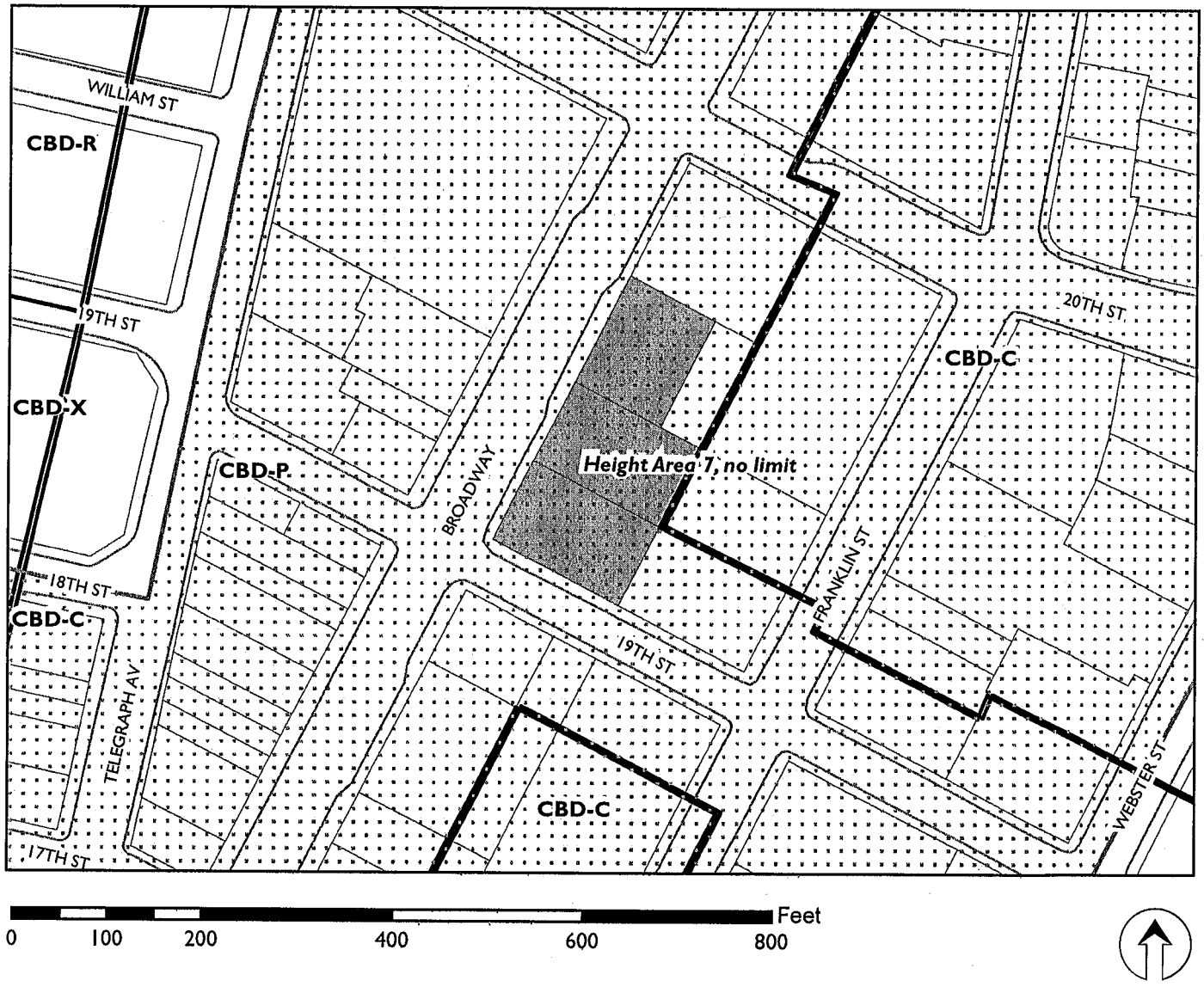
Location:	1900-1944 Broadway (APNs: 008-0638-005-00; 008-0638-006-03; 008-0638-007-10). **(See map on reverse)**
Proposal:	Revision of a proposed new tower. The revision would result in a new 38-story building (plus rooftop amenities) with 452 residential units and approximately 96,300 square feet of office and retail space. The project also includes reconditioning an existing four story, historically-rated (Cb+1+) building and demolishing a one story commercial building that has no historic rating.
Applicant/Owner:	Seth Hamalian, 19th and Bway Associates, LLC
Planning Permits Required:	Design Review for new construction in a CBD zone; Major Conditional Use Permit for new construction over 250 feet in height or 200,000 square feet in floor area; Minor Conditional Use Permits for a reduction of the parking requirement in the CBD zone and a reduction in the size of a loading berth; and a Minor Variance for a reduction of the number of loading berths from two to one.
General Plan:	Central Business District
Zoning:	CBD-P Central Business District Pedestrian Retail Commercial Zone and CBD-C Central Business District General Commercial Zone. Height Area 7 (no height limit).
Environmental Determination:	Exempt, State CEQA Guidelines Sections 15332 – In-fill projects and 15183 - Projects consistent with a community plan, general plan, or zoning.
Historic Status:	Existing building at the corner of 19th Street and Broadway is rated Cb+1+ and the site is within the Uptown Commercial Area of Primary Importance. This building will be refurbished as part of this project.
City Council District:	3
Status:	Previously approved and revision proposed
Action to be Taken:	Review proposed changes to project and direct staff
For Further Information:	Contact case planner **Neil Gray** at **510-238-3878** or ngray@oaklandnet.com

SUMMARY

The proposal is a revision to a project that includes the renovation of the Tapscott Building, a highly rated historic structure, and the construction of a tower that includes ground floor commercial, office space, and dwelling units. The currently approved height of the tower is 379'-6" and number of dwelling units is 433. Staff recommends approval of the currently proposed increased height of 394'-6" feet and 352 dwelling units because it is consistent with General Plan, regional, and state policies encouraging development intensity near transit and in downtown. The proposed design is also consistent with the input provided by the Design Review Committee and the additional height will contribute to the downtown skyline.

CITY OF OAKLAND PLANNING COMMISSION



Case File:	PLN15179-R02
Applicant:	Seth Hamalian, 19th and Bway Associates, LLC
Address:	1900-1944 Broadway
Zone:	CBD-P
Height Area:	7 (no height limit)

BACKGROUND AND PROPOSAL

This project was originally approved at the August 5, 2015 City Planning Commission meeting (see Attachment B for the staff report). The approval included the construction of a new 33-story tower with 345 residential units, approximately 10,000 square feet of commercial space, and the reconditioning an existing four story, highly rated historic structure, known as the Tapscott Building (rated Cb+1+ and considered a contributor to the Uptown Historic District by the Office of Cultural Heritage Survey). The plans for the reconditioning of the Tapscott Building are contained in Attachment B.

Staff administratively approved a revision to the proposal on March 25, 2016 that increased the scope of the project as described in Table 1:

TABLE 1

	8/5/15 Planning Commission Approval	**3/25/16 First Revision** (administratively approved)	**Difference**
Height (ft)	330	368	+38 ft
Stories	33 plus rooftop amenities	36 plus rooftop amenities	+3 stories
Residential Units	345	451	+106 dwelling units
Office Space (sf)	0	25,000	+25,000 sf
Retail Space (sf)	10,000	25,000	+15,000 sf
Parking Spaces	338	338	No Change

Other than the additional height, the revision did not include any substantial changes to the exterior of the tower and included the same renovation of the Tapscott Building. The revision was approved administratively after noticing the neighborhood and the completion of a detailed environmental analysis.

On February 6, 2018, the applicant submitted another set of revised plans that showed the additional changes to the tower shown in the table below. This revision generally consisted of reducing parking, placing parking underground, and using the newly available floor area to provide additional office and retail space.

TABLE 2

	3/25/16 First Revision (administratively approved)	2/6/18 Second Revision (administratively approved after presented to the DRC)	Difference
Height (ft)	368	379'-6"	+11'-6" sf
Stories	36 plus rooftop amenities	37 plus rooftop amenities	+1 story
Residential Units	451	433	-18 dwelling units
Office Space (sf)	25,000 (all in the Tapscott Building)	74,649 (25,000 in the Tapscott Building)	+49,679 sf
Retail Space (sf)	25,000	21,286	-3,714 sf
Parking Spaces	338 (above grade)	171 (141 below grade)	-167 sf

This change was brought to the Design Review Committee (DRC) on February 28, 2018 due to substantial changes to the façade of the building. The DRC voted 3-0 to recommend that staff approve the revision. Part of the motion included agendizing an item for a Planning Commission meeting to discuss when revisions should be considered "major" and be brought to the Planning Commission and when revisions could be approved administratively. Commissioner Myres expressed concern that the first revision (see above) should have been considered "major" and require Commission approval. In the motion, Commissioner Manus requested a reduction in the use of champaign colors and materials on the building and better distinguish the base of the building from the upper stories. See Attachments B and C for the DRC and Planning Commission staff reports, respectively. Attachment D describes the applicant's architectural response to the comments from Commissioner Manus.

On May 21, 2018, the applicant submitted further revisions that are the subject of this report. The revisions would increase the height of the building and the number of units proposed (see Attachment A for plans). The increased height is a result of taller floors, and the increased number of units maximizes those allowed in Height Area 7 in the Central Business District. Table 3, below, summarizes each version of the project:

TABLE 3

	8/5/15 Planning Commission Approval	3/25/16 First Revision (administratively approved)	2/6/18 Second Revision (administratively approved after presented to the DRC)	Current (Third) Revision
Height (ft)	330	368	379'-6"	**394'-6"**
Stories	33	36 plus rooftop amenity	37	**38 plus rooftop amenity**
Residential Units	345	451	433	**452**
Office Space (sf)	25,000 (all in the Tapscott Building)	25,000	74,649 (25,000 in the Tapscott Building)	**78,802 (27,000 in the Tapscott Building)**
Retail Space (sf)	10,000	25,000	21,286	**23,417 (17,500 in the Tapscott Building)**
Parking Spaces	338 (all above grade)	338	171 (141 below grade)	**153 (122 below grade)**

PROPERTY DESCRIPTION

This flat, 40,674 square-foot, site is at the northeast corner of the intersection of Broadway and 19th Street. Approximately 400 linear feet of the site faces Broadway and 150 linear feet faces 19th Street. The four-story, L-shaped Tapscott commercial building, constructed in 1922-1923, fronts both Broadway and 19th Street. This building has an historic rating of Cb+1+ and is a contributor to the Uptown Commercial Historic District. Although brown brick and terra cotta materials, a tall ground floor, and detailing contribute to the historic significance of the building, it is in substantial disrepair – the storefronts are in particularly poor condition, the tapestry trim on the building is badly damaged, and the original vertical spandrels on the upper floors were removed in the 1960's. A second commercial building at the site, which is is one story and without historic or architectural interest, would be demolished to construct the tower.

An entrance to the 19th Street BART Station and an AC Transit bus stop is located on Broadway, directly in front of the site.

NEIGHBORHOOD DESCRIPTION

The site is in within the heart of Downtown Oakland's commercial district and on the edge of the historic Uptown Commercial District, a retail and entertainment area that is anchored by the art-deco styled Fox and Paramount Theaters and I. Magnin Building. The district contains several night clubs, restaurants, retail stores, and galleries. Several low-rise commercial buildings that contribute to the historic character of the district are located to the south, across the Broadway, and on 19th Street. The four-story, approximately 60-foot tall Sears Building at the corner of Broadway and 20th Street is currently being renovated for office uses. The adjacent 12-story Golden West Office Building, constructed in 1968, has a post-modern design with reflective windows and a block shape. According to the City's Office of Cultural Heritage Survey, the Uptown Historic District does not have a consistent height context that should influence the height of new buildings.

PROJECT DESCRIPTION

Site Plan

The site plan is unchanged from the iteration of the plans presented to the DRC (see Attachment C for the DRC Staff Report). The high-rise tower would sit atop a three-story podium building, and a 20-foot wide outdoor plaza would be placed between the new construction and the Tapscott Building to create outdoor seating for a restaurant, provide a visual separation between the two buildings, and expose historic advertising art on the Tapscott Building's north façade.

The ground floor of the tower would contain two retail spaces, a lobby, a leasing office and amenities. A ramp to the underground parking, 30 mechanical parking spaces, and bike storage would be behind the commercial spaces and the lobby. Vehicular and loading access into the site would be from 19th Street, which allows Broadway, the site's primary pedestrian frontage, to be free of curb cuts and potential conflicts between pedestrians, bikes, and cars. Two stories of office space would be between the retail space and the apartments above. An open space podium deck that includes landscaping, outdoor furniture, and a pool with views to the bay would be located where the base of the tower and top of the podium meet. The positioning of the tower's narrow north and south elevations will preserve views of the Oakland Hills and the Jack London Square area from Broadway.

Building Design

The building design is similar to that presented to the DRC (see Attachment C for the DRC Staff Report). The main changes are the increase in height from 375'-6" to 394'-6" and the responses to Commissioner Manus' input at the DRC meeting.

The upper stories of the tower will contain a proposed curtain wall with narrow, vertical mechanical louvres at their edge. According to applicant, the bands beneath each window have been narrowed 50 percent in response the Commissioner Manus' request to reduce the amount of champaign color on the façade. On the Broadway elevation, a vertical element is provided through group balconies that separate the building into two distinct volumes. The facade behind the balconies would be brick to relate to the Tapscott Building. The northern elevation contains a similar vertical feature, except it contains windows instead of balconies.

The 15-foot ground floor creates a prominent storefront and matches the height of the ground floor of the Tapscott Building. The storefront includes a floor to ceiling glass window wall system vertically separated by a balcony/awning feature. The ground floor is recessed behind a catwalk, and vertical brick columns separate the storefront windows. In response to Commissioner Manus' input at the DRC meeting, aluminum vertical elements between the 4th and 5th floors have been added to provide a greater differentiation between the base and upper stories of the tower.

The building would have a rooftop community room with an open deck with views to the Bay and San Francisco. This feature creates a top for the Broadway side of the building that would be lit up at night to create a lantern affect.

GENERAL PLAN ANALYSIS

The subject property is located within the Central Business District General Plan Land Use Classification. The intent of this classification is to encourage, support, and enhance Downtown as a high density, mixed-use urban center of regional importance and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation in Northern California. The CBD classification includes a mix of large-scale offices, commercial, urban high-rise residential, institutional, open space, cultural, educational, arts, entertainment, service, community facilities, and visitor uses.

The revision is consistent with this intent by providing additional development intensity to a high-rise residential development in the City's development and transit center. The prominence of the

proposed residential tower and ground floor commercial space will contribute to the regional importance of Downtown Oakland and the vision contained in the General Plan for a vibrant, 24-hour downtown.

The following lists General Plan Land Use and Transportation Element policies applicable to the proposed project and revision and how the they are consistent with each policy. The policies are in normal font and descriptions of how the proposal with the revision fulfills the policies are in bold type.

Land Use and Transportation Element of the General Plan

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. **The proposed tower with the revised height and penthouse torch feature will enhance the City's downtown skyline. The prominent ground floor presence of the tower and Tapscott Building will increase the pedestrian orientation of Broadway. The positioning of the tower's narrow north and south elevations will preserve views of the Oakland Hills and the Jack London Square area.**

Policy D3.1 Promoting Pedestrians: Pedestrian-friendly commercial areas should be promoted. **The proposal contains ground floor commercial space that continues the existing pedestrian oriented retail activities on Broadway.**

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. **The project minimizes pedestrian-vehicle conflicts by containing only one curb cut for the entire site. Further, there are no curb cuts on Broadway, the primary pedestrian frontage of the project. Locating the parking behind the proposed tower and the Tapscott Building minimizes the visual impact of parking areas.**

Policy D6.1 Developing Vacant Lots: Construction on vacant land or to replace surface parking should be encouraged throughout the downtown, where possible. **The tower is proposed to be built on underutilized lots.**

Policy D10.1 Encouraging Housing: Housing in the downtown should be encouraged as a vital component of a 24-hour community presence. **The proposal and revision include high density housing in a high-rise tower, bringing many residents downtown who will contribute to a 24-hour presence.**

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. **As described in this report, the project will have a high quality design that relates to the surrounding buildings. The renovation of the historic Tapscott building respects the historic architecture of the Uptown Commercial District.**

Policy D10.6 Creating Infill Housing: Infill housing that respects surrounding development and the streetscape should be encouraged in the downtown to strengthen district districts. **As**

described in this report, the project will have a high quality design that relates to the surrounding buildings. The project will also extend the existing retail storefronts on Broadway.

Policy D11.1 Promoting Mixed-Use Developments: Mixed use developments should be encouraged in the downtown for such purposes as to promote its diverse character, provide for needed goods and services, support local art and culture, and give incentive to reuse existing vacant or underutilized structures. **The revised proposal is for a mixed-use development with approximately 75,000 square feet of commercial space and 352 residential units.**

Policy D11.2 Locating Mixed-Use Developments: Mixed use developments should be allowed in commercial areas, where the residential component is compatible with the desired commercial function of the area. **The mixed-use proposal is in a commercial zone. The residential activities will be compatible with the intended retail and restaurant use of the ground floor commercial space.**

Historic Preservation Element of the General Plan

Policy 3.5: Historic Preservation and Discretionary Permit Approvals: For additions or alteration to Heritage Properties or Potential Designated Historic Properties requiring discretionary City permits, the City will make a finding that: 1) the design matches or is compatible with, but not necessarily identical to, the property's existing or historical design; or 2) the proposed design comprehensively modifies and is at least equal in quality to the existing design and is compatible with the character of the neighborhood; or 3) the existing design is undistinguished and does not warrant retention and the purposed design is compatible with the character of the neighborhood. **The proposal will restore the Tapscott Building with compatible exterior features.**

ZONING ANALYSIS

The following highlights relevant zoning standards from the CBD-P and CBD-C zones and Height Area.

Zoning Intent

The intent of the CBD-P zone is to create, maintain, and enhance areas of the Central Business District for ground-level, pedestrian-oriented, active storefront uses. Upper story spaces are intended to be available for a wide range of office and residential activities. The proposal includes ground floor retail storefront with office and residential activities above.

Development Standards

The following describes development standards for CBD-P zone, Height Area 7.

	Standard	Proposed	Complies?
Minimum/Maximum Setbacks			
Minimum front	0 ft	0 ft	Yes
Maximum front and street side	5 ft	4 ft	Yes
Minimum interior side	0 ft	0 ft	Yes
Minimum corner side	0 ft	0 ft	Yes
Rear	0 ft	0 ft	Yes
Design Regulations			
Ground floor primary commercial facade transparency	65%	80%	Yes
Minimum height of the ground floor	15 ft	23'-3"	Yes
Maximum Density[1] (square feet of lot area required per unit)	90	90	Yes
Floor Area Ratio[1]	20.0	13.9	Yes
Maximum height[1]	No height limit	394'-6" feet	Yes
Open Space	75 square feet per unit	111 sf per unit	Yes
Parking	No parking required	153 spaces, 122 below ground	Yes
Loading Berths	Two	One	No[2]

Notes:

1. These are regulations that apply to Height Area 7, where the site is located.
2. At their August 5, 2015 meeting, the Planning Commission granted the proposal a Variance for quantity of loading berths.

ENVIRONMENTAL DETERMINATION

The information presented in Attachment E supports the determination that the project meets all requirements under CEQA Guidelines Sections 15183 and 15332 and does not trigger conditions in CEQA Guidelines Section 15300.2. As a result, the Project qualifies for CEQA exemptions under CEQA Guidelines 15183 and 15332.

KEY ISSUES AND IMPACTS

Staff recommends approval of the revisions because adding three stories and 19 dwelling units in the tower is consistent with General Plan, regional, and state policies encouraging development intensity near transit and in downtown. The proposed design is consistent with the input provided by the Design Review Committee and the additional height will contribute to the downtown skyline.

RECOMMENDATION

1. Affirm staff's environmental determination.
2. Approve the revisions subject to the attached findings and conditions.

Prepared by:

NEIL GRAY
Planner IV

Approved by:

ROBERT MERKAMP
Acting Zoning Manager

Approved for forwarding to the
City Planning Commission:

ED MANASSE, Acting Deputy Director
Bureau of Planning

ATTACHMENTS:

A. Project Plans
B. 8/5/15 Planning Commission Staff Report
C. 3/20/18 Design Review Committee Staff Report
D. Applicant response to DRC comments
E. CEQA Analysis

FINDINGS FOR APPROVAL

This proposal meets the required findings under Sections 17.136.050 -- General Design Review Criteria, 17.134.050 -- General Use Permit Criteria, 17.148.050 – General Variance Criteria, Table 17.101G.04, Note 10 -- Use Permit Criteria for Exceptions to Height/Bulk/Intensity Area Standards in the LM Zones. Required findings are shown in **bold** type; explanations as to why these findings can be made are in *italic*.

Section 17.136.050 Regular design review criteria.

A. For Residential Facilities.

1. **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**

   The neighborhood consists of a mix of older commercial buildings, midrise historic buildings, and glass high rise structures. The proposal relates to the neighborhood in the following ways:

   - *The renovation of the Tapscott Building will preserve a highly rated historic building that relates to several historic buildings in the neighborhood;*
   - *The massing of the tower is articulated as two smaller elements that breaks down its scale to be similar to other buildings in the neighborhood;*
   - *A public plaza built between the tower and the Tapscott Building will create a clear distinction between the historic structure and the new tower.*
   - *The proposed curtain wall will relate to more recently building high rise buildings in the neighborhood; and*
   - *When viewed along Broadway, the tower has a distinct base whose height and brick facade reference the scale and material of the Tapscott building.*

2. **That the proposed design will protect, preserve, or enhance desirable neighborhood characteristics;**

   The proposal meets this finding in the following ways:

   - *The renovation of the Tapscott Building preserves an important and prominent historic structure in the neighborhood;*
   - *High density development near the 19th Street BART Station and AC Transit bus lines enhances the transit oriented character of the neighborhood;*
   - *The public plaza between the Tapscott Building and the tower will provide a valuable amenity to pedestrians and activate the street; and*
   - *Double height commercial spaces, outdoor seating, and attractive commercial bays will enhance the ground floor storefront character on Broadway.*

3. **That the proposed design will be sensitive to the topography and landscape.**

   There is no significant topography or landscape on the project site.

4. **That, if situated on a hill, the design and massing of the proposed building relates to the grade of the hill;**

The site is not situated on a hill.

5. **That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.**

   The project conforms to the General Plan as described in the General Plan Analysis section of this report.

B. For Nonresidential Facilities and Signs.

1. **That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors, and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have some significant relationship to outside appearance shall be considered, except as otherwise provided in Section 17.136.060;**

   This finding is met in the following manner:

   - *The ground floor commercial facilities will enhance the storefront character on Broadway using double height floors, columns, outdoor seating, high quality and durable materials, and prominent bases;*
   - *The restoration of the Tapscott Building with office uses will enhance the historic character of Downtown;*
   - *A public plaza built between the tower and the Tapscott Building will create a clear distinction between the historic structure and the new tower and be an amenity for pedestrians;*
   - *Light colored curtain walls will relate to nearby glass buildings and provide an attractive façade along Broadway;*
   - *The scale of the building is reduced through a 30-story vertical element with materials that relate to the Tapscott Building;*
   - *The narrow north and south facades will preserve views of the Oakland Hills and the Bay;*
   - *The façades and torch element at the top of the tower will provide an attractive addition to the City's skyline.*

2. **That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of, private and public investments in the area;**

   The proposal will protect the value of investments in the area by providing attractive commercial spaces to Broadway and bring customers to Downtown businesses.

3. **That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.**

The project conforms to the General Plan as described in the General Plan Analysis section of this report.

17.134.050 General Use Permit criteria.

A. That the location, size, design, and operating characteristics of the proposed development will be compatible with and will not adversely affect the livability or appropriate development of abutting properties and the surrounding neighborhood, with consideration to be given to harmony in scale, bulk, coverage, and density; to the availability of civic facilities and utilities; to harmful effect, if any, upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development;

A high-rise tower at this location will be compatible with the surrounding properties for the following reasons:

- *The proposal will bring residents who will shop and eat at nearby businesses, increase AC Transit and BART ridership, and bring a 24-hour presence to downtown;*
- *The mass and height of the building is appropriate for a regional downtown center;*
- *The design successfully reduces the scale of the building to relate to other buildings on Broadway (see "Project Description", above);*
- *Views of the Oakland Hills and Jack London Square will be preserved through narrow north and south building elevations;*
- *A 20-foot wide outdoor courtyard would be created between the new construction and the Tapscott Building, creating an appropriate visual separation between the new and historic developments;*
- *According to the CEQA analysis accompanying the application (see Attachment E), the project will not result in a significant traffic impact at nearby intersections;*
- *Vehicular and loading access into the site would be from 19th Street, which allows Broadway, the site's primary pedestrian and primary frontage, to be free of curb cuts and potential conflicts between pedestrians, bikes, and cars.*
- *The proposed size of the loading birth (15 feet wide and 25 feet deep) will be large enough to accommodate a moving truck sufficient to serve the apartments proposed for the project.*

B. That the location, design, and site planning of the proposed development will provide a convenient and functional living, working, shopping, or civic environment, and will be as attractive as the nature of the use and its location and setting warrant;

The residents will have convenient access to the podium structure, which will contain both parking spaces and rooftop open space. Further, commercial and residential construction will be placed to obscure the view of the parking podium from Broadway. 1900 Broadway is an ideal location for a high-rise tower because it is in the heart of Downtown Oakland, which is the regional center for the East Bay and a major hub for transit facilities.

The commercial spaces will be located at prominent locations at or near the Broadway and 19th Street right of ways. As described in the Design Review section, above, the proposal will be an attractive addition to the City's skyline.

C. That the proposed development will enhance the successful operation of the surrounding area in its basic community functions, or will provide an essential service to the community or region;

The proposed high rise building contributes to the surrounding neighborhood as a regional center for the East Bay and a major hub for transit facilities. The ground floor commercial activities will contribute to the pedestrian retail environment on Broadway and the 345 residential units will contribute to businesses in the neighborhood and support transit use.

D. That the proposal conforms to all applicable regular design review criteria set forth in the regular design review procedure at Section 17.136.050

See Design Review Findings, above.

E. That the proposal conforms in all significant respects with the Oakland General Plan and with any other applicable guidelines or criteria, district plan or development control map which has been adopted by the Planning Commission or City Council.

The project conforms to the General Plan as described in the General Plan Analysis section of this report.

17.148.050 Variance Findings required.

A. That strict compliance with the specified regulation would result in practical difficulty or unnecessary hardship inconsistent with the purposes of the zoning regulations, due to unique physical or topographic circumstances or conditions of design; or, as an alternative in the case of a minor variance, that such strict compliance would preclude an effective design solution improving livability, operational efficiency, or appearance.

A Variance is requested to reduce the number of loading berths from one to two. Approving this Variance would preclude an effective design solution improving the operational efficiency and appearance of the project.

A loading berth on Broadway is inappropriate because it is the principal pedestrian street adjacent to the site. Placing a curb cut there to accommodate a loading berth would interrupt the pedestrian flow and create conflicts between trucks and bicycles and pedestrians. An additional loading berth on 19th Street would also be problematic. There are currently 38 feet of curb cut required for the entrances to the proposed parking structure and loading berth on 19th Street. In addition, there are existing driveways on 19th Street just east of the property that serve the adjacent Kaiser parking garage that require approximately 70 feet of curb cuts. Adding an additional 15-foot curb cut for a loading birth would create a total of approximately 123 feet of curb cut along the 300 feet of frontage on 19th Street. This amount of curb cut would create a hazardous pedestrian environment. Further, additional curb cuts on 19th Street would adversely affect the historic façade of the Tapscott Building and reduce the amount of valuable retail space along 19th Street.

B. That strict compliance with the regulations would deprive the applicant of privileges enjoyed by owners of similarly zoned property; or, as an alternative in the case of a

minor variance, that such strict compliance would preclude an effective design solution fulfilling the basic intent of the applicable regulation.

Strict compliance with the loading berth regulation would deprive the applicant of privileges enjoyed by owners of similarly zoned property because several buildings in Downtown have no loading births and the City has approved developments of a similar size without the required number of loading berths.

C. That the variance, if granted, will not adversely affect the character, livability, or appropriate development of abutting properties or the surrounding area, and will not be detrimental to the public welfare or contrary to adopted plans or development policy.

As conditioned, residents and tenants of the building will be required schedule the use of the loading birth to prevent street blockage.

That the variance will not constitute a grant of special privilege inconsistent with limitations imposed on similarly zoned properties or inconsistent with the purposes of the zoning regulations.

As mentioned, other Downtown buildings have received Variances for the reduction of required loading berths. Also, granting the Variance to improve the appearance of the Tapscott Building and increase pedestrian and bike safety are consistent with the purposes of the zoning regulations.

D. That the elements of the proposal requiring the variance (e.g., elements such as buildings, walls, fences, driveways, garages and carports, etc.) conform with the regular design review criteria set forth in the design review procedure at Section 17.136.050.

Not requiring the additional loading berth will improve the appearance of the project by preserving the façade of the historic Tapscott Building.

E. That the proposal conforms in all significant respects with the Oakland General Plan and with any other applicable guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.

The project conforms to the General Plan as described in the General Plan Analysis section of this report.

1. **Approved Use**

The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, staff report and the approved plans **[identify final approved plans by date of plans and/or date plans received]**, as amended by the following conditions of approval and mitigation measures, if applicable ("Conditions of Approval" or "Conditions").

2. **Effective Date, Expiration, Extensions and Extinguishment**

This Approval shall become effective immediately, unless the Approval is appealable, in which case the Approval shall become effective in ten (10) calendar days unless an appeal is filed. Unless a different termination date is prescribed, this Approval shall expire June 20, 2020 from the Approval date, or from the date of the final decision in the event of an appeal, unless within such period a complete building permit application has been filed with the Bureau of Building and diligently pursued towards completion, or the authorized activities have commenced in the case of a permit not involving construction or alteration. Upon written request and payment of appropriate fees submitted no later than the expiration date of this Approval, the Director of City Planning or designee may grant a one-year extension of this date, with additional extensions subject to approval by the approving body. Expiration of any necessary building permit or other construction-related permit for this project may invalidate this Approval if said Approval has also expired. If litigation is filed challenging this Approval, or its implementation, then the time period stated above for obtaining necessary permits for construction or alteration and/or commencement of authorized activities is automatically extended for the duration of the litigation.

3. **Compliance with Other Requirements**

The project applicant shall comply with all other applicable federal, state, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Bureau of Building, Fire Marshal, Department of Transportation, and Public Works Department. 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 Condition #4.

4. **Minor and Major Changes**

a. Minor changes to the approved project, plans, Conditions, facilities, or use may be approved administratively by the Director of City Planning.

b. Major changes to the approved project, plans, Conditions, facilities, or use shall be reviewed by the Director of City Planning to determine whether such changes require submittal and approval of a revision to the Approval by the original approving body or a new independent permit/approval. Major revisions shall be reviewed in accordance with the procedures required for the original permit/approval. A new independent permit/approval shall be reviewed in accordance with the procedures required for the new permit/approval.

5. **Compliance with Conditions of Approval**

a. The project applicant and property owner, including successors, (collectively referred to hereafter as the "project applicant" or "applicant") shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.

b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant's expense that the as-built project conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.

c. Violation of any term, Condition, or project description relating to the Approval is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approval or alter these Conditions if it is found that there is violation of any of the Conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Approval or Conditions.

6. **Signed Copy of the Approval/Conditions**

A copy of the Approval letter and Conditions shall be signed by the project applicant, attached to each set of permit plans submitted to the appropriate City agency for the project, and made available for review at the project job site at all times.

7. **Blight/Nuisances**

The project site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within sixty (60) days of approval, unless an earlier date is specified elsewhere.

8. **Indemnification**

a. To the maximum extent permitted by law, the project applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the Oakland Redevelopment Successor Agency, the Oakland City Planning Commission, and their respective agents, officers, employees, and volunteers (hereafter collectively called "City") from any liability, damages, claim, judgment, loss (direct or indirect), action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul this Approval or implementation of this Approval. The City may elect, in its sole discretion, to

participate in the defense of said Action and the project applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.

b. Within ten (10) calendar days of the filing of any Action as specified in subsection (a) above, the project applicant shall execute a Joint Defense Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Joint Defense Letter of Agreement shall survive termination, extinguishment, or invalidation of the Approval. Failure to timely execute the Letter of Agreement does not relieve the project applicant of any of the obligations contained in this Condition or other requirements or Conditions of Approval that may be imposed by the City.

9. Severability

The Approval would not have been granted but for the applicability and validity of each and every one of the specified Conditions, and if one or more of such Conditions is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid Conditions consistent with achieving the same purpose and intent of such Approval.

10. Special Inspector/Inspections, Independent Technical Review, Project Coordination and Monitoring

The project applicant may be required to cover the full costs of independent third-party technical review and City monitoring and inspection, including without limitation, special inspector(s)/inspection(s) during times of extensive or specialized plan-check review or construction, and inspections of potential violations of the Conditions of Approval. The project applicant shall establish a deposit with Engineering Services and/or the Bureau of Building, if directed by the Director of Public Works, Building Official, Director of City Planning, Director of Transportation, or designee, prior to the issuance of a construction-related permit and on an ongoing as-needed basis.

11. Public Improvements

The project applicant shall obtain all necessary permits/approvals, such as encroachment permits, obstruction permits, curb/gutter/sidewalk permits, and public improvement ("p-job") permits from the City for work in the public right-of-way, including but not limited to, streets, curbs, gutters, sidewalks, utilities, and fire hydrants. Prior to any work in the public right-of-way, the applicant shall submit plans for review and approval by the Bureau of Planning, the Bureau of Building, Engineering Services, Department of Transportation, and other City departments as required. Public improvements shall be designed and installed to the satisfaction of the City.

12. Compliance Matrix

The project applicant shall submit a Compliance Matrix, in both written and electronic form, for review and approval by the Bureau of Planning and the Bureau of Building that lists each Condition of Approval (including each mitigation measure if applicable) in a sortable spreadsheet. The Compliance Matrix shall contain, at a minimum, each required Condition of Approval, when compliance with the Condition is required, and the status of compliance

with each Condition. For multi-phased projects, the Compliance Matrix shall indicate which Condition applies to each phase. The project applicant shall submit the initial Compliance Matrix prior to the issuance of the first construction-related permit and shall submit an updated matrix upon request by the City.

13. Construction Management Plan

Prior to the issuance of the first construction-related permit, the project applicant and his/her general contractor shall submit a Construction Management Plan (CMP) for review and approval by the Bureau of Planning, Bureau of Building, and other relevant City departments such as the Fire Department, Department of Transportation, and the Public Works Department as directed. The CMP shall contain measures to minimize potential construction impacts including measures to comply with all construction-related Conditions of Approval (and mitigation measures if applicable) such as dust control, construction emissions, hazardous materials, construction days/hours, construction traffic control, waste reduction and recycling, stormwater pollution prevention, noise control, complaint management, and cultural resource management (see applicable Conditions below). The CMP shall provide project-specific information including descriptive procedures, approval documentation, and drawings (such as a site logistics plan, fire safety plan, construction phasing plan, proposed truck routes, traffic control plan, complaint management plan, construction worker parking plan, and litter/debris clean-up plan) that specify how potential construction impacts will be minimized and how each construction-related requirement will be satisfied throughout construction of the project.

