29   4183044.60    1.50
   DISCCART    564092.50   4183043.88    1.50
   DISCCART    564118.27   4183039.78    1.50
   DISCCART    564067.50   4183018.88    6.00
   DISCCART    564092.50   4183018.88    6.00
   DISCCART    564117.50   4183018.88    6.00
   DISCCART    564142.50   4183018.88    6.00
   DISCCART    564092.50   4183043.88    6.00
   DISCCART    564118.27   4183039.78    6.00
   DISCCART    564067.50   4183018.88   12.00
   DISCCART    564092.50   4183018.88   12.00
   DISCCART    564117.50   4183018.88   12.00
   DISCCART    564142.50   4183018.88   12.00
   DISCCART    564092.50   4183043.88   12.00
   DISCCART    564118.27   4183039.78   12.00
   DISCCART    564067.50   4183018.88   18.00
   DISCCART    564092.50   4183018.88   18.00
   DISCCART    564117.50   4183018.88   18.00
   DISCCART    564142.50   4183018.88   18.00
   DISCCART    564092.50   4183043.88   18.00
   DISCCART    564118.27   4183039.78   18.00
   DISCCART    564067.50   4183018.88    1.50
   DISCCART    564092.50   4183018.88    1.50
   DISCCART    564117.50   4183018.88    1.50
   DISCCART    564142.50   4183018.88    1.50
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary
Receptors"
   DISCCART    564326.35   4183232.66  100.00
   DISCCART    564363.36   4183310.38  100.00
   DISCCART    564315.34   4183332.82  100.00
```

```
   DISCCART    564350.90   4183407.47  100.00
   DISCCART    564447.81   4183358.72  100.00
   DISCCART    564375.93   4183209.29  100.00
RE FINISHED
**
****************************************
** ISCST3 Meteorology Pathway
****************************************
**
**
ME STARTING
   INPUTFIL METDAT~1\300MMI~1\OST003RA.ASC
   ANEMHGHT 10 METERS
   SURFDATA 1804 2000
   UAIRDATA 1804 2000
ME FINISHED
**
****************************************
** ISCST3 Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST JACKLO~1.IS\01H1GALL.PLT 31
OU FINISHED

***********************************
*** SETUP Finishes Successfully ***
***********************************
```

 *** ISCST3 - VERSION 02035 ***   *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                   ***
***   07:14:59
**MODELOPTs:
PAGE   1
CONC   URBAN FLAT FLGPOL DFAULT

                                           ***   MODEL SETUP
OPTIONS SUMMARY   ***
- -
- -

**Intermediate Terrain Processing is Selected

**Model Is Setup For Calculation of Average CONCentration Values.

  -- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion
Calculations

**Model Uses URBAN Dispersion.

**Model Uses Regulatory DEFAULT Options:
           1. Final Plume Rise.
           2. Stack-tip Downwash.
           3. Buoyancy-induced Dispersion.
           4. Use Calms Processing Routine.
           5. Not Use Missing Data Processing Routine.
           6. Default Wind Profile Exponents.
           7. Default Vertical Potential Temperature Gradients.
           8. "Upper Bound" Values for Supersquat Buildings.
           9. No Exponential Decay for URBAN/Non-SO2

**Model Assumes Receptors on FLAT Terrain.

**Model Accepts FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 1-HR

**This Run Includes: 8 Source(s);   1 Source Group(s); and
782 Receptor(s)

**The Model Assumes A Pollutant Type of: PM_10

**Model Set To Continue RUNning After the Setup Testing.

```
**Output Options Selected:
         Model Outputs Tables of Highest Short Term Values by
Receptor (RECTABLE Keyword)
         Model Outputs External File(s) of High Values for
Plotting (PLOTFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c
for Calm Hours
                                                                m
for Missing Hours
                                                                b
for Both Calm and Missing Hours

**Misc. Inputs:  Anem. Hgt. (m) =    10.00 ;    Decay Coef. =
0.000     ;    Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC
;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =     1.2 MB of RAM.

**Input Runstream File:          JackLondonSquare_CostPlus.INP
**Output Print File:             JackLondonSquare_CostPlus.OUT
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                   ***
***         07:14:59
**MODELOPTs:
PAGE   2
CONC                     URBAN FLAT  FLGPOL DFAULT



                                                       *** AREA SOURCE
DATA ***

             NUMBER EMISSION RATE  COORD (SW CORNER)  BASE
RELEASE  X-DIM     Y-DIM    ORIENT.    INIT.  EMISSION RATE
   SOURCE     PART.  (GRAMS/SEC       X         Y       ELEV.
HEIGHT  OF AREA   OF AREA   OF AREA     SZ     SCALAR VARY
     ID       CATS.   /METER**2)   (METERS) (METERS) (METERS)
(METERS) (METERS)  (METERS)   (DEG.)  (METERS)      BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

  BLOCKA        0   0.52571E-07  564319.8 4183337.0     0.0
5.00    100.00     70.00     25.80     0.00
  BLOCKB        0   0.52571E-07  564329.0 4183238.8     0.0
5.00     50.00     70.00     25.80     0.00
  A0000001      0   0.84845E-07  564441.9 4183370.0     0.0
0.00      7.65     18.19    114.53     2.17
  A0000002      0   0.84845E-07  564443.0 4183351.3     0.0
0.00    121.74     18.19     26.32     2.17
  A0000003      0   0.84845E-07  564551.9 4183297.2     0.0
0.00    140.85     18.19     27.93     2.17
  A0000004      0   0.84845E-07  564689.7 4183239.5     0.0
0.00      8.66     18.19    -89.95     2.17
  A0000005      0   0.84845E-07  564684.9 4183256.0     0.0
0.00    134.84     18.19   -151.88     2.17
  A0000006      0   0.84845E-07  564565.7 4183319.8     0.0
0.00    124.01     18.19   -153.89     2.17
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*** ISCST3 - VERSION 02035 *** *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
***
*** 07:14:59
**MODELOPTs:
PAGE 3
CONC URBAN FLAT FLGPOL DFAULT

*** SOURCE IDs DEFINING
SOURCE GROUPS ***

GROUP ID SOURCE
IDs

ALL BLOCKA , BLOCKB , A0000001, A0000002, A0000003,
A0000004, A0000005, A0000006,

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                   ***
***        07:14:59
**MODELOPTs:
PAGE   4
CONC                    URBAN FLAT  FLGPOL DFAULT


                                              *** DISCRETE
CARTESIAN RECEPTORS ***
                                                (X-COORD, Y-COORD,
ZELEV, ZFLAG)

(METERS)

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    ( 564355.6, 4183080.8,       0.0,       1.5);         (
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    ( 564405.6, 4183080.8,       0.0,       1.5);         (
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    ( 564381.3, 4183101.5,       0.0,       1.5);         (
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    ( 564330.6, 4183155.8,       0.0,       1.5);         (
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    ( 564255.6, 4183205.8,       0.0,       1.5);         (
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    ( 564480.6, 4183205.8,       0.0,       1.5);         (
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    ( 564180.6, 4183230.8,       0.0,       1.5);         (
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(564255.6, 4183330.8, 0.0, 1.5); (
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564155.6, 4183355.8,        0.0,        1.5);
    ( 564205.6, 4183355.8,        0.0,        1.5);            (
564230.6, 4183355.8,        0.0,        1.5);
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CONC   URBAN FLAT FLGPOL DFAULT

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

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564205.6, 4183380.8,       0.0,       1.5);
    ( 564230.6, 4183380.8,       0.0,       1.5);          (
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    ( 564230.6, 4183405.8,       0.0,       1.5);          (
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    ( 564280.6, 4183405.8,       0.0,       1.5);          (
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    ( 564151.6, 4183418.2,       0.0,       1.5);          (
564255.6, 4183430.8,       0.0,       1.5);
    ( 564280.6, 4183430.8,       0.0,       1.5);          (
564655.6, 4183605.8,       0.0,       1.5);
    ( 564355.6, 4183055.8,       0.0,       6.0);          (
564380.6, 4183055.8,       0.0,       6.0);
    ( 564405.6, 4183055.8,       0.0,       6.0);          (
564330.6, 4183080.8,       0.0,       6.0);
    ( 564355.6, 4183080.8,       0.0,       6.0);          (
564380.6, 4183080.8,       0.0,       6.0);
    ( 564405.6, 4183080.8,       0.0,       6.0);          (
564580.6, 4183080.8,       0.0,       6.0);
    ( 564606.0, 4183070.8,       0.0,       6.0);          (
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    ( 564381.3, 4183101.5,       0.0,       6.0);          (
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    ( 564330.6, 4183155.8,       0.0,       6.0);          (
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    ( 564280.6, 4183180.8,       0.0,       6.0);          (
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    ( 564330.6, 4183180.8,       0.0,       6.0);          (
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    ( 564457.1, 4183184.2,       0.0,       6.0);          (
564477.1, 4183184.8,       0.0,       6.0);
    ( 564205.6, 4183205.8,       0.0,       6.0);          (
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(564155.6, 4183255.8, 0.0, 6.0); (
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(564205.6, 4183255.8, 0.0, 6.0); (
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(564330.6, 4183255.8, 0.0, 6.0); (
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(564180.6, 4183280.8, 0.0, 6.0); (
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(564230.6, 4183280.8, 0.0, 6.0); (
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(564155.6, 4183305.8, 0.0, 6.0); (
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564330.6, 4183305.8,        0.0,        6.0);
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 *** ISCST3 - VERSION 02035 ***    *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                   ***
***        07:14:59
**MODELOPTs:
PAGE   6
CONC                    URBAN FLAT  FLGPOL DFAULT


                                          *** DISCRETE
CARTESIAN RECEPTORS ***
                                            (X-COORD, Y-COORD,
ZELEV, ZFLAG)

(METERS)