GENERAL

14. Regulatory Permits and Authorizations from Other Agencies

Requirement: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies including, but not limited to, the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.

When Required: Prior to activity requiring permit/authorization from regulatory agency

Initial Approval: Approval by applicable regulatory agency with jurisdiction; evidence of approval submitted to Bureau of Planning

Monitoring/Inspection: Applicable regulatory agency with jurisdiction

AESTHETICS

15. Trash and Blight Removal

Requirement: The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and

multi-family residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

16. Graffiti Control

Requirement:

a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:
   i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.
   ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces.
   iii. Use of paint with anti-graffiti coating.
   iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).
   v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.

b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:
   i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.
   ii. Covering with new paint to match the color of the surrounding surface.
   iii. Replacing with new surfacing (with City permits if required).

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

17. Landscape Plan

a. ***Landscape Plan Required***

- Requirement: The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code. Proposed plants shall be predominantly drought-tolerant. Specification of any street trees shall comply with the Master Street Tree List and Tree Planting Guidelines (which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and

http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively), and with any applicable streetscape plan.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: N/A

b. ***Landscape Installation***
Requirement: The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid.

When Required: Prior to building permit final

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

c. ***Landscape Maintenance***
Requirement: 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. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

18. Lighting

Requirement: Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.

When Required: Prior to building permit final

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

1. Public Art for Private Development

Requirement: The project is subject to the City's Public Art Requirements for Private Development, adopted by Ordinance No. 13275 C.M.S. ("Ordinance"). The public art contribution requirements are equivalent to one-half percent (0.5%) for the "residential" building development costs, and one percent (1.0%) for the "non-residential" building development costs.

FINDINGS

The contribution requirement can be met through: 1) the installation of freely accessible art at the site; 2) the installation of freely accessible art within one-quarter mile of the site; or 3) satisfaction of alternative compliance methods described in the Ordinance, including, but not limited to, payment of an in-lieu fee contribution. The applicant shall provide proof of full payment of the in-lieu contribution and/or provide plans, for review and approval by the Planning Director, showing the installation or improvements required by the Ordinance prior to issuance of a building permit.

Proof of installation of artwork, or other alternative requirement, is required prior to the City's issuance of a final certificate of occupancy for each phase of a project unless a separate, legal binding instrument is executed ensuring compliance within a timely manner subject to City approval.

When Required: Payment of in-lieu fees and/or plans showing fulfillment of public art requirement – Prior to Issuance of Building permit

Installation of art/cultural space – Prior to Issuance of a Certificate of Occupancy.

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

AIR QUALITY

2. Dust Controls – Construction Related

Requirement: The project applicant shall implement all of the following applicable dust control measures during construction of the project:

a) Water all exposed surfaces of active construction areas at least twice daily. 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 feasible.

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

e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.

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

g) 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.

[The following condition applies to all projects involving construction activities.]

3. **Criteria Air Pollutant Controls - Construction Related**

Requirement: The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable:

a) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two 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.

b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations").

c) 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. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed.

d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand.

e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings.

f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met.

g) Criteria Air Pollutant Reduction Measures

Requirement: The project applicant shall retain a qualified air quality consultant to identify criteria air pollutant reduction measures to reduce the project's average daily emissions below 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10. Quantified emissions and identified reduction measures shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits and the approved criteria air pollutant reduction measures shall be implemented during construction.

h) Construction Emissions Minimization Plan

Requirement: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified criteria air pollutant reduction measures. The Emissions Plan shall be submitted to the City (and the Air District

if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following:

i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all Verified Diesel Emissions Control Strategies (VDECS), the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.

ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.

When Required: Prior to issuance of a construction related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

4. **Diesel Particulate Matter Controls-Construction Related**

a. Diesel Particulate Matter Reduction Measures

Requirement: The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose **one** of the following methods:

i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction.

-or-

ii. All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to

compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract.

When Required: Prior to issuance of a construction related permit (i), during construction (ii)

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

b. Construction Emissions Minimization Plan (if required by a above)

Requirement: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified DPM reduction measures (if any). The Emissions Plan shall be submitted to the City (and the Bay Area Air Quality District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following:

i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.

ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.

When Required: Prior to issuance of a construction related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

5. Stationary Sources of Air Pollution (Toxic Air Contaminants)

Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of 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 California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. 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.

- or -

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:

i. Installation of non-diesel fueled generators, if feasible, or;

ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

6. Asbestos in Structures

Requirement: The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.

When Required: Prior to approval of construction-related permit

Initial Approval: Applicable regulatory agency with jurisdiction

Monitoring/Inspection: Applicable regulatory agency with jurisdiction

BIOLOGICAL RESOURCES

7. Bird Collision Reduction Measures

Requirement: The project applicant shall submit a Bird Collision Reduction Plan for City review and approval to reduce potential bird collisions to the maximum feasible extent. The Plan shall include all of the following mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent. The project applicant shall implement the approved Plan. Mandatory measures include all of the following:

i. For large buildings subject to federal aviation safety regulations, install minimum intensity white strobe lighting with three second flash instead of solid red or rotating lights.

ii. Minimize the number of and co-locate rooftop-antennas and other rooftop structures.

iii. Monopole structures or antennas shall not include guy wires.

iv. Avoid the use of mirrors in landscape design.

v. Avoid placement of bird-friendly attractants (i.e., landscaped areas, vegetated roofs, water features) near glass unless shielded by architectural features taller than the attractant that incorporate bird friendly treatments no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule), as explained below.

vi. Apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground or to the height of existing adjacent landscape or the height of the proposed landscape. Examples of bird-friendly glazing treatments include the following:

- Use opaque glass in window panes instead of reflective glass.
- Uniformly cover the interior or exterior of clear glass surface with patterns (e.g., dots, stripes, decals, images, abstract patterns). Patterns can be etched, fritted, or on films and shall have a density of no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule).
- Install paned glass with fenestration patterns with vertical and horizontal mullions no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule).
- Install external screens over non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects.
- Install UV-pattern reflective glass, laminated glass with a patterned UV-reflective coating, or UV-absorbing and UV-reflecting film on the glass since most birds can see ultraviolet light, which is invisible to humans.
- Install decorative grilles, screens, netting, or louvers, with openings no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule).
- Install awnings, overhangs, sunshades, or light shelves directly adjacent to clear glass which is recessed on all sides.
- Install opaque window film or window film with a pattern/design which also adheres to the "two-by-four" rule for coverage.

vi. Reduce light pollution. Examples include the following:

- Extinguish night-time architectural illumination treatments during bird migration season (February 15 to May 15 and August 15 to November 30).
- Install time switch control devices or occupancy sensors on non-emergency interior lights that can be programmed to turn off during non-work hours and between 11:00 p.m. and sunrise.
- Reduce perimeter lighting whenever possible.
- Install full cut-off, shielded, or directional lighting to minimize light spillage, glare, or light trespass.
- Do not use beams of lights during the spring (February 15 to May 15) or fall (August 15 to November 30) migration.

vii. Develop and implement a building operation and management manual that promotes bird safety. Example measures in the manual include the following:

- Donation of discovered dead bird specimens to an authorized bird conservation organization or museums (e.g., UC Berkeley Museum of Vertebrate Zoology) to aid in species identification and to benefit scientific study, as per all federal, state and local laws.
- Distribution of educational materials on bird-safe practices for the building occupants. Contact Golden Gate Audubon Society or American Bird Conservancy for materials.

FINDINGS

- Asking employees to turn off task lighting at their work stations and draw office blinds, shades, curtains, or other window coverings at end of work day.
- Install interior blinds, shades, or other window coverings in windows above the ground floor visible from the exterior as part of the construction contract, lease agreement, or CC&Rs.
- Schedule nightly maintenance during the day or to conclude before 11 p.m., if possible.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

8. Tree Removal During Bird Breeding Season

Requirement: To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.

When Required: Prior to removal of trees

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

CULTURAL RESOURCES

9. Archaeological and Paleontological Resources – Discovery During Construction

Requirement: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance

measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration 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, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.

In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. 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 practicable. 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. The project applicant shall implement the ARDTP at his/her expense.

In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

10. Human Remains – Discovery During Construction

Requirement: Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event 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 California Health and Safety Code. 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 and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

GEOLOGY AND SOILS

11. Construction-Related Permit(s)

Requirement: The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

12. Soils Report

Requirement: The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

HAZARDS AND HAZARDOUS MATERIALS

13. Hazardous Materials Related to Construction

Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:

a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction;
b. Avoid overtopping construction equipment fuel gas tanks;
c. During routine maintenance of construction equipment, properly contain and remove grease and oils;
d. Properly dispose of discarded containers of fuels and other chemicals;
e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and

f. 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 underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project 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 notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, 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.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

14. Hazardous Building Materials and Site Contamination

a. ***Hazardous Building Materials Assessment***

Requirement: The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.

When Required: Prior to approval of demolition, grading, or building permits

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

b. ***Environmental Site Assessment Required***

Requirement: The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.

When Required: Prior to approval of construction-related permit.

Initial Approval: Applicable regulatory agency with jurisdiction

Monitoring/Inspection: Applicable regulatory agency with jurisdiction

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c. ***Health and Safety Plan Required***
Requirement: The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

d. ***Best Management Practices (BMPs) Required for Contaminated Sites***
Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following:

i. Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements.

ii. Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

HYDROLOGY AND WATER QUALITY

15. Erosion and Sedimentation Control Measures for Construction

Requirement: The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. At a minimum, the project applicant shall provide filter materials deemed acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City's storm drain system and creeks.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

16. NPDES C.3 Stormwater Requirements for Regulated Projects

a. ***Post-Construction Stormwater Management Plan Required***

Requirement: The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following:

i. Location and size of new and replaced impervious surface;
ii. Directional surface flow of stormwater runoff;
iii. Location of proposed on-site storm drain lines;
iv. Site design measures to reduce the amount of impervious surface area;
v. Source control measures to limit stormwater pollution;
vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and
vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Planning; Bureau of Building
Monitoring/Inspection: Bureau of Building

b. ***Maintenance Agreement Required***

Requirement: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following:

i. The project 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 maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.

When Required: Prior to building permit final

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

NOISE

17. Construction Days/Hours

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling 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.

b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.

c. No construction is allowed on Sunday or federal holidays.

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.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

18. Construction Noise

Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

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. Applicant shall use temporary power poles instead of generators where feasible.

d. Stationary noise sources shall be located as far from adjacent properties 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.

e. 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.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

19. Extreme Construction Noise

a. ***Construction Noise Management Plan Required***

Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;

ii. 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;

iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;

iv. 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

v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

b. ***Public Notification Required***

Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall

submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

When Required: During construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

20. Project-Specific Construction Noise Reduction Measures

Requirement: The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts on 1770 Broadway. The project applicant shall implement the approved Plan during construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

21. Construction Noise Complaints

Requirement: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include:

a. Designation of an on-site construction complaint and enforcement manager for the project;
b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit;
c. Protocols for receiving, responding to, and tracking received complaints; and
d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

22. Operational Noise

Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 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 City.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

23. Exposure to Vibration

Requirement: The project applicant shall submit a Vibration Reduction Plan prepared by a qualified acoustical consultant for City review and approval that contains vibration reduction measures to reduce groundborne vibration to acceptable levels per Federal Transit Administration (FTA) standards. The applicant shall implement the approved Plan during construction. Potential vibration reduction measures include, but are not limited to, the following:

a. Isolation of foundation and footings using resilient elements such as rubber bearing pads or springs, such as a "spring isolation" system that consists of resilient spring supports that can support the podium or residential foundations. The specific system shall be selected so that it can properly support the structural loads, and provide adequate filtering of groundborne vibration to the residences above.

b. Trenching, which involves excavating soil between the railway and the project so that the vibration path is interrupted, thereby reducing the vibration levels before they enter the project's structures. Since the reduction in vibration level is based on a ratio between trench depth and vibration wavelength, additional measurements shall be conducted to determine the vibration wavelengths affecting the project. Based on the resulting measurement findings, an adequate trench depth and, if required, suitable fill shall be identified (such as foamed styrene packing pellets [i.e., Styrofoam] or low-density polyethylene).

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

24. Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities

Requirement: The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located at 1900 Broadway (The Tapscott Building). The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.

When Required: Prior to construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

POPULATION AND HOUSING

25. Jobs/Housing Impact Fee

Requirement: The project applicant shall comply with the requirements of the City of Oakland Jobs/Housing Impact Fee Ordinance (chapter 15.68 of the Oakland Municipal Code).

When Required: Prior to issuance of building permit; subsequent milestones pursuant to ordinance

Initial Approval: Bureau of Building

Monitoring/Inspection: N/A

26. Affordable Housing Impact Fee

Requirement: The project applicant shall comply with the requirements of the City of Oakland Affordable Housing Impact Fee Ordinance (chapter 15.72 of the Oakland Municipal Code).

When Required: Prior to issuance of building permit; subsequent milestones pursuant to ordinance

Initial Approval: Bureau of Building

Monitoring/Inspection: N/A

PUBLIC SERVICES

27. Capital Improvements Impact Fee

Requirement: The project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).

When Required: Prior to issuance of building permit

Initial Approval: Bureau of Building

Monitoring/Inspection: N/A

TRANSPORTATION/TRAFFIC

28. Construction Activity in the Public Right-of-Way

a. ***Obstruction Permit Required***

Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops.

When Required: Prior to approval of construction-related permit

Initial Approval: Department of Transportation

Monitoring/Inspection: Department of Transportation

b. ***Traffic Control Plan Required***

Requirement: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit

evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved Plan during construction.

Initial Approval: Department of Transportation

Monitoring/Inspection: Department of Transportation

c. ***Repair of City Streets***

Requirement: The project applicant shall repair any damage to the public right-of way, including streets and sidewalks, caused by project construction at his/her 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 approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.

When Required: Prior to building permit final

Initial Approval: N/A

Monitoring/Inspection: Department of Transportation

29. Bicycle Parking

Requirement: The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

30. Transportation and Parking Demand Management

a. Transportation and Parking Demand Management (TDM) Plan Required

Requirement: The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City.

i. The goals of the TDM Plan shall be the following:

- Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable.
- Achieve the following project vehicle trip reductions (VTR):
  - Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR
  - Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR

- Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate.
- Enhance the City's transportation system, consistent with City policies and programs.

ii. The TDM Plan should include the following:

- Baseline existing conditions of parking and curbside regulations within the surrounding neighborhood that could affect the effectiveness of TDM strategies, including inventory of parking spaces and occupancy if applicable.
- Proposed TDM strategies to achieve VTR goals (see below).

iii. For employers with 100 or more employees at the subject site, the TDM Plan shall also comply with the requirements of Oakland Municipal Code Chapter 10.68 Employer-Based Trip Reduction Program.

iv. The following TDM strategies **must** be incorporated into a TDM Plan based on a project location or other characteristics. When required, these mandatory strategies should be identified as a credit toward a project's VTR.

Improvement	**Required by code or when…**
Bus boarding bulbs or islands	• A bus boarding bulb or island does not already exist and a bus stop is located along the project frontage; and/or • A bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb
Bus shelter	• A stop with no shelter is located within the project frontage, or • The project is located within 0.10 miles of a flag stop with 25 or more boardings per day
Concrete bus pad	• A bus stop is located along the project frontage and a concrete bus pad does not already exist
Curb extensions or bulb-outs	• Identified as an improvement within site analysis
Implementation of a corridor-level bikeway improvement	• A buffered Class II or Class IV bikeway facility is in a local or county adopted plan within 0.10 miles of the project location; and • The project would generate 500 or more daily bicycle trips
Implementation of a corridor-level transit capital improvement	• A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and

Improvement	Required by code or when…
	• The project would generate 400 or more peak period transit trips
Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.	• Always required
Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.)	• When improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection
In-street bicycle corral	• A project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and on-street vehicle parking is provided along the project frontages.
Intersection improvements[1]	• Identified as an improvement within site analysis
New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards	• Always required
No monthly permits and establish minimum price floor for public parking[2]	• If proposed parking ratio exceeds 1:1000 sf. (commercial)
Parking garage is designed with retrofit capability	• Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf. (commercial)
Parking space reserved for car share	• If a project is providing parking and a project is located within downtown. One car share space reserved for buildings between 50 – 200 units, then one car share space per 200 units.
Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section	• Typically required

[1] Including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines.

[2] May also provide a cash incentive or transit pass alternative to a free parking space in commercial properties.

Improvement	Required by code or when…
Pedestrian crossing improvements	• Identified as an improvement within site analysis
Pedestrian-supportive signal changes[3]	• Identified as an improvement within operations analysis
Real-time transit information system	• A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
Relocating bus stops to far side	• A project is located within 0.10 mile of any active bus stop that is currently near-side
Signal upgrades[4]	• Project size exceeds 100 residential units, 80,000 sf. of retail, or 100,000 sf. of commercial; and • Project frontage abuts an intersection with signal infrastructure older than 15 years
Transit queue jumps	• Identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
Trenching and placement of conduit for providing traffic signal interconnect	• Project size exceeds 100 units, 80,000 sf. of retail, or 100,000 sf. of commercial; and • Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and • A major transit improvement is identified within operations analysis requiring traffic signal interconnect
Transit Pass subsidy for residents	• Required per Section 17.116.105 of the Planning Code.
Unbundled parking	• Required per Section 17.116.310 of the Planning Code.

v. Other TDM strategies to consider include, but are not limited to, the following:

- 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 the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and

[3] Including but not limited to reducing signal cycle lengths to less than 90 seconds to avoid pedestrian crossings against the signal, providing a leading pedestrian interval, provide a "scramble" signal phase where appropriate.
[4] Including typical traffic lights, pedestrian signals, bike actuated signals, transit-only signals

shower and locker facilities in commercial developments that exceed the requirement.

- Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping.
- Installation of safety elements per the Pedestrian Master Plan (such as crosswalk 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.

- Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan, the Master Street Tree List and Tree Planting Guidelines (which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively)

  and any applicable streetscape plan.

  - Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.
  - 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).
  - Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes.
  - Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3).
  - Guaranteed ride home program for employees, either through 511.org or through separate program.
  - Pre-tax commuter benefits (commuter checks) for employees.
  - 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.
  - On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools.
  - Distribution of information concerning alternative transportation options.
  - 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.

FINDINGS

- Parking management strategies including attendant/valet parking and shared parking spaces.
- Requiring tenants to provide opportunities and the ability to work off-site.
- 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).
- 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, based on published research or guidelines where feasible. 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.

When Required: Prior to approval of planning application.

Initial Approval: Bureau of Planning

Monitoring/Inspection: N/A

b. TDM Implementation – Physical Improvements

Requirement: For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project.

When Required: Prior to building permit final

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

c. TDM Implementation – Operational Strategies

Requirement: For projects that generate 100 or more net new a.m. or p.m. 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 achieved by the project during operation. 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.

When Required: Ongoing

Initial Approval: Department of Transportation

FINDINGS

Monitoring/Inspection: Department of Transportation

31. Transportation Impact Fee

Requirement: The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).

When Required: Prior to issuance of building permit

Initial Approval: Bureau of Building

Monitoring/Inspection: N/A

32. Plug-In Electric Vehicle (PEV) Charging Infrastructure

a. ***PEV-Ready Parking Spaces***

Requirement: The applicant shall submit, for review and approval of the Building Official and the Zoning Manager, plans that show the location of parking spaces equipped with full electrical circuits designated for future PEV charging (i.e. "PEV-Ready) per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-Ready parking spaces.

When Required: Prior to Issuance of Building Permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

b. ***PEV-Capable Parking Spaces***

Requirement: The applicant shall submit, for review and approval of the Building Official, plans that show the location of inaccessible conduit to supply PEV-capable parking spaces per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-capable parking spaces.

When Required: Prior to Issuance of Building Permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

c. ***ADA-Accessible Spaces***

Requirement: The applicant shall submit, for review and approval of the Building Official, plans that show the location of future accessible EV parking spaces as required under Title 24 Chapter 11B Table 11B-228.3.2.1, and specify plans to construct all future accessible EV parking spaces with appropriate grade, vertical clearance, and accessible path of travel to allow installation of accessible EV charging station(s).

When Required: Prior to Issuance of Building Permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

FINDINGS

UTILITY AND SERVICE SYSTEMS

33. Construction and Demolition Waste Reduction and Recycling

Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Environmental Services Division

Monitoring/Inspection: Public Works Department, Environmental Services Division

34. Underground Utilities

Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

35. Recycling Collection and Storage Space

Requirement: The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two (2) cubic feet of storage and collection space per residential unit is required, with a minimum of ten (10) cubic feet. For nonresidential projects, at least two (2) cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten (10) cubic feet.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning
Monitoring/Inspection: Bureau of Building

36. Green Building Requirements

d. ***Compliance with Green Building Requirements During Plan-Check***
Requirement: The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code).

i. The following information shall be submitted to the City for review and approval with the application for a building permit:
- Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards.
- Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.
- Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit.
- Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below.
- 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.
- 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.
- Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

ii. The set of plans in subsection (i) shall demonstrate compliance with the following:
- CALGreen mandatory measures.
- The project shall meet the green building point level/certification requirement per the appropriate checklist approved during the Planning entitlement process.
- All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted.
- The required green building point minimums in the appropriate credit categories.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Building
Monitoring/Inspection: N/A

e. ***Compliance with Green Building Requirements During Construction***

FINDINGS

Requirement: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project.

The following information shall be submitted to the City 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.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

f. ***Compliance with Green Building Requirements After Construction***
Requirement: Prior to the finaling the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.

When Required: Prior to Final Approval

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

37. Sanitary Sewer System

Requirement: The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Department of Engineering and Construction

Monitoring/Inspection: N/A

38. Storm Drain System

Requirement: The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

FINDINGS

39. Employee Rights

Requirement: The project applicant and business owners in the project shall comply with all state and federal laws regarding employees' right to organize and bargain collectively with employers and shall comply with the City of Oakland Minimum Wage Ordinance (chapter 5.92 of the Oakland Municipal Code).

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: N/A

40. Neighborhood Retail Survey

Requirement: The project applicant shall conduct a survey of community members located within one-half mile of the project site to identify neighborhood needs and preferences for the proposed commercial space. The City strongly encourages the project applicant to seek tenants for the proposed commercial space that meet the needs and preferences of local community members. Please refer to the City's Survey Guidelines for more information (contained in a separate document and available from the Oakland Planning Bureau).

When Required: Prior to commercial operations

Initial Approval: N/A

Monitoring/Inspection: N/A

41. Loading Berth

Ongoing

The management of the building shall require tenants and residents of the building to reserve use of the loading birth to prevent the double parking of a second delivery vehicle.

Applicant Statement

I have read and accept responsibility for the Conditions of Approval. I agree to abide by and conform to the Conditions of Approval, as well as to all provisions of the Oakland Planning Code and Oakland Municipal Code pertaining to the project.

_____

Name of Project Applicant

_____

Signature of Project Applicant

_____

Date



1900 Broadway

Oakland, CA

MIXED USE TOWER

ENTITLEMENTS REVISED PROPOSAL CONCEPT:
MAXIMUM RESID DENSITY 452 UNITS / 39 FLRS

05 - 21 - 2018

OWNER: 19TH & B'WAY ASSOCIATES, LLC

ARCHITECT: SOLOMON CORDWELL BUENZ

CASE FILE # PLN15 - 179

APNS
008-0638-005-00
008-0638-006-03
008-0638-007-10

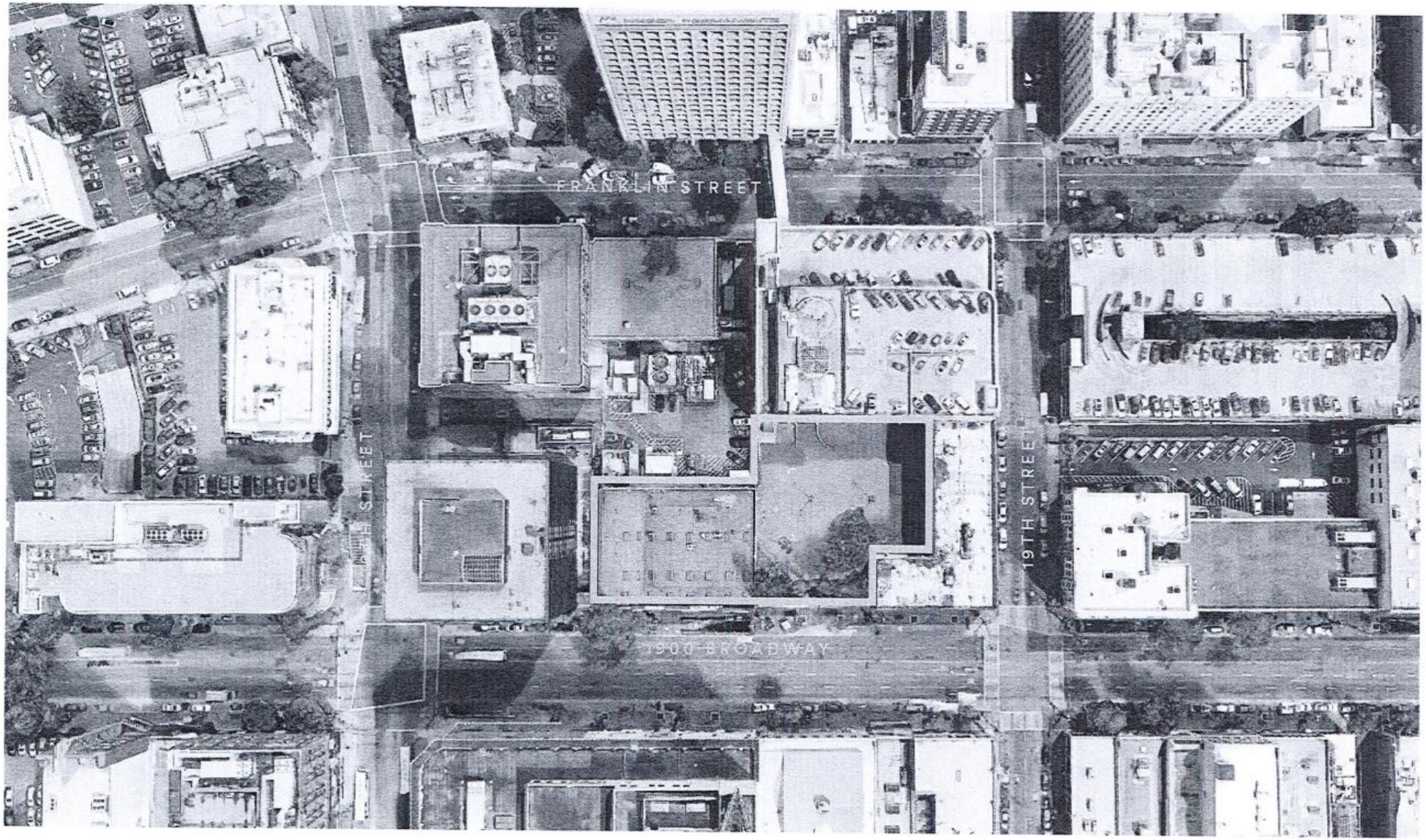
ATTACHMENT A

PLANNING/ENTITLEMENT COMPARISON*

	APPROVED 2018 ENTITLEMENT	TAPSCOTT	PROPOSED 2018 UPDATE	TAPSCOTT
HEIGHT**	363'-6" (to upper flr) 375'-6" (to upper roof)	-	382'-6" (to upper flr) 394'-6" (to upper roof)	-
STORIES	36 + rooftop amenity level (3 level podium)	-	38 + rooftop amenity level (3 level podium)	-
RESIDENTIAL UNITS	433 (as-of-right 90 sf/unit = 452)	0	452 (as-of-right 90 sf/unit = 452)	0
OFFICE SPACE	51,802 SF	27,000 SF	SAME	SAME
RETAIL SPACES	5,917 SF	17,500 SF (incl. 8,765 sf bsmnt retail)	SAME	SAME
PARKING	153 spaces (31 at grade, 122 below)	2,000 sf	SAME	-
TYPICAL TOWER FLOORPLATE	13,307 SF	-	SAME	-
MAX. TOWER LENGTH/DIAGONAL	185'-4" L / 192'-7" DIAG.	-	SAME	-

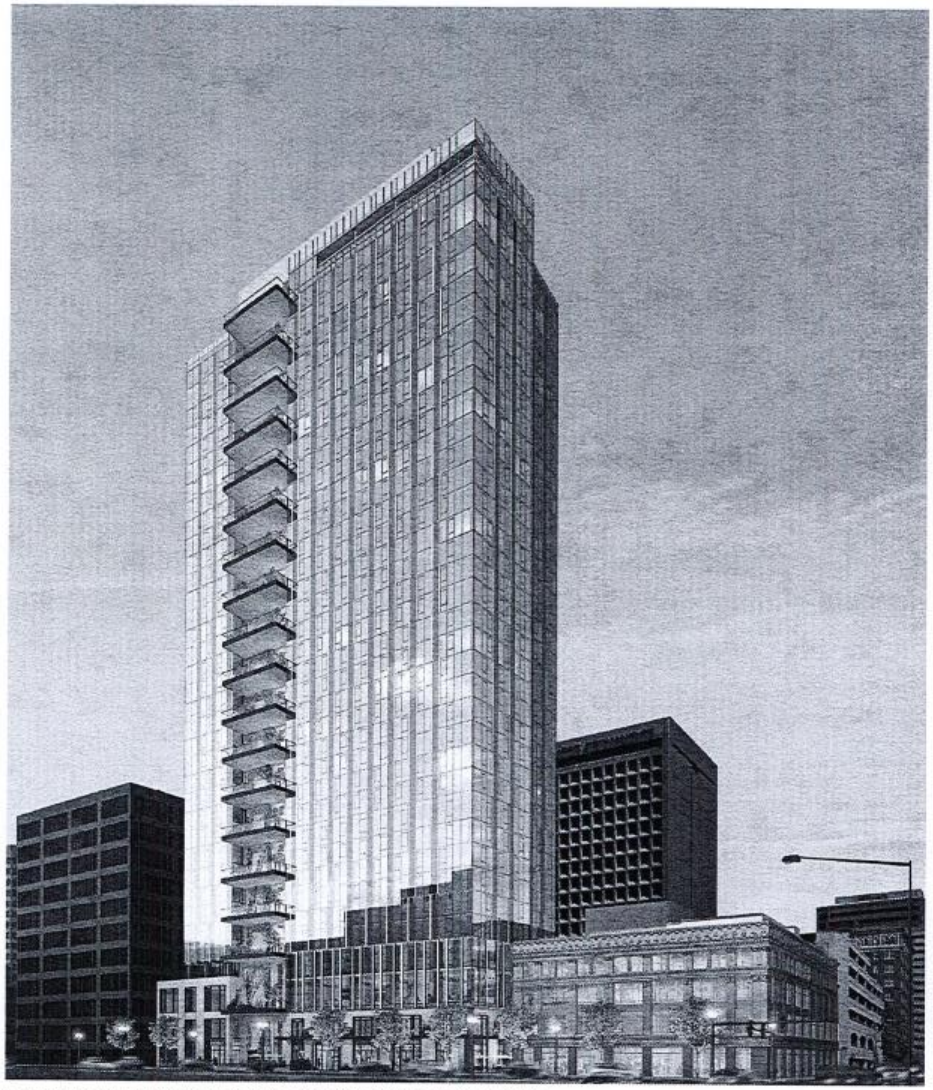
* Previous 2016 approvals include Tapscott; current approval bifurcates + separates site
** Previous 2016 approvals measured to floor of highest habitable level.
Typ. zoning methodology shown to upper roof of highest habitable level - both shown for clarification

TOTAL GSF TOWARD FAR	**515,892 GSF (NEW) + 35,377 GSF (EXIST) = 551,269 GSF**	**542,506 GSF (NEW) = 35,377 GSF (EXIST) = 577,883 GSF**
TOTAL ABOVE GRADE GSF	**529,267 GSF (NEW) + 35,377 GSF (EXIST) = 564,644 GSF**	**555,881 GSF (NEW) + 35,377 GSF (EXIST) = 591,258 GSF**