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564155.6, 4183330.8,       0.0,       6.0);
    ( 564205.6, 4183330.8,       0.0,       6.0);          (
564230.6, 4183330.8,       0.0,       6.0);
    ( 564255.6, 4183330.8,       0.0,       6.0);          (
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564155.6, 4183355.8,       0.0,       6.0);
    ( 564205.6, 4183355.8,       0.0,       6.0);          (
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    ( 564130.6, 4183380.8,       0.0,       6.0);          (
564205.6, 4183380.8,       0.0,       6.0);
    ( 564230.6, 4183380.8,       0.0,       6.0);          (
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    ( 564230.6, 4183405.8,       0.0,       6.0);          (
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    ( 564280.6, 4183405.8,       0.0,       6.0);          (
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    ( 564151.6, 4183418.2,       0.0,       6.0);          (
564255.6, 4183430.8,       0.0,       6.0);
    ( 564280.6, 4183430.8,       0.0,       6.0);          (
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    ( 564355.6, 4183055.8,       0.0,      12.0);          (
564380.6, 4183055.8,       0.0,      12.0);
    ( 564405.6, 4183055.8,       0.0,      12.0);          (
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    ( 564355.6, 4183080.8,       0.0,      12.0);          (
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    ( 564405.6, 4183080.8,       0.0,      12.0);          (
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    ( 564381.3, 4183101.5,        0.0,       12.0);           (
564305.6, 4183155.8,        0.0,       12.0);
    ( 564330.6, 4183155.8,        0.0,       12.0);           (
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    ( 564280.6, 4183180.8,        0.0,       12.0);           (
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    ( 564480.6, 4183205.8,        0.0,       12.0);           (
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    ( 564180.6, 4183230.8,        0.0,       12.0);           (
564205.6, 4183230.8,        0.0,       12.0);
    ( 564230.6, 4183230.8,        0.0,       12.0);           (
564280.6, 4183230.8,        0.0,       12.0);
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    ( 564105.6, 4183255.8,        0.0,       12.0);           (
564130.6, 4183255.8,        0.0,       12.0);
    ( 564155.6, 4183255.8,        0.0,       12.0);           (
564180.6, 4183255.8,        0.0,       12.0);
    ( 564205.6, 4183255.8,        0.0,       12.0);           (
564230.6, 4183255.8,        0.0,       12.0);
    ( 564255.6, 4183255.8,        0.0,       12.0);           (
564305.6, 4183255.8,        0.0,       12.0);
    ( 564330.6, 4183255.8,        0.0,       12.0);           (
564418.7, 4183257.8,        0.0,       12.0);
    ( 564449.9, 4183248.0,        0.0,       12.0);           (
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    ( 564080.6, 4183280.8,        0.0,       12.0);           (
564105.6, 4183280.8,        0.0,       12.0);
    ( 564130.6, 4183280.8,        0.0,       12.0);           (
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    ( 564180.6, 4183280.8,        0.0,       12.0);           (
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    ( 564230.6, 4183280.8,        0.0,       12.0);            (
564255.6, 4183280.8,        0.0,       12.0);
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 *** ISCST3 - VERSION 02035 ***    *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                   ***
***        07:14:59
**MODELOPTs:
PAGE   7
CONC                     URBAN FLAT  FLGPOL DFAULT


                                            *** DISCRETE
CARTESIAN RECEPTORS ***
                                              (X-COORD, Y-COORD,
ZELEV, ZFLAG)

(METERS)

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    ( 564105.6, 4183305.8,       0.0,      12.0);          (
564130.6, 4183305.8,       0.0,      12.0);
    ( 564155.6, 4183305.8,       0.0,      12.0);          (
564180.6, 4183305.8,       0.0,      12.0);
    ( 564205.6, 4183305.8,       0.0,      12.0);          (
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    ( 564255.6, 4183305.8,       0.0,      12.0);          (
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    ( 564305.6, 4183305.8,       0.0,      12.0);          (
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    ( 564130.6, 4183330.8,       0.0,      12.0);          (
564155.6, 4183330.8,       0.0,      12.0);
    ( 564205.6, 4183330.8,       0.0,      12.0);          (
564230.6, 4183330.8,       0.0,      12.0);
    ( 564255.6, 4183330.8,       0.0,      12.0);          (
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    ( 564080.6, 4183355.8,       0.0,      12.0);          (
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    ( 564130.6, 4183355.8,       0.0,      12.0);          (
564155.6, 4183355.8,       0.0,      12.0);
    ( 564205.6, 4183355.8,       0.0,      12.0);          (
564230.6, 4183355.8,       0.0,      12.0);
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    ( 564230.6, 4183405.8,       0.0,      12.0);          (
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    ( 564280.6, 4183180.8,        0.0,      18.0);           (
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    ( 564330.6, 4183180.8,        0.0,      18.0);           (
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564477.1, 4183184.8,        0.0,      18.0);
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    ( 564255.6, 4183205.8,        0.0,      18.0);           (
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    ( 564305.6, 4183205.8,        0.0,      18.0);           (
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    ( 564355.6, 4183205.8,        0.0,      18.0);           (
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    ( 564430.6, 4183205.8,        0.0,      18.0);           (
564455.6, 4183205.8,        0.0,      18.0);
    ( 564480.6, 4183205.8,        0.0,      18.0);           (
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    ( 564180.6, 4183230.8,        0.0,      18.0);           (
564205.6, 4183230.8,        0.0,      18.0);
    ( 564230.6, 4183230.8,        0.0,      18.0);           (
564280.6, 4183230.8,        0.0,      18.0);
    ( 564305.6, 4183230.8,        0.0,      18.0);           (
564330.6, 4183220.0,        0.0,      18.0);
    ( 564405.6, 4183230.8,        0.0,      18.0);           (
564430.6, 4183230.8,        0.0,      18.0);
    ( 564455.6, 4183230.8,        0.0,      18.0);           (
564480.6, 4183230.8,        0.0,      18.0);
    ( 564105.6, 4183255.8,        0.0,      18.0);           (
564130.6, 4183255.8,        0.0,      18.0);
    ( 564155.6, 4183255.8,        0.0,      18.0);           (
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    ( 564205.6, 4183255.8,        0.0,       18.0);           (
564230.6, 4183255.8,        0.0,       18.0);
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*** ISCST3 - VERSION 02035 ***   *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
***
***   07:14:59
**MODELOPTs:
PAGE   8
CONC   URBAN FLAT FLGPOL DFAULT

*** DISCRETE
CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD,
ZELEV, ZFLAG)

(METERS)

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(564330.6, 4183255.8,   0.0,   18.0);   (
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(564180.6, 4183280.8,   0.0,   18.0);   (
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(564230.6, 4183280.8,   0.0,   18.0);   (
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(564155.6, 4183305.8,   0.0,   18.0);   (
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(564205.6, 4183305.8,   0.0,   18.0);   (
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(564255.6, 4183305.8,   0.0,   18.0);   (
564280.6, 4183305.8,   0.0,   18.0);
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(564130.6, 4183330.8,   0.0,   18.0);   (
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(564205.6, 4183330.8,   0.0,   18.0);   (
564230.6, 4183330.8,   0.0,   18.0);
(564255.6, 4183330.8,   0.0,   18.0);   (

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    ( 564130.6, 4183355.8,        0.0,       18.0);            (
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    ( 564205.6, 4183355.8,        0.0,       18.0);            (
564230.6, 4183355.8,        0.0,       18.0);
    ( 564080.6, 4183380.8,        0.0,       18.0);            (
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    ( 564130.6, 4183380.8,        0.0,       18.0);            (
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    ( 564230.6, 4183380.8,        0.0,       18.0);            (
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    ( 564280.6, 4183405.8,        0.0,       18.0);            (
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    ( 564151.6, 4183418.2,        0.0,       18.0);            (
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    ( 564280.6, 4183430.8,        0.0,       18.0);            (
564655.6, 4183605.8,        0.0,       18.0);
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    ( 564455.1, 4183487.0,        0.0,       18.0);            (
564480.1, 4183487.0,        0.0,       18.0);
    ( 564405.9, 4183508.0,        0.0,       18.0);            (
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    ( 564455.1, 4183512.0,        0.0,       18.0);            (
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    ( 564505.1, 4183512.0,        0.0,       18.0);            (
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    ( 564480.1, 4183487.0,        0.0,        1.5);            (
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    ( 564430.1, 4183512.0,        0.0,        1.5);            (
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    ( 564480.1, 4183512.0,        0.0,        1.5);            (
564505.1, 4183512.0,        0.0,        1.5);
    ( 564430.1, 4183537.0,        0.0,        1.5);            (
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    ( 564228.1, 4183369.8,        0.0,        6.0);            (
564430.1, 4183487.0,        0.0,        6.0);
    ( 564455.1, 4183487.0,        0.0,        6.0);            (
564480.1, 4183487.0,        0.0,        6.0);
    ( 564405.9, 4183508.0,        0.0,        6.0);            (
564430.1, 4183512.0,        0.0,        6.0);
    ( 564455.1, 4183512.0,        0.0,        6.0);            (
564480.1, 4183512.0,        0.0,        6.0);
    ( 564505.1, 4183512.0,        0.0,        6.0);            (
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    ( 564455.1, 4183537.0,        0.0,        6.0);            (
564228.1, 4183369.8,        0.0,       12.0);
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 *** ISCST3 - VERSION 02035 ***    *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                         ***
***        07:14:59
**MODELOPTs:
PAGE   9
CONC                    URBAN FLAT  FLGPOL DFAULT


                                                  *** DISCRETE
CARTESIAN RECEPTORS ***
                                                    (X-COORD, Y-COORD,
ZELEV, ZFLAG)

(METERS)

    ( 564430.1, 4183487.0,       0.0,      12.0);          (
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    ( 564480.1, 4183487.0,       0.0,      12.0);          (
564405.9, 4183508.0,       0.0,      12.0);
    ( 564430.1, 4183512.0,       0.0,      12.0);          (
564455.1, 4183512.0,       0.0,      12.0);
    ( 564480.1, 4183512.0,       0.0,      12.0);          (
564505.1, 4183512.0,       0.0,      12.0);
    ( 564430.1, 4183537.0,       0.0,      12.0);          (
564455.1, 4183537.0,       0.0,      12.0);
    ( 564455.1, 4183462.0,       0.0,       1.5);          (
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    ( 564455.1, 4183462.0,       0.0,       6.0);          (
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    ( 564455.1, 4183462.0,       0.0,      18.0);          (
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    ( 564535.5, 4183432.2,       0.0,      18.0);          (
564560.5, 4183432.2,       0.0,      18.0);
    ( 564585.5, 4183432.2,       0.0,      18.0);          (
564511.3, 4183453.3,       0.0,      18.0);
    ( 564535.5, 4183457.2,       0.0,      18.0);          (
564560.5, 4183457.2,       0.0,      18.0);
    ( 564585.5, 4183457.2,       0.0,      18.0);          (
564610.5, 4183457.2,       0.0,      18.0);
    ( 564535.5, 4183482.2,       0.0,      18.0);          (
564560.5, 4183482.2,       0.0,      18.0);
    ( 564535.5, 4183432.2,       0.0,       1.5);          (
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    ( 564585.5, 4183432.2,       0.0,       1.5);          (
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    ( 564535.5, 4183457.2,       0.0,       1.5);          (
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    ( 564585.5, 4183457.2,       0.0,       1.5);          (
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    ( 564585.5, 4183432.2,        0.0,        6.0);           (
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    ( 564535.5, 4183457.2,        0.0,        6.0);           (
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    ( 564585.5, 4183457.2,        0.0,        6.0);           (
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    ( 564535.5, 4183482.2,        0.0,        6.0);           (
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    ( 564535.5, 4183432.2,        0.0,       12.0);           (
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    ( 564585.5, 4183432.2,        0.0,       12.0);           (
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    ( 564585.5, 4183457.2,        0.0,       12.0);           (
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    ( 564535.5, 4183482.2,        0.0,       12.0);           (
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    ( 564560.5, 4183407.2,        0.0,       12.0);           (
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    ( 564560.5, 4183407.2,        0.0,       18.0);           (
564585.5, 4183407.2,        0.0,       18.0);
    ( 564640.9, 4183386.2,        0.0,       18.0);           (
564665.9, 4183386.2,        0.0,       18.0);
    ( 564616.8, 4183407.2,        0.0,       18.0);           (
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    ( 564665.9, 4183411.2,        0.0,       18.0);           (
564640.9, 4183436.2,        0.0,       18.0);
    ( 564665.9, 4183436.2,        0.0,       18.0);           (
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    ( 564665.9, 4183386.2,        0.0,        1.5);           (
564616.8, 4183407.2,        0.0,        1.5);
    ( 564640.9, 4183411.2,        0.0,        1.5);           (
564665.9, 4183411.2,        0.0,        1.5);
    ( 564640.9, 4183436.2,        0.0,        1.5);           (
564665.9, 4183436.2,        0.0,        1.5);
    ( 564640.9, 4183386.2,        0.0,        6.0);           (
564665.9, 4183386.2,        0.0,        6.0);
    ( 564616.8, 4183407.2,        0.0,        6.0);           (
564640.9, 4183411.2,        0.0,        6.0);
    ( 564665.9, 4183411.2,        0.0,        6.0);           (
564640.9, 4183436.2,        0.0,        6.0);
    ( 564665.9, 4183436.2,        0.0,        6.0);           (
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    ( 564665.9, 4183386.2,        0.0,       12.0);           (
564616.8, 4183407.2,        0.0,       12.0);
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*** ISCST3 - VERSION 02035 ***   *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
***
***   07:14:59
**MODELOPTs:
PAGE 10
CONC   URBAN FLAT FLGPOL DFAULT

*** DISCRETE
CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD,
ZELEV, ZFLAG)

(METERS)

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(564518.4, 4183565.2,   0.0,   18.0);   (
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(564518.4, 4183565.2,   0.0,   1.5);   (
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(564468.4, 4183565.2,   0.0,   12.0);   (
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(564518.4, 4183565.2,   0.0,   12.0);   (

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    ( 564518.4, 4183590.2,        0.0,      12.0);           (
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    ( 564493.4, 4183540.2,        0.0,       6.0);           (
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    ( 564365.4, 4183535.3,        0.0,      18.0);           (
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    ( 564315.4, 4183585.2,        0.0,      18.0);           (
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    ( 564365.4, 4183535.3,        0.0,       1.5);           (
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    ( 564315.4, 4183560.2,        0.0,       1.5);           (
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    ( 564315.4, 4183585.2,        0.0,       6.0);           (
564340.4, 4183585.2,        0.0,       6.0);
    ( 564315.4, 4183535.3,        0.0,      12.0);           (
564340.4, 4183535.3,        0.0,      12.0);
    ( 564365.4, 4183535.3,        0.0,      12.0);           (
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    ( 564365.4, 4183560.2,        0.0,      12.0);           (
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    ( 564315.4, 4183585.2,        0.0,      12.0);           (
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564365.4, 4183510.3,        0.0,        1.5);
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*** DISCRETE
CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD,
ZELEV, ZFLAG)

(METERS)

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564402.7, 4183594.8,       0.0,      18.0);
    ( 564427.7, 4183594.8,       0.0,      18.0);          (
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    ( 564402.7, 4183594.8,       0.0,       1.5);          (
564427.7, 4183594.8,       0.0,       1.5);
    ( 564377.7, 4183594.8,       0.0,       6.0);          (
564402.7, 4183594.8,       0.0,       6.0);
    ( 564427.7, 4183594.8,       0.0,       6.0);          (
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    ( 564402.7, 4183594.8,       0.0,      12.0);          (
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    ( 564487.0, 4183607.0,        0.0,      12.0);            (
564487.0, 4183607.0,        0.0,      18.0);
    ( 564513.5, 4183606.8,        0.0,       1.5);            (
564513.5, 4183606.8,        0.0,       6.0);
    ( 564513.5, 4183606.8,        0.0,      12.0);            (
564513.5, 4183606.8,        0.0,      18.0);
    ( 564460.9, 4183607.5,        0.0,       1.5);            (
564460.9, 4183607.5,        0.0,       6.0);
    ( 564460.9, 4183607.5,        0.0,      12.0);            (
564460.9, 4183607.5,        0.0,      18.0);
    ( 564544.0, 4183565.0,        0.0,       1.5);            (
564544.0, 4183565.0,        0.0,       6.0);
    ( 564544.0, 4183565.0,        0.0,      12.0);            (
564544.0, 4183565.0,        0.0,      18.0);
    ( 564100.6, 4183062.0,        0.0,       1.5);            (
564100.6, 4183112.0,        0.0,       1.5);
    ( 564126.4, 4183107.8,        0.0,       1.5);            (
564100.6, 4183062.0,        0.0,       6.0);
    ( 564125.6, 4183062.0,        0.0,       6.0);            (
564150.6, 4183062.0,        0.0,       6.0);
    ( 564075.6, 4183087.0,        0.0,       6.0);            (
564100.6, 4183087.0,        0.0,       6.0);
    ( 564125.6, 4183087.0,        0.0,       6.0);            (
564150.6, 4183087.0,        0.0,       6.0);
    ( 564100.6, 4183112.0,        0.0,       6.0);            (
564126.4, 4183107.8,        0.0,       6.0);
    ( 564125.6, 4183062.0,        0.0,       1.5);            (
564100.6, 4183062.0,        0.0,      12.0);
    ( 564125.6, 4183062.0,        0.0,      12.0);            (
564150.6, 4183062.0,        0.0,      12.0);
    ( 564075.6, 4183087.0,        0.0,      12.0);            (
564100.6, 4183087.0,        0.0,      12.0);
    ( 564125.6, 4183087.0,        0.0,      12.0);            (
564150.6, 4183087.0,        0.0,      12.0);
    ( 564100.6, 4183112.0,        0.0,      12.0);            (
564126.4, 4183107.8,        0.0,      12.0);
    ( 564150.6, 4183062.0,        0.0,       1.5);            (
564100.6, 4183062.0,        0.0,      18.0);
    ( 564125.6, 4183062.0,        0.0,      18.0);            (
564150.6, 4183062.0,        0.0,      18.0);
    ( 564075.6, 4183087.0,        0.0,      18.0);            (
564100.6, 4183087.0,        0.0,      18.0);
    ( 564125.6, 4183087.0,        0.0,      18.0);            (
564150.6, 4183087.0,        0.0,      18.0);
    ( 564100.6, 4183112.0,        0.0,      18.0);            (
564126.4, 4183107.8,        0.0,      18.0);
    ( 564075.6, 4183087.0,        0.0,       1.5);            (
564100.6, 4183087.0,        0.0,       1.5);
    ( 564125.6, 4183087.0,        0.0,       1.5);            (
564150.6, 4183087.0,        0.0,       1.5);
    ( 564189.3, 4183019.5,        0.0,       1.5);            (
```

```
564189.3, 4183069.5,       0.0,       1.5);
    ( 564215.1, 4183065.5,       0.0,       1.5);          (
564189.3, 4183019.5,       0.0,       6.0);
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                   ***
***        07:14:59
**MODELOPTs:
PAGE  12
CONC                    URBAN FLAT  FLGPOL DFAULT


                                            *** DISCRETE
CARTESIAN RECEPTORS ***
                                              (X-COORD, Y-COORD,
ZELEV, ZFLAG)

(METERS)

    ( 564214.3, 4183019.5,       0.0,       6.0);          (
564239.3, 4183019.5,       0.0,       6.0);
    ( 564164.3, 4183044.5,       0.0,       6.0);          (
564189.3, 4183044.5,       0.0,       6.0);
    ( 564214.3, 4183044.5,       0.0,       6.0);          (
564239.3, 4183044.5,       0.0,       6.0);
    ( 564189.3, 4183069.5,       0.0,       6.0);          (
564215.1, 4183065.5,       0.0,       6.0);
    ( 564214.3, 4183019.5,       0.0,       1.5);          (
564189.3, 4183019.5,       0.0,      12.0);
    ( 564214.3, 4183019.5,       0.0,      12.0);          (
564239.3, 4183019.5,       0.0,      12.0);
    ( 564164.3, 4183044.5,       0.0,      12.0);          (
564189.3, 4183044.5,       0.0,      12.0);
    ( 564214.3, 4183044.5,       0.0,      12.0);          (
564239.3, 4183044.5,       0.0,      12.0);
    ( 564189.3, 4183069.5,       0.0,      12.0);          (
564215.1, 4183065.5,       0.0,      12.0);
    ( 564239.3, 4183019.5,       0.0,       1.5);          (
564189.3, 4183019.5,       0.0,      18.0);
    ( 564214.3, 4183019.5,       0.0,      18.0);          (
564239.3, 4183019.5,       0.0,      18.0);
    ( 564164.3, 4183044.5,       0.0,      18.0);          (
564189.3, 4183044.5,       0.0,      18.0);
    ( 564214.3, 4183044.5,       0.0,      18.0);          (
564239.3, 4183044.5,       0.0,      18.0);
    ( 564189.3, 4183069.5,       0.0,      18.0);          (
564215.1, 4183065.5,       0.0,      18.0);
    ( 564164.3, 4183044.5,       0.0,       1.5);          (
564189.3, 4183044.5,       0.0,       1.5);
    ( 564214.3, 4183044.5,       0.0,       1.5);          (
564239.3, 4183044.5,       0.0,       1.5);
    ( 564092.5, 4183044.0,       0.0,       1.5);          (
564118.2, 4183039.8,       0.0,       1.5);
    ( 564067.5, 4183019.0,       0.0,       6.0);          (
```