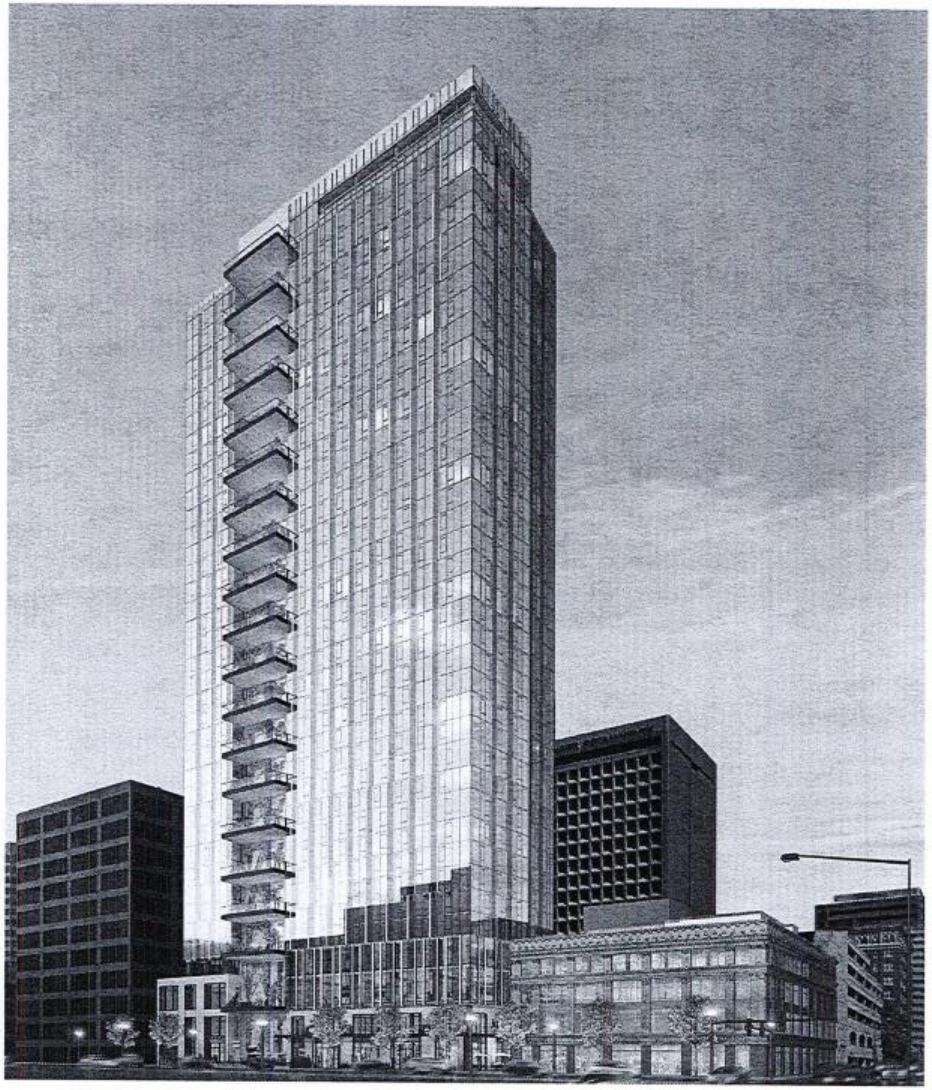


SITE AERIAL

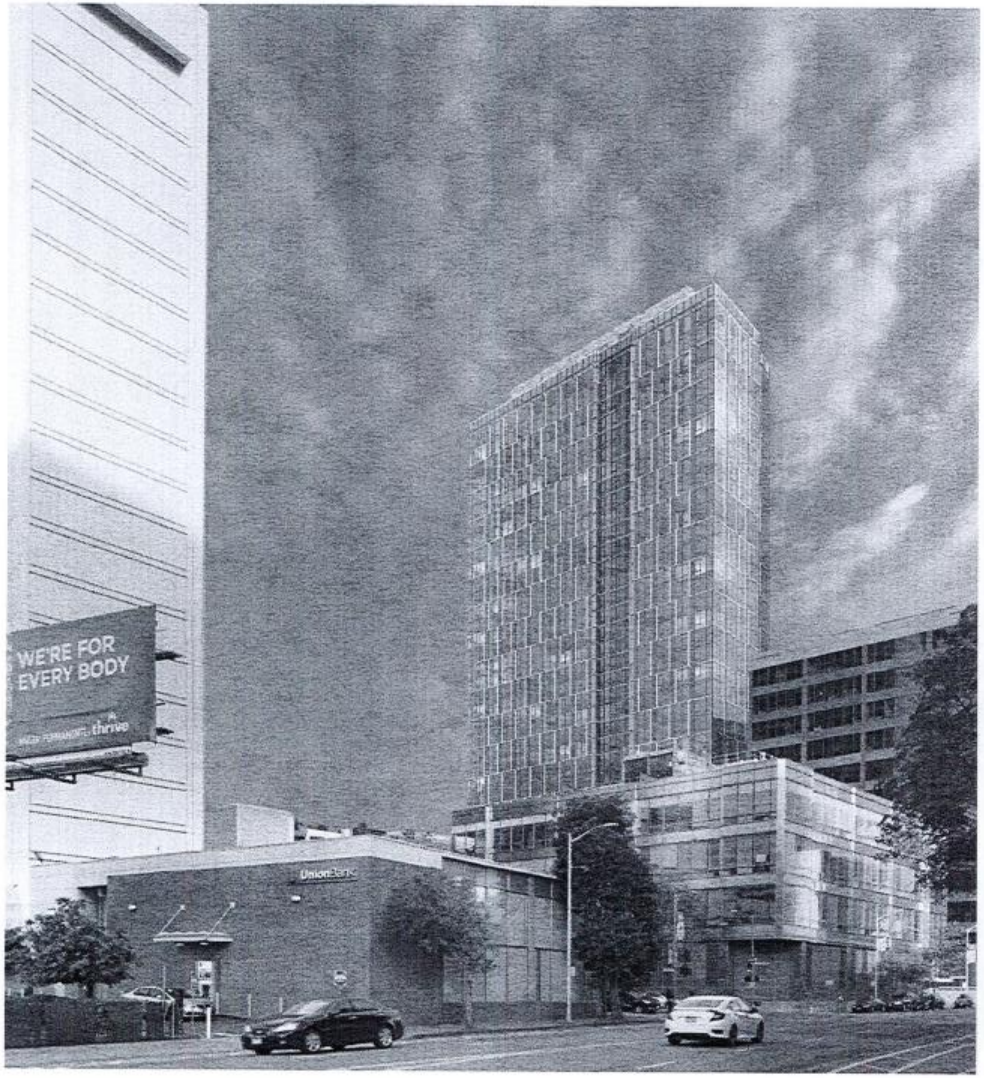
1900 BROADWAY



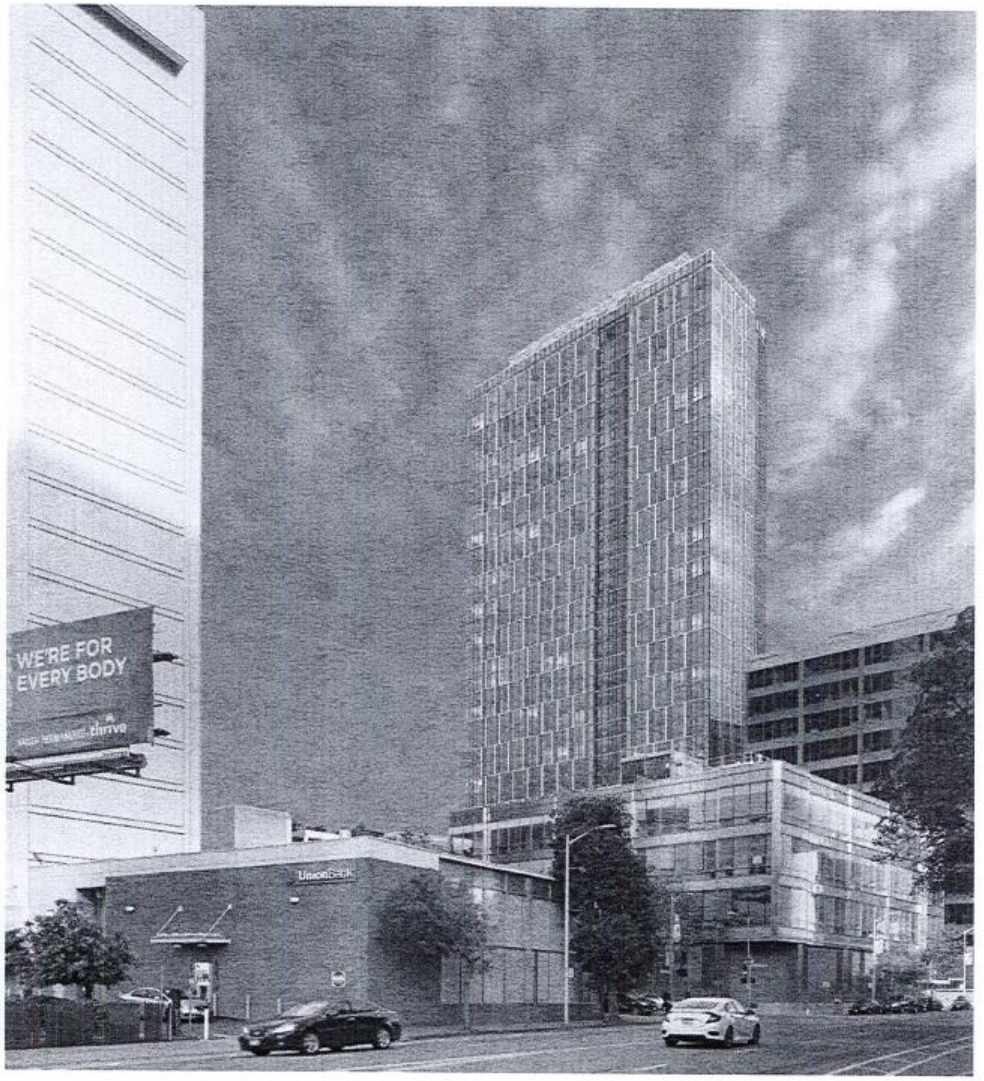
ENTITLED BUILDING DESIGN - BROADWAY PERSPECTIVE



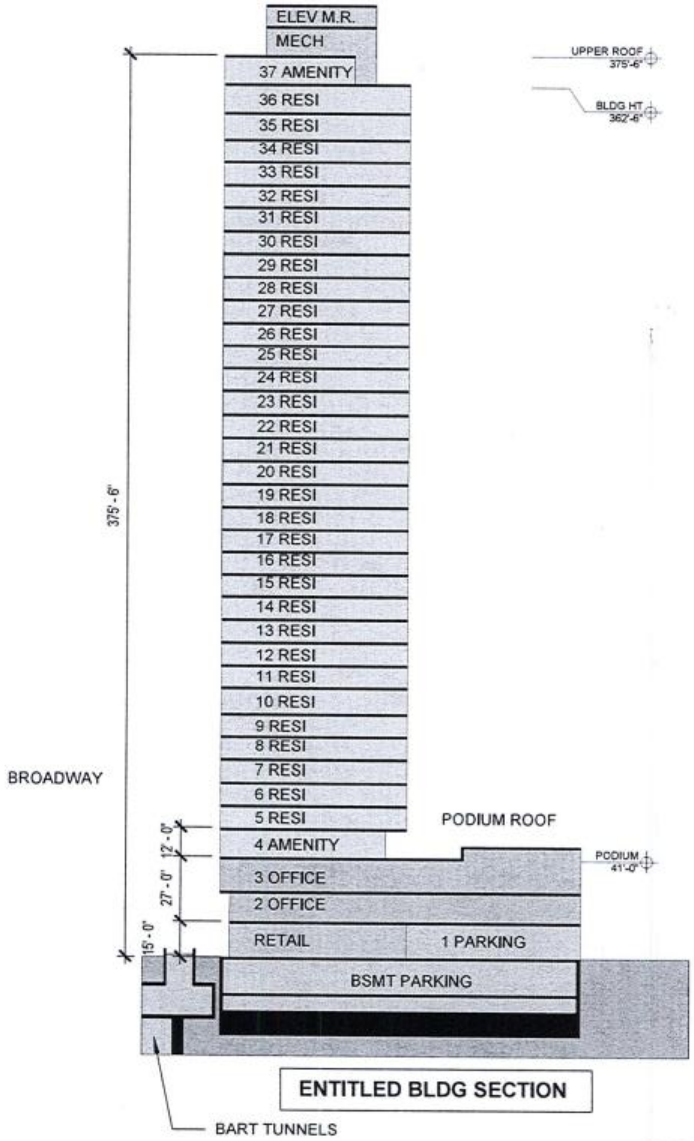
PROPOSED BUILDING DESIGN - BROADWAY PERSPECTIVE



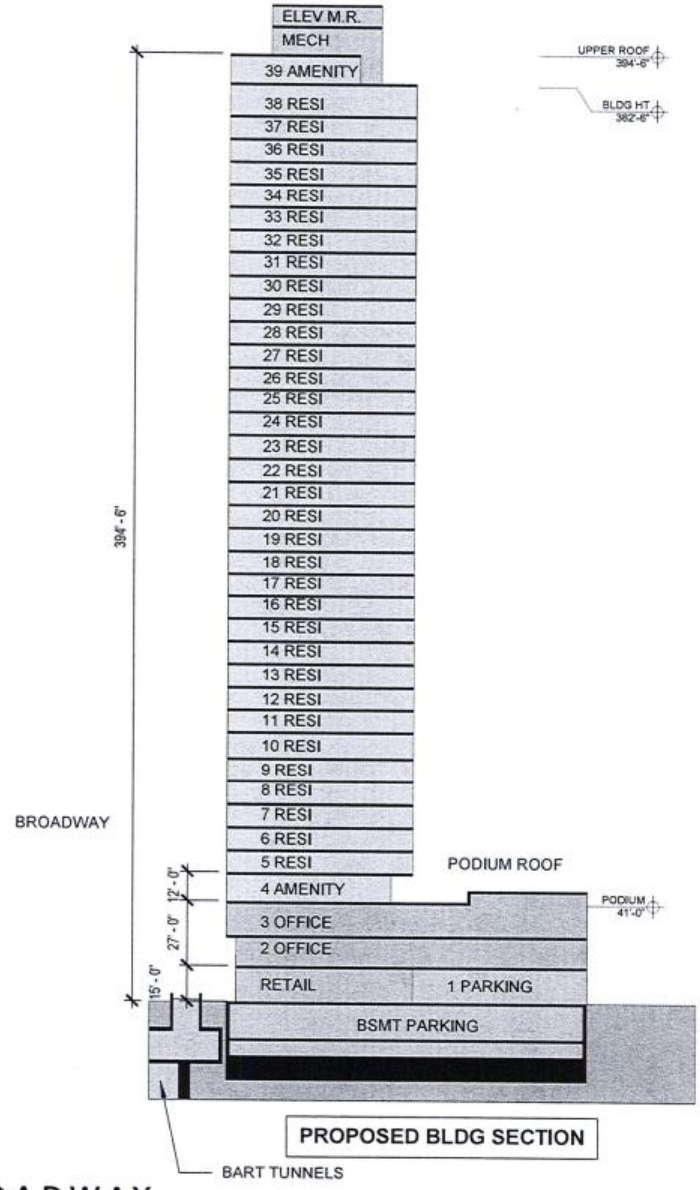
ENTITLED BUILDING DESIGN - EAST PERSPECTIVE



PROPOSED BUILDING DESIGN - EAST PERSPECTIVE

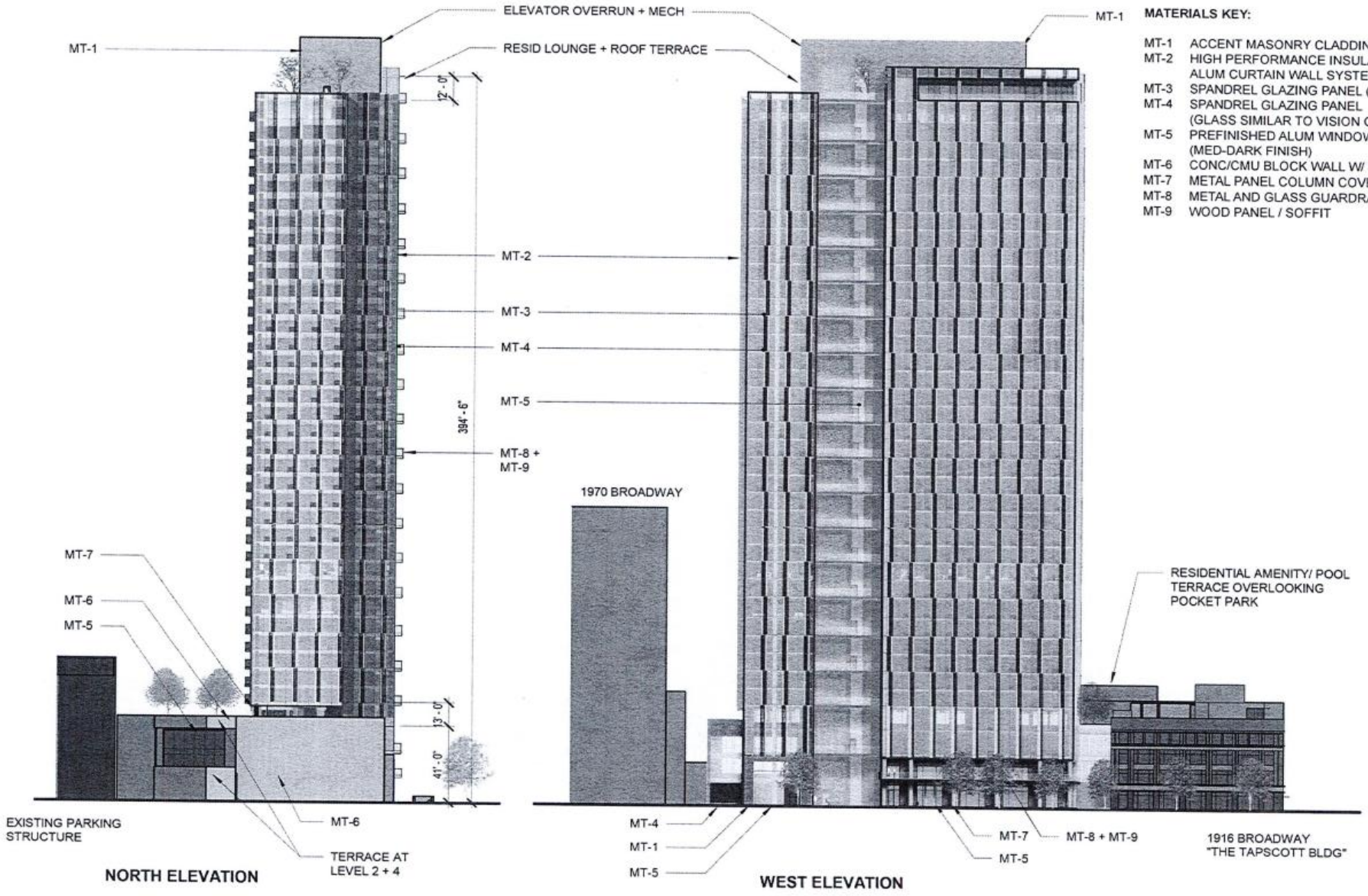


ENTITLED BLDG SECTION



PROPOSED BLDG SECTION

1900 BROADWAY

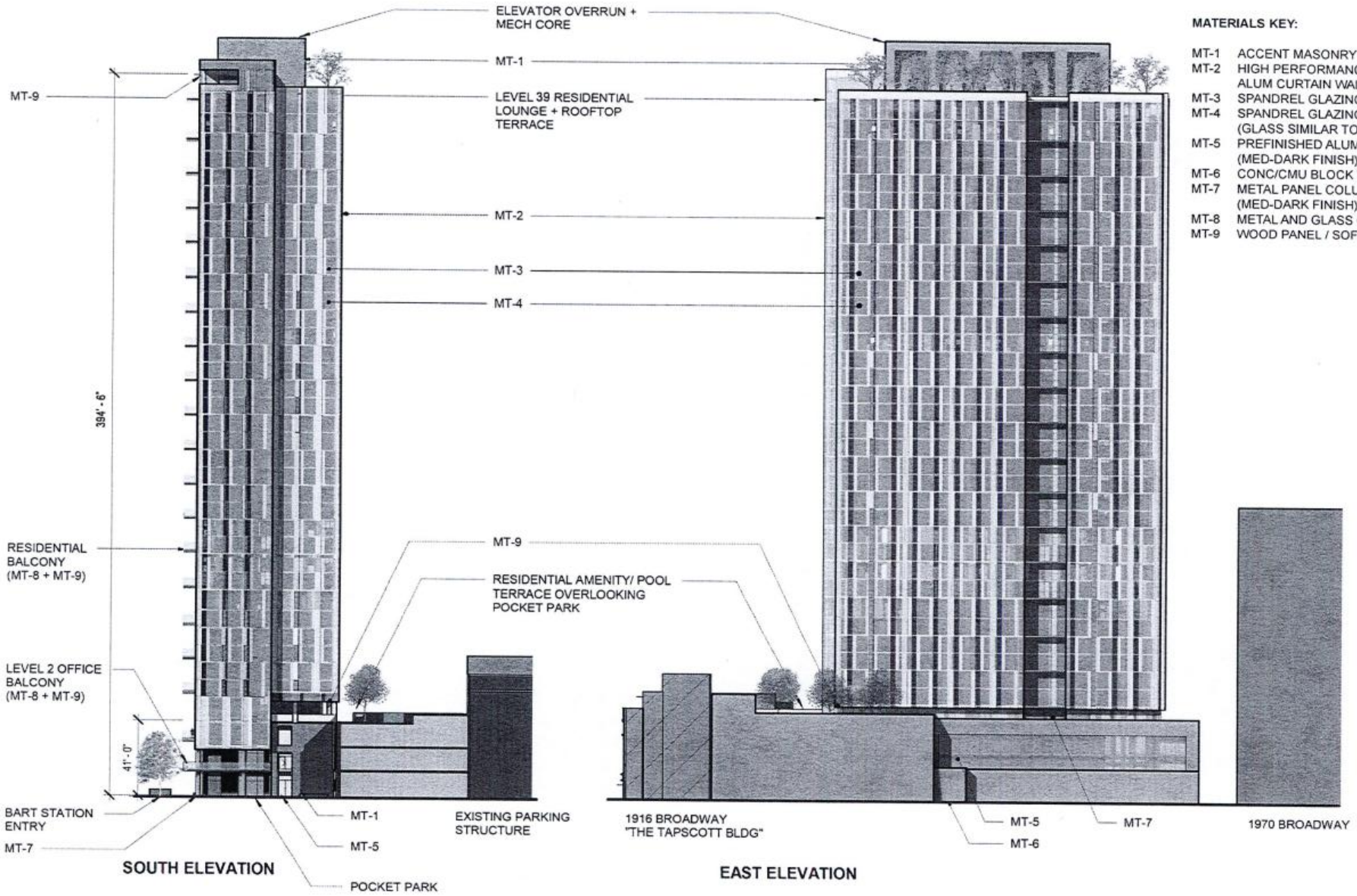


MATERIALS KEY:

- MT-1 ACCENT MASONRY CLADDING
- MT-2 HIGH PERFORMANCE INSULATED GLAZING + ALUM CURTAIN WALL SYSTEM
- MT-3 SPANDREL GLAZING PANEL (METAL PANEL)
- MT-4 SPANDREL GLAZING PANEL (GLASS SIMILAR TO VISION GLASS)
- MT-5 PREFINISHED ALUM WINDOW FRAME (MED-DARK FINISH)
- MT-6 CONC/CMU BLOCK WALL W/ SKIM COAT FINISH
- MT-7 METAL PANEL COLUMN COVER (MED-DARK FINISH)
- MT-8 METAL AND GLASS GUARDRAIL
- MT-9 WOOD PANEL / SOFFIT

ELEVATIONS NORTH + WEST

1900 BROADWAY

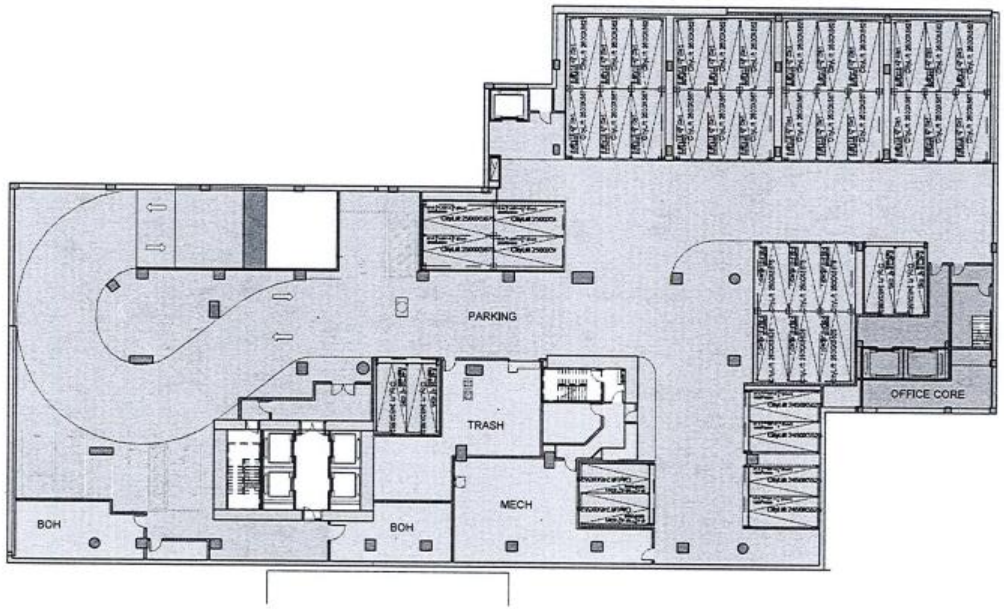


MATERIALS KEY:

MT-1	ACCENT MASONRY CLADDING
MT-2	HIGH PERFORMANCE INSULATED GLAZING + ALUM CURTAIN WALL SYSTEM
MT-3	SPANDREL GLAZING PANEL (METAL PANEL)
MT-4	SPANDREL GLAZING PANEL (GLASS SIMILAR TO VISION GLASS)
MT-5	PREFINISHED ALUM WINDOW FRAME (MED-DARK FINISH)
MT-6	CONC/CMU BLOCK WALL W/ SKIM COAT FINISH
MT-7	METAL PANEL COLUMN COVER (MED-DARK FINISH)
MT-8	METAL AND GLASS GUARDRAIL
MT-9	WOOD PANEL / SOFFIT

ELEVATIONS SOUTH + EAST

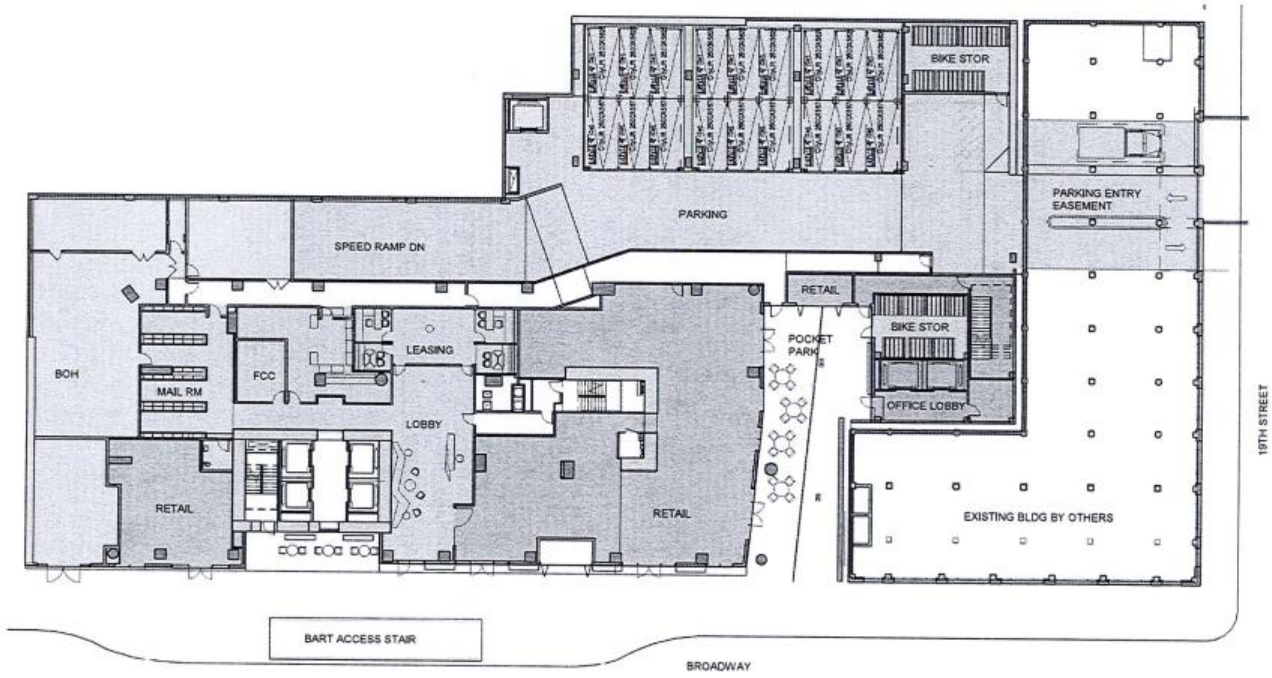
1900 BROADWAY



0 16 32

PLAN - BASEMENT LEVEL

1900 BROADWAY



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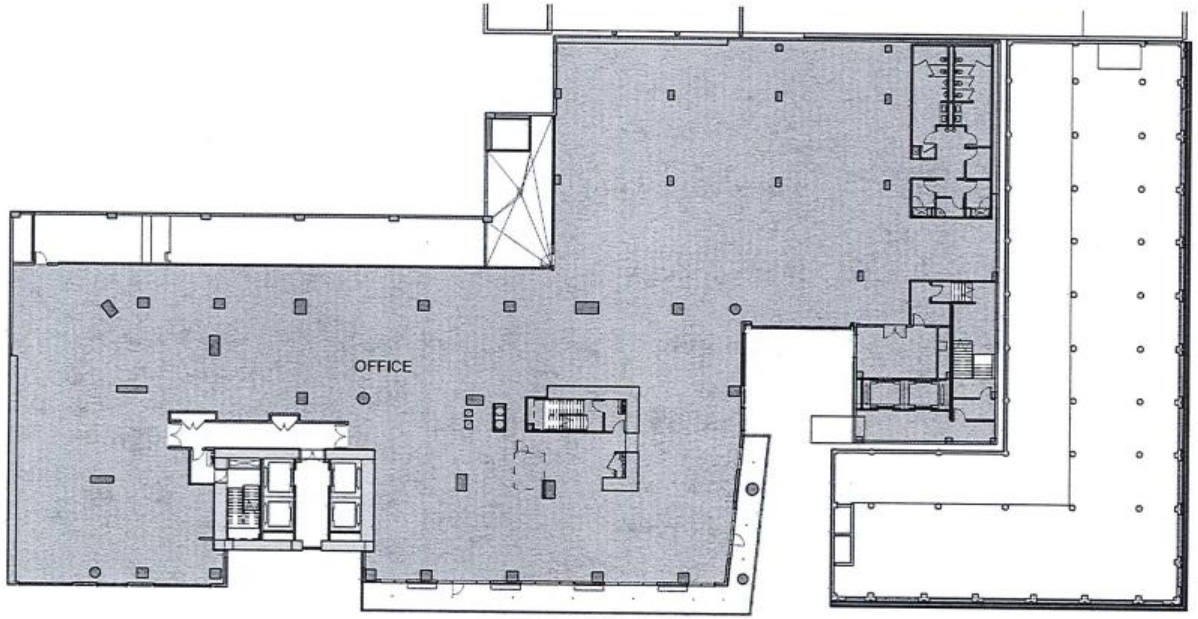
PLAN - LEVEL 1 GROUND FLOOR

1900 BROADWAY



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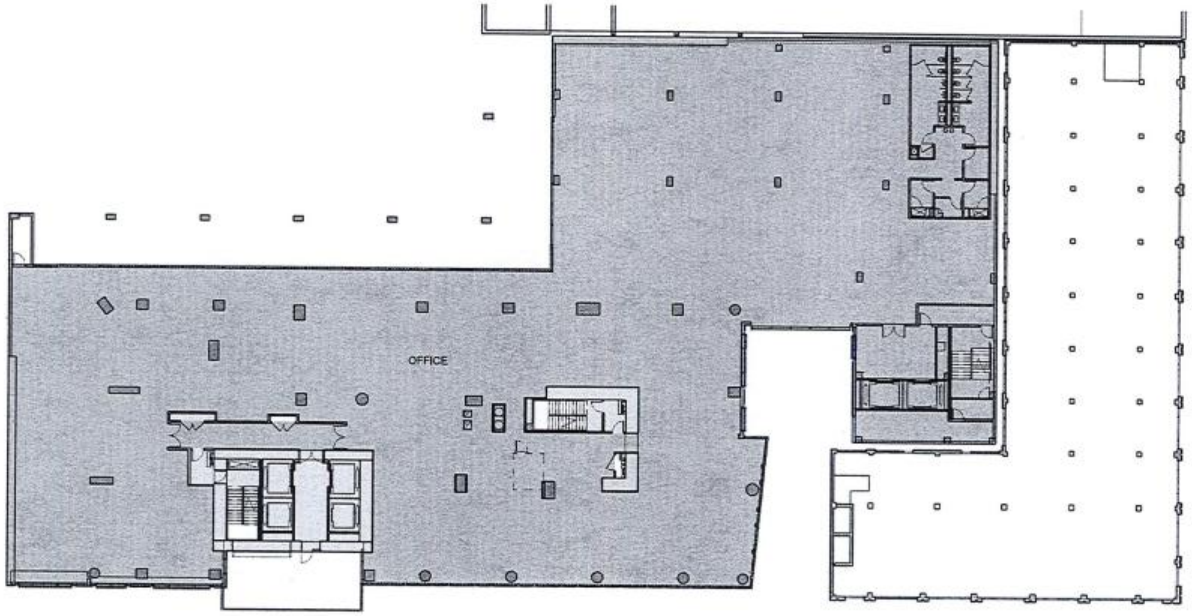
PLAN - LEVEL 2 COMMERCIAL

1900 BROADWAY



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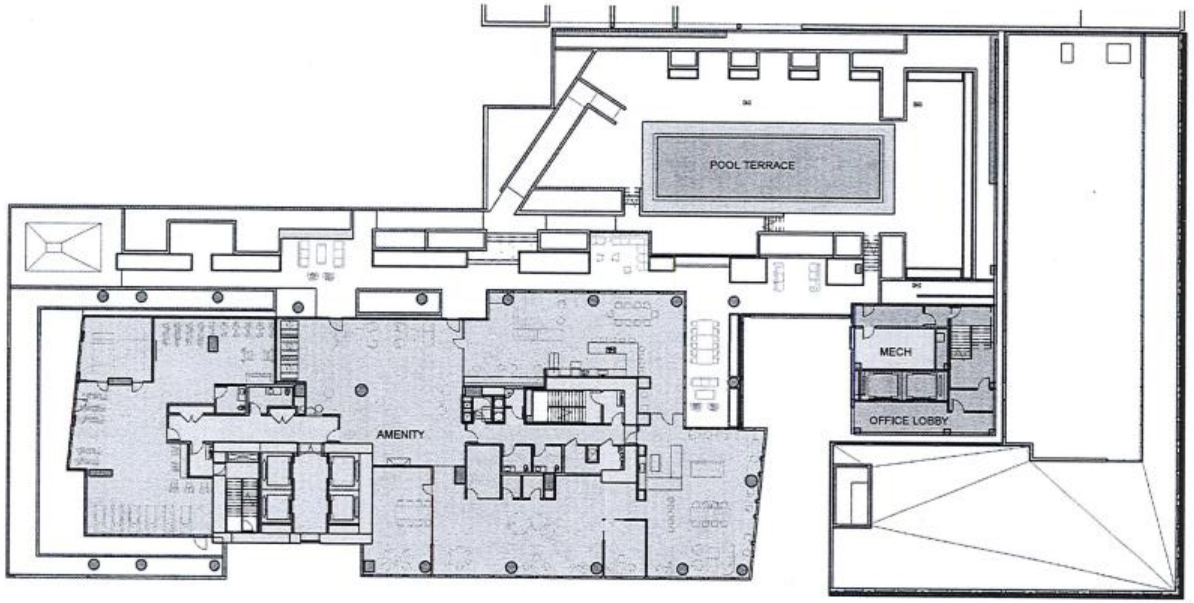
PLAN - LEVEL 3 COMMERCIAL

1900 BROADWAY



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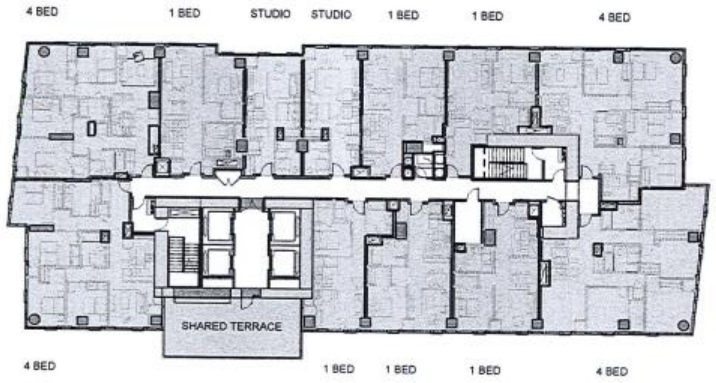
PLAN - LEVEL 4 AMENITY/POOL TERRACE 1900 BROADWAY



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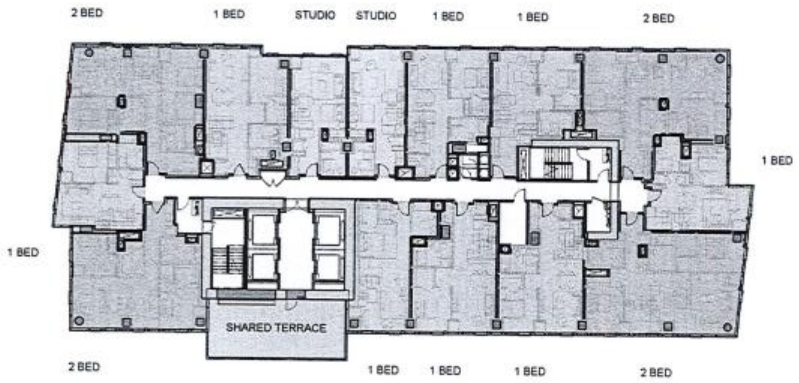
PLAN - LEVEL 5-10 LOWER RESID