```
564092.5, 4183019.0,       0.0,       6.0);
    ( 564117.5, 4183019.0,       0.0,       6.0);          (
564142.5, 4183019.0,       0.0,       6.0);
    ( 564092.5, 4183044.0,       0.0,       6.0);          (
564118.2, 4183039.8,       0.0,       6.0);
    ( 564067.5, 4183019.0,       0.0,      12.0);          (
564092.5, 4183019.0,       0.0,      12.0);
    ( 564117.5, 4183019.0,       0.0,      12.0);          (
564142.5, 4183019.0,       0.0,      12.0);
    ( 564092.5, 4183044.0,       0.0,      12.0);          (
564118.2, 4183039.8,       0.0,      12.0);
    ( 564067.5, 4183019.0,       0.0,      18.0);          (
564092.5, 4183019.0,       0.0,      18.0);
    ( 564117.5, 4183019.0,       0.0,      18.0);          (
564142.5, 4183019.0,       0.0,      18.0);
    ( 564092.5, 4183044.0,       0.0,      18.0);          (
564118.2, 4183039.8,       0.0,      18.0);
    ( 564067.5, 4183019.0,       0.0,       1.5);          (
564092.5, 4183019.0,       0.0,       1.5);
    ( 564117.5, 4183019.0,       0.0,       1.5);          (
564142.5, 4183019.0,       0.0,       1.5);
    ( 564326.4, 4183232.8,       0.0,     100.0);          (
564363.4, 4183310.5,       0.0,     100.0);
    ( 564315.3, 4183332.8,       0.0,     100.0);          (
564350.9, 4183407.5,       0.0,     100.0);
    ( 564447.8, 4183358.8,       0.0,     100.0);          (
564375.9, 4183209.2,       0.0,     100.0);
```

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1 =YES; 0=NO)

```
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54,   3.09,   5.14,   8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY   WIND SPEED CATEGORY
CATEGORY   1   2   3

```
4              5              6
                  A           .15000E+00     .15000E+00
.15000E+00     .15000E+00      .15000E+00     .15000E+00
                  B           .15000E+00     .15000E+00
.15000E+00     .15000E+00      .15000E+00     .15000E+00
                  C           .20000E+00     .20000E+00
.20000E+00     .20000E+00      .20000E+00     .20000E+00
                  D           .25000E+00     .25000E+00
.25000E+00     .25000E+00      .25000E+00     .25000E+00
                  E           .30000E+00     .30000E+00
.30000E+00     .30000E+00      .30000E+00     .30000E+00
                  F           .30000E+00     .30000E+00
.30000E+00     .30000E+00      .30000E+00     .30000E+00

                                            *** VERTICAL POTENTIAL
TEMPERATURE GRADIENTS ***
                                                       (DEGREES
KELVIN PER METER)

               STABILITY                                WIND SPEED
CATEGORY
               CATEGORY          1              2              3
4              5              6
                  A           .00000E+00     .00000E+00
.00000E+00     .00000E+00      .00000E+00     .00000E+00
                  B           .00000E+00     .00000E+00
.00000E+00     .00000E+00      .00000E+00     .00000E+00
                  C           .00000E+00     .00000E+00
.00000E+00     .00000E+00      .00000E+00     .00000E+00
                  D           .00000E+00     .00000E+00
.00000E+00     .00000E+00      .00000E+00     .00000E+00
                  E           .20000E-01     .20000E-01
.20000E-01     .20000E-01      .20000E-01     .20000E-01
                  F           .35000E-01     .35000E-01
.35000E-01     .35000E-01      .35000E-01     .35000E-01
```

```
 *** ISCST3 - VERSION 02035 ***     *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                   ***
***        07:14:59
**MODELOPTs:
PAGE  14
CONC                     URBAN FLAT  FLGPOL DFAULT


                     *** THE FIRST  24 HOURS OF METEOROLOGICAL
DATA ***

     FILE:   METDAT~1\300MMI~1\OST003RA.ASC
     FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
     SURFACE STATION NO.:   1804                   UPPER AIR
STATION NO.:   1804
                    NAME: UNKNOWN
NAME: UNKNOWN
                    YEAR:   2000
YEAR:   2000

             FLOW   SPEED  TEMP  STAB  MIXING HEIGHT (M)  USTAR
M-O LENGTH   Z-0 IPCODE PRATE
YR MN DY HR VECTOR  (M/S)   (K)  CLASS   RURAL   URBAN    (M/S)
(M)       (M)       (mm/HR)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

00 01 01 01    3.0   2.55  283.5   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 02  355.0   1.83  283.3   5     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 03   94.5   1.97  283.2   6     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 04  152.6   3.89  282.3   5     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 05  164.1   4.47  281.8   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 06  172.0   5.01  281.9   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 07  178.7   2.73  282.0   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 08  148.7   2.19  282.0   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 09  133.5   2.37  281.8   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 10  153.8   1.92  282.0   3     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 11  351.9   1.25  282.8   2     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 12   53.1   2.15  283.1   1     300.0   300.0    0.0000
```

```
0.0  0.0000   0   0.00
00 01 01 13  112.2   2.59  282.9   2      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 14  127.9   1.92  283.3   3      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 15  104.2   1.70  284.3   2      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 16  125.0   7.29  284.5   3      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 17  119.0   8.72  284.6   4      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 18  126.9   7.64  284.0   4      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 19  130.0   6.97  283.8   4      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 20  124.8   5.99  283.6   4      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 21  111.9   5.50  283.4   4      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 22  126.9   5.10  283.0   4      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 23  133.0   6.44  282.8   4      300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 24  155.4   4.74  282.3   4      300.0   300.0    0.0000
0.0  0.0000   0   0.00


*** NOTES:  STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
            FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS
BLOWING.
```

```
 *** ISCST3 - VERSION 02035 ***     *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                                   ***
***         07:14:59
**MODELOPTs:
PAGE  15
CONC                        URBAN FLAT  FLGPOL DFAULT

                                      *** THE   1ST HIGHEST  1-HR AVERAGE
CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL      ***
                                          INCLUDING SOURCE(S):      BLOCKA
, BLOCKB  , A0000001, A0000002, A0000003, A0000004, A0000005,
         A0000006,

                                                         *** DISCRETE
CARTESIAN RECEPTOR POINTS ***

                                                    ** CONC OF PM_10    IN
MICROGRAMS/M**3                                       **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       564355.56   4183055.75        0.27956  (00122423)
564380.56   4183055.75        0.27269  (00052106)
       564405.56   4183055.75        0.25689  (00091703)
564330.56   4183080.75        0.32002  (00110407)
       564355.56   4183080.75        0.32015  (00122423)
564380.56   4183080.75        0.31188  (00052106)
       564405.56   4183080.75        0.28974  (00111905)
564580.56   4183080.75        0.18215  (00081607)
       564606.00   4183070.75        0.18614  (00081602)
564355.56   4183105.75        0.36927  (00122423)
       564381.31   4183101.50        0.34936  (00091804)
564305.56   4183155.75        0.46001  (00012020)
       564330.56   4183155.75        0.48570  (00032204)
564255.56   4183180.75        0.42452  (00110402)
       564280.56   4183180.75        0.48435  (00091724)
564305.56   4183180.75        0.52641  (00032804)
       564330.56   4183180.75        0.54462  (00092324)
564355.56   4183180.75        0.57163  (00093006)
       564457.06   4183184.25        0.29920  (00020824)
564477.13   4183184.75        0.27741  (00092924)
       564205.56   4183205.75        0.33808  (00032807)
564230.56   4183205.75        0.38004  (00012102)
       564255.56   4183205.75        0.43549  (00092504)
564280.56   4183205.75        0.51290  (00112004)
       564305.56   4183205.75        0.59042  (00081603)
564330.56   4183205.75        0.58547  (00011221)
       564355.56   4183205.75        0.56875  (00093006)
```

564405.56	4183205.75	0.46445	(00121705)
564430.56	4183205.75	0.36735	(00113002)
564455.56	4183205.75	0.32669	(00021807)
564480.56	4183205.75	0.30249	(00112402)
564155.56	4183230.75	0.28479	(00011207)
564180.56	4183230.75	0.30858	(00011207)
564205.56	4183230.75	0.33992	(00011207)
564230.56	4183230.75	0.38008	(00090702)
564280.56	4183230.75	0.49026	(00032807)
564305.56	4183230.75	0.56742	(00112004)
564330.56	4183220.00	0.58537	(00122024)
564405.56	4183230.75	0.46098	(00110202)
564430.56	4183230.75	0.39083	(00112401)
564455.56	4183230.75	0.37427	(00031505)
564480.56	4183230.75	0.34176	(00121922)
564105.56	4183255.75	0.26238	(00052107)
564130.56	4183255.75	0.27651	(00011207)
564155.56	4183255.75	0.29242	(00090702)
564180.56	4183255.75	0.30928	(00052006)
564205.56	4183255.75	0.33185	(00092323)
564230.56	4183255.75	0.36611	(00010704)
564255.56	4183255.75	0.41013	(00092323)
564305.56	4183255.75	0.50172	(00011207)
564330.56	4183255.75	0.54999	(00091801)
564418.69	4183257.75	0.44471	(00020603)
564449.88	4183248.00	0.42156	(00112402)
564055.56	4183280.75	0.24659	(00010704)
564080.56	4183280.75	0.26291	(00010704)
564105.56	4183280.75	0.27992	(00092323)
564130.56	4183280.75	0.29845	(00011208)
564155.56	4183280.75	0.31934	(00052107)
564180.56	4183280.75	0.34191	(00011207)
564205.56	4183280.75	0.36723	(00052006)
564230.56	4183280.75	0.39047	(00052006)
564255.56	4183280.75	0.42132	(00032807)
564305.56	4183280.75	0.48825	(00042005)
564330.56	4183280.75	0.53075	(00092504)
564055.56	4183305.75	0.26038	(00090504)
564080.56	4183305.75	0.27913	(00090504)
564105.56	4183305.75	0.30129	(00111907)
564130.56	4183305.75	0.32618	(00090706)
564155.56	4183305.75	0.35359	(00010704)
564180.56	4183305.75	0.38904	(00010704)
564205.56	4183305.75	0.42798	(00011208)
564230.56	4183305.75	0.47091	(00052107)
564255.56	4183305.75	0.51738	(00052107)
564280.56	4183305.75	0.56581	(00011207)
564305.56	4183305.75	0.60894	(00052006)
564330.56	4183305.75	0.62878	(00032807)
564350.69	4183306.25	0.61317	(00032807)
564105.56	4183330.75	0.32311	(00101605)
564130.56	4183330.75	0.35469	(00101605)

564155.56	4183330.75	0.39206	(00101605)

```
 *** ISCST3 - VERSION 02035 ***     *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                   ***
***        07:14:59
**MODELOPTs:
PAGE  16
CONC                     URBAN FLAT  FLGPOL DFAULT

                             *** THE   1ST HIGHEST  1-HR AVERAGE
CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):      BLOCKA
, BLOCKB  , A0000001, A0000002, A0000003, A0000004, A0000005,
         A0000006,

                                          *** DISCRETE
CARTESIAN RECEPTOR POINTS ***

                                       ** CONC OF PM_10    IN
MICROGRAMS/M**3                          **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       564205.56   4183330.75        0.49607  (00112102)
564230.56   4183330.75        0.56733  (00112102)
       564255.56   4183330.75        0.65171  (00090504)
564280.56   4183330.75        0.73989  (00090504)
       564080.56   4183355.75        0.30995  (00123101)
564105.56   4183355.75        0.34103  (00123101)
       564130.56   4183355.75        0.37828  (00123101)
564155.56   4183355.75        0.42340  (00123101)
       564205.56   4183355.75        0.54504  (00123101)
564230.56   4183355.75        0.62999  (00101604)
       564080.56   4183380.75        0.31850  (00103108)
564105.56   4183380.75        0.35173  (00122305)
       564130.56   4183380.75        0.39095  (00090703)
564205.56   4183380.75        0.54533  (00011204)
       564230.56   4183380.75        0.63620  (00011204)
564255.56   4183380.75        0.73261  (00011204)
       564230.56   4183405.75        0.61691  (00011203)
564255.56   4183405.75        0.69825  (00122102)
       564280.56   4183405.75        0.79217  (00112422)
564137.94   4183424.75        0.39340  (00102406)
       564151.62   4183418.25        0.42051  (00021801)
564255.56   4183430.75        0.60851  (00111908)
       564280.56   4183430.75        0.64575  (00090305)
564655.56   4183605.75        0.17670  (00121823)
       564355.56   4183055.75        0.26347  (00122423)
564380.56   4183055.75        0.25712  (00052105)
       564405.56   4183055.75        0.24251  (00091703)
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564330.56	4183080.75	0.29841	(00091803)
564355.56	4183080.75	0.29790	(00122423)
564380.56	4183080.75	0.29050	(00052106)
564405.56	4183080.75	0.27054	(00121102)
564580.56	4183080.75	0.17114	(00081602)
564606.00	4183070.75	0.17542	(00011701)
564355.56	4183105.75	0.33782	(00122423)
564381.31	4183101.50	0.32103	(00052106)
564305.56	4183155.75	0.40928	(00012020)
564330.56	4183155.75	0.42815	(00032204)
564255.56	4183180.75	0.38518	(00091308)
564280.56	4183180.75	0.43130	(00091724)
564305.56	4183180.75	0.46360	(00032804)
564330.56	4183180.75	0.48201	(00092324)
564355.56	4183180.75	0.51891	(00112024)
564457.06	4183184.25	0.27045	(00020824)
564477.13	4183184.75	0.25337	(00092924)
564205.56	4183205.75	0.31605	(00032807)
564230.56	4183205.75	0.34924	(00042005)
564255.56	4183205.75	0.39182	(00122003)
564280.56	4183205.75	0.45493	(00112004)
564305.56	4183205.75	0.53740	(00081603)
564330.56	4183205.75	0.57918	(00011221)
564355.56	4183205.75	0.64675	(00091803)
564405.56	4183205.75	0.41557	(00110202)
564430.56	4183205.75	0.32267	(00112401)
564455.56	4183205.75	0.29104	(00021807)
564480.56	4183205.75	0.27307	(00112402)
564155.56	4183230.75	0.27234	(00011207)
564180.56	4183230.75	0.29242	(00011207)
564205.56	4183230.75	0.31794	(00011207)
564230.56	4183230.75	0.34909	(00090702)
564280.56	4183230.75	0.43809	(00032807)
564305.56	4183230.75	0.55080	(00122304)
564330.56	4183220.00	0.68689	(00101703)
564405.56	4183230.75	0.45567	(00052101)
564430.56	4183230.75	0.33948	(00112401)
564455.56	4183230.75	0.32671	(00031505)
564480.56	4183230.75	0.30298	(00121922)
564105.56	4183255.75	0.25357	(00052107)
564130.56	4183255.75	0.26587	(00052107)
564155.56	4183255.75	0.27960	(00090702)
564180.56	4183255.75	0.29363	(00052006)
564205.56	4183255.75	0.31162	(00092323)
564230.56	4183255.75	0.33812	(00092323)
564255.56	4183255.75	0.37150	(00092323)
564305.56	4183255.75	0.48875	(00011208)
564330.56	4183255.75	0.68988	(00111803)
564418.69	4183257.75	0.40113	(00092001)
564449.88	4183248.00	0.36391	(00112402)
564055.56	4183280.75	0.23981	(00010704)
564080.56	4183280.75	0.25490	(00010704)

564105.56	4183280.75	0.27025	(00092323)

CONC   URBAN FLAT FLGPOL DFAULT

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   BLOCKA , BLOCKB , A0000001, A0000002, A0000003, A0000004, A0000005, A0000006,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
564130.56	4183280.75	0.28668	(00011208)	564155.56	4183280.75	0.30445	(00052107)
564180.56	4183280.75	0.32285	(00011207)	564205.56	4183280.75	0.34325	(00052006)
564230.56	4183280.75	0.36137	(00052006)	564255.56	4183280.75	0.38126	(00032807)
564305.56	4183280.75	0.42938	(00012102)	564330.56	4183280.75	0.54862	(00112102)
564055.56	4183305.75	0.25326	(00090504)	564080.56	4183305.75	0.27061	(00090504)
564105.56	4183305.75	0.29063	(00111907)	564130.56	4183305.75	0.31301	(00090706)
564155.56	4183305.75	0.33654	(00090706)	564180.56	4183305.75	0.36684	(00010704)
564205.56	4183305.75	0.39832	(00092323)	564230.56	4183305.75	0.43104	(00011208)
564255.56	4183305.75	0.46590	(00052107)	564280.56	4183305.75	0.50049	(00011207)
564305.56	4183305.75	0.53806	(00052006)	564330.56	4183305.75	0.59122	(00032807)
564350.69	4183306.25	0.66505	(00012102)	564105.56	4183330.75	0.31171	(00101605)
564130.56	4183330.75	0.34030	(00101605)	564155.56	4183330.75	0.37349	(00101605)
564205.56	4183330.75	0.46061	(00112102)	564230.56	4183330.75	0.51798	(00112102)
564255.56	4183330.75	0.58470	(00112102)				

564280.56	4183330.75	0.66865	(00090504)
564080.56	4183355.75	0.30042	(00123101)
564105.56	4183355.75	0.32906	(00123101)
564130.56	4183355.75	0.36291	(00123101)
564155.56	4183355.75	0.40314	(00123101)
564205.56	4183355.75	0.50694	(00123101)
564230.56	4183355.75	0.57779	(00101604)
564080.56	4183380.75	0.30887	(00103108)
564105.56	4183380.75	0.33965	(00122305)
564130.56	4183380.75	0.37545	(00090703)
564205.56	4183380.75	0.50981	(00011204)
564230.56	4183380.75	0.58634	(00011204)
564255.56	4183380.75	0.66519	(00011204)
564230.56	4183405.75	0.57265	(00011203)
564255.56	4183405.75	0.63919	(00122102)
564280.56	4183405.75	0.71736	(00112422)
564137.94	4183424.75	0.37833	(00102406)
564151.62	4183418.25	0.40297	(00021801)
564255.56	4183430.75	0.56240	(00111908)
564280.56	4183430.75	0.59150	(00090305)
564655.56	4183605.75	0.17120	(00121823)
564355.56	4183055.75	0.21839	(00122423)
564380.56	4183055.75	0.21348	(00052105)
564405.56	4183055.75	0.20203	(00091703)
564330.56	4183080.75	0.23930	(00091803)
564355.56	4183080.75	0.23736	(00122423)
564380.56	4183080.75	0.23214	(00052106)
564405.56	4183080.75	0.21793	(00091703)
564580.56	4183080.75	0.14193	(00090506)
564606.00	4183070.75	0.14669	(00121705)
564355.56	4183105.75	0.25520	(00122423)
564381.31	4183101.50	0.24656	(00052106)
564305.56	4183155.75	0.28020	(00012020)
564330.56	4183155.75	0.27939	(00032204)
564255.56	4183180.75	0.28384	(00091801)
564280.56	4183180.75	0.29505	(00091724)
564305.56	4183180.75	0.29047	(00032804)
564330.56	4183180.75	0.27388	(00092324)
564355.56	4183180.75	0.27163	(00011902)
564457.06	4183184.25	0.19618	(00112421)
564477.13	4183184.75	0.18981	(00092924)
564205.56	4183205.75	0.25640	(00032807)
564230.56	4183205.75	0.26944	(00042005)
564255.56	4183205.75	0.28229	(00122003)
564280.56	4183205.75	0.29560	(00112004)
564305.56	4183205.75	0.29288	(00081603)
564330.56	4183205.75	0.25664	(00032804)
564355.56	4183205.75	0.24460	(00032608)
564405.56	4183205.75	0.22544	(00040304)
564430.56	4183205.75	0.20610	(00020603)
564455.56	4183205.75	0.20043	(00021807)
564480.56	4183205.75	0.19693	(00112402)

564155.56	4183230.75	0.23664	(00011207)

*** ISCST3 - VERSION 02035 ***   *** C:\Lakes\AERMOD View \CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
***
***   07:14:59
**MODELOPTs:
PAGE 18
CONC   URBAN FLAT FLGPOL DFAULT

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   BLOCKA , BLOCKB , A0000001, A0000002, A0000003, A0000004, A0000005, A0000006,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
564180.56	4183230.75	0.24724	(00011207)
564205.56	4183230.75	0.25861	(00090702)
564230.56	4183230.75	0.26909	(00052006)
564280.56	4183230.75	0.27806	(00092504)
564305.56	4183230.75	0.27700	(00110402)
564330.56	4183220.00	0.24544	(00122024)
564405.56	4183230.75	0.19729	(00121705)
564430.56	4183230.75	0.20027	(00112401)
564455.56	4183230.75	0.20710	(00031505)
564480.56	4183230.75	0.20518	(00121922)
564105.56	4183255.75	0.22750	(00052107)
564130.56	4183255.75	0.23543	(00052107)
564155.56	4183255.75	0.24274	(00011207)
564180.56	4183255.75	0.24950	(00011207)
564205.56	4183255.75	0.25687	(00011208)
564230.56	4183255.75	0.26572	(00011208)
564255.56	4183255.75	0.27318	(00011208)
564305.56	4183255.75	0.26280	(00122003)
564330.56	4183255.75	0.23267	(00110402)
564418.69	4183257.75	0.20131	(00010704)
564449.88	4183248.00	0.20839	(00112402)
564055.56	4183280.75	0.21943	(00010704)
564080.56	4183280.75	0.23101	(00010704)
564105.56	4183280.75	0.24169	(00092323)
564130.56	4183280.75	0.25237	(00011208)
564155.56	4183280.75	0.26180	(00011208)
564180.56	4183280.75	0.27147	(00052107)

564205.56	4183280.75	0.27872	(00011207)
564230.56	4183280.75	0.28329	(00052006)
564255.56	4183280.75	0.28260	(00052006)
564305.56	4183280.75	0.26852	(00012102)
564330.56	4183280.75	0.24299	(00092504)
564055.56	4183305.75	0.23186	(00090504)
564080.56	4183305.75	0.24525	(00090504)
564105.56	4183305.75	0.25926	(00111907)
564130.56	4183305.75	0.27481	(00111907)
564155.56	4183305.75	0.28984	(00090706)
564180.56	4183305.75	0.30493	(00010704)
564205.56	4183305.75	0.31960	(00010704)
564230.56	4183305.75	0.33018	(00092323)
564255.56	4183305.75	0.33547	(00011208)
564280.56	4183305.75	0.33328	(00052107)
564305.56	4183305.75	0.31990	(00052107)
564330.56	4183305.75	0.29276	(00090706)
564350.69	4183306.25	0.27726	(00101605)
564105.56	4183330.75	0.27821	(00112006)
564130.56	4183330.75	0.29855	(00101605)
564155.56	4183330.75	0.32064	(00101605)
564205.56	4183330.75	0.36821	(00101605)
564230.56	4183330.75	0.39130	(00101605)
564255.56	4183330.75	0.41018	(00101605)
564280.56	4183330.75	0.41728	(00101605)
564080.56	4183355.75	0.27207	(00123101)
564105.56	4183355.75	0.29386	(00123101)
564130.56	4183355.75	0.31836	(00123101)
564155.56	4183355.75	0.34558	(00123101)
564205.56	4183355.75	0.40595	(00101604)
564230.56	4183355.75	0.44190	(00101604)
564080.56	4183380.75	0.28021	(00103108)
564105.56	4183380.75	0.30409	(00090703)
564130.56	4183380.75	0.33045	(00090703)
564205.56	4183380.75	0.41401	(00011204)
564230.56	4183380.75	0.45587	(00011204)
564255.56	4183380.75	0.48978	(00011204)