1900 BROADWAY



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PLAN - LEVEL 11-34 TYP RESID

1900 BROADWAY



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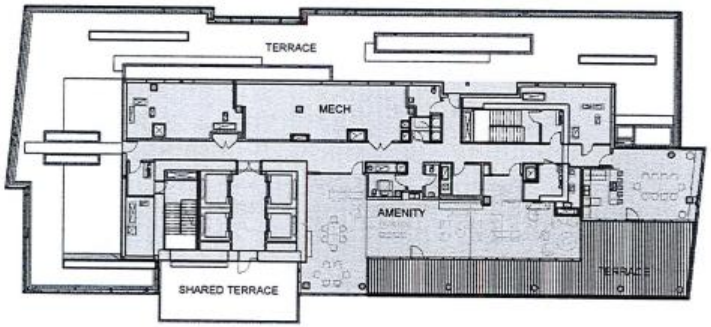
PLAN - LEVEL 35-38 PH RESID

1900 BROADWAY



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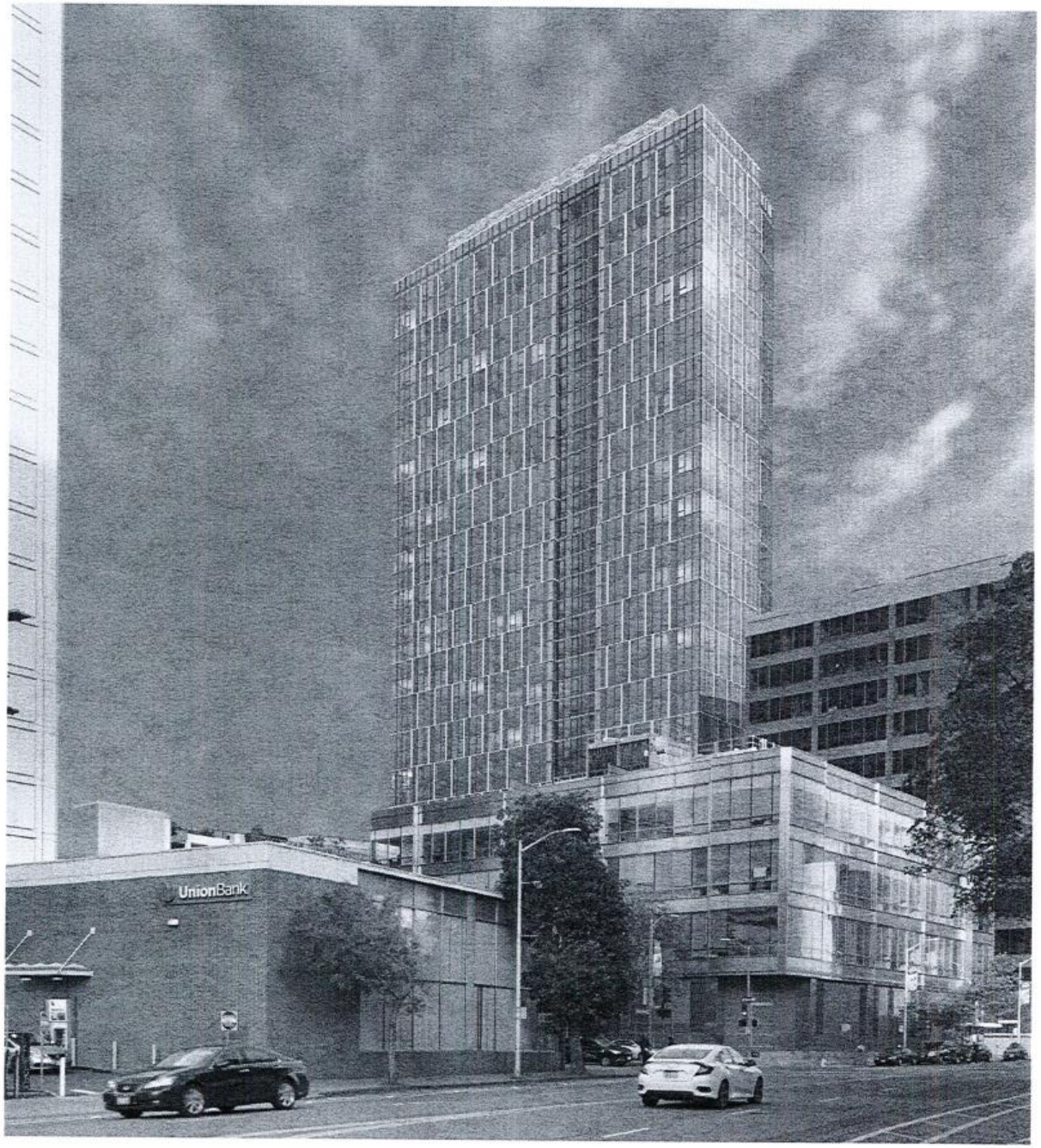
PLAN - LEVEL 39 ROOF AMENITY

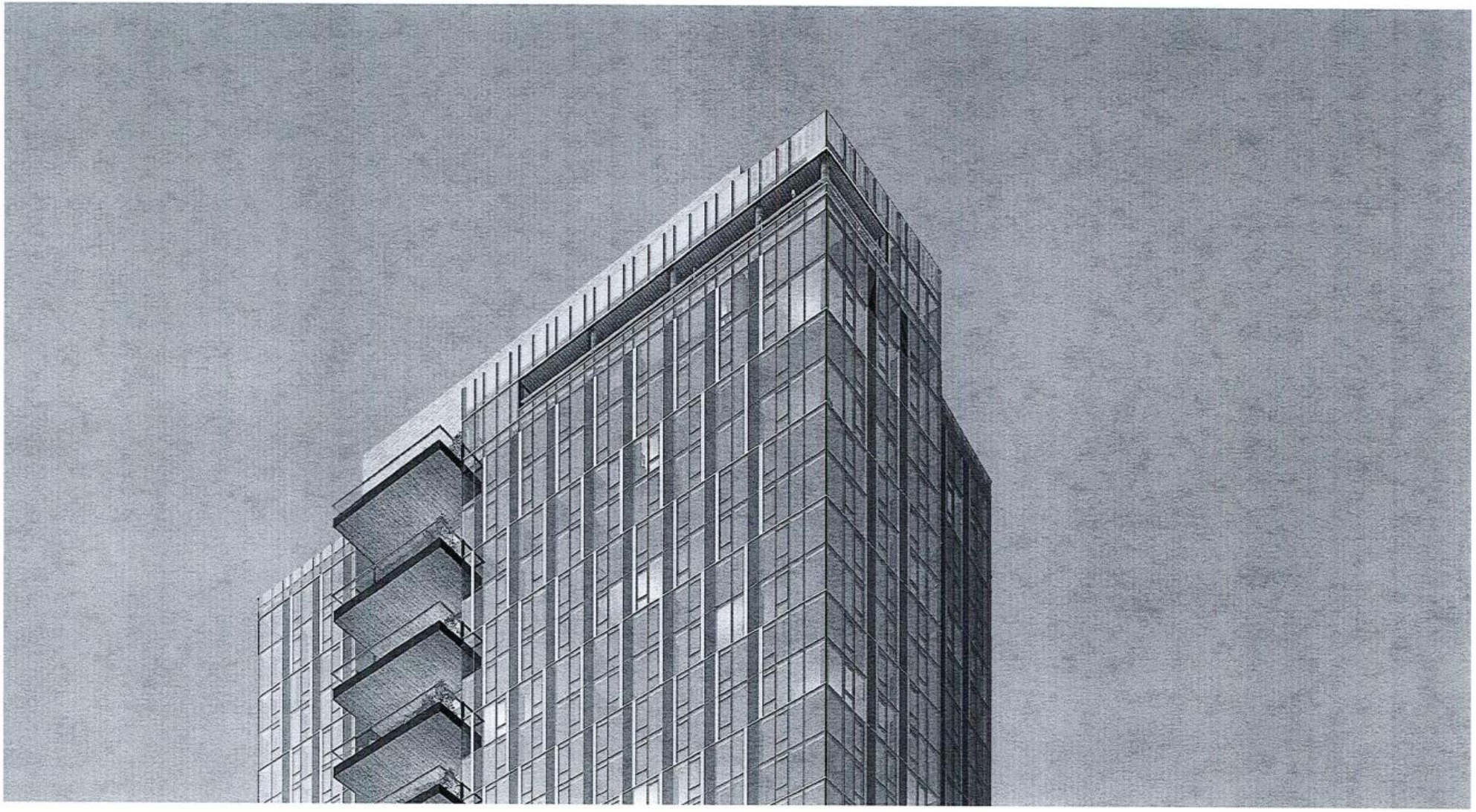
1900 BROADWAY



BROADWAY PERSPECTIVE



EAST PERSPECTIVE



BUILDING CROWN PERSPECTIVE

1900 BROADWAY



BUILDING STREET LEVEL VIEW

1900 BROADWAY

2018.05.10

BUILDING AREA SUMMARY (452 RESI) - Excluding Historic Building

FLR. ELEV.	F/F	FLR.	RESIDENTIAL UNITS/FLR.	OB	1B	2B	3B	4B	Lobbies & Amenities NSF	RES NSF	RES GSF	EFF	RETAIL/ OFFICE NSF	PARKING SPACES	PARKING GSF	BIKE PARKING SPACES	BIKE PARKING GSF	LOADING GSF	TOTALS GSF	OPEN SPACE Private	OPEN SPACE Shared	OPEN SPACE GSF
+406.50	9.00	41	ELEV MACH RM								1,127								1,127			
+394.50	12.00	40	MECH EQT								1,127								1,127			
+382.50	12.00	39							2,333		6,283								6,283	0	7,100	7,100
+369.00	13.50	38	11	0	4	5	2	0	0	10,872	13,307	81.7%							13,307	0	0	0
+359.50	9.50	37	11	0	4	5	2	0	0	10,872	13,307	81.7%							13,307	0	565	565
+350.00	9.50	36	11	0	4	5	2	0	0	10,872	13,307	81.7%							13,307	0	0	0
+340.50	9.50	35	11	0	4	5	2	0	0	10,872	13,307	81.7%							13,307	0	565	565
+331.00	9.50	34	14	2	8	4	0	0	0	10,813	13,307	81.3%							13,307	0	0	0
+321.50	9.50	33	14	2	8	4	0	0	0	10,773	13,307	81.0%							13,307	0	565	565
+312.00	9.50	32	14	2	8	4	0	0	0	10,773	13,307	81.0%							13,307	0	0	0
+302.50	9.50	31	14	2	8	4	0	0	0	10,773	13,307	81.0%							13,307	0	565	565
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+112.50	9.50	11	14	2	8	4	0	0	0	10,773	13,307	81.0%							13,307	0	565	565
+101.50	11.00	10	12	2	6	0	0	4	0	10,786	13,307	81.1%							13,307	0	0	0
+92.00	9.50	9	12	2	6	0	0	4	0	10,786	13,307	81.1%							13,307	0	565	565
+82.50	9.50	8	12	2	6	0	0	4	0	10,786	13,307	81.1%							13,307	0	0	0
+73.00	9.50	7	12	2	6	0	0	4	0	10,786	13,307	81.1%							13,307	0	565	565
+63.50	9.50	6	12	2	6	0	0	4	0	10,786	13,307	81.1%							13,307	0	0	0
+54.00	9.50	5	12	2	6	0	0	4	0	10,786	13,307	81.1%	1,195						14,502	0	565	565
+42.00	12.00	4							9,754		11,501	0.0%	1,116						12,617	0	15,019	15,019
+28.00	14.00	3									1,662	0.0%	24133						25,795	0	550	550
+15.00	13.00	2									1,662	0.0%	23829						25,491	0	3,783	3,783
+0.00	15.0	1							2,597		6,390		7446	28	9,752	190	1,725	1,898	29,808	0	2,952	2,952
-15.00	15.00	Bsmnt									9,162			121	21,518	0	0		30,680			0
			452 TOTAL	60 0B	244 1B	116 2B	8 3B	24 4B	14,684 NSF	366,796 NSF	491,352 GSF		57,719 NSF	153 SPACES	31,270 GSF	142 SPACES	1,725 GSF	1,898 GSF	586,561 GSF	0 GSF	39,009 GSF	39,009 GSF
				13.3%	54.0%	25.7%	1.8%	5.3%		811 sf average 74.7% efficient			(NOT INCL TAPSCOTT)	0.34 per unit 204 sf per car		0.31 per unit				34,676 sf total resi open space 33,900 sf Open Space Req'd (75 sf per unit)		

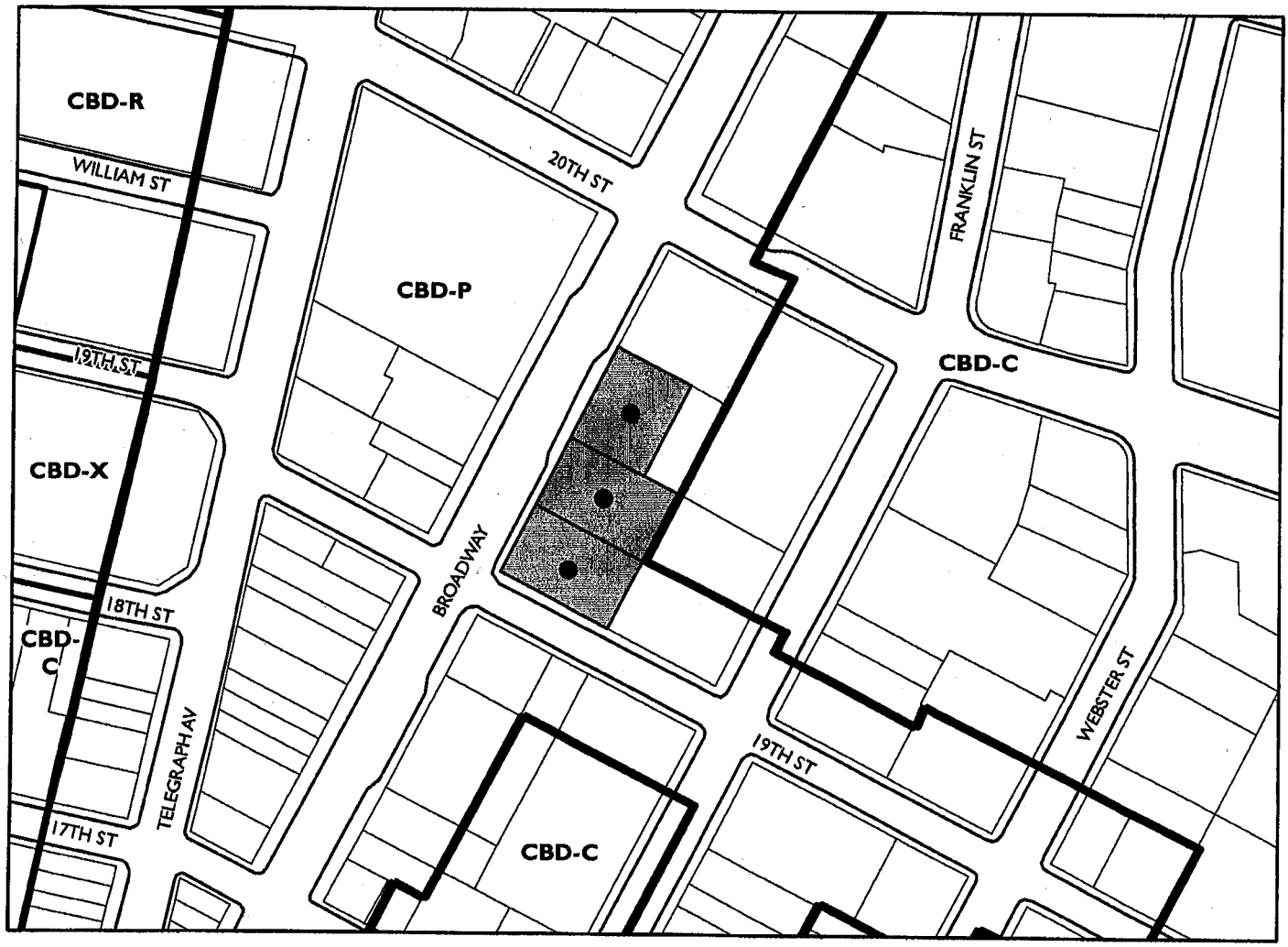
OPEN SPACE - APPROVALS

Location: **Assessors Parcel Numbers:**	**1900 – 1944 Broadway (see map on reverse)** **008-0638-005-00, 008-0638-006-03, and 008-0638-007-10**
Proposal:	Construct a new 33-story building with 345 residential units and 9,724 square feet of ground floor commercial space. The project also includes restoration of an existing four story, historically-rated (Cb+1+) building and demolishing a one story commercial building that has no historic rating.
Applicant:	Matt Combrink, Brick LLP
Owner:	Seth Hamalian, 19th and Broadway Associates, LLC
Planning Permits Required:	Design Review for new construction in a CBD zone; Major Conditional Use Permit for new construction over 250 feet in height or 200,000 square feet in floor area; Minor Conditional Use Permits for a reduction of the parking requirement in the CBD zone and a reduction in the size of a loading berth; and a Minor Variance for a reduction of the number of loading berths from two to one.
General Plan:	Central Business District
Zoning:	CBD-P Central Business District Pedestrian Retail Commercial Zone; CBD-C Central Business District General Commercial Zone; Height Area 7
Environmental Determination:	Exempt, State CEQA Guidelines Sections 15332 – In-fill projects and 15183 - Projects consistent with a community plan, general plan, or zoning.
Historic Status:	Existing building as the corner of 19th Street and Broadway is rated Cb+1+ and the site is within the Uptown Commercial Area of Primary Importance
Decision to be taken	Decision on proposal based on staff's recommendation
Status	Pending.
Service Delivery District:	Metro
City Council District:	3
For further information:	Contact case planner **Neil Gray** at **510-238-3878** or by email: ngray@oaklandnet.com

SUMMARY

The proposed project would combine three parcels into a 40,674 square foot site and the construction of a new 33-story high-rise tower and the renovation of the adjacent four-story historic Tapscott Building. In total, the project would create 345 residential units, 333 parking stalls, approximately 10,000 square feet of ground floor retail space, and one loading berth. Staff supports the project because of its high quality design, renovation of the Tapscott Building will be an important contribution to the Broadway streetscape, and the site is an ideal downtown location for the construction of a mixed use tower such as that proposed.

CITY OF OAKLAND PLANNING COMMISSION



Case File: PLN15179
Applicant: Matt Combrink, Brick LLP
Address: 1900 - 1944 Broadway
Zone: CBD-P

PROPERTY DESCRIPTION

This flat, 40,674 square-foot, site is at the northeast corner of the intersection of Broadway and 19th Street. Approximately 400 linear feet of the site faces Broadway and 150 linear feet faces 19th Street. The four-story, L-shaped Tapscott commercial building, constructed in 1922-1923, fronts both Broadway and 19th Street. This building has an historic rating of Cb+1+ and is a contributor to the Uptown Commercial Historic District. Although brown brick and terra cotta materials, a tall ground floor, and detailing contribute to the historic significance of the building, it is in serious disrepair – the storefronts are in particularly poor condition, the tapestry trim on the building is badly damaged, and the original vertical spandrels on the upper floors were removed in the 1960's. A second commercial building, which is without historical or architectural interest, is also located at the site.

An entrance to the 19th Street BART Station and an AC Transit bus stop is located on Broadway, directly in front of the site.

NEIGHBORHOOD DESCRIPTION

The site is located in within the heart of Downtown Oakland's commercial district and on the edge of the historic Uptown Commercial District, a retail and entertainment area that is anchored by the art-deco styled Fox and Paramount Theaters and I. Magnin Building. The district contains several night clubs, restaurants, retail stores, and galleries. Several low-rise commercial buildings that contribute to the historic character of the district are to the south, across the Broadway, and on 19th Street. The four-story, approximately 60-foot tall Sears Building at the corner of Broadway and 20th Street is currently being renovated for office uses and a ground floor market hall. The adjacent 12-story Golden West Office Building, constructed in 1968, has a post-modern design with reflective windows and a block shape. According to the City's Office of Cultural Heritage Survey, the Uptown Historic District does not have a consistent height context that should influence the appropriate height of new buildings.

PROJECT DESCRIPTION

Overall

The project includes the construction of a new 33-story high-rise tower and the renovation of the adjacent four-story historic Tapscott Building. In total, the project would create 345 residential units, 333 parking stalls, approximately 10,000 square feet of ground floor retail space, and one loading berth. The Tapscott building would be renovated to contain ground floor commercial space with residential units above. A fifth-story glass penthouse, setback ten feet from the façade, would be added to the top of the Tapscott Building.

The project plans are located in Attachment A.

Site Plan

The new high rise tower would sit atop a five-story podium building located along Broadway.

The Tapscott Building would wrap the podium at the corner of Broadway and along 19th Street. A 20-foot wide outdoor courtyard would be created between the new construction and the Tapscott Building to create a visual separation between the two and expose historic advertising art on the Tapscott Building's north façade.

With the exception of a 29-foot wide lobby, the entire ground floor of the new building along Broadway would contain an approximately 35-foot deep storefront space. A four-foot ground floor setback in the next 74 feet of frontage would accommodate sidewalk seating in three 27-foot bays. The commercial space in the northern part of the tower would be located adjacent to the Broadway right of way.

Vehicular and loading access into the site would be from 19th Street, which allows Broadway, the site's primary pedestrian frontage, to be free of curb cuts and potential conflicts between pedestrians, bikes, and cars. A six-level parking structure would be tucked to the rear of the site, hidden from view from passersby.

An open space podium deck that includes indoor and outdoor connections to resident amenity space, landscaping, plantings, and a pool deck with views out to the bay would be located where the base of the tower and top of the podium meet. These elements have been setback from the edge of the podium and the Tapscott Building so as not to be seen from the street.

Finally, the positioning of the tower's narrow north and south elevations will preserve views of the Oakland Hills and the Jack London Square area from Broadway.

Building Design

The new tower would be clad in precast concrete, glass window walls, metal panel and brick. The design uses contrasts in colors and materials to create visual interest and break up the scale – glass window wall elements are next to precast concrete, light colored facades are accented by dark colored metal window frames and vertical sunshades.

The massing of the tower is articulated as multiple smaller elements that further breaks down its scale. When viewed along Broadway, the north half of the tower is broken into a distinct base whose height and brick facade references the scale and material of the Tapscott building, while the tower portion is comprised of precast concrete "punched" openings that create texture to relate to many surrounding buildings in the neighborhood.

The south portion of the tower provides contrast from the northern part of the building, clad in a floor to ceiling glass window wall system with integrated vertical sunshades, reaching all the way down to the street level. The pattern of articulation creates a series of alternating heights to relate to the varying heights of other buildings on Broadway.

The restoration of the Tapscott Building is described in the "Key Issues and Impacts" section of this report.

GENERAL PLAN ANALYSIS

The subject property is located within the Central Business District General Plan Land Use Classification. The intent of this classification is to encourage, support, and enhance Downtown as a high density, mixed-use urban center of regional importance and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation in Northern California. The CBD classification includes a mix of large-scale offices, commercial, urban high-rise residential, institutional, open space, cultural, educational, arts, entertainment, service, community facilities, and visitor uses.

The project is consistent with this intent by providing a high-rise residential development on two vacant parcels. The prominence of the proposed residential tower and ground floor commercial space will contribute to the regional importance of Downtown Oakland and the vision contained in the General Plan for a vibrant, 24-hour downtown.

The following lists General Plan Land Use and Transportation policies applicable to the proposed project and how the project is consistent with each policy. The policies are in normal font and descriptions of how the proposal fulfills the policies are in **bold** type.

Land Use and Transportation Element of the General Plan

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. **The proposed tower will enhance the City's downtown skyline and the pedestrian orientation of Broadway. The positioning of the tower's narrow north and south elevations will preserve views of the Oakland Hills and the Jack London Square area.**

Policy D3.1 Promoting Pedestrians: Pedestrian-friendly commercial areas should be promoted. **The proposal contains ground floor commercial space that continues the existing pedestrian oriented retail activities on Broadway.**

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. **The project minimizes pedestrian-vehicle conflicts by containing only one curb cut for the entire site. Further, there are no curb cuts on Broadway, the primary pedestrian frontage of the project. Locating the parking behind the proposed tower and the Tapscott Building minimizes the visual impact of parking areas.**

Policy D6.1 Developing Vacant Lots: Construction on vacant land or to replace surface parking should be encouraged throughout the downtown, where possible. **The tower is proposed to be built on one vacant and one underutilized vacant lots. The third lot on the site contains the Tapscott Building, which is proposed for renovation.**

Policy D10.1 Encouraging Housing: Housing in the downtown should be encouraged as a vital component of a 24-hour community presence. **The proposal includes high density housing in**

a high-rise tower, bringing many residents downtown who will contribute to a 24-hour presense.

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. **As described in this report, the project will have a high quality design that relates to the surrounding buildings. The renovation of the historic Tapscott building respects the historic architecture of the Uptown Commercial District.**

Policy D10.6 Creating Infill Housing: Infill housing that respects surrounding development and the streetscape should be encouraged in the downtown to strengthen district districts. **As described in this report, the project will have a high quality design that relates to the surrounding buildings. The project will also extend the existing retail storefronts on Broadway.**

Policy D11.1 Promoting Mixed-Use Developments: Mixed use developments should be encouraged in the downtown for such purposes as to promote its diverse character, provide for needed goods and services, support local art and culture, and give incentive to reuse existing vacant or underutilized structures. **The proposal is for a mixed use development with approximately 10,000 square feet of commercial space and 345 residential units.**

Policy D11.2 Locating Mixed-Use Developments: Mixed use development should be allowed in commercial areas, where the residential component is compatible with the desired commercial function of the area. **The mixed use proposal is in a commercial zone. The residential activities will be compatible with the intended retail and restaurant use of the ground floor commercial space.**

Historic Preservation Element of the General Plan

Policy 3.5: Historic Preservation and Discretionary Permit Approvals: For additions or alteration to Heritage Properties or Potential Designated Historic Properties requiring discretionary City permits, the City will make a finding that: 1) the design matches or is compatible with, but not necessarily identical to, the property's existing or historical design; or 2) the proposed design comprehensively modifies and is at least equal in quality to the existing design and is compatible with the character of the neighborhood; or 3) the existing design is undistinguished and does not warrant retention and the purposed design is compatible with the character of the neighborhood. **See Key Issues and Impacts and Attachment B, for discussions of the renovation of the Tapscott Building.**

ZONING ANALYSIS

The following highlights relevant zoning standards from the CBD-P and CBD-C zones and Height Area.

Zoning Intent

The intent of the CBD-P zone, which is designated on Broadway, is to create, maintain, and enhance areas of the Central Business District for ground-level, pedestrian-oriented, active storefront uses. Upper story spaces are intended to be available for a wide range of office and residential activities.

The intent of the CBD-C zone, which is toward the rear of the site, is to create, maintain, and enhance areas of the Central Business District appropriate for a wide range of ground-floor office and other commercial activities. Upper-story spaces are intended to be available for a wide range of residential and office or other commercial activities.

Development Standards

The following describes development standards for the applicable zones in Chapter.

	Standard	Proposed	Complies?
Minimum/Maximum Setbacks			
Minimum front	0 ft	0 ft	Yes
Maximum front and street side for the first story	5 ft	4 ft	Yes
Maximum front and street side for the second and third stories or 35 ft, whatever is lower	5 ft	4 ft	Yes
Minimum interior side	0 ft	0 ft	Yes
Minimum corner side	0 ft	0 ft	Yes
Rear	0 ft	0 ft	Yes
Design Regulations			
Ground floor primary commercial facade transparency	65%	80%	Yes
Minimum height of the ground floor	15 ft	23'-3"	Yes
Maximum Density[2] (square feet of lot area required per unit)	90	118	Yes
Floor Area Ratio[2]	20.0	10.5	Yes
Maximum height[2]	No height limit	339 feet	Yes
Maximum average per story lot coverage (above the base)[2]	85% of site area or 10,000 sf, whichever is greater	32 percent of site area	Yes

	Standard	Proposed	Complies?
Open Space	75 square feet per unit	99 sf per unit	Yes
Parking	One parking space per unit; none required for commercial space; .5 spaces per dwelling unit upon the granting of a CUP[3]	333 parking spaces (.97 parking spaces per unit)	Yes
Loading Berths	Two	One	No[4]

Notes:

1. The requirements for the CBD-P and CBD-C zones are the same unless otherwise specified.
2. These are regulations that apply to Height Area 7, where the site is located.
3. The applicant is applying for a Conditional Use Permit to reduce the parking requirement.
4. The proposal requires variances for not meeting minimum requirement for loading berths. See the Key Issues and Impacts Section, below, for further discussion.

ENVIRONMENTAL DETERMINATION

The City has determined that the project is exempt from CEQA under Section 15332 of the State CEQA Guidelines, which applies to certain infill projects. The project is also exempt under Section 15183 of the State CEQA Guidelines, which applies to projects that are consistent with a Community Plan, General Plan or Zoning.

A detailed CEQA analysis of the project is contained in Attachment B of this report.

KEY ISSUES AND IMPACTS

Tapscott Building

The proposed renovation of the brick and terra cotta façade of the Tapscott Building with compatible cornice and spandrel features, which is based on historic photos provided by the City and existing fragments on the building, will provide a high quality restoration of the building. The proposed contemporary design of the ground floor is appropriate for historic buildings, which traditionally experience frequent storefront redesigns depending on the trends of a particular era. In addition, the upper stories of the building are designed to be a unified whole, appearing to be held up by the ground floor. Finally, the proposed 20-foot separation from the new construction will preserve the visual integrity and usability of the Tapscott Building.

The top story glass addition is compatible with the Tapscott Building because its visibility would be limited by a 10-foot step back and glass exterior. The step back and contrasting materials of the additional story also clearly distinguishes it from the historic building. The new tower will be

clearly distinguished from the Tapscott Building through a 20-foot wide space between the two buildings.

More analysis of the historic compatibility of the restoration is contained in the CEQA analysis for the project (see Attachment B)

Loading Berth

As mentioned, a Minor Variance is requested to reduce the number of loading berths from one to two. Staff supports the Variance for the following reasons. A loading berth on Broadway is inappropriate because it is the principal pedestrian street adjacent to the site. Placing a curb cut there to accommodate a loading berth would interrupt the pedestrian flow and create conflicts between trucks, bicycles, and pedestrians.

An additional loading berth on 19th Street would also be problematic. There are currently entrances to the proposed parking structure and loading berth that require 38 feet of curb cuts on 19th Street. In addition, there are curb cuts just east of the property at the Kaiser parking garage that total approximately 70 feet. Adding an additional 15-foot curb cut for a loading birth would create a total of approximately 123 feet of curb cut along the 300 feet of frontage on 19th Street. This much potential pedestrian, bike, truck and car conflict would create a hazardous pedestrian environment. Further, an additional berth on 19th Street would adversely affect the historic façade of the Tapscott Building and reduce the amount of retail space on 19th Street.

RECOMMENDATION

1. Affirm staff's environmental determination.
2. Approve the Conditional Use Permits and Design Review subject to the attached findings and conditions.

Prepared by:

Neil Gray

NEIL GRAY
Planner III

Approved by:

ROBERT MERKAMP
Development Planning Manager

Approved for forwarding to the
City Planning Commission:

DARIN RANELLETTI, Deputy Director
Bureau of Planning

ATTACHMENTS:

A. Project Plans
B. CEQA Analysis

FINDINGS FOR APPROVAL

This proposal meets the required findings under Sections 17.136.050 -- General Design Review Criteria, 17.134.050 -- General Use Permit Criteria, 17.148.050 – General Variance Criteria, Table 17.101G.04, Note 10 -- Use Permit Criteria for Exceptions to Height/Bulk/Intensity Area Standards in the LM Zones. Required findings are shown in **bold** type; explanations as to why these findings can be made are in *italic*.

Section 17.136.050 Regular design review criteria.

A. For Residential Facilities.

1. 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

The renovation of the Tapscott Building will preserve a highly rated historic building that relates to several historic buildings in the neighborhood. The massing of the tower is articulated as multiple smaller elements that further breaks down its scale. When viewed along Broadway, the north half of the tower is broken into a distinct base whose height and brick facade references the scale and material of the Tapscott building, while the tower portion is comprised of precast concrete "punched" openings that create texture to relate to many surrounding buildings in the neighborhood.

The south portion of the tower provides contrast from the northern part of the building, clad in a floor to ceiling glass window wall system with integrated vertical sunshades, reaching all the way down to the street level. The pattern of articulation creates a series of alternating heights, high and low, relating to the varying heights of other buildings on Broadway.

2. That the proposed design will protect, preserve, or enhance desirable neighborhood characteristics;

The renovation of the Tapscott Building preserves an important and prominent historic structure in the neighborhood. High density development near the 19th Street BART Station and AC Transit bus lines enhances the transit oriented development character of the neighborhood. Double height commercial spaces, outdoor seating, and attractive commercial bays will enhance the ground floor storefront character on Broadway. Views of the Oakland Hills and Jack London Square will be preserved through narrow north and south building elevations.

3. That the proposed design will be sensitive to the topography and landscape.

There is no significant topography or landscape on the project site.

4. That, if situated on a hill, the design and massing of the proposed building relates to the grade of the hill;

The site is not situated on a hill.

5. **That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.**

   The project conforms to the General Plan as described in the General Plan Analysis section of this report.

B. For Nonresidential Facilities and Signs.

1. **That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors, and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have some significant relationship to outside appearance shall be considered, except as otherwise provided in Section 17.136.060;**

   The only proposed nonresidential facilities are the ground floor commercial spaces of the tower and the Tapscott Building. These facilities will enhance the ground floor storefront character on Broadway through the use of double height floors, columns, outdoor seating, high quality and durable materials, and prominent bases.

2. **That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of, private and public investments in the area;**

   The proposal will protect the value of investments in the area by providing attractive commercial spaces to Broadway.

3. **That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.**

   The project conforms to the General Plan as described in the General Plan Analysis section of this report.

17.134.050 General Use Permit criteria.

A. That the location, size, design, and operating characteristics of the proposed development will be compatible with and will not adversely affect the livability or appropriate development of abutting properties and the surrounding neighborhood, with consideration to be given to harmony in scale, bulk, coverage, and density; to the availability of civic facilities and utilities; to harmful effect, if any, upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development;

A high-rise tower at this location will be compatible with the surrounding properties for the following reasons:

- *The proposal will bring residents who will shop and eat at nearby businesses, increase AC Transit and BART ridership, and bring a 24-hour presence to downtown;*
- *The mass and height of the building is appropriate for a regional downtown center;*
- *The design successfully reduces the scale of the building to relate to other buildings on Broadway (see "Project Description", above);*
- *Views of the Oakland Hills and Jack London Square will be preserved through narrow north and south building elevations;*
- *A 20-foot wide outdoor courtyard would be created between the new construction and the Tapscott Building, creating an appropriate visual separation between the new and historic developments;*
- *According to the CEQA analysis accompanying the application (see Attachment B), the project will not result in a significant traffic impact at nearby intersections;*
- *Vehicular and loading access into the site would be from 19th Street, which allows Broadway, the site's primary pedestrian and primary frontage, to be free of curb cuts and potential conflicts between pedestrians, bikes, and cars.*
- *The proposed size of the loading birth (15 feet wide and 25 feet deep) will be large enough to accommodate a moving truck sufficient to serve the apartments proposed for the project.*

B. That the location, design, and site planning of the proposed development will provide a convenient and functional living, working, shopping, or civic environment, and will be as attractive as the nature of the use and its location and setting warrant;

The residents will have convenient access to the podium structure, which will contain both parking spaces and rooftop open space. Further, commercial and residential construction will be placed to obscure the view of the parking podium from Broadway. 1900 Broadway is an ideal location for a high-rise tower because it is in the heart of Downtown Oakland, which is the regional center for the East Bay and a major hub for transit facilities.