564230.56	4183405.75	0.45520	(00102406)
564255.56	4183405.75	0.48575	(00110403)
564280.56	4183405.75	0.51401	(00033007)
564137.94	4183424.75	0.33447	(00102406)
564151.62	4183418.25	0.35242	(00021801)
564255.56	4183430.75	0.44492	(00102404)
564280.56	4183430.75	0.45459	(00090404)
564655.56	4183605.75	0.15479	(00121823)
564355.56	4183055.75	0.16085	(00122423)
564380.56	4183055.75	0.15762	(00052105)
564405.56	4183055.75	0.15073	(00081607)
564330.56	4183080.75	0.16741	(00091803)
564355.56	4183080.75	0.16442	(00122423)
564380.56	4183080.75	0.16156	(00052105)
564405.56	4183080.75	0.15378	(00091703)

564580.56	4183080.75	0.10682	(00031024)

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CONC                    URBAN FLAT  FLGPOL DFAULT

                             *** THE   1ST HIGHEST  1-HR AVERAGE
CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):      BLOCKA
, BLOCKB  , A0000001, A0000002, A0000003, A0000004, A0000005,
         A0000006,

                                          *** DISCRETE
CARTESIAN RECEPTOR POINTS ***

                                        ** CONC OF PM_10    IN
MICROGRAMS/M**3                            **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       564606.00   4183070.75        0.11142  (00123002)
564355.56   4183105.75        0.16298  (00122423)
       564381.31   4183101.50        0.16144  (00052106)
564305.56   4183155.75        0.15449  (00121703)
       564330.56   4183155.75        0.16284  (00032608)
564255.56   4183180.75        0.17675  (00091801)
       564280.56   4183180.75        0.16437  (00091724)
564305.56   4183180.75        0.14354  (00101703)
       564330.56   4183180.75        0.15728  (00032608)
564355.56   4183180.75        0.14968  (00032608)
       564457.06   4183184.25        0.11612  (00112421)
564477.13   4183184.75        0.11806  (00092924)
       564205.56   4183205.75        0.18506  (00032807)
564230.56   4183205.75        0.18066  (00112723)
       564255.56   4183205.75        0.17150  (00012024)
564280.56   4183205.75        0.15640  (00091308)
       564305.56   4183205.75        0.13367  (00101808)
564330.56   4183205.75        0.13219  (00032608)
       564355.56   4183205.75        0.13859  (00032608)
564405.56   4183205.75        0.11002  (00020710)
       564430.56   4183205.75        0.12236  (00110124)
564455.56   4183205.75        0.11545  (00120103)
       564480.56   4183205.75        0.11497  (00112402)
564155.56   4183230.75        0.18877  (00011207)
       564180.56   4183230.75        0.18962  (00090702)
564205.56   4183230.75        0.18808  (00090702)
       564230.56   4183230.75        0.18223  (00052006)
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564280.56	4183230.75	0.15006	(00081605)
564305.56	4183230.75	0.13013	(00090702)
564330.56	4183220.00	0.11812	(00052006)
564405.56	4183230.75	0.11653	(00052107)
564430.56	4183230.75	0.12099	(00110124)
564455.56	4183230.75	0.12064	(00120103)
564480.56	4183230.75	0.10771	(00121922)
564105.56	4183255.75	0.19040	(00052107)
564130.56	4183255.75	0.19306	(00052107)
564155.56	4183255.75	0.19388	(00052107)
564180.56	4183255.75	0.19299	(00052107)
564205.56	4183255.75	0.19050	(00011208)
564230.56	4183255.75	0.18557	(00011208)
564255.56	4183255.75	0.17612	(00011208)
564305.56	4183255.75	0.14454	(00092323)
564330.56	4183255.75	0.13556	(00010704)
564418.69	4183257.75	0.12728	(00090706)
564449.88	4183248.00	0.11995	(00120103)
564055.56	4183280.75	0.19006	(00090706)
564080.56	4183280.75	0.19648	(00010704)
564105.56	4183280.75	0.20189	(00010704)
564130.56	4183280.75	0.20553	(00092323)
564155.56	4183280.75	0.20726	(00011208)
564180.56	4183280.75	0.20634	(00011208)
564205.56	4183280.75	0.20240	(00052107)
564230.56	4183280.75	0.19461	(00052107)
564255.56	4183280.75	0.18329	(00010704)
564305.56	4183280.75	0.15813	(00090504)
564330.56	4183280.75	0.15094	(00090504)
564055.56	4183305.75	0.20054	(00112102)
564080.56	4183305.75	0.20865	(00090504)
564105.56	4183305.75	0.21594	(00090504)
564130.56	4183305.75	0.22247	(00111907)
564155.56	4183305.75	0.22766	(00111907)
564180.56	4183305.75	0.22993	(00090706)
564205.56	4183305.75	0.22826	(00090706)
564230.56	4183305.75	0.22207	(00090706)
564255.56	4183305.75	0.21101	(00111907)
564280.56	4183305.75	0.19645	(00090504)
564305.56	4183305.75	0.18424	(00120205)
564330.56	4183305.75	0.17456	(00101603)
564350.69	4183306.25	0.17161	(00060104)
564105.56	4183330.75	0.23127	(00112006)
564130.56	4183330.75	0.24159	(00112006)
564155.56	4183330.75	0.25096	(00112006)
564205.56	4183330.75	0.26206	(00112006)
564230.56	4183330.75	0.26014	(00112006)
564255.56	4183330.75	0.25182	(00101603)
564280.56	4183330.75	0.23686	(00060104)
564080.56	4183355.75	0.23129	(00123101)
564105.56	4183355.75	0.24435	(00123101)
564130.56	4183355.75	0.25749	(00123101)

564155.56	4183355.75	0.26985	(00123101)

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   BLOCKA , BLOCKB , A0000001, A0000002, A0000003, A0000004, A0000005, A0000006,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
564205.56	4183355.75	0.29119	(00101604)
564230.56	4183355.75	0.29509	(00101604)
564080.56	4183380.75	0.23889	(00103108)
564105.56	4183380.75	0.25398	(00090703)
564130.56	4183380.75	0.26876	(00090703)
564205.56	4183380.75	0.30031	(00011204)
564230.56	4183380.75	0.31196	(00011204)
564255.56	4183380.75	0.31290	(00011204)
564230.56	4183405.75	0.32086	(00102406)
564255.56	4183405.75	0.32355	(00110403)
564280.56	4183405.75	0.32126	(00033007)
564137.94	4183424.75	0.27405	(00102406)
564151.62	4183418.25	0.28402	(00021801)
564255.56	4183430.75	0.31265	(00102404)
564280.56	4183430.75	0.30957	(00010404)
564655.56	4183605.75	0.13103	(00121823)
564228.12	4183369.75	0.30382	(00090703)
564430.06	4183487.00	0.16999	(00021024)
564455.06	4183487.00	0.15305	(00090508)
564480.06	4183487.00	0.14365	(00012607)
564405.88	4183508.00	0.17251	(00021024)
564430.06	4183512.00	0.15588	(00031804)
564455.06	4183512.00	0.14741	(00012607)
564480.06	4183512.00	0.14703	(00122022)
564505.06	4183512.00	0.14399	(00082124)
564430.06	4183537.00	0.14937	(00011222)
564455.06	4183537.00	0.14908	(00112120)

564228.12	4183369.75	0.63319	(00090703)
564430.06	4183487.00	0.36128	(00050621)
564455.06	4183487.00	0.33939	(00090423)
564480.06	4183487.00	0.31490	(00122022)
564405.88	4183508.00	0.34278	(00033008)
564430.06	4183512.00	0.32085	(00011222)
564455.06	4183512.00	0.30118	(00090423)
564480.06	4183512.00	0.28590	(00122022)
564505.06	4183512.00	0.26952	(00082124)
564430.06	4183537.00	0.28387	(00011222)
564455.06	4183537.00	0.27219	(00112120)
564228.12	4183369.75	0.58254	(00090703)
564430.06	4183487.00	0.32736	(00050621)
564455.06	4183487.00	0.30983	(00090423)
564480.06	4183487.00	0.28874	(00122022)
564405.88	4183508.00	0.31352	(00033008)
564430.06	4183512.00	0.29576	(00011222)
564455.06	4183512.00	0.27896	(00090423)
564480.06	4183512.00	0.26621	(00122022)
564505.06	4183512.00	0.25197	(00082124)
564430.06	4183537.00	0.26503	(00011222)
564455.06	4183537.00	0.25524	(00112120)
564228.12	4183369.75	0.44997	(00090703)
564430.06	4183487.00	0.23968	(00090508)
564455.06	4183487.00	0.23223	(00090423)
564480.06	4183487.00	0.21994	(00122022)
564405.88	4183508.00	0.23642	(00033008)
564430.06	4183512.00	0.22857	(00011222)
564455.06	4183512.00	0.21883	(00090423)
564480.06	4183512.00	0.21239	(00122022)
564505.06	4183512.00	0.20364	(00082124)
564430.06	4183537.00	0.21317	(00011222)
564455.06	4183537.00	0.20815	(00112120)
564455.06	4183462.00	0.38414	(00111921)
564480.06	4183462.00	0.35621	(00082124)
564455.06	4183462.00	0.34421	(00111921)
564480.06	4183462.00	0.32131	(00082124)
564455.06	4183462.00	0.24935	(00090508)
564480.06	4183462.00	0.23231	(00082124)
564455.06	4183462.00	0.16797	(00112706)
564480.06	4183462.00	0.14773	(00090508)
564535.50	4183432.25	0.13841	(00011210)
564560.50	4183432.25	0.14879	(00031821)
564585.50	4183432.25	0.15512	(00031821)
564511.25	4183453.25	0.14042	(00121823)
564535.50	4183457.25	0.14917	(00111909)
564560.50	4183457.25	0.15763	(00120904)
564585.50	4183457.25	0.16487	(00012508)
564610.50	4183457.25	0.17003	(00031821)
564535.50	4183482.25	0.15148	(00121823)
564560.50	4183482.25	0.15829	(00111909)
564535.50	4183432.25	0.50618	(00120904)

564560.50	4183432.25	0.46779	(00012508)

CONC   URBAN FLAT FLGPOL DFAULT

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   BLOCKA , BLOCKB , A0000001, A0000002, A0000003, A0000004, A0000005, A0000006,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
564585.50	4183432.25	0.42485	(00031821)
564511.25	4183453.25	0.41578	(00022505)
564535.50	4183457.25	0.40665	(00121823)
564560.50	4183457.25	0.39035	(00120904)
564585.50	4183457.25	0.37217	(00011219)
564610.50	4183457.25	0.34672	(00031821)
564535.50	4183482.25	0.33800	(00022505)
564560.50	4183482.25	0.33435	(00091101)
564535.50	4183432.25	0.42855	(00120904)
564560.50	4183432.25	0.40662	(00012508)
564585.50	4183432.25	0.37768	(00031821)
564511.25	4183453.25	0.36211	(00022505)
564535.50	4183457.25	0.36085	(00091101)
564560.50	4183457.25	0.35171	(00120904)
564585.50	4183457.25	0.33926	(00011219)
564610.50	4183457.25	0.32046	(00031821)
564535.50	4183482.25	0.30773	(00022505)
564560.50	4183482.25	0.30748	(00091101)
564535.50	4183432.25	0.26497	(00120904)
564560.50	4183432.25	0.26783	(00012508)
564585.50	4183432.25	0.26417	(00031821)
564511.25	4183453.25	0.24309	(00081202)
564535.50	4183457.25	0.25214	(00091101)
564560.50	4183457.25	0.25572	(00120904)
564585.50	4183457.25	0.25524	(00091005)
564610.50	4183457.25	0.25065	(00031821)
564535.50	4183482.25	0.23188	(00081202)

564560.50	4183482.25	0.23711	(00091101)
564560.50	4183407.25	0.54211	(00123105)
564585.50	4183407.25	0.49121	(00123105)
564560.50	4183407.25	0.45470	(00123105)
564585.50	4183407.25	0.42473	(00122806)
564560.50	4183407.25	0.27220	(00123105)
564585.50	4183407.25	0.28228	(00122806)
564560.50	4183407.25	0.13594	(00122806)
564585.50	4183407.25	0.15655	(00092605)
564640.94	4183386.25	0.19046	(00122418)
564665.94	4183386.25	0.19816	(00122418)
564616.75	4183407.25	0.17542	(00012101)
564640.94	4183411.25	0.18363	(00012101)
564665.94	4183411.25	0.18741	(00012101)
564640.94	4183436.25	0.17721	(00123105)
564665.94	4183436.25	0.18153	(00122806)
564640.94	4183386.25	0.45087	(00112607)
564665.94	4183386.25	0.41141	(00021806)
564616.75	4183407.25	0.43655	(00010605)
564640.94	4183411.25	0.39285	(00010605)
564665.94	4183411.25	0.36277	(00012101)
564640.94	4183436.25	0.34981	(00123105)
564665.94	4183436.25	0.32316	(00123105)
564640.94	4183386.25	0.40728	(00021806)
564665.94	4183386.25	0.37878	(00021806)
564616.75	4183407.25	0.39193	(00010605)
564640.94	4183411.25	0.36027	(00092605)
564665.94	4183411.25	0.33736	(00012101)
564640.94	4183436.25	0.32460	(00123105)
564665.94	4183436.25	0.30245	(00122806)
564640.94	4183386.25	0.30173	(00021806)
564665.94	4183386.25	0.29305	(00021806)
564616.75	4183407.25	0.28381	(00092605)
564640.94	4183411.25	0.27593	(00012101)
564665.94	4183411.25	0.26884	(00012101)
564640.94	4183436.25	0.25690	(00123105)
564665.94	4183436.25	0.24873	(00122806)
564665.94	4183361.25	0.47908	(00052002)
564665.94	4183361.25	0.43532	(00112404)
564665.94	4183361.25	0.32690	(00060102)
564665.94	4183361.25	0.21401	(00011703)
564468.38	4183565.25	0.14403	(00112120)
564493.38	4183565.25	0.14183	(00122924)
564518.38	4183565.25	0.13895	(00122022)
564444.19	4183586.25	0.14297	(00011222)
564468.38	4183590.25	0.14044	(00123001)
564493.38	4183590.25	0.13788	(00090423)
564518.38	4183590.25	0.13627	(00122022)
564543.38	4183590.25	0.13032	(00122022)
564468.38	4183565.25	0.23606	(00112120)
564493.38	4183565.25	0.22734	(00122924)
564518.38	4183565.25	0.21996	(00122022)

564444.19	4183586.25	0.22655	(00011222)

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PAGE 22
CONC   URBAN FLAT FLGPOL DFAULT

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   BLOCKA , BLOCKB , A0000001, A0000002, A0000003, A0000004, A0000005, A0000006,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
564468.38	4183590.25	0.21612	(00123001)	564493.38	4183590.25	0.20852	(00090423)
564518.38	4183590.25	0.20255	(00122022)	564543.38	4183590.25	0.19484	(00122022)
564468.38	4183565.25	0.22398	(00112120)	564493.38	4183565.25	0.21622	(00122924)
564518.38	4183565.25	0.20945	(00122022)	564444.19	4183586.25	0.21576	(00011222)
564468.38	4183590.25	0.20647	(00123001)	564493.38	4183590.25	0.19958	(00090423)
564518.38	4183590.25	0.19422	(00122022)	564543.38	4183590.25	0.18669	(00122022)
564468.38	4183565.25	0.18954	(00112120)	564493.38	4183565.25	0.18436	(00122924)
564518.38	4183565.25	0.17930	(00122022)	564444.19	4183586.25	0.18471	(00011222)
564468.38	4183590.25	0.17853	(00123001)	564493.38	4183590.25	0.17359	(00090423)
564518.38	4183590.25	0.16991	(00122022)	564543.38	4183590.25	0.16296	(00122022)
564493.38	4183540.25	0.24934	(00122022)	564518.38	4183540.25	0.23604	(00122022)
564493.38	4183540.25	0.23533	(00122022)	564518.38	4183540.25	0.22237	(00082124)
564493.38	4183540.25	0.19588	(00122022)	564518.38	4183540.25	0.18695	(00082124)
564493.38	4183540.25	0.14501	(00122022)				

564518.38	4183540.25	0.14062	(00082124)
564315.44	4183535.25	0.20218	(00092302)
564340.44	4183535.25	0.19356	(00031022)
564365.44	4183535.25	0.18144	(00112706)
564291.25	4183556.25	0.18920	(00092302)
564315.44	4183560.25	0.18230	(00031022)
564340.44	4183560.25	0.17490	(00112706)
564365.44	4183560.25	0.16135	(00090508)
564390.44	4183560.25	0.15368	(00031804)
564315.44	4183585.25	0.16632	(00112706)
564340.44	4183585.25	0.15549	(00090508)
564315.44	4183535.25	0.30443	(00092302)
564340.44	4183535.25	0.30749	(00021803)
564365.44	4183535.25	0.31576	(00011704)
564291.25	4183556.25	0.26796	(00092302)
564315.44	4183560.25	0.26328	(00031022)
564340.44	4183560.25	0.26506	(00021803)
564365.44	4183560.25	0.27752	(00011704)
564390.44	4183560.25	0.27359	(00112121)
564315.44	4183585.25	0.22770	(00021803)
564340.44	4183585.25	0.22971	(00021803)
564315.44	4183535.25	0.29138	(00092302)
564340.44	4183535.25	0.28754	(00031022)
564365.44	4183535.25	0.29276	(00011704)
564291.25	4183556.25	0.25821	(00092302)
564315.44	4183560.25	0.25317	(00031022)
564340.44	4183560.25	0.24891	(00021803)
564365.44	4183560.25	0.26067	(00011704)
564390.44	4183560.25	0.25724	(00112121)
564315.44	4183585.25	0.21990	(00112706)
564340.44	4183585.25	0.21785	(00021803)
564315.44	4183535.25	0.25361	(00092302)
564340.44	4183535.25	0.24736	(00031022)
564365.44	4183535.25	0.23045	(00011704)
564291.25	4183556.25	0.22954	(00092302)
564315.44	4183560.25	0.22357	(00031022)
564340.44	4183560.25	0.21407	(00112706)
564365.44	4183560.25	0.21368	(00011704)
564390.44	4183560.25	0.21154	(00112121)
564315.44	4183585.25	0.19789	(00112706)
564340.44	4183585.25	0.18881	(00090508)
564340.44	4183510.25	0.35910	(00122503)
564365.44	4183510.25	0.36196	(00011704)
564340.44	4183510.25	0.33969	(00092302)
564365.44	4183510.25	0.32989	(00011704)
564340.44	4183510.25	0.28540	(00092302)
564365.44	4183510.25	0.27122	(00031022)
564340.44	4183510.25	0.21615	(00110119)
564365.44	4183510.25	0.20115	(00031022)
564377.69	4183594.75	0.14668	(00123023)
564402.69	4183594.75	0.14324	(00112121)
564427.69	4183594.75	0.14387	(00033008)

564377.69	4183594.75	0.23409	(00123023)

CONC   URBAN FLAT FLGPOL DFAULT

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   BLOCKA , BLOCKB , A0000001, A0000002, A0000003, A0000004, A0000005, A0000006,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
564402.69	4183594.75	0.22659	(00112121)	564427.69	4183594.75	0.22504	(00042522)
564377.69	4183594.75	0.22275	(00123023)	564402.69	4183594.75	0.21583	(00112121)
564427.69	4183594.75	0.21461	(00042522)	564377.69	4183594.75	0.19022	(00123023)
564402.69	4183594.75	0.18488	(00112121)	564427.69	4183594.75	0.18451	(00042522)
564403.81	4183580.75	0.23748	(00112121)	564402.38	4183608.00	0.21569	(00112121)
564403.81	4183580.75	0.22524	(00112121)	564402.38	4183608.00	0.20620	(00112121)
564403.81	4183580.75	0.19036	(00112121)	564402.38	4183608.00	0.17865	(00112121)
564403.81	4183580.75	0.14431	(00112121)	564402.38	4183608.00	0.14097	(00112121)
564428.94	4183607.75	0.21340	(00033008)	564428.94	4183607.75	0.20422	(00033008)
564428.94	4183607.75	0.17753	(00033008)	564428.94	4183607.75	0.14087	(00033008)
564376.31	4183608.50	0.21907	(00123023)	564376.31	4183608.50	0.20928	(00123023)
564376.31	4183608.50	0.18094	(00123023)	564376.31	4183608.50	0.14233	(00123023)
564487.00	4183607.00	0.19669	(00112120)	564487.00	4183607.00	0.18882	(00112120)
564487.00	4183607.00	0.16578	(00112120)				

564487.00	4183607.00	0.13369	(00112120)
564513.50	4183606.75	0.19279	(00122924)
564513.50	4183606.75	0.18537	(00122924)
564513.50	4183606.75	0.16360	(00111921)
564513.50	4183606.75	0.13322	(00111921)
564460.88	4183607.50	0.20448	(00011222)
564460.88	4183607.50	0.19603	(00011222)
564460.88	4183607.50	0.17138	(00011222)
564460.88	4183607.50	0.13724	(00011222)
564544.00	4183565.00	0.21587	(00082124)
564544.00	4183565.00	0.20621	(00082124)
564544.00	4183565.00	0.17827	(00082124)
564544.00	4183565.00	0.14034	(00082124)
564100.62	4183062.00	0.18763	(00091308)
564100.62	4183112.00	0.20877	(00012024)
564126.38	4183107.75	0.21701	(00111803)
564100.62	4183062.00	0.18271	(00091308)
564125.62	4183062.00	0.18982	(00090505)
564150.62	4183062.00	0.20124	(00091805)
564075.62	4183087.00	0.18335	(00111803)
564100.62	4183087.00	0.18817	(00112004)
564125.62	4183087.00	0.20324	(00112004)
564150.62	4183087.00	0.21438	(00090505)
564100.62	4183112.00	0.20270	(00012024)
564126.38	4183107.75	0.21003	(00111803)
564125.62	4183062.00	0.19542	(00090505)
564100.62	4183062.00	0.16787	(00091308)
564125.62	4183062.00	0.17302	(00090505)
564150.62	4183062.00	0.18146	(00091805)
564075.62	4183087.00	0.16911	(00111803)
564100.62	4183087.00	0.17196	(00112004)
564125.62	4183087.00	0.18400	(00112004)
564150.62	4183087.00	0.19185	(00090505)
564100.62	4183112.00	0.18451	(00012024)
564126.38	4183107.75	0.18928	(00111803)
564150.62	4183062.00	0.20789	(00091805)
564100.62	4183062.00	0.14591	(00110402)
564125.62	4183062.00	0.14847	(00090505)
564150.62	4183062.00	0.15308	(00101607)
564075.62	4183087.00	0.14793	(00111803)
564100.62	4183087.00	0.14866	(00111803)
564125.62	4183087.00	0.15616	(00112004)
564150.62	4183087.00	0.15983	(00090505)
564100.62	4183112.00	0.15800	(00012024)
564126.38	4183107.75	0.15955	(00111803)
564075.62	4183087.00	0.18806	(00111803)
564100.62	4183087.00	0.19356	(00112004)
564125.62	4183087.00	0.20970	(00112004)
564150.62	4183087.00	0.22199	(00090505)
564189.31	4183019.50	0.19776	(00032804)
564189.31	4183069.50	0.23232	(00010705)
564215.06	4183065.50	0.24193	(00101703)

564189.31	4183019.50	0.19148	(00032804)

CONC   URBAN FLAT FLGPOL DFAULT

*** THE   1ST HIGHEST 1-HR AVERAGE
CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   BLOCKA
, BLOCKB , A0000001, A0000002, A0000003, A0000004, A0000005,
A0000006,

*** DISCRETE
CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN
MICROGRAMS/M**3   **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
564214.31	4183019.50	0.19889	(00101606)
564239.31	4183019.50	0.20482	(00081604)
564164.31	4183044.50	0.19746	(00010705)
564189.31	4183044.50	0.20648	(00122024)
564214.31	4183044.50	0.21621	(00122301)
564239.31	4183044.50	0.22406	(00012020)
564189.31	4183069.50	0.22337	(00010705)
564215.06	4183065.50	0.23173	(00101703)
564214.31	4183019.50	0.20597	(00101606)
564189.31	4183019.50	0.17278	(00032804)
564214.31	4183019.50	0.17792	(00101606)
564239.31	4183019.50	0.18159	(00081604)
564164.31	4183044.50	0.17812	(00010705)
564189.31	4183044.50	0.18441	(00122024)
564214.31	4183044.50	0.19094	(00122301)
564239.31	4183044.50	0.19554	(00012020)
564189.31	4183069.50	0.19717	(00010705)
564215.06	4183065.50	0.20214	(00101703)
564239.31	4183019.50	0.21271	(00081604)
564189.31	4183019.50	0.14581	(00032804)
564214.31	4183019.50	0.14802	(00101606)
564239.31	4183019.50	0.14889	(00081604)
564164.31	4183044.50	0.15025	(00010705)
564189.31	4183044.50	0.15308	(00122024)
564214.31	4183044.50	0.15561	(00122301)
564239.31	4183044.50	0.15633	(00012020)
564189.31	4183069.50	0.16062	(00010705)

564215.06	4183065.50	0.16157	(00101703)
564164.31	4183044.50	0.20395	(00010705)
564189.31	4183044.50	0.21394	(00122024)
564214.31	4183044.50	0.22483	(00122301)
564239.31	4183044.50	0.23386	(00012020)
564092.50	4183044.00	0.17730	(00090505)
564118.25	4183039.75	0.18416	(00101607)
564067.50	4183019.00	0.15690	(00090505)
564092.50	4183019.00	0.16332	(00101607)
564117.50	4183019.00	0.17033	(00091724)
564142.50	4183019.00	0.17740	(00010705)
564092.50	4183044.00	0.17297	(00090505)
564118.25	4183039.75	0.17927	(00101607)
564067.50	4183019.00	0.14653	(00090505)
564092.50	4183019.00	0.15157	(00101607)
564117.50	4183019.00	0.15710	(00091724)
564142.50	4183019.00	0.16250	(00010705)
564092.50	4183044.00	0.15986	(00090505)
564118.25	4183039.75	0.16455	(00101607)
564067.50	4183019.00	0.13081	(00090505)
564092.50	4183019.00	0.13393	(00101607)
564117.50	4183019.00	0.13741	(00091724)
564142.50	4183019.00	0.14052	(00010705)
564092.50	4183044.00	0.14029	(00090505)
564118.25	4183039.75	0.14278	(00101607)
564067.50	4183019.00	0.16030	(00090505)
564092.50	4183019.00	0.16718	(00101607)
564117.50	4183019.00	0.17469	(00091724)
564142.50	4183019.00	0.18236	(00010705)
564326.38	4183232.75	0.00587	(00120217)
564363.38	4183310.50	0.00709	(00112112)
564315.31	4183332.75	0.00930	(00112112)
564350.88	4183407.50	0.00745	(00122516)
564447.81	4183358.75	0.00354	(00122516)
564375.94	4183209.25	0.00592	(00120217)