The commercial spaces will be located at prominent locations at or near the Broadway and 19th Street right of ways. As described in the Design Review section, above, the proposal will be an attractive addition to the City's skyline.

C. That the proposed development will enhance the successful operation of the surrounding area in its basic community functions, or will provide an essential service to the community or region;

The proposed high rise building contributes to the surrounding neighborhood as a regional center for the East Bay and a major hub for transit facilities. The ground floor commercial activities will contribute to the pedestrian retail environment on Broadway and the 345 residential units will contribute to businesses in the neighborhood and support transit use.

D. That the proposal conforms to all applicable regular design review criteria set forth in the regular design review procedure at Section 17.136.050

See Design Review Findings, above.

E. That the proposal conforms in all significant respects with the Oakland General Plan and with any other applicable guidelines or criteria, district plan or development control map which has been adopted by the Planning Commission or City Council.

The project conforms to the General Plan as described in the General Plan Analysis section of this report.

17.148.050 Variance Findings required.

A. That strict compliance with the specified regulation would result in practical difficulty or unnecessary hardship inconsistent with the purposes of the zoning regulations, due to unique physical or topographic circumstances or conditions of design; or, as an alternative in the case of a minor variance, that such strict compliance would preclude an effective design solution improving livability, operational efficiency, or appearance.

A Variance is requested to reduce the number of loading berths from one to two. Approving this Variance would preclude an effective design solution improving the operational efficiency and appearance of the project.

A loading berth on Broadway is inappropriate because it is the principal pedestrian street adjacent to the site. Placing a curb cut there to accommodate a loading berth would interrupt the pedestrian flow and create conflicts between trucks and bicycles and pedestrians.

An additional loading berth on 19th Street would also be problematic. There are currently 38 feet of curb cut required for the entrances to the proposed parking structure and loading berth on 19th Street. In addition, there are existing driveways on 19th Street just east of the property that serve the adjacent Kaiser parking garage that require approximately 70 feet of curb cuts. Adding an additional 15-foot curb cut for a loading birth would create a total of approximately 123 feet of curb cut along the 300 feet of frontage on 19th Street. This amount of curb cut would create a hazardous pedestrian environment. Further, additional curb cuts on 19th Street would adversely affect the historic façade of the Tapscott Building and reduce the amount of valuable retail space along 19th Street.

B. That strict compliance with the regulations would deprive the applicant of privileges enjoyed by owners of similarly zoned property; or, as an alternative in the case of a minor variance, that such strict compliance would preclude an effective design solution fulfilling the basic intent of the applicable regulation.

Strict compliance with the loading berth regulation would deprive the applicant of privileges enjoyed by owners of similarly zoned property because several buildings in Downtown have no loading births and the City has approved developments of a similar size without the required number of loading berths.

C. That the variance, if granted, will not adversely affect the character, livability, or appropriate development of abutting properties or the surrounding area, and will not be detrimental to the public welfare or contrary to adopted plans or development policy.

As conditioned, residents and tenants of the building will be required schedule the use of the loading birth to prevent street blockage.

That the variance will not constitute a grant of special privilege inconsistent with limitations imposed on similarly zoned properties or inconsistent with the purposes of the zoning regulations.

As mentioned, other Downtown buildings have received Variances for the reduction of required loading berths. Also, granting the Variance to improve the appearance of the Tapscott Building and increase pedestrian and bike safety are consistent with the purposes of the zoning regulations.

D. That the elements of the proposal requiring the variance (e.g., elements such as buildings, walls, fences, driveways, garages and carports, etc.) conform with the regular design review criteria set forth in the design review procedure at Section 17.136.050.

Not requiring the additional loading berth will improve the appearance of the project by preserving the façade of the historic Tapscott Building.

E. That the proposal conforms in all significant respects with the Oakland General Plan and with any other applicable guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.

The project conforms to the General Plan as described in the General Plan Analysis section of this report.

CONDITIONS OF APPROVAL

1. **Approved Use**
   Ongoing
   a) The project shall be constructed and operated in accordance with the authorized use as described in the application materials, staff report, and the plans dated and submitted 6/2/15, and as amended by the following conditions. Any additional uses or facilities other than those approved with this permit, as described in the project description and the approved plans, will require a separate application and approval. Any deviation from the approved drawings, Conditions of Approval or use shall required prior written approval from the Director of City Planning or designee.
   b) This action by the City Planning Commission ("this Approval") includes the approvals set forth below. This Approval includes: Approval of Conditional Use Permits, Variances, and Design Review for the construction of a 33-story building with 345 units and ground floor commercial facilities.

2. **Effective Date, Expiration, Extensions and Extinguishment**
   Ongoing
   Unless a different termination date is prescribed, this Approval shall expire two years from the approval date, unless within such period all necessary permits for construction or alteration have been issued, or the authorized activities have commenced in the case of a permit not involving construction or alteration. Upon written request and payment of appropriate fees submitted no later than the expiration date of this permit, the Director of City Planning or designee may grant a one-year extension of this date, with additional extensions subject to approval by the approving body. Expiration of any necessary building permit for this project may invalidate this Approval if the said extension period has also expired.

3. **Scope of This Approval; Major and Minor Changes**
   Ongoing
   The project is approved pursuant to the Planning Code only. Minor changes to approved plans may be approved administratively by the Director of City Planning or designee. Major changes to the approved plans shall be reviewed by the Director of City Planning or designee to determine whether such changes require submittal and approval of a revision to the approved project by the approving body or a new, completely independent permit.

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 Condition of Approval 3.

a) 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.

5. **Conformance to Approved Plans; Modification of Conditions or Revocation**
Ongoing

a) Site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60-90 days of approval, unless an earlier date is specified elsewhere.

b) The City of Oakland reserves the right at any time during construction to require certification by a licensed professional that the as-built project conforms to all applicable zoning requirements, including but not limited to approved maximum heights and minimum setbacks. Failure to construct the project in accordance with approved plans may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension or other corrective action.

c) Violation of any term, Conditions or project description relating to the Approvals is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approvals or alter these Conditions if it is found that there is violation of any of the Conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Conditions of Approval.

6. **Signed Copy of the Conditions**
With submittal of a demolition, grading, and building permit

A copy of the approval letter and Conditions shall be signed by the property owner, notarized, and submitted with each set of permit plans to the appropriate City agency for this project.

7. **Indemnification**
Ongoing

a) To the maximum extent permitted by law, the applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the City of Oakland Redevelopment Agency, the Oakland City Planning Commission and its respective agents, officers, and employees (hereafter collectively called City) from any liability, damages, claim, judgment, loss (direct or indirect)action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul, (1) an approval by the City relating to a development-related application or subdivision or (2) implementation of an approved development-related project. The City may elect, in its sole discretion, to participate in the defense of said Action and the applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.

b) Within ten (10) calendar days of the filing of any Action as specified in subsection A above, the applicant shall execute a Letter Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Letter of Agreement shall survive termination, extinguishment or invalidation of the approval. Failure to timely execute the Letter Agreement does not relieve the applicant of any of the obligations contained in this condition or other requirements or conditions of approval that may be imposed by the City.

8. **Compliance with Conditions of Approval**
Ongoing
The project applicant shall be responsible for compliance with the recommendations in any submitted and approved technical report and all the Conditions of Approval set forth below at its sole cost and expense, and subject to review and approval of the City of Oakland.

9. **Severability**
Ongoing
Approval of the project would not have been granted but for the applicability and validity of each and every one of the specified conditions, and if one or more of such conditions is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid conditions consistent with achieving the same purpose and intent of such Approval.

10. **Job Site Plans**
Ongoing throughout demolition, grading, and/or construction
At least one (1) copy of the stamped approved plans, along with the Approval Letter and Conditions of Approval, shall be available for review at the job site at all times.

11. **Special Inspector/Inspections, Independent Technical Review, Project Coordination and Management**
Prior to issuance of a demolition, grading, and/or construction permit
The project applicant may be required to pay for on-call third-party special inspector(s)/inspections as needed during the times of extensive or specialized plancheck review or construction. The project applicant may also be required to cover the full costs of independent technical review and other types of peer review, monitoring and inspection, including without limitation, third party plan check fees, including inspections of violations of Conditions of Approval. The project applicant shall establish a deposit with the Building Services Division, as directed by the Building Official, Director of City Planning or designee.

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.

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.

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 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.

15. 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.

16. 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.

17. Underground Utilities

Prior to issuance of a 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.

18. Improvements in the Public Right-of-Way (General)

Approved prior to the issuance of a 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 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.

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.

19. Improvements in the Public Right-of Way (Specific)

Approved prior to the issuance of a grading or building permit

Final building and public improvement plans submitted to the Building Services Division may include the following components:

a) Remove and replace any existing driveway that will not be used for access to the property with new concrete sidewalk, curb and gutter.

b) Reconstruct drainage facility to current City standards.

c) Provide separation between sanitary sewer and water lines to comply with current City of Oakland and Alameda Health Department standards.

d) Construct wheelchair ramps that comply with Americans with Disability Act requirements and current City Standards.

e) Remove and replace deficient concrete sidewalk, curb and gutter within property frontage.

f) Provide adequate fire department access and water supply, including, but not limited to currently adopted fire codes and standards.

20. Payment for Public Improvements

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

The project applicant shall pay for and install public improvements made necessary by the project including damage caused by construction activity.

21. Compliance Matrix

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

The project applicant shall submit to the Planning and Zoning Division and the Building Services Division a Conditions compliance matrix that lists each condition of approval, the City agency or division responsible for review, and how/when the project applicant has met or intends to meet the conditions. The applicant will sign the Conditions of Approval attached to the approval letter and submit that with the compliance matrix for review and approval. The compliance matrix shall be organized per step in the plancheck/construction process unless another format is acceptable to the Planning and Zoning Division and the Building Services Division. The project applicant shall update the compliance matrix and provide it with each item submittal.

22. Construction Management Plan

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

The project applicant shall submit to the Planning and Zoning Division and the Building Services Division for review and approval a construction management plan that identifies the conditions of approval related to construction impacts of the project and explains how the project applicant will comply with these construction-related conditions of approval.

23. Parking and Transportation Demand Management

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

The applicant shall submit for review and approval by the Planning and Zoning Division a Transportation Demand Management (TDM) plan containing strategies to reduce on-site parking demand and single occupancy vehicle travel. The applicant shall implement the approved TDM plan. The TDM shall include strategies to increase bicycle, pedestrian, transit,

and carpools/vanpool use. All four modes of travel shall be considered. Strategies to consider include the following:

a) Inclusion of additional bicycle parking, shower, and locker facilities that exceed the requirement
b) Construction of bike lanes per the Bicycle Master Plan; Priority Bikeway Projects
c) Signage and striping onsite to encourage bike safety
d) 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 crossing at arterials
e) Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan
f) Direct transit sales or subsidized transit passes
g) Guaranteed ride home program
h) Pre-tax commuter benefits (checks)
i) On-site car-sharing program (such as City Car Share, Zip Car, etc.)
j) On-site carpooling program
k) Distribution of information concerning alternative transportation options
l) Parking spaces sold/leased separately
m) Parking management strategies; including attendant/valet parking and shared parking spaces

24. 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 Bay Area Air Quality Management District (BAAQMD):

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.

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, 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.

25. 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.

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.

26. 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.

27. <u>Noise Complaint Procedures</u>

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.

28. 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 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.

29. 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.

30. Construction Traffic and Parking

Prior to the 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 onsite 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 applicant'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 applicant'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.

31. Hazards Best Management Practices

Prior to commencement of demolition, grading, or construction

The project applicant and construction contractor shall ensure that construction of 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:

a) Follow manufacture's recommendations on use, storage, and disposal of chemical products used in construction;

b) Avoid overtopping construction equipment fuel gas tanks;

c) During routine maintenance of construction equipment, properly contain and remove grease and oils;

d) Properly dispose of discarded containers of fuels and other chemicals.

e) 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 UST's, elevator shafts, clarifiers, and subsurface hydraulic lifts when on-site demolition, or construction activities would potentially affect a particular development or building.

f) 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 underground storage tanks, 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 the City's Standard Conditions of Approval, 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.

32. <u>Waste Reduction and Recycling</u>

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.

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.

33. 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 90dBA, 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.

34. 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.

35. Archaeological Resources

Ongoing throughout demolition, grading, and/or construction

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.

36. 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.

37. 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.

38. 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.

39. 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.

40. <u>Maintenance Agreement for Stormwater Treatment Measures</u>

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:

a) 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

b) 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.

41. 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.

42. Exposure to Air Pollution (Toxic Air Contaminants: Particulate Matter)

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

A. Indoor Air Quality: In accordance with the recommendations of the California Air Resources Board (CARB) and the Bay Area Air Quality Management District, appropriate measures shall be incorporated into the project design in order to reduce the potential health risk due to exposure to diesel particulate matter to achieve an acceptable interior air quality level for sensitive receptors. The appropriate measures shall include **one** of the following methods:

1) The project applicant shall retain a qualified air quality consultant to prepare a health risk assessment (HRA) in accordance with the CARB and the Office of Environmental Health and Hazard Assessment requirements to determine the exposure of project residents/occupants/users to air polluters prior to issuance of a demolition, grading, or building permit. The HRA shall be submitted to the Planning and Zoning Division for review and approval. The applicant shall implement the approved HRA recommendations, if any. If the HRA concludes that the air quality risks from nearby sources are at or below acceptable levels, then additional measures are not required.

2) The applicant shall implement all of the following features that have been found to reduce the air quality risk to sensitive receptors and shall be included in the project

construction plans. These features shall be submitted to the Planning and Zoning Division and the Building Services Division for review and approval prior to the issuance of a demolition, grading, or building permit and shall be maintained on an ongoing basis during operation of the project.

i. Redesign the site layout to locate sensitive receptors as far as possible from any freeways, major roadways, or other sources of air pollution (e.g., loading docks, parking lots).
ii. Do not locate sensitive receptors near distribution center's entry and exit points.
iii. Incorporate tiered plantings of trees (redwood, deodar cedar, live oak, and/or oleander) to the maximum extent feasible between the sources of pollution and the sensitive receptors.
iv. Install, operate and maintain in good working order a central heating and ventilation (HV) system or other air take system in the building, or in each individual residential unit, that meets or exceeds an efficiency standard of MERV 13. The HV system shall include the following features: Installation of a high efficiency filter and/or carbon filter to filter particulates and other chemical matter from entering the building. Either HEPA filters or ASHRAE 85% supply filters shall be used.
v. Retain a qualified HV consultant or HERS rater during the design phase of the project to locate the HV system based on exposure modeling from the pollutant sources.
vi. Install indoor air quality monitoring units in buildings.
vii. Project applicant shall maintain, repair and/or replace HV system on an ongoing and as needed basis or shall prepare an operation and maintenance manual for the HV system and the filter. The manual shall include the operating instructions and the maintenance and replacement schedule. This manual shall be included in the CC&Rs for residential projects and distributed to the building maintenance staff. In addition, the applicant shall prepare a separate homeowners manual. The manual shall contain the operating instructions and the maintenance and replacement schedule for the HV system and the filters.

B. Outdoor Air Quality: To the maximum extent practicable, individual and common exterior open space, including playgrounds, patios, and decks, shall either be shielded from the source of air pollution by buildings or otherwise buffered to further reduce air pollution for project occupants.

43. <u>Exposure to Air Pollution (Toxic Air Contaminants: Gaseous Emissions)</u>
Prior to issuance of a demolition, grading, or building permit

A. Indoor Air Quality: In accordance with the recommendations of the California Air Resources Board (CARB) and the Bay Area Air Quality Management District, appropriate measures shall be incorporated into the project design in order to reduce the potential risk due to exposure to toxic air contaminants to achieve an acceptable interior air quality level for sensitive receptors. The project applicant shall retain a qualified air quality consultant to prepare a health risk assessment (HRA) in accordance with the CARB and the Office of Environmental Health and Hazard Assessment requirements to determine the exposure of project residents/occupants/users to air polluters prior to

issuance of a demolition, grading, or building permit. The HRA shall be submitted to the Planning and Zoning Division for review and approval. The applicant shall implement the approved HRA recommendations, if any. If the HRA concludes that the air quality risks from nearby sources are at or below acceptable levels, then additional measures are not required.

B. Exterior Air Quality: To the maximum extent practicable, individual and common exterior open space, including playgrounds, patios, and decks, shall either be shielded from the source of air pollution by buildings or otherwise buffered to further reduce air pollution for project occupants.

44. Bird Collision Reduction

Prior to issuance of a building permit and ongoing

A. The project applicant, or his or her successor, including the building manager or homeowners' association, shall submit plans to the Planning and Zoning Division, for review and approval, indicating how they intend to reduce potential bird collisions to the maximum feasible extent. The applicant shall implement the approved plan, including all mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent.

1. Mandatory measures include all of the following:
   i. Comply with federal aviation safety regulations for large buildings by installing minimum intensity white strobe lighting with three second flash instead of blinking red or rotating lights.
   ii. Minimize the number of and co-locate rooftop-antennas and other rooftop structures.
   iii. Monopole structures or antennas shall not include guy wires.
   iv. Avoid the use of mirrors in landscape design.
   v. Avoid placement of bird-friendly attractants (i.e. landscaped areas, vegetated roofs, water features) near glass.

2. Additional BMP strategies to consider include the following:
   i. Make clear or reflective glass visible to birds using visual noise techniques. Examples include:
      1. Use of opaque or transparent glass in window panes instead of reflective glass.
      2. Uniformly cover the outside clear glass surface with patterns (e.g., dots, decals, images, abstract patterns). Patterns must be separated by a minimum 10 centimeters (cm).
      3. Apply striping on glass surface. If the striping is less than 2 cm wide it must be applied vertically at a maximum of 10 cm apart (or 1 cm wide strips at 5 cm distance).
      4. Install paned glass with fenestration patterns with vertical and horizontal mullions of 10 cm or less.
      5. Place decorative grilles or louvers with spacing of 10 cm or less.
      6. Apply one-way transparent film laminates to outside glass surface to make the window appear opaque on the outside.

7. Install internal screens through non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects.
8. Install windows which have the screen on the outside of the glass.
9. Use UV-reflective glass. Most birds can see ultraviolet light, which is invisible to humans.
10. If it is not possible to apply glass treatments to the entire building, the treatment should be applied to windows at the top of the surrounding tree canopy or the anticipated height of the surrounding vegetation at maturity.

ii. Mute reflections in glass. Examples include:
1. Angle glass panes toward ground or sky so that the reflection is not in a direct line-of-sight (minimum angle of 20 degrees with optimum angle of 40 degrees).
2. Awnings, overhangs, and sunshades provide birds a visual indication of a barrier and may reduce image reflections on glass, but do not entirely eliminate reflections.

iii. Reduce Light Pollution. Examples include:
1. Turn off all unnecessary interior lights from 11 p.m. to sunrise.
2. Install motion-sensitive lighting in lobbies, work stations, walkways, and corridors, or any area visible from the exterior and retrofitting operation systems that automatically turn lights off during after-work hours.
3. Reduce perimeter lighting whenever possible.

iv. Institute a building operation and management manual that promotes bird safety. Example text in the manual includes:
1. Donation of discovered dead bird specimens to authorized bird conservation organization or museums to aid in species identification and to benefit scientific study, as per all federal, state and local laws.
2. Production of educational materials on bird-safe practices for the building occupants.
3. Asking employees to turn off task lighting at their work stations and draw office blinds or curtains at end of work day.
4. Schedule nightly maintenance during the day or to conclude before 11 p.m., if possible.

45. <u>Greenhouse Gas (GHG) Reduction Plan</u>

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 goal of the GHG Reduction Plan shall be to increase energy efficiency and reduce GHG emissions to below 1,100 metric tons of CO_2e per year or 4.6 metric tons of CO_2e per year per service population to help achieve the City's goal of reducing GHG emissions. The GHG Reduction Plan shall include, at a minimum, (a) a detailed GHG emissions inventory for the project under a "business-as-usual" scenario with no consideration of project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the project (including

the City's Standard Conditions of Approval, proposed mitigation measures, project design features, and other City requirements), (c) a comprehensive set of quantified additional GHG reduction measures available to further reduce GHG emissions beyond the adjusted GHG emissions, and (d) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. If the project is to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase.

Specifically, the applicant/sponsor shall adhere to the following:

a) ***GHG Reduction Measures Program.*** Prepare and submit to the City Planning Director or his/her designee for review and approval a GHG Reduction Plan that specifies and quantifies GHG reduction measures that the project will implement by phase.

Potential GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures Document (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council.

The proposed GHG reduction measures must be reviewed and approved by the City Planning Director or his/her designee. The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "offset carbon credits," pursuant to item "b" below).

The allowable locations of the GHG reduction measures include the following (listed in order of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; (4) off-site within the State of California; then (5) elsewhere in the United States.

b) ***Offset Carbon Credits Guidelines.*** For GHG reduction measures involving the purchase of offset carbon credits, evidence of the payment/purchase shall be submitted to the City Planning Director or his/her designee for review and approval prior to completion of the project (or prior to completion of the project phase, if the project includes more one phase).

As with preferred locations for the implementation of all GHG reductions measures, the preference for offset carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; (3) within the State of California; then (4) elsewhere in the United States. The cost of offset carbon credit purchases shall be based on current market value at the time purchased and shall be based on the Project's operational emissions estimated in the GHG Reduction Plan or subsequent approved emissions

inventory, which may result in emissions that are higher or lower than those estimated in the GHG Reduction Plan.

c) ***Plan Implementation and Documentation.*** For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits. For operational GHG reduction measures to be incorporated into the project, the measures shall be implemented on an indefinite and ongoing basis beginning at the time of project completion (or at the completion of the project phase for phased projects).

For physical GHG reduction measures to be incorporated into off-site projects, the measures shall be included on drawings and submitted to the City Planning Director or his/her designee for review and approval and then installed prior to completion of the subject project (or prior to completion of the project phase for phased projects). For operational GHG reduction measures to be incorporated into off-site projects, the measures shall be implemented on an indefinite and ongoing basis beginning at the time of completion of the subject project (or at the completion of the project phase for phased projects).

d) ***Compliance, Monitoring and Reporting.*** Upon City review and approval of the GHG Reduction Plan program by phase, the applicant/sponsor shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. The GHG Reduction Plan requires regular periodic evaluation over the life of the Project (generally estimated to be at least 40 years) to determine how the Plan is achieving required GHG emissions reductions over time, as well as the efficacy of the specific additional GHG reduction measures identified in the Plan.

Implementation of the GHG reduction measures and related requirements shall be ensured through the project applicant/sponsor's compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the project, the project applicant/sponsor shall prepare each year of the useful life of the project an Annual GHG Emissions Reduction Report (Annual Report), subject to the City Planning Director or his/her designee for review and approval. The Annual Report shall be submitted to an independent reviewer of the City Planning Director's or his/her designee's choosing, to be paid for by the project applicant/sponsor (see *Funding*, below), within two months of the anniversary of the Certificate of Occupancy.

The Annual Report shall summarize the project's implementation of GHG reduction measures over the preceding year, intended upcoming changes, compliance with the conditions of the Plan, and include a brief summary of the previous year's Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the baseline emissions reported in the GHG Plan.

The GHG Reduction Plan shall be considered fully attained when project emissions are less than either applicable numeric BAAQMD CEQA Thresholds, as confirmed by the City Planning Director or his/her designee through an established monitoring program. Monitoring and reporting activities will continue at the City's discretion, as discussed below.

e) ***Funding.*** Within two months after the Certificate of Occupancy, the project applicant/sponsor shall fund an escrow-type account or endowment fund to be used exclusively for preparation of Annual Reports and review and evaluation by the City Planning Director or his/her designee, or its selected peer reviewers. The escrow-type account shall be initially funded by the project applicant/sponsor in an amount determined by the City Planning Director or his/her designee and shall be replenished by the project applicant/sponsor so that the amount does not fall below an amount determined by the City Planning Director or his/her designee. The mechanism of this account shall be mutually agreed upon by the project applicant/sponsor and the City Planning Director or his/her designee, including the ability of the City to access the funds if the project applicant/sponsor is not complying with the GHG Reduction Plan requirements, and/or to reimburse the City for its monitoring and enforcement costs.

f) ***Corrective Procedure.*** If the third Annual Report, or any report thereafter, indicates that, in spite of the implementation of the GHG Reduction Plan, the project is not achieving the GHG reduction goal, the project applicant/sponsor shall prepare a report for City review and approval, which proposes additional or revised GHG measures to better achieve the GHG emissions reduction goals, including without limitation, a discussion on the feasibility and effectiveness of the menu of other additional measures (Corrective GHG Action Plan). The project applicant/sponsor shall then implement the approved Corrective GHG Action Plan.

If, one year after the Corrective GHG Action Plan is implemented, the required GHG emissions reduction target is still not being achieved, or if the project applicant/owner fails to submit a report at the times described above, or if the reports do not meet City requirements outlined above, the City Planning Director or his/her designee may, in addition to its other remedies, (a) assess the project applicant/sponsor a financial penalty based upon actual percentage reduction in GHG emissions as compared to the percent reduction in GHG emissions established in the GHG Reduction Plan; or (b) refer the matter to the City Planning Commission for scheduling of a compliance hearing to determine whether the project's approvals should be revoked, altered or additional conditions of approval imposed.

The penalty as described in (a) above shall be determined by the City Planning Director or his/her designee and be commensurate with the percentage GHG emissions reduction not achieved (compared to the applicable numeric significance thresholds) or required percentage reduction from the "adjusted" baseline.

In determining whether a financial penalty or other remedy is appropriate, the City shall not impose a penalty if the project applicant/sponsor has made a good faith effort to comply with the GHG Reduction Plan.

The City would only have the ability to impose a monetary penalty after a reasonable cure period and in accordance with the enforcement process outlined in Planning Code Chapter 17.152. If a financial penalty is imposed, such penalty sums shall be used by the City solely toward the implementation of the GHG Reduction Plan.

g) ***Timeline Discretion and Summary.*** The City Planning Director or his/her designee shall have the discretion to reasonably modify the timing of reporting, with reasonable notice and opportunity to comment by the applicant, to coincide with other related monitoring and reporting required for the project.
- *Fund Escrow-type Account for City Review*: Certificate of Occupancy plus 2 months
- *Submit Baseline Inventory of "Actual Adjusted Emissions"*: Certificate of Occupancy plus 1 year
- *Submit Annual Report #1*: Certificate of Occupancy plus 2 years
- *Submit Corrective GHG Action Plan* (if needed): Certificate of Occupancy plus 4 years (based on findings of Annual Report #3)
- *Post Attainment Annual Reports*: Minimum every 3 years and at the City Planning Director's or his/her designee's reasonable discretion

46. <u>Bird Collision Reduction</u>

Prior to issuance of a building permit and ongoing

The project applicant, or his or her successor, including the building manager or homeowners' association, shall submit plans to the Planning and Zoning Division, for review and approval, indicating how they intend to reduce potential bird collisions to the maximum feasible extent. The applicant shall implement the approved plan, including all mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent.

a) Mandatory measures include **<u>all</u>** of the following:

vi. Comply with federal aviation safety regulations for large buildings by installing minimum intensity white strobe lighting with three second flash instead of blinking red or rotating lights.

vii. Minimize the number of and co-locate rooftop-antennas and other rooftop structures.

viii. Monopole structures or antennas shall not include guy wires.

ix. Avoid the use of mirrors in landscape design.

x. Avoid placement of bird-friendly attractants (i.e. landscaped areas, vegetated roofs, water features) near glass.

b) Additional BMP strategies to consider include the following:

ii. Make clear or reflective glass visible to birds using visual noise techniques. Examples include:

1. Use of opaque or transparent glass in window panes instead of reflective glass.

2. Uniformly cover the outside clear glass surface with patterns (e.g., dots, decals, images, abstract patterns). Patterns must be separated by a minimum 10 centimeters (cm).
3. Apply striping on glass surface.

47. Public Art

Prior to Issuance of Occupancy Permit

This project is subject to the City's Public Art for Private Development Ordinance No. 13275 C.M.S. ("Ordinance"). As a mixed-use project, the public art oblication is equivalent to one percent of the total building valuation for the nonresidential portion of the project and one-half percent for the residential portion of the project, as required by the Ordinance. The contribution requirement can be met through the commission or acquisition of public accessible art on the development site, payment of an in-lieu contribution to the City's established public art fund, or satisfaction of alternative compliance methods as described in the Ordinance. The applicant shall provide proof of full payment of the in lieu contribution or provide proof of full payment of the in lieu contribution, or provide proof of installation of artwork on the development site prior to the City's issuance of a final certificate of occupancy for each Phase, unless a separate, legal binding instrument is executed ensuring complaince within a timeley manner, subject to City approval. On-site art installation shall be designed by independent artists, or artist working in conjunction with arts or community organizations, that are verified by the City or either hold a valid Oakland business license and/or be an Oakland-based 501(c)(3) tax designated organization in good standing.

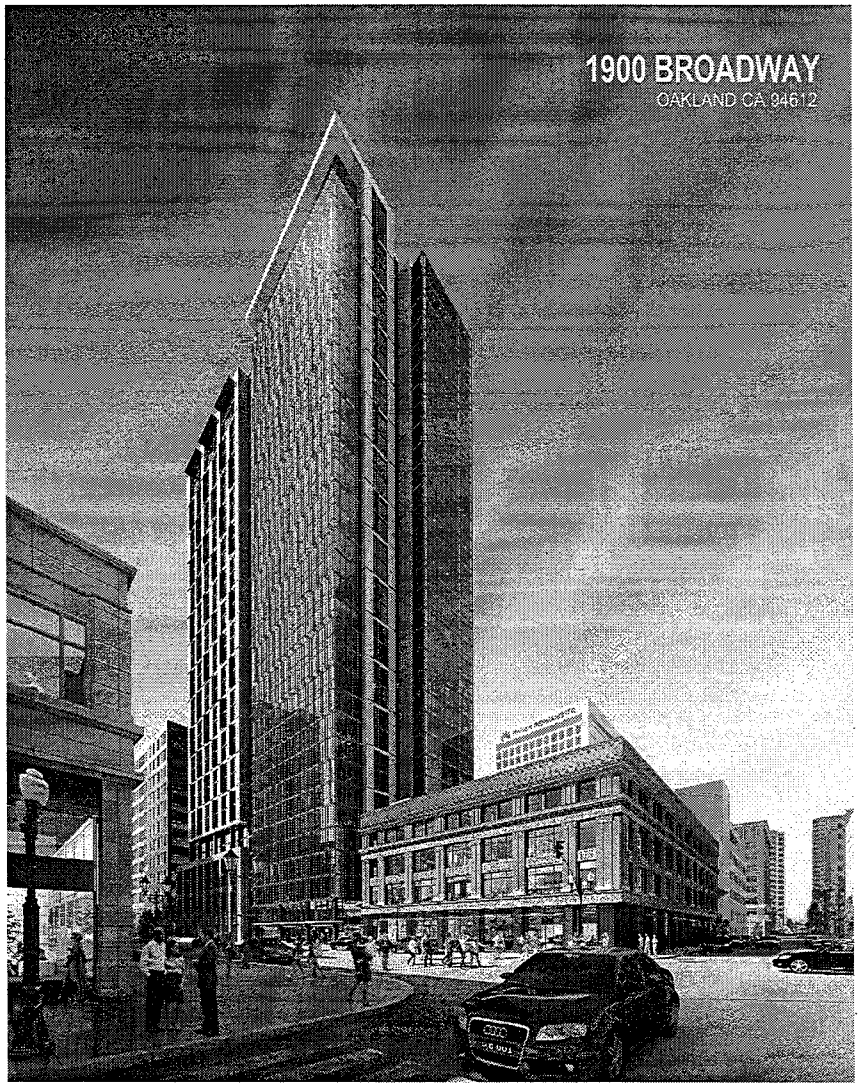
48. Loading Berth

Ongoing

The management of the building shall require tenants and residents of the building to reserve use of the loading birth to prevent the double parking of a second delivery vehicle.