```
 *** ISCST3 - VERSION 02035 ***     *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                   ***
***        07:14:59
**MODELOPTs:
PAGE  25
CONC                    URBAN FLAT  FLGPOL DFAULT

                                               *** THE SUMMARY OF
HIGHEST  1-HR RESULTS ***


                                       ** CONC OF PM_10    IN
MICROGRAMS/M**3                          **

                                                     DATE
NETWORK
GROUP ID                         AVERAGE CONC     (YYMMDDHH)
RECEPTOR  (XR, YR, ZELEV, ZFLAG)     OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS       0.79217  ON 00112422: AT (
564280.56,  4183405.75,      0.00,      1.50)  DC      NA


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Lakes\AERMOD View
\CostPlus\JackLondonSquare_CostPlus\JackLondonSq ***
03/27/15
                                   ***
***        07:14:59
**MODELOPTs:
PAGE  26
CONC                    URBAN FLAT  FLGPOL DFAULT


*** Message Summary : ISCST3 Model Execution ***

 --------- Summary of Total Messages --------

A Total of           0 Fatal Error Message(s)
A Total of           0 Warning Message(s)
A Total of           4 Informational Message(s)

A Total of           4 Calm Hours Identified


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
              ***  NONE  ***


   ************************************
   *** ISCST3 Finishes Successfully ***
   ************************************
```

URBAN
PLANNING
PARTNERS
INC.