1900 BROADWAY

OAKLAND CA 94612



APPLICATION FOR DEVELOPMENT REVIEW

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CLIENT	ARCHITECT	CIVIL
LANDSCAPE ARCHITECT	STRUCTURAL	

PROJECT DIRECTORY

- DEMOLITION OF EXISTING ONE STORY COMMERCIAL BUILDING CONSISTING OF 11,780 SQ.FT. THAT PROVIDES NO ON-SITE PARKING.
- DEMOLITION OF EXISTING SURFACE PARKING LOT AND SITE FENCING ADJACENT TO 4 STORY BUILDING TO REMAIN AT CORNER OF 19TH STREET AND BROADWAY AVE.
- DEVELOP A NEW 33 STORY HIGH RISE INCLUDING 6 LEVELS OF ABOVE GRADE PARKING CONSTRUCTED OF 2-WAY CONCRETE SLAB WITH PRECAST CONCRETE, GLASS WINDOW WALL AND METAL PANEL CLADDING.
- RECONDITION EXISTING BRICK AND CONCRETE 4 STORY BUILDING INCLUDING FACADE MODIFICATIONS

PROJECT DESCRIPTION

TOTAL LOT AREA:	40,874 SQ.FT.
TOTAL FLOOR AREA:	426,396 SQ.FT.
DWELLING UNITS:	340
TOTAL PARKING AREA:	117,281 SQ.FT.
PARKING SPACES:	333

PROJECT DATA

APN:	8-638-5,8-638-6-3,8-638-7-10
ZONING:	CBD-P
COMPREHENSIVE PLAN DESIGNATION:	REGIONAL COMMUNITY COMMERCIAL
PROPOSED MIXED USE:	RETAIL, MULTI-FAMILY RESIDENTIAL
OCCUPANCY GROUP:	B (COMMERCIAL) R-2 (MULTI-FAMILY RESIDENTIAL) S-2 (PARKING GARAGE)
CONSTRUCTION TYPE:	1-A
FULLY SPRINKLERED:	YES

LOT INFORMATION



PROJECT LOCATION:
1900 BROADWAY AVENUE,
OAKLAND, CA 94612

VICINITY MAP

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G0.3 SITE PHOTOGRAPHS
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G0.6 GREEN BUILDING CHECKLIST
G0.8 MATERIAL BOARD
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C1.0 SITE AND GRADING PLAN
C1.1 SITE AND GRADING PLAN
C2.0 EROSION CONTROL PLAN
C2.1 EROSION CONTROL PLAN
C3.0 STORMWATER MANAGEMENT PLAN
C3.1 STORMWATER MANAGEMENT PLAN

LANDSCAPE
L0.1 GROUND FLOOR LANDSCAPE SITE PLAN
L0.2 LEVEL 6 LANDSCAPE SITE PLAN
L1.0 GROUND LEVEL LANDSCAPE SITE PLAN
L1.1 6TH FLOOR ROOF GARDEN
L1.2 RESTAUTANT LANDSCAPE PLAN
L2.0 OVERALL PLANTING
L2.1 6TH FLOOR ROOF GARDEN PLANTING PLAN
L2.2 OUTDOOR RESTAURANT PLANTING PLAN
L3.0 HARDSCAPE MATERIAL IMAGES
L4.0 PLANT MATERIAL

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A1.2 SITE PLAN
A2.1 OVERALL LEVEL 1 FLOOR PLAN
A2.2 OVERALL LEVEL 1 MEZZANINE
A2.3 OVERALL LEVEL 2 FLOOR PLAN
A2.4 OVERALL LEVEL 3 FLOOR PLAN
A2.5 OVERALL LEVEL 4 FLOOR PLAN
A2.6 OVERALL LEVEL 5 FLOOR PLAN
A2.7 OVERALL LEVEL 6 FLOOR PLAN
A2.8 OVERALL LEVEL 7-13 FLOOR PLAN
A2.9 OVERALL LEVEL 14-32 FLOOR PLAN
A2.10 OVERALL LEVEL 33 FLOOR PLAN
A2.11 ROOF PLAN
A2.20 BEDROOM UNITS AND STUDIOS
A2.34 LEVEL 1 FLOOR PLAN AREA A
A2.35 LEVEL 1 FLOOR PLAN AREA B
A2.36 LEVEL 1 MEZZANINE FLOOR PLAN AREA A
A2.37 LEVEL 1 MEZZANINE FLOOR PLAN AREA B
A2.38 LEVEL 2 FLOOR PLAN AREA A
A2.39 LEVEL 4 FLOOR PLAN AREA A
A2.40 LEVEL 3 FLOOR PLAN AREA A
A2.41 LEVEL 3 FLOOR PLAN AREA B
A2.42 LEVEL 4 FLOOR PLAN AREA A
A2.43 LEVEL 4 FLOOR PLAN AREA B
A2.44 LEVEL 5 FLOOR PLAN AREA A
A2.45 LEVEL 5 FLOOR PLAN AREA B
A2.46 LEVEL 13TH FLOOR PLAN
A2.47 LEVEL 14 FLOOR PLAN
A2.48 LEVEL 33 AND 34
A2.49 ROOF PLAN
A2.60 LIGHTING PLAN-LEVEL 1
A2.61 LIGHTING PLAN- LEVEL 4 EXISTING
A2.62 LIGHTING PLAN-LEVEL 6
A2.63 LIGHTING PLAN-LEVEL 33
A3.1 WEST ELEVATION
A3.2 EAST ELEVATION
A3.3 SOUTH ELEVATION
A3.4 NORTH ELEVATION
A3.5 ENLARGED ELEVATION / WALL SECTIONS
A3.6 ENLARGED ELEVATION / WALL SECTIONS
A3.7 ENLARGED ELEVATION / WALL SECTIONS
A3.8 ENLARGED ELEVATION / WALL SECTIONS
A3.9 ENLARGED ELEVATION / WALL SECTIONS
A3.10 ENLARGED ELEVATION / WALL SECTIONS
A3.11 ENLARGED ELEVATION / WALL SECTIONS
A3.12 ENLARGED ELEVATION / WALL SECTIONS
A3.13 ENLARGED ELEVATION / WALL SECTIONS
A3.14 BUILDING SECTION
A3.15 BUILDING SECTION
A3.16 BUILDING SECTION

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berkeley, ca 94710
510.216.6167
www.brick-llp.com

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DESIGN DEVELOPMENT
TITLE SHEET

G0.1

PARKING AREA

Level	Area
LEVEL 1	22,524 SF
LEVEL 1 MEZZANINE	21,052 SF
LEVEL 2	20,918 SF
LEVEL 3	20,918 SF
LEVEL 4	20,918 SF
LEVEL 5	11,491 SF
TOTAL	117,821 SF

RETAIL

Level	Area
LEVEL 1	9,724 SF
TOTAL	9,724 SF

RESIDENTAL

Level	Area
LEVEL 2	12,938 SF
LEVEL 3	12,938 SF
LEVEL 4	8,742 SF
LEVEL 5	5,448 SF
LEVEL 6	5,216 SF
LEVEL 7	10,383 SF
LEVEL 8	10,383 SF
LEVEL 9	10,383 SF
LEVEL 10	10,383 SF
LEVEL 11	10,383 SF
LEVEL 12	10,383 SF
LEVEL 13	10,373 SF
LEVEL 14	10,513 SF
LEVEL 15	10,523 SF
LEVEL 16	10,523 SF
LEVEL 17	10,523 SF
LEVEL 18	10,523 SF
LEVEL 19	10,523 SF
LEVEL 20	10,523 SF
LEVEL 21	10,523 SF
LEVEL 22	10,523 SF
LEVEL 23	10,523 SF
LEVEL 24	10,523 SF
LEVEL 25	10,523 SF
LEVEL 26	10,523 SF
LEVEL 27	10,523 SF
LEVEL 28	10,523 SF
LEVEL 29	10,523 SF
LEVEL 30	10,523 SF
LEVEL 31	10,523 SF
LEVEL 32	10,467 SF
LEVEL 33	5,370 SF
LEVEL 33 MEZZ.	1,126 SF
TOTAL	324,316 SF

STORAGE

Level	Area
LEVEL 0 - EXISTING BASEMENT	8,438 SF
LEVEL 1 MEZZANINE	512 SF
LEVEL 2	1,044 SF
LEVEL 3	1,044 SF
LEVEL 4	1,044 SF
LEVEL 5	543 SF
TOTAL	12,626 SF

AMENITY

Level	Area
LEVEL 6	1,766 SF
LEVEL 6	2,901 SF
TOTAL	4,667 SF

CIRCULATION

Level	Area
LEVEL 0 - EXISTING BASEMENT	327 SF
LEVEL 1	3,066 SF
LEVEL 1 MEZZANINE	1,652 SF
LEVEL 2	3,636 SF
LEVEL 3	3,636 SF
LEVEL 4	3,354 SF
LEVEL 5	2,141 SF
LEVEL 6	1,958 SF
LEVEL 7	1,875 SF
LEVEL 8	1,875 SF
LEVEL 9	1,875 SF
LEVEL 10	1,875 SF
LEVEL 11	1,875 SF
LEVEL 12	1,849 SF
LEVEL 13	1,897 SF
LEVEL 14	1,758 SF
LEVEL 15	1,738 SF
LEVEL 16	1,738 SF
LEVEL 17	1,738 SF
LEVEL 18	1,738 SF
LEVEL 19	1,738 SF
LEVEL 20	1,738 SF
LEVEL 21	1,738 SF
LEVEL 22	1,738 SF
LEVEL 23	1,738 SF
LEVEL 24	1,738 SF
LEVEL 25	1,738 SF
LEVEL 26	1,738 SF
LEVEL 27	1,738 SF
LEVEL 28	1,738 SF
LEVEL 29	1,738 SF
LEVEL 30	1,738 SF
LEVEL 31	1,738 SF
LEVEL 32	1,738 SF
LEVEL 33	1,609 SF
LEVEL 33 MEZZ.	267 SF
TOTAL	67,604 SF

USABLE OPEN SPACE

Level	Area
LEVEL 1	711 SF
LEVEL 4	4,347 SF
LEVEL 5	1,240 SF
LEVEL 6	20,986 SF
LEVEL 7	102 SF
LEVEL 8	102 SF
LEVEL 9	102 SF
LEVEL 10	102 SF
LEVEL 11	102 SF
LEVEL 12	102 SF
LEVEL 13	102 SF
LEVEL 14	102 SF
LEVEL 15	102 SF
LEVEL 16	102 SF
LEVEL 17	102 SF
LEVEL 18	102 SF
LEVEL 19	102 SF
LEVEL 20	102 SF
LEVEL 21	102 SF
LEVEL 22	102 SF
LEVEL 23	102 SF
LEVEL 24	102 SF
LEVEL 25	102 SF
LEVEL 26	102 SF
LEVEL 27	102 SF
LEVEL 28	102 SF
LEVEL 29	102 SF
LEVEL 30	102 SF
LEVEL 31	102 SF
LEVEL 32	157 SF
LEVEL 33	3,994 SF
TOTAL	33,964 SF

SERVICE

Level	Area
LEVEL 2	91 SF
LEVEL 3	91 SF
LEVEL 4	91 SF
LEVEL 5	91 SF
LEVEL 6	91 SF
LEVEL 7	78 SF
LEVEL 8	78 SF
LEVEL 9	78 SF
LEVEL 10	78 SF
LEVEL 11	78 SF
LEVEL 12	78 SF
LEVEL 13	79 SF
LEVEL 14	79 SF
LEVEL 15	78 SF
LEVEL 16	78 SF
LEVEL 17	78 SF
LEVEL 18	78 SF
LEVEL 19	78 SF
LEVEL 20	78 SF
LEVEL 21	78 SF
LEVEL 22	78 SF
LEVEL 23	78 SF
LEVEL 24	78 SF
LEVEL 25	78 SF
LEVEL 26	78 SF
LEVEL 27	78 SF
LEVEL 28	78 SF
LEVEL 29	78 SF
LEVEL 30	78 SF
LEVEL 31	78 SF
LEVEL 32	78 SF
LEVEL 33	79 SF
LEVEL 33 MEZZ.	686 SF
TOTAL	3,253 SF

TRASH

Level	Area
LEVEL 1	628 SF
LEVEL 2	54 SF
LEVEL 3	54 SF
LEVEL 4	54 SF
LEVEL 5	54 SF
LEVEL 6	77 SF
LEVEL 7	54 SF
LEVEL 8	54 SF
LEVEL 9	54 SF
LEVEL 10	54 SF
LEVEL 11	54 SF
LEVEL 12	54 SF
LEVEL 13	54 SF
LEVEL 14	54 SF
LEVEL 15	54 SF
LEVEL 16	54 SF
LEVEL 17	54 SF
LEVEL 18	54 SF
LEVEL 19	54 SF
LEVEL 20	54 SF
LEVEL 21	54 SF
LEVEL 22	54 SF
LEVEL 23	54 SF
LEVEL 24	54 SF
LEVEL 25	54 SF
LEVEL 26	54 SF
LEVEL 27	54 SF
LEVEL 28	54 SF
LEVEL 29	54 SF
LEVEL 30	54 SF
LEVEL 31	54 SF
LEVEL 32	54 SF
LEVEL 33	54 SF
TOTAL	2,390 SF

LOBBY

Level	Area
LEVEL 1	819 SF
LEVEL 1	2,141 SF
TOTAL	2,960 SF

GROSS BUILDING

Level	Area
LEVEL 0 - EXISTING BASEMENT	8,765 SF
LEVEL 1	38,946 SF
LEVEL 1 MEZZANINE A	23,519 SF
LEVEL 2	38,769 SF
LEVEL 3	38,769 SF
LEVEL 4	34,218 SF
LEVEL 5	19,598 SF
LEVEL 6	11,822 SF
LEVEL 7	12,402 SF
LEVEL 8	12,402 SF
LEVEL 9	12,402 SF
LEVEL 10	12,402 SF
LEVEL 11	12,402 SF
LEVEL 12	12,402 SF
LEVEL 13	12,402 SF
LEVEL 14	12,402 SF
LEVEL 15	12,402 SF
LEVEL 16	12,402 SF
LEVEL 17	12,402 SF
LEVEL 18	12,402 SF
LEVEL 19	12,402 SF
LEVEL 20	12,402 SF
LEVEL 21	12,402 SF
LEVEL 22	12,402 SF
LEVEL 23	12,402 SF
LEVEL 24	12,402 SF
LEVEL 25	12,402 SF
LEVEL 26	12,402 SF
LEVEL 27	12,402 SF
LEVEL 28	12,402 SF
LEVEL 29	12,402 SF
LEVEL 30	12,402 SF
LEVEL 31	12,402 SF
LEVEL 32	12,402 SF
LEVEL 33	7,175 SF
LEVEL 33 MEZZ.	2,183 SF
TOTAL	546,219 SF

UNIT TABULATION

LEVEL	UNIT	COUNT
LEVEL 2	STUDIO	1
LEVEL 2	1 BED	5
LEVEL 2	2 BED	1
		7
LEVEL 2A	STUDIO	1
LEVEL 2A	1 BED	5
LEVEL 2A	2 BED	1
		7
LEVEL 3	STUDIO	1
LEVEL 3	1 BED	5
LEVEL 3	2 BED	1
		7
LEVEL 3A	STUDIO	1
LEVEL 3A	1 BED	2
LEVEL 3A	2 BED	4
		7
LEVEL 4	STUDIO	1
LEVEL 4	1 BED	5
LEVEL 4	2 BED	1
		7
LEVEL 5	STUDIO	1
LEVEL 5	1 BED	3
LEVEL 5	2 BED	2
		6
LEVEL 6	STUDIO	1
LEVEL 6	1 BED	4
LEVEL 6	2 BED	1
		6
LEVEL 7	STUDIO	4
LEVEL 7	1 BED	4
LEVEL 7	2 BED	4
		12
LEVEL 8	STUDIO	4
LEVEL 8	1 BED	4
LEVEL 8	2 BED	4
		12
LEVEL 9	STUDIO	4
LEVEL 9	1 BED	4
LEVEL 9	2 BED	4
		12
LEVEL 10	STUDIO	4
LEVEL 10	1 BED	4
LEVEL 10	2 BED	4
		12

UNIT TABULATION

LEVEL	UNIT	COUNT
LEVEL 11	STUDIO	4
LEVEL 11	1 BED	4
LEVEL 11	2 BED	4
		12
LEVEL 12	STUDIO	4
LEVEL 12	1 BED	4
LEVEL 12	2 BED	4
		12
LEVEL 13	STUDIO	4
LEVEL 13	1 BED	4
LEVEL 13	2 BED	4
		12
LEVEL 14	STUDIO	2
LEVEL 14	1 BED	5
LEVEL 14	2 BED	4
		11
LEVEL 15	STUDIO	2
LEVEL 15	1 BED	5
LEVEL 15	2 BED	4
		11
LEVEL 16	STUDIO	2
LEVEL 16	1 BED	5
LEVEL 16	2 BED	4
		11
LEVEL 17	STUDIO	2
LEVEL 17	1 BED	5
LEVEL 17	2 BED	4
		11
LEVEL 18	STUDIO	2
LEVEL 18	1 BED	5
LEVEL 18	2 BED	4
		11
LEVEL 19	STUDIO	2
LEVEL 19	1 BED	5
LEVEL 19	2 BED	4
		11
LEVEL 20	STUDIO	2
LEVEL 20	1 BED	5
LEVEL 20	2 BED	4
		11
LEVEL 21	STUDIO	2
LEVEL 21	1 BED	5
LEVEL 21	2 BED	4
		11

UNIT TABULATION

LEVEL	UNIT	COUNT
LEVEL 22	STUDIO	2
LEVEL 22	1 BED	5
LEVEL 22	2 BED	4
		11
LEVEL 23	STUDIO	2
LEVEL 23	1 BED	5
LEVEL 23	2 BED	4
		11
LEVEL 24	STUDIO	2
LEVEL 24	1 BED	5
LEVEL 24	2 BED	4
		11
LEVEL 25	STUDIO	2
LEVEL 25	1 BED	5
LEVEL 25	2 BED	4
		11
LEVEL 26	STUDIO	2
LEVEL 26	1 BED	5
LEVEL 26	2 BED	4
		11
LEVEL 27	STUDIO	2
LEVEL 27	1 BED	5
LEVEL 27	2 BED	4
		11
LEVEL 28	STUDIO	2
LEVEL 28	1 BED	5
LEVEL 28	2 BED	4
		11
LEVEL 29	STUDIO	2
LEVEL 29	1 BED	5
LEVEL 29	2 BED	4
		11
LEVEL 30	STUDIO	2
LEVEL 30	1 BED	5
LEVEL 30	2 BED	4
		11
LEVEL 31	STUDIO	2
LEVEL 31	1 BED	5
LEVEL 31	2 BED	4
		11
LEVEL 32	STUDIO	2
LEVEL 32	1 BED	5
LEVEL 32	2 BED	4
		11

UNIT TABULATION

LEVEL	UNIT	COUNT
LEVEL 33	STUDIO	1
LEVEL 33	2 BED	4
		5
TOTAL		345

PARKING SCHEDULE

LEVEL	STALL TYPE	COUNT
LEVEL 1	c	22
LEVEL 1	f	12
LEVEL 1	hc	2
LEVEL 1	i	7
		43
LEVEL 1 MEZZANINE	c	18
LEVEL 1 MEZZANINE	f	8
LEVEL 1 MEZZANINE	hc	2
LEVEL 1 MEZZANINE	i	7
		35
LEVEL 1 MEZZANINE A	c	12
LEVEL 1 MEZZANINE A	f	13
LEVEL 1 MEZZANINE A	i	5
		30
LEVEL 2	c	18
LEVEL 2	f	8
LEVEL 2	hc	2
LEVEL 2	i	7
		35
LEVEL 2A	c	10
LEVEL 2A	f	14
LEVEL 2A	hc	1
LEVEL 2A	i	3
		28
LEVEL 3	c	18
LEVEL 3	f	8
LEVEL 3	hc	2
LEVEL 3	i	7
		35
LEVEL 3A	c	10
LEVEL 3A	f	14
LEVEL 3A	hc	1
LEVEL 3A	i	3
		28
LEVEL 4	c	19
LEVEL 4	f	10
LEVEL 4	i	7
		36
LEVEL 4A	c	13
LEVEL 4A	f	11
LEVEL 4A	hc	1
LEVEL 4A	i	3
		28
LEVEL 5	c	25
LEVEL 5	f	10
		35
TOTAL		333

PROJECT METRICS

NET RENTABLE vs. BUILDING GSF:

NET RENTABLE BUILDING GSF
(RETAIL + RESIDENTIAL+STORAGE) (INCLUDING PARKING)
346,666 SF / 546,219 SF = 63%

NET RENTABLE vs. BUILDING GSF W/O PARKING:

NET RENTABLE BUILDING GSF
(RETAIL + RESIDENTIAL+STORAGE) (NOT INCLUDING PARKING)
346,666 SF / 428,398 SF = 81%

TYP. TOWER FLOOR NET RENTABLE vs. TYP. TOWER FLOOR GSF:

TOWER FLOOR NET RENTABLE TOWER FLOOR GSF

10,523 SF / 12,402 SF = 85%

UNIT MIX

UNIT TYPE	COUNT	PERCENTAGE
STUDIO	74	17%
1 BED	152	48%
2 BED	119	35%
	345	

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brick., llp
928 carleton street
berkeley, ca 94710
510.516.0167
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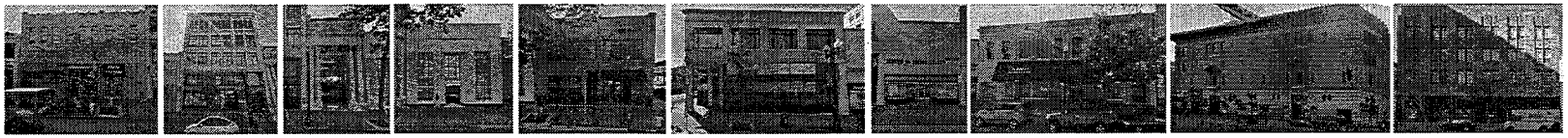
DESIGN DEVELOPMENT
PROJECT DATA

G0.2



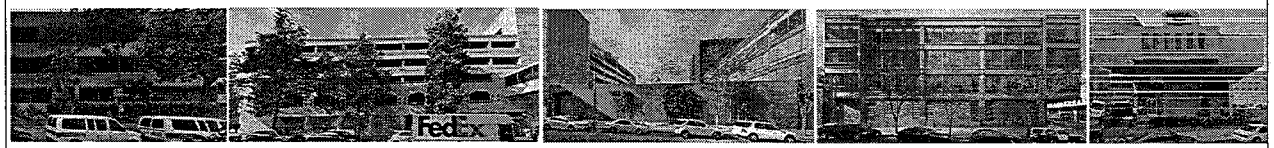
1741 Broadway | 1755 Broadway | 1759 Broadway | 1763 Broadway | 1771 - 1775 Broadway | 1901 Broadway | 1926 Broadway | 1929 - 1931 Broadway | 1945 - 1956 Broadway | 2001 Broadway

1 BROADWAY NIEIGHBORS - WEST FACING



2000 BROADWAY | 1970 BROADWAY | 1934 - 1946 BROADWAY | 1770 BROADWAY | 1750 BROADWAY | 1724 -1722 - 1720 BROADWAY | 1716 BROADWAY | 1700 BROADWAY

2 BROADWAY NIEIGHBORS - EAST FACING



1841 FRANKLIN ST | 1901 FRANKLIN ST | 415 20TH STREET | 2001 FRANKLIN ST

3 FRANKLIN ST NIEGHBORS - SOUTH FACING



VICINITY MAP

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brick., llp
925 carleton street
berkeley, ca 94710
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11/30/15
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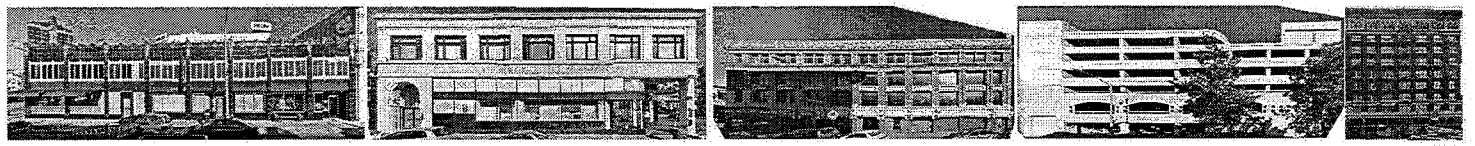
DESIGN DEVELOPMENT
SITE PHOTOGRAPHS

G0.3



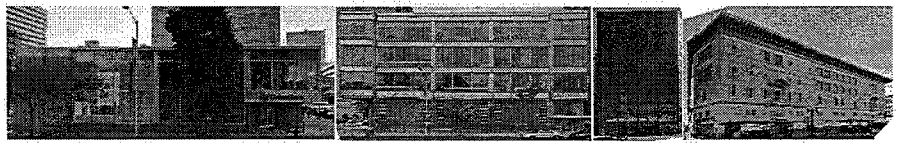
1820 FRANKLIN STREET | 1841 FRANKLIN STREET | 415 19TH STREET | 467 19TH STREET | 1616 TELEGRAPH STREET

4 19TH STREET - SOUTH FACING



468 19TH STREET | 464 19TH STREET | 442 - 440 19TH STREET | 410 19TH STREET | 386 19TH STREET

5 19TH STREET - NORTH FACING



1970 FRANKLIN STREET | 415 20TH STREET | 1970 BROADWAY | 1955 BROADWAY

6 THOMAS L BERKELY WAY / 20TH STREET-SOUTH FACING



VICINITY MAP

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928 carlotta street
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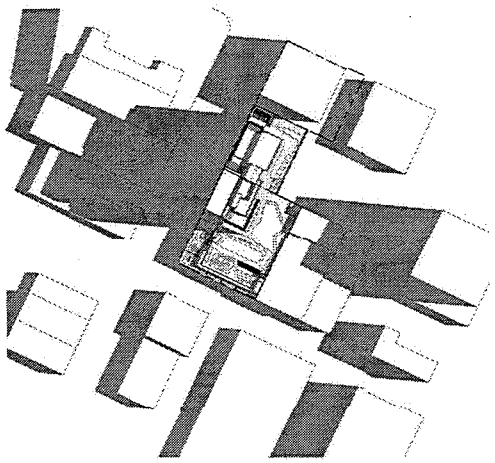
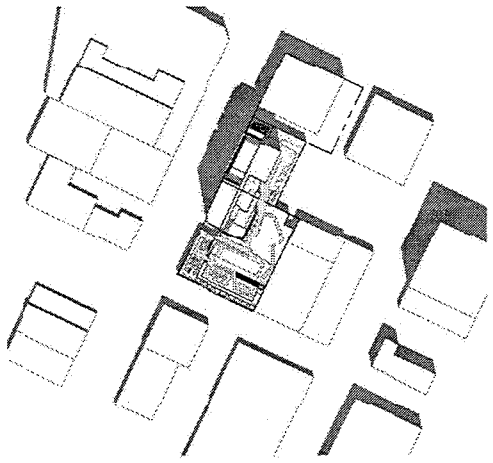
DESIGN
DEVELOPMENT
SITE
PHOTOGRAPHS

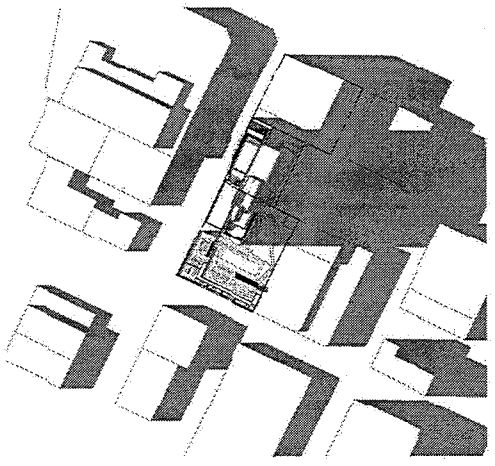
G0.4



9 AM SUMMER SOLSTICE

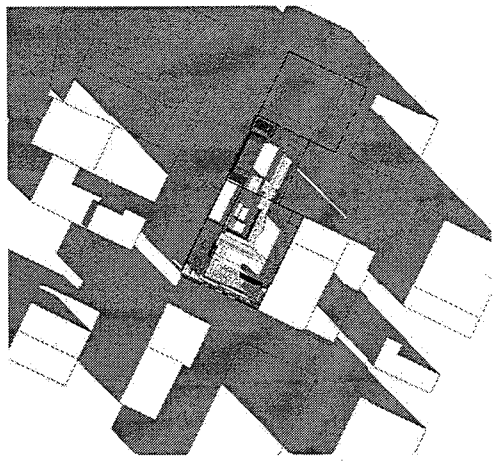


12 PM SUMMER SOLSTICE

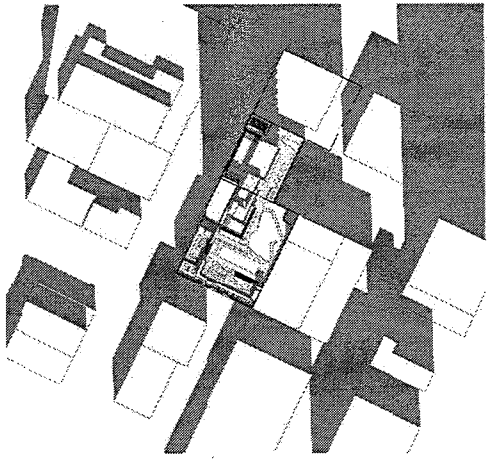


4 PM SUMMER SOLSTICE

1 SUMMER SOLSTICE SHADOW STUDY



9 AM WINTER SOLSTICE



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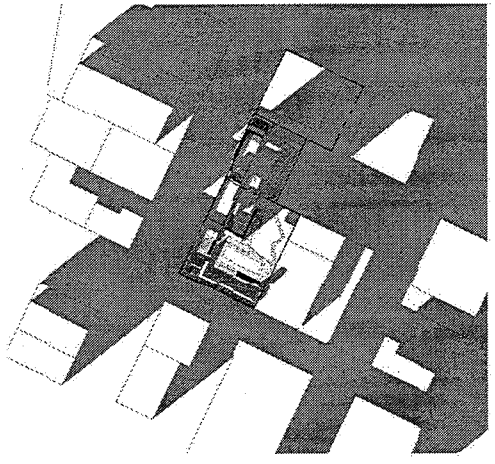

4 PM WINTER SOLSTICE

2 WINTER SOLSTICS SHADOW STUDY

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920 carleton street
berkeley, ca 94710
510.518.0187
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DESIGN
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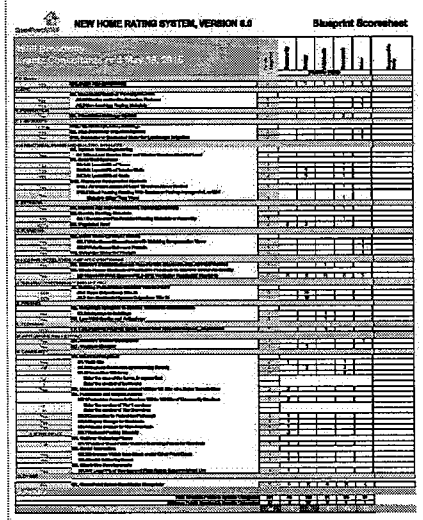
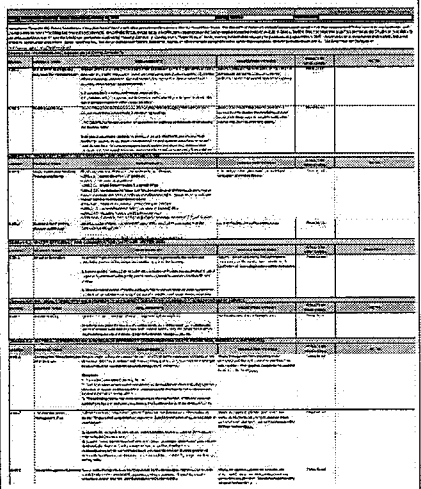
SHADOW STUDY

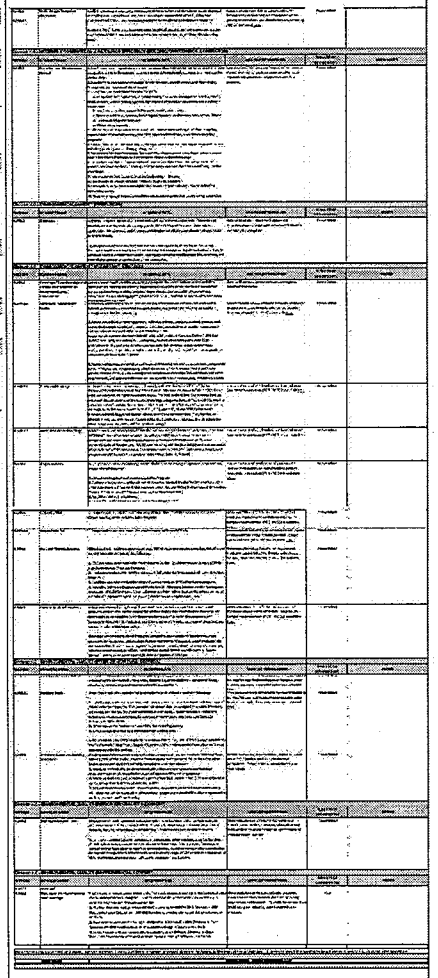
G0.5



GREENPOINT RATED SCORECARD



CAL GREEN MANDATORY MEASURES CHECKLIST



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berkeley, ca 94710
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DESIGN
DEVELOPMENT

GREEN BUILDING
CHECKLIST

G0.6

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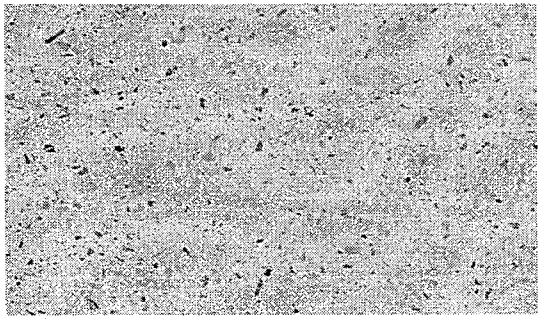
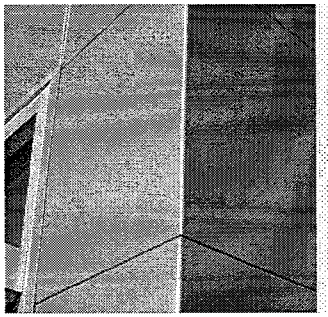
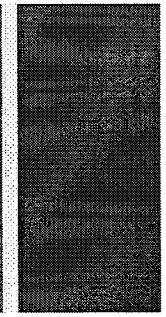


PRECAST TEXTURE

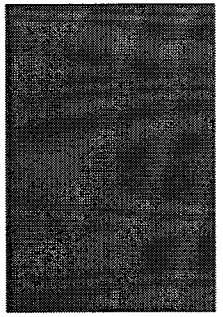
PRECAST PANEL



PANELING DETAIL

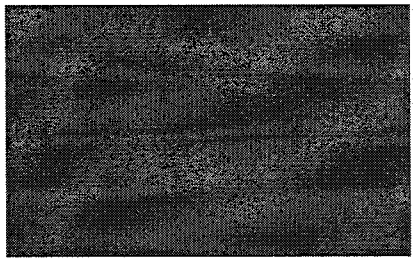


DARK STAINLESS STEEL

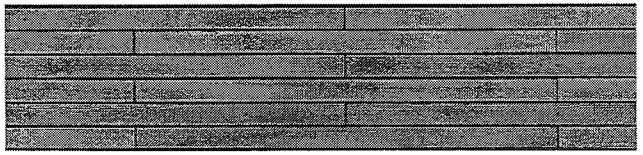


METAL COLOR CHARCOAL GRAY

METAL PANEL

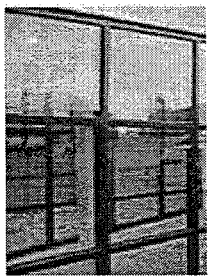


GFRC PANEL

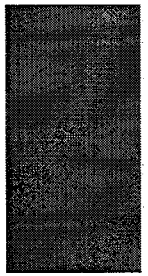


GFRC RAIN-SCREEN SYSTEM

GFRC

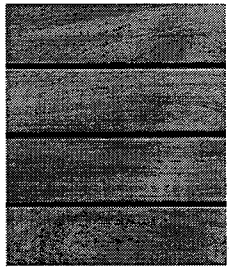


STORE FRONT SYSTEM



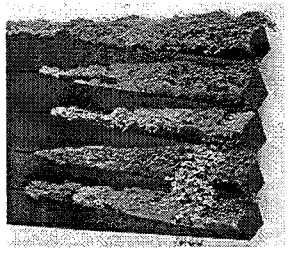
MULLION COLOR MEDIUM BRONZ

WINDOW WALL

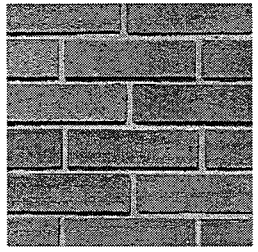


IPE WOOD WEATHERED

WOOD FENCING & COURTYARD



LIVING WALL & COURTYARD



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510.516.0167
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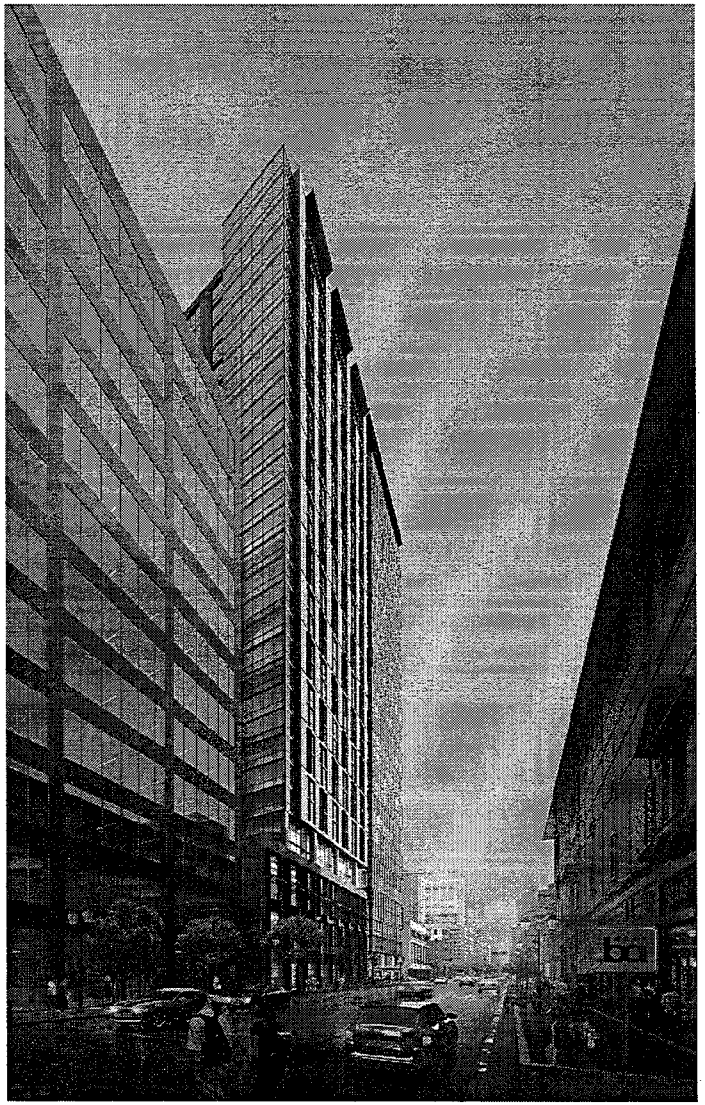
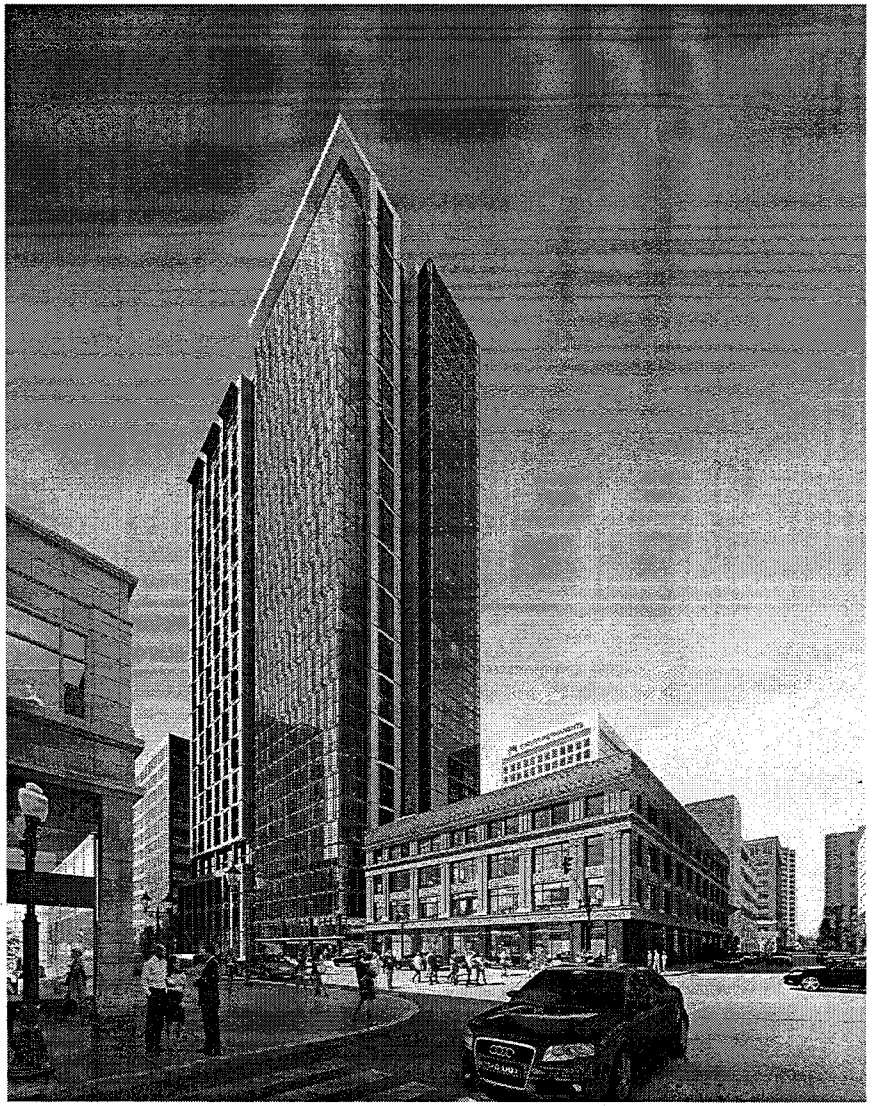
DESIGN
DEVELOPMENT
MATERIAL BOARD

G0.8



VIEW DOWN BROADWAY FROM 20TH



VIEW UP BROADWAY FROM 19TH

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929 canelon street
berkeley, ca 94710
510.516.0167
www.brick-llp.com

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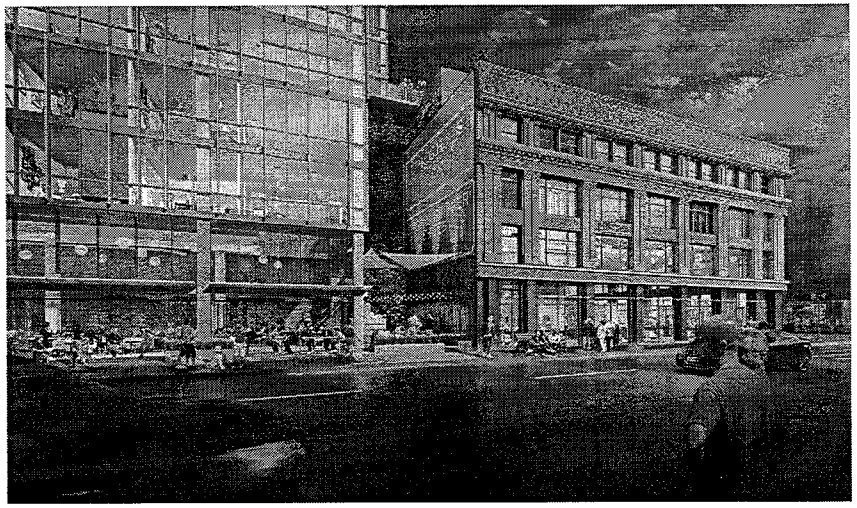
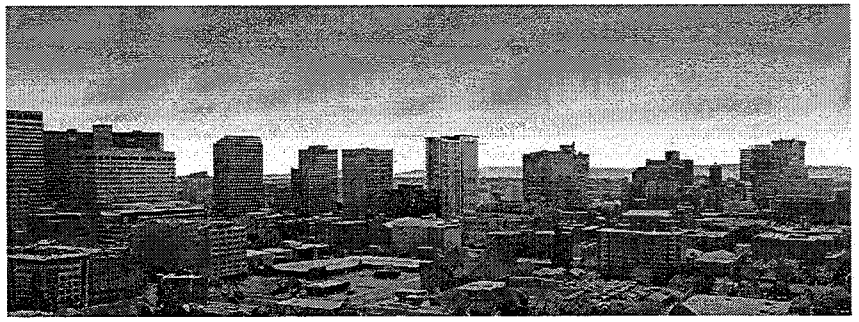
DESIGN
DEVELOPMENT

3D
VIEWS-STREET
VIEWS

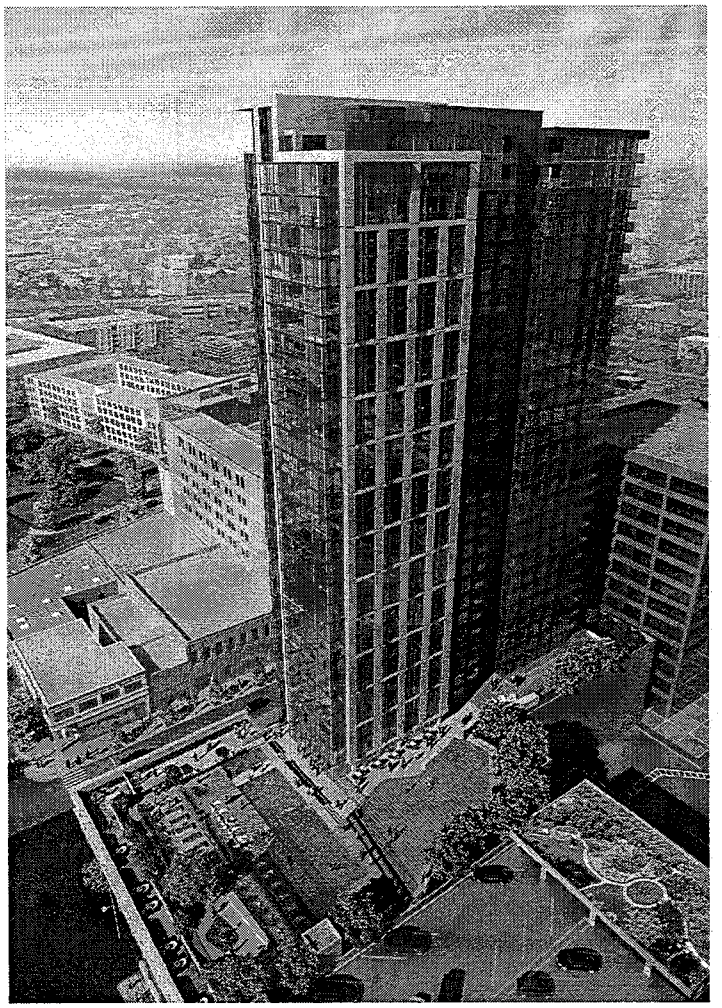
G1.2



VIEW OF PEDESTRIAN EXPERIENCE ALONG BROADWAY



AREAL VIEW LOOKING SOUTH EAST



BIRDS EYE LOOKING WEST FROM 19TH STREET

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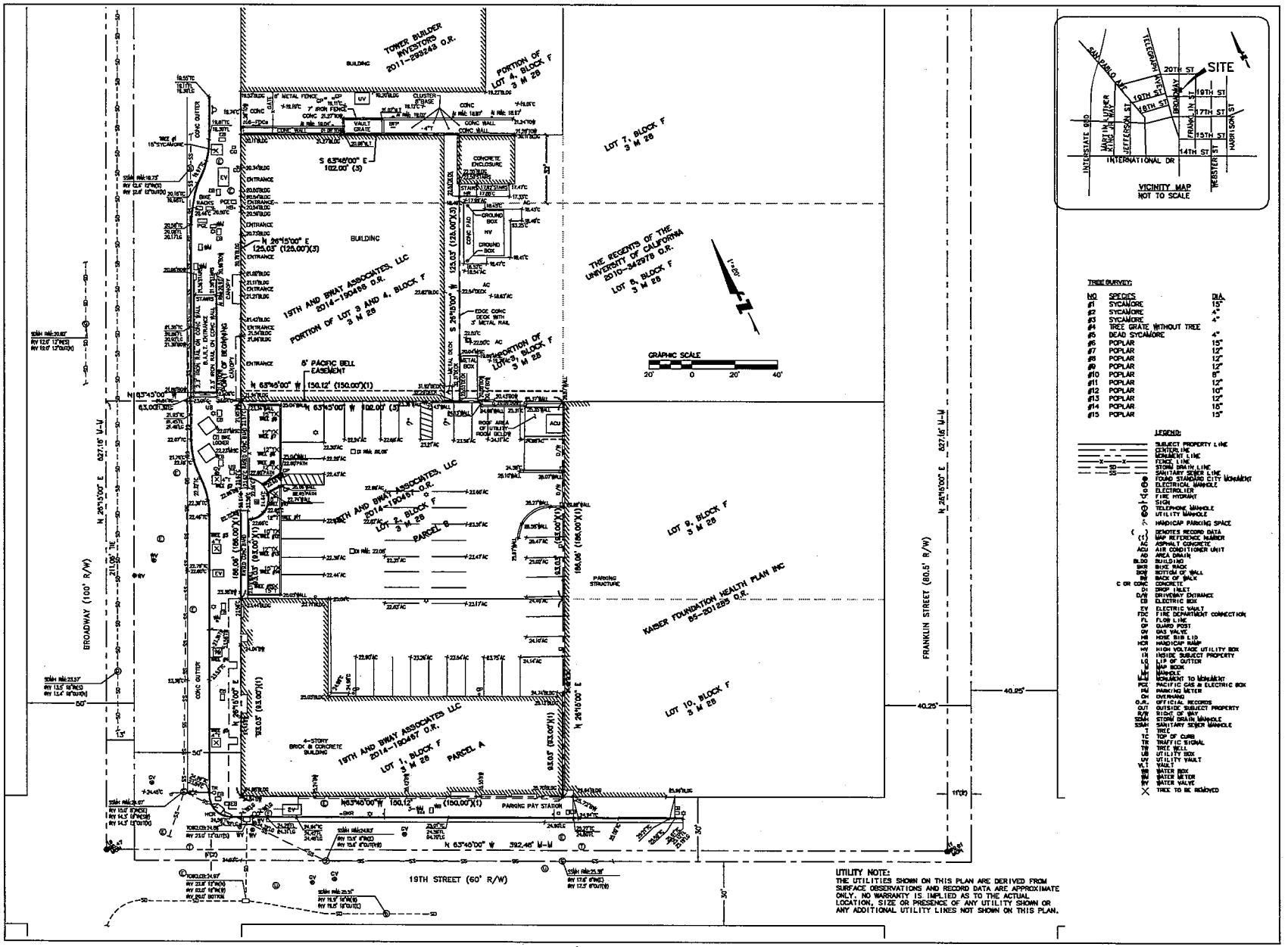
DESIGN
DEVELOPMENT
3D VIEWS

G1.3



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510.516.0367
www.brick-llp.com

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BkF
Engineers | Surveyors | Planners
1646 N. CALIFORNIA BLVD.
SUITE 400
WALNUT CREEK, CA 94596
925-940-2200
925-940-2201 (fax)

REGISTERED PROFESSIONAL ENGINEER
DANIEL C. SCHAEFER
No. 51158
CIVIL
STATE OF CALIFORNIA

rev date issue

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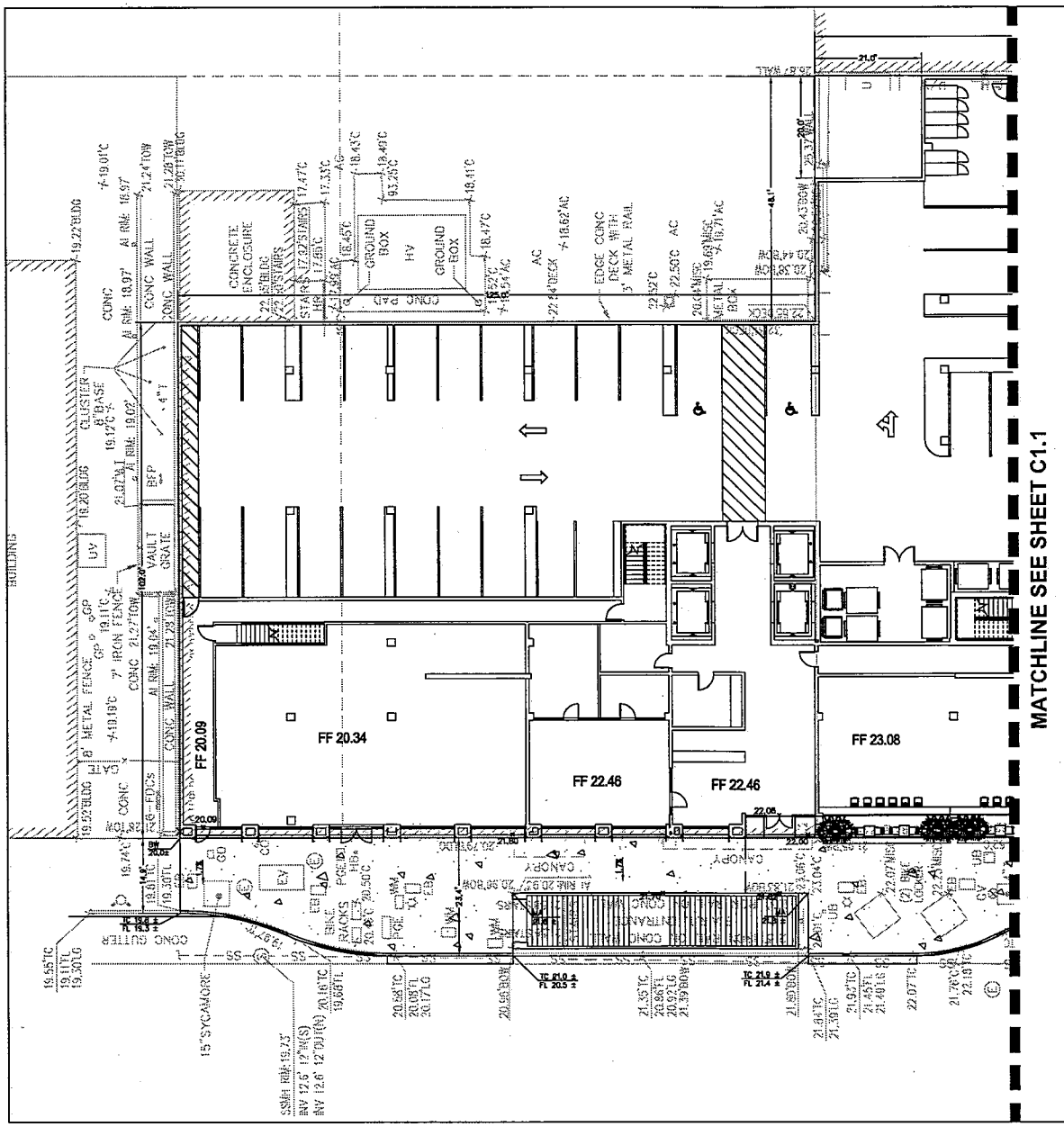
DESIGN
DEVELOPMENT
EXISTING CONDITIONS
& TREE SURVEY

C0.0



LEGEND:

(N) CONCRETE SIDEWALK PER CITY OF OAKLAND STANDARD DETAILS AND SPECIFICATIONS

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. IMPACTED SIDEWALKS ON BROADWAY AND 19TH STREET TO BE REPLACED PER CITY STANDARD DETAILS AND SPECIFICATIONS
3. ALL LISTED TREE DIAMETERS ARE DBH.

EARTHWORK TABLE

EXCAVATION (CY)	FILL (CY)	OFF-HAUL (CY)
1,179	0	1,179

1"=10'

GRAPHIC SCALE

(IN FEET)

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BkF
engineers
1646 N. CALIFORNIA BLVD.
SUITE 400
WALNUT CREEK, CA 94596
925-930-7100
925-930-0208 (fax)

REGISTERED PROFESSIONAL ENGINEER
DANIEL E. SCHUSTER
No. 51158
CIVIL
STATE OF CALIFORNIA

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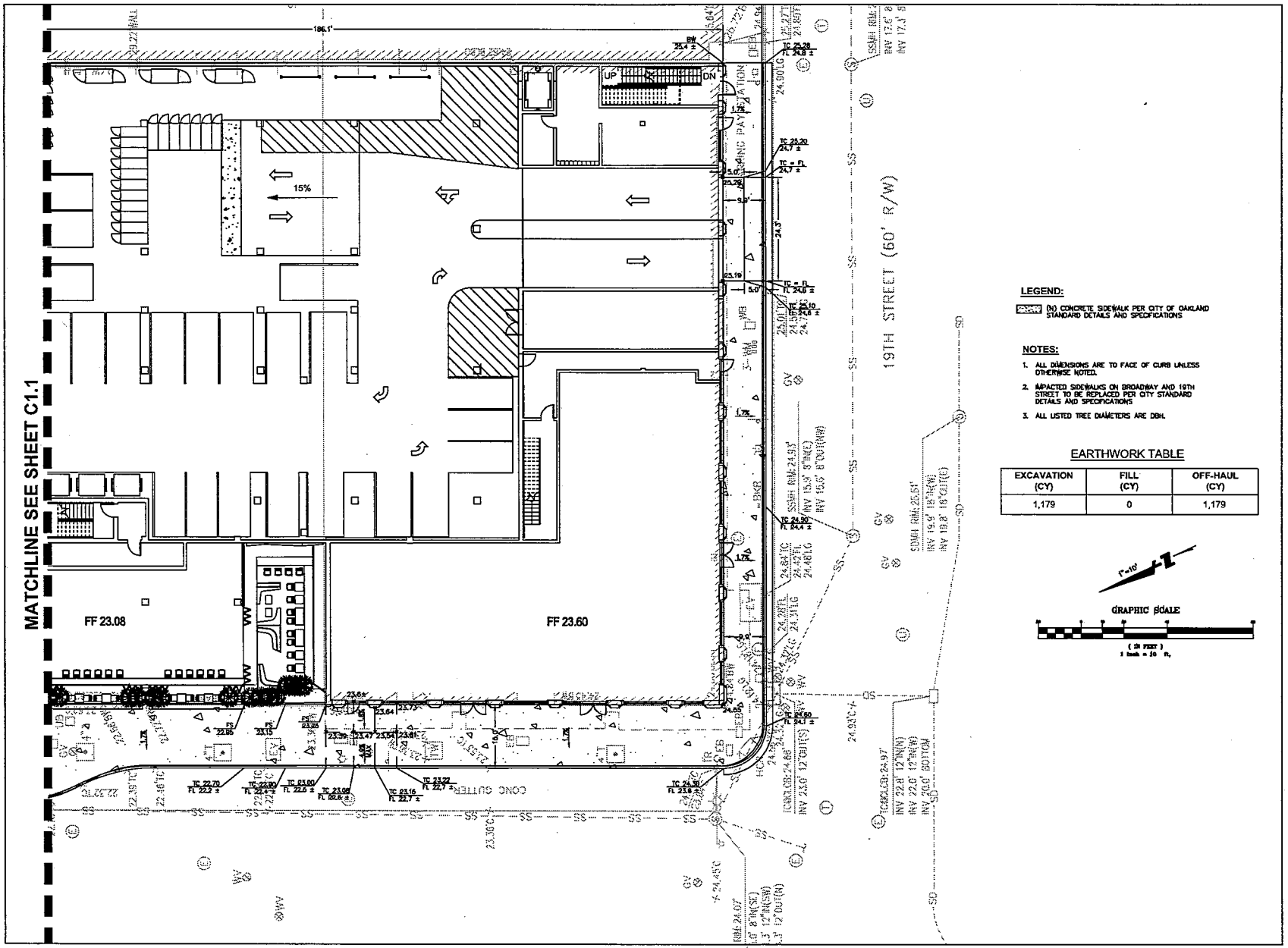
DESIGN DEVELOPMENT
SITE AND GRADING PLAN

C1.0



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EARTHWORK TABLE

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1,179	0	1,179

1"=10'

GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft.

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No. 51158
CIVIL
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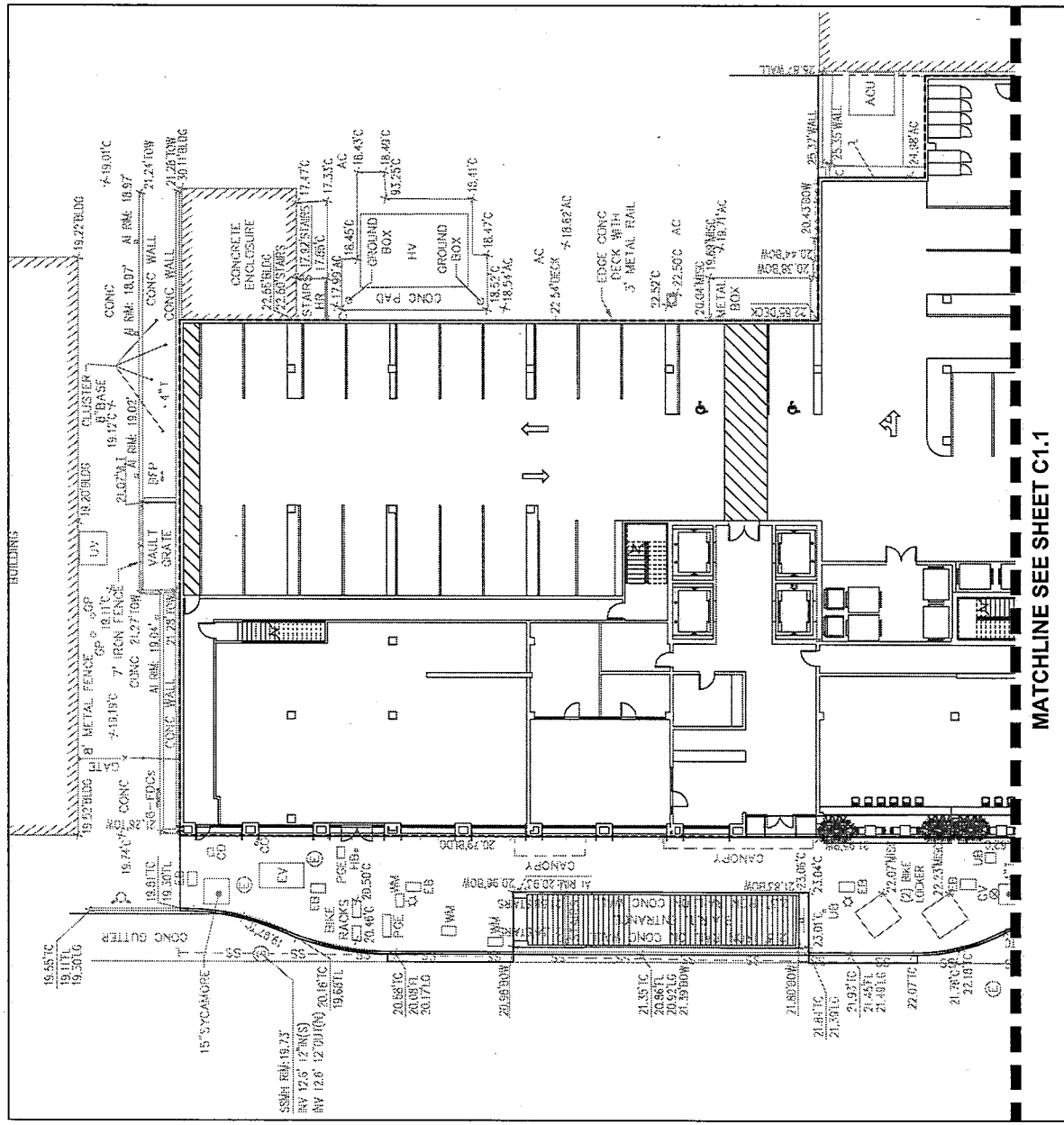
DESIGN DEVELOPMENT

SITE AND GRADING PLAN

C1.1



LEGEND

STABILIZED CONSTRUCTION ENTRANCE (TC-1)** WITH ENTRANCE,OUTLET TIRE WASH (TC-3)**

STORM DRAIN INLET PROTECTION (SE-10)**

PROPOSED BUILDING FOOTPRINT

**REFER TO CALIFORNIA CONSTRUCTION SITE BMP FACT SHEETS FOR DETAILS.

EROSION CONTROL NOTES

1. SITE ACCESS SHOWN ON THIS PLAN IS PROVIDED FOR INFORMATION PURPOSES ONLY. CONTRACTOR SHALL LOCATE CONSTRUCTION ACCESS DRIVEWAYS AS NECESSARY.
2. LOCATION OF CONSTRUCTION FENCING SHOWN ON THIS PLAN IS APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING THE SITE AND INSTALLING NEW CONSTRUCTION FENCING AS NECESSARY.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN EFFECT AND MAINTAINED BY THE CONTRACTOR ON A YEAR-ROUND BASIS UNTIL ALL DISTURBED AREAS ARE STABILIZED UNLESS OTHERWISE PERMITTED BY THE COUNTY INSPECTOR.
4. ALL INLETS RECEIVING STORM WATER RUNOFF FROM THE PROJECT AREA MUST BE EQUIPPED WITH REQUIRED INLET PROTECTION.
5. ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF ENTERING THE STORM DRAIN SYSTEM.
6. STOCKPILED EARTHEN MATERIAL SHALL BE EITHER COVERED WITH A TARP OR WATERED SUFFICIENTLY TO ELIMINATE DUST.
7. REFERENCE: "CALIFORNIA STORM WATER BEST MANAGEMENT PRACTICE (BMP)HANDBOOK", MARCH 2003.
8. CONSTRUCTION AREAS SHOWN ARE CONCEPTUAL. ACTUAL PLACEMENT TO BE DETERMINED BY CONTRACTOR BASED ON CURRENT BEST MANAGEMENT PRACTICES. CONTRACTOR SHALL SUBMIT A CONSTRUCTION STAGING PLAN.
9. THIS PROJECT WILL BE SUBJECT TO SWPPP PROVISIONS ADOPTED BY THE STATE OF CALIFORNIA IN SEPTEMBER 2009. SITE MONITORING OF STORM WATER DISCHARGE WILL BE REQUIRED THROUGHOUT CONSTRUCTION.

GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft.

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brick, llp
528 carlson street
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510.516.0167
www.brick-llp.com

CLIENT
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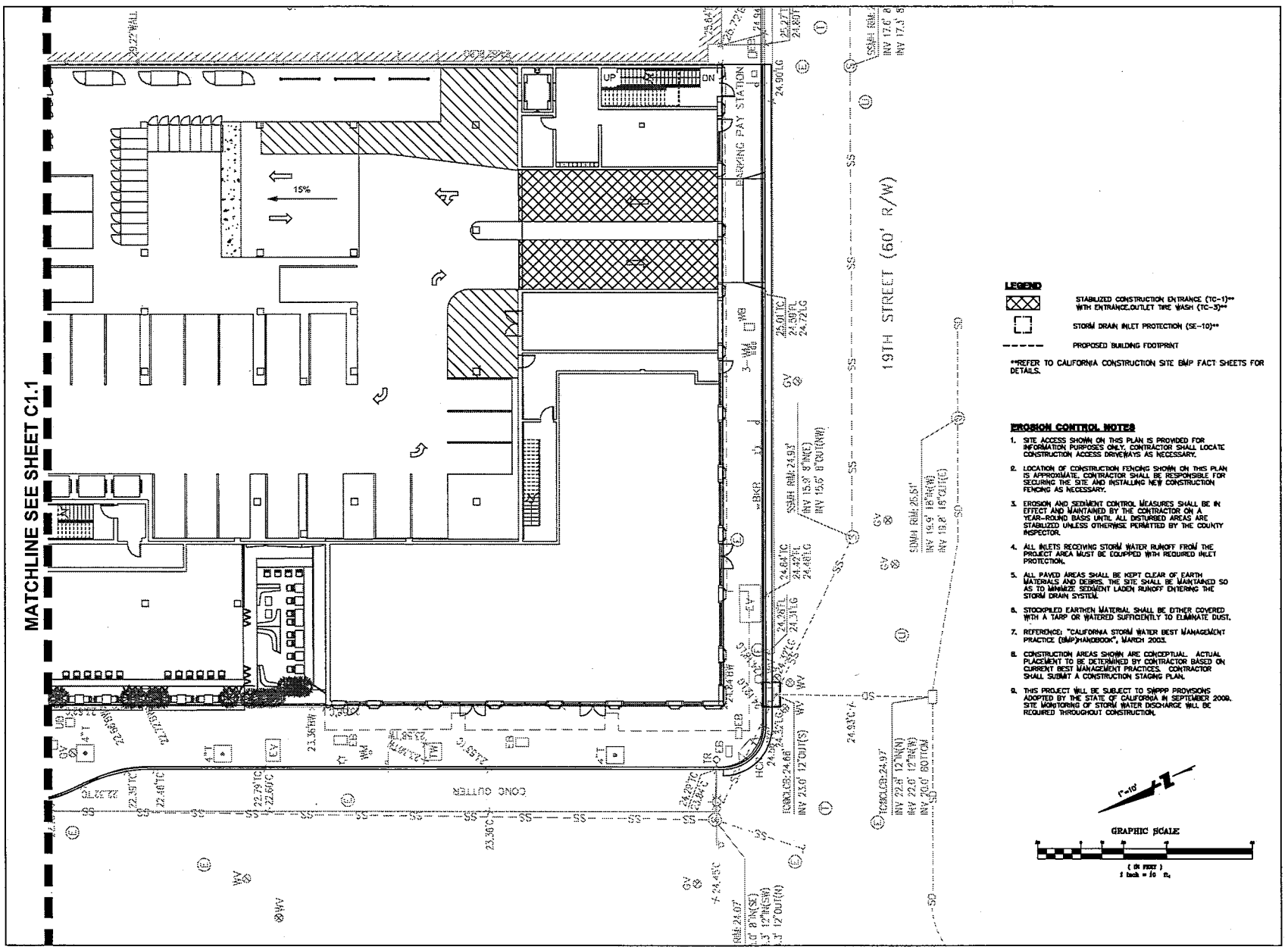
DESIGN DEVELOPMENT
EROSION CONTROL PLAN

C2.0



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928 carleton street
berkeley, ca 94710
510.516.0167
www.brick-llp.com

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19th and broadway associates, llc

BkF
1646 N. CALIFORNIA BLVD.
SUITE 400
WALNUT CREEK, CA 94596
925-940-2200
925-940-2201 (FAX)

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DANIEL G. SCHAEFER
No. 51158
CIVIL
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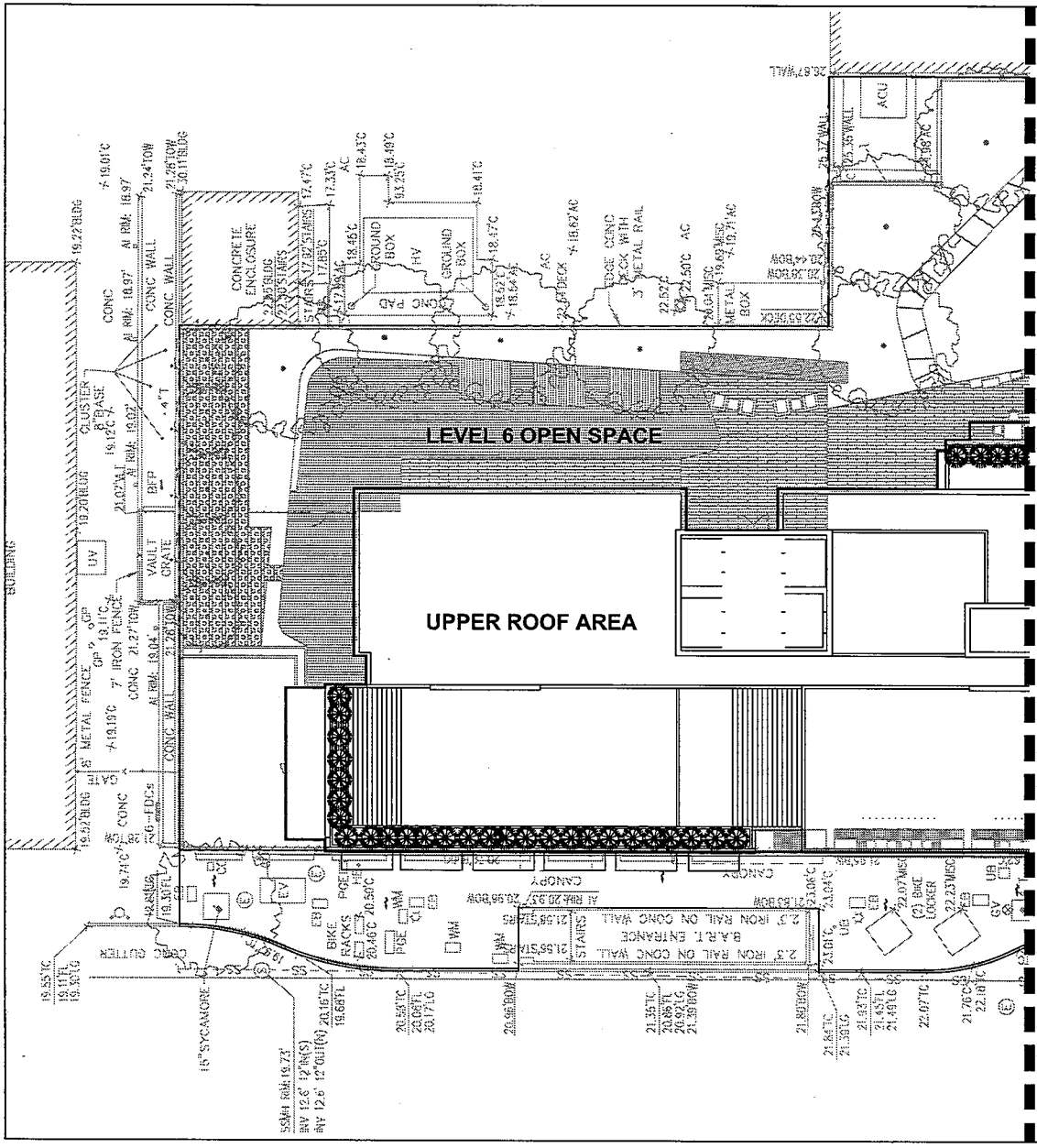
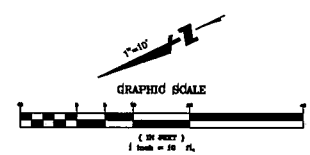
DESIGN
DEVELOPMENT
EROSION CONTROL
PLAN

C2.1



Total Site Area (SF)	Total Land Area Disturbed (SF)	Total Existing/Pre-Project Impervious Surface (SF)	Replaced Impervious Surface (SF)	New Impervious Surface (SF)	Total Post-Project Impervious Surface (SF)
40,683	47,496	40,200	24,577	824	25,401



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brick, llp
928 carleton street
berkeley, ca 94710
510.516.0167
www.brick-llp.com

CLIENT
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BKF
ENGINEERS / SURVEYORS / PLANNERS
1942 N. CALIFORNIA BLVD.
SUITE 400
WALNUT CREEK, CA 94596
[illegible]
[illegible] (FAX)

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DANIEL C. SCHAEFER
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STATE OF CALIFORNIA

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DESIGN
DEVELOPMENT
STORMWATER
MANAGEMENT PLAN

C3.0

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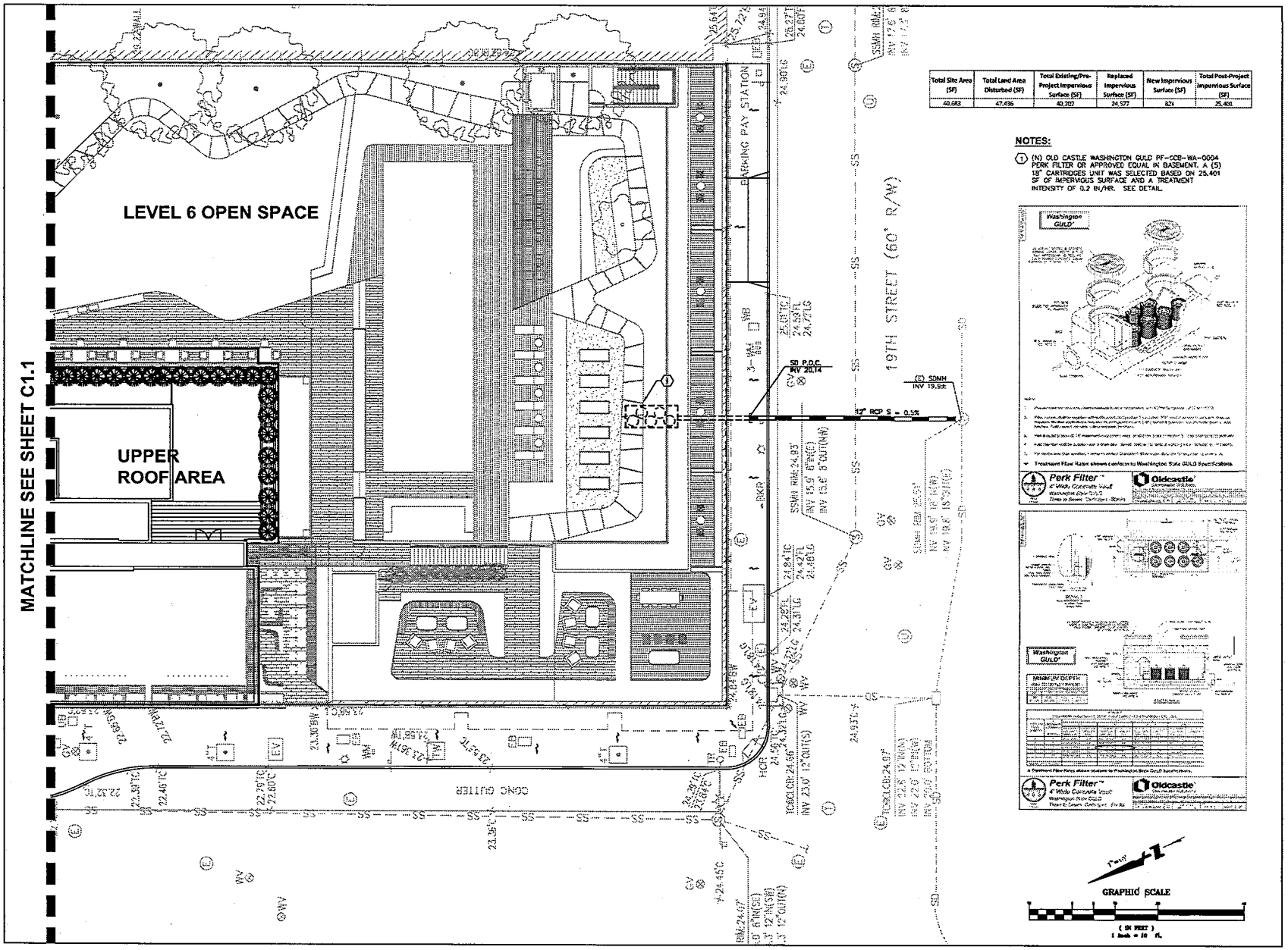

Total Site Area (SF)	Total Land Area Disturbed (SF)	Total Existing/Pre-Project Impervious Surface (SF)	Replaced Impervious Surface (SF)	New Impervious Surface (SF)	Total Post-Project Impervious Surface (SF)
48,083	47,496	40,207	24,577	824	25,401

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SUITE 400
WALNUT CREEK, CA 94596
925-940-2200 (PH)
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DANIEL G. SQUIRES
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CIVIL
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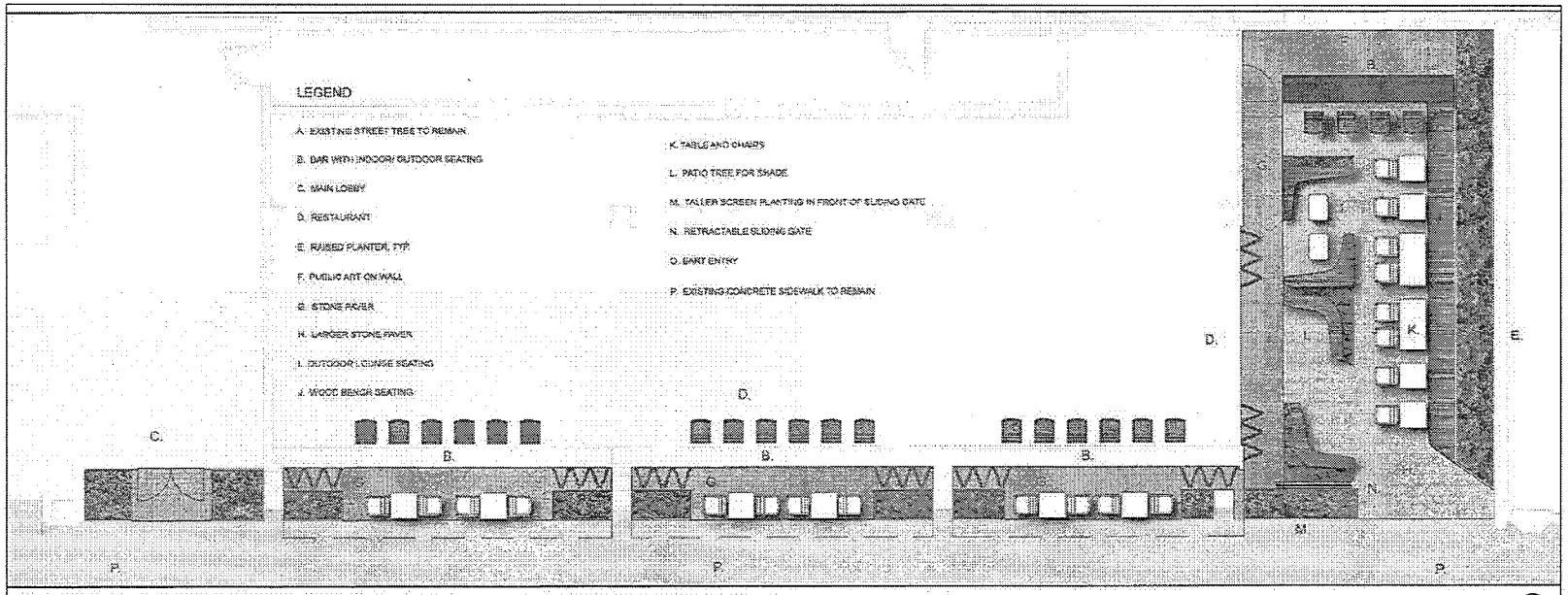
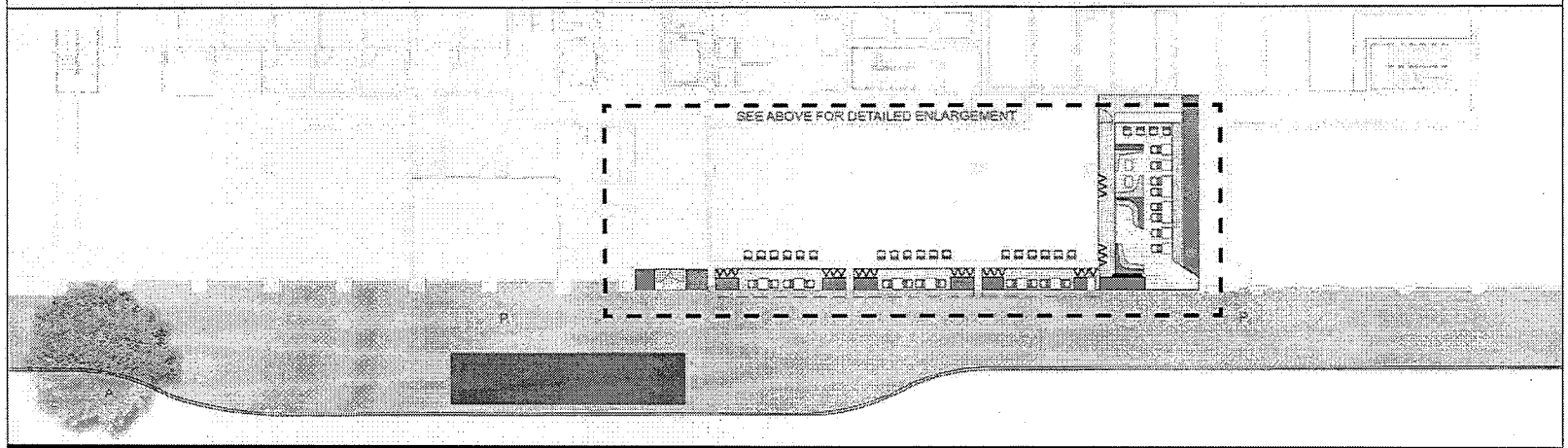
DESIGN DEVELOPMENT
STORMWATER MANAGEMENT PLAN

C3.1





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SCHEMATIC
DESIGN
ILLUSTRATIVE
LANDSCAPE
SITE PLAN

L0.1

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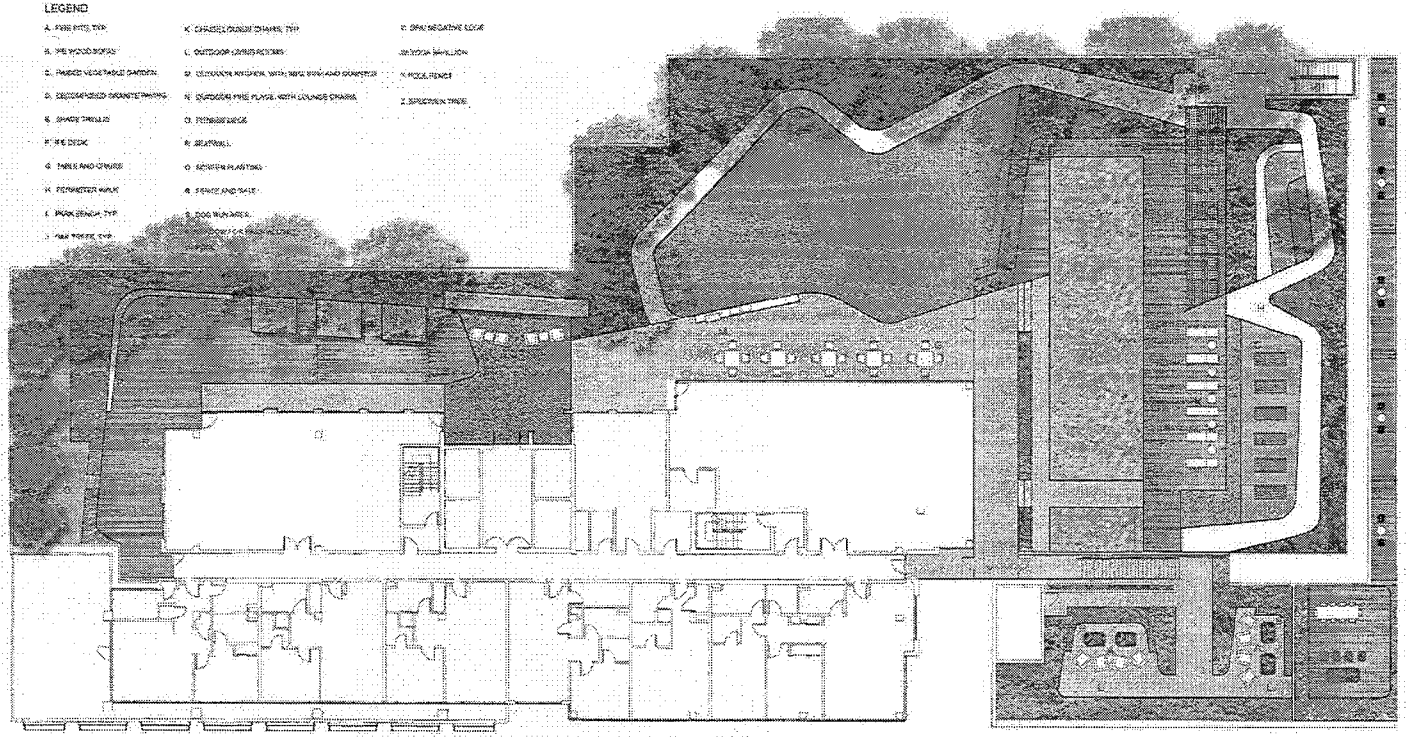

6TH FLOOR ROOF GARDEN

SCALE: 1"=12'-0"

0' 6' 12' 24'

NORTH

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[illegible]
berkeley, ca 94710
[illegible]
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[illegible]

rev date issue

REGISTERED LANDSCAPE ARCHITECT
C 5693
STATE OF CALIFORNIA

1900
broadway

1900 broadway oakland california
project number Project Number

scale: as noted
date: 08.02.2015

SCHEMATIC
DESIGN
ILLUSTRATIVE
LANDSCAPE
SITE PLAN

L0.2

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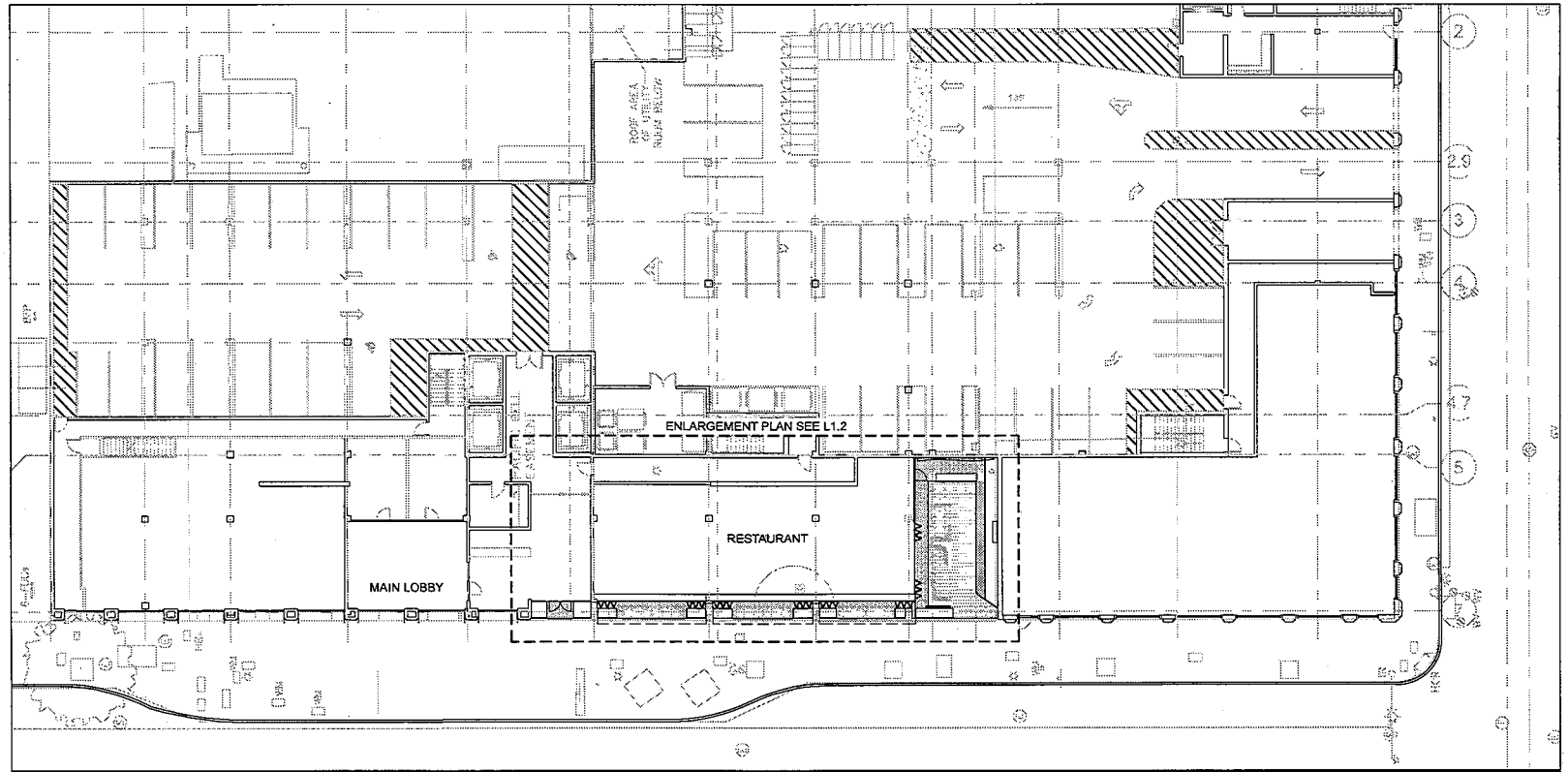

LANDSCAPE SITE PLAN

SCALE: 1/16" =1'-0"

0' 8' 16' 32'

NORTH

LAYOUT NOTES

1. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION INCLUDING LOCATIONS OF FIBER OPTIC LINES, PROPOSED UTILITIES, AREA DRAINS, MANHOLES, AND VAULTS AS INDICATED ON THE PROJECT SURVEY AND ANY CIVIL UTILITY PLANS. FOR MARKING UNDERGROUND FACILITIES, CALL UNDERGROUND SERVICE ALERT MINIMUM TWO DAYS PRIOR TO DIGGING: 1-800-227-2600, BETWEEN 6:00 AM- 7:00 PM, MONDAY- FRIDAY, EXCEPT HOLIDAYS.

2. CONTRACTOR SHALL POTHOLE EXISTING FIBER OPTIC LINE TO VERIFY DEPTH AND LOCATION PRIOR TO CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE OF ANY CONFLICT AND WAIT FOR WRITTEN AUTHORIZATION PRIOR TO PROCEEDING.

3. REFER TO CIVIL DRAWINGS FOR LOCATION OF ALL UNDERGROUND UTILITIES EXISTING AND PROPOSED, AND NOTIFY OWNERS REPRESENTATIVE OF ANY CONFLICT AND WAIT FOR WRITTEN AUTHORIZATION PRIOR TO PROCEEDING.

4. DIMENSIONS ARE MEASURED TO FACE OF BLDG., FACE OF CURB OR EDGE OF SIDEWALK UNLESS NOTED OTHERWISE.

5. STAKE LOCATION OF LANDSCAPE ELEMENTS INCLUDING PAVING, BENCHES, POTS, ETC. FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

6. SPACING OF SCORE MARKS EQUALS WIDTH OF WALK, EXCEPT WHERE DRAWN OTHERWISE. ALIGN WITH OBVIOUS PAVING EDGES, AND PERPENDICULAR TO EDGE OF CURVED WALKWAYS UNLESS SHOWN OTHERWISE.

7. PROVIDE EXPANSION JOINTS WHERE CONCRETE PAVING MEETS EXISTING PAVING WHETHER SHOWN ON PLAN OR NOT. AT NEW CONCRETE PAVING, SPACING OF EXPANSION JOINTS IS TYPICALLY 20' MIN. O.C., OR WHERE SHOWN. REFER TO SPECIFICATIONS. PROVIDE DOWELS INTO BACK OF CURB, FACE OF WALL, BOTTOM OF STAIRS, ETC. TO PREVENT DIFFERENTIAL SETTLEMENT AS SHOWN ON DETAILS.

8. ALL CURVES SHALL BE CONSTRUCTED SMOOTH AND TANGENT WITH OTHER CURVES OR STRAIGHT LINES WHEREVER POSSIBLE. TRANSITIONS BETWEEN CHANGES IN VERTICAL CURVATURE OF PAVING SHALL BE SMOOTH AND GRADUAL WITH NO ABRUPT CHANGES.

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brick, llp
928 carleton street
berkeley, ca 94710
510.516.0167
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REGISTERED LANDSCAPE ARCHITECT
TODD S. LANTING
C 5693
9/30/15
6/2/15
STATE OF CALIFORNIA

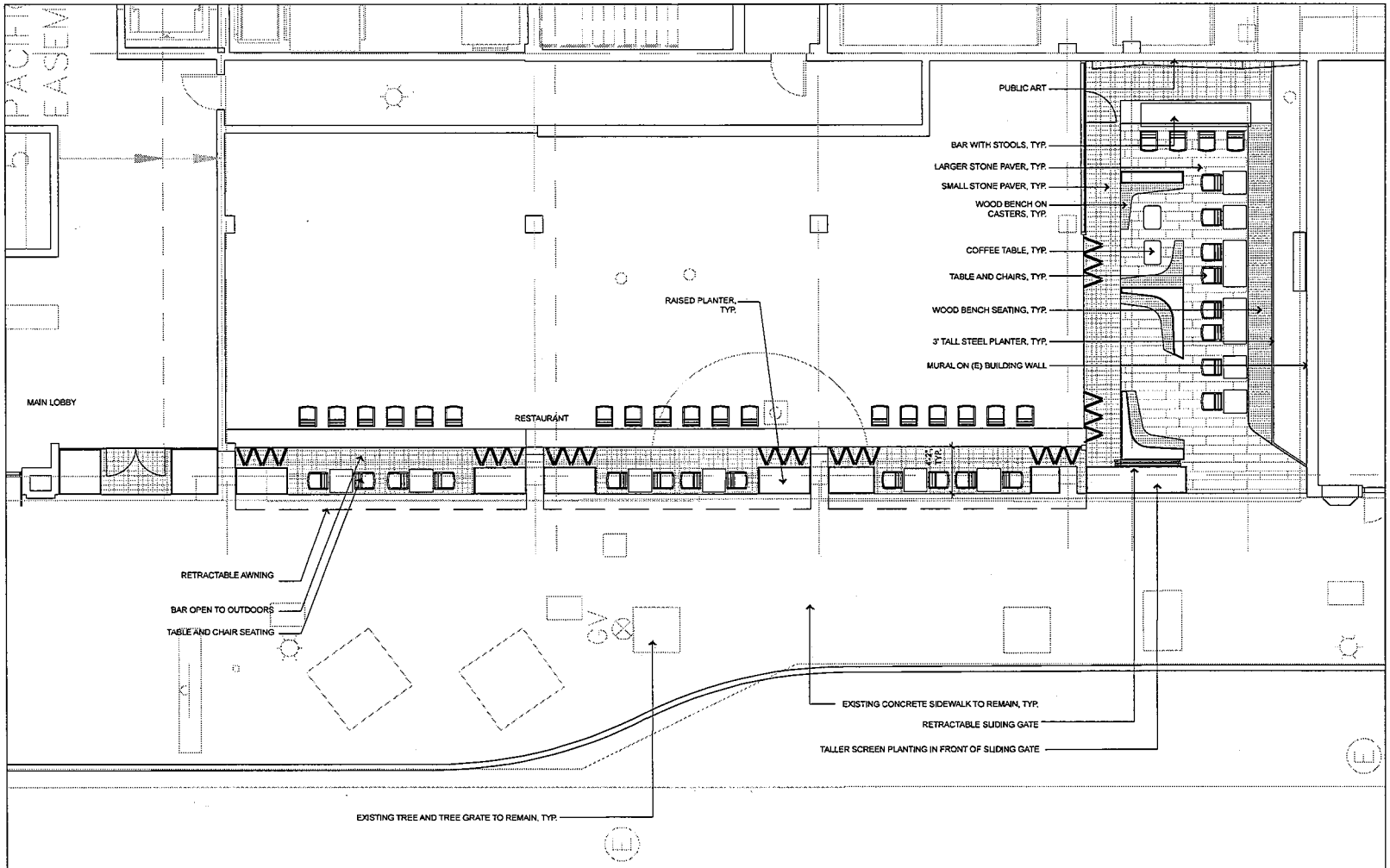
1900
broadway

1900 broadway oakland california
project number: Project Number

scale: as noted
date: 06.02.2015

SCHEMATIC DESIGN
LANDSCAPE SITE PLAN

L1.0



RESTAURANT DINING PATIO ENLARGEMENT

SCALE: 1/4" =1'-0"

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STATE OF CALIFORNIA

1900
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project number: Project Number

scale: as noted
date: 06.02.2015

SCHEMATIC DESIGN
OUTDOOR RESTAURANT LANDSCAPE PLAN

L1.1

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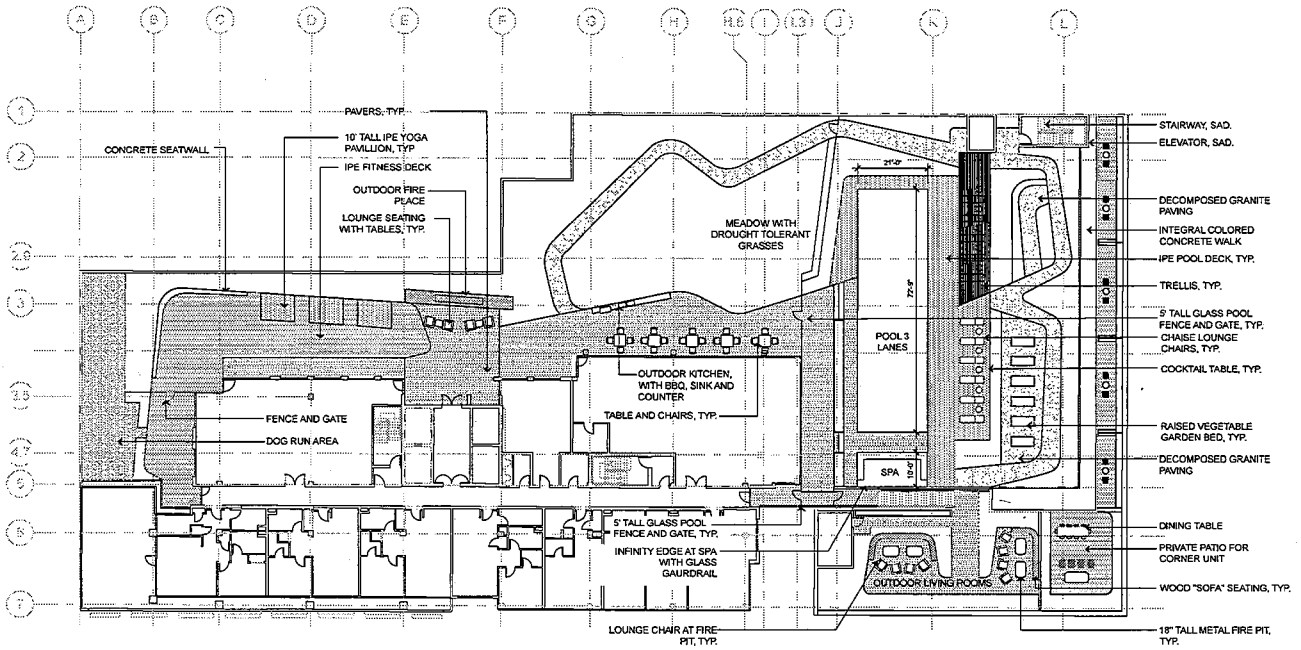

6TH FLOOR ROOF GARDEN

LEGEND

- CONCRETE PAVING WITH LIGHT SAND BLAST FINISH
- CRUSHED GRAVEL PAVING
- UNIT PAVERS
- IPE WOOD DECK
- WOOD BARK MULCH
- TWO PERSON TABLE AND CHAIRS
- 4 PERSON TABLE AND CHAIRS
- CHAISE LOUNGE CHAIRS AND SIDE TABLE
- DINING TABLE
- LOUNGE SEATING
- HDR — METAL HEADER

SCALE: 1/16" =1'-0"

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REGISTERED LANDSCAPE ARCHITECT — CHRISTOPHER C. LEHTER — C 5690 — Renewal 8/30/15 — 6/2/15 — STATE OF CALIFORNIA

1900 broadway

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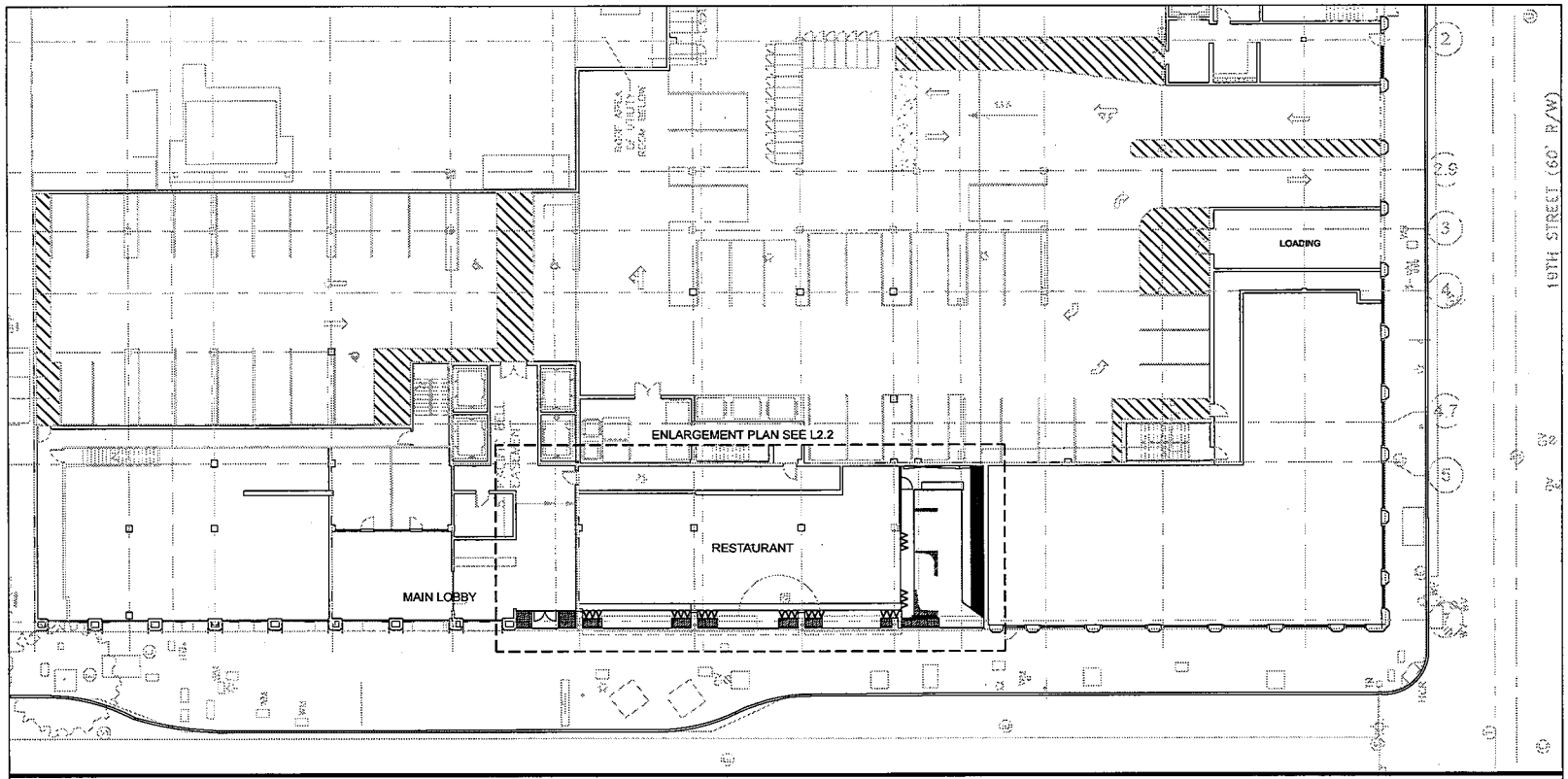
date: 06.02.2015

SCHEMATIC DESIGN
6TH FLOOR ROOF GARDEN LANDSCAPE PLAN

L1.2



PLANTING PLAN

LANDSCAPE DESIGN CRITERIA

1. PLANTING TO BE DESIGNED TO PROVIDE MAXIMUM SAFETY FOR STUDENTS. PLANTING WILL BE PROVIDED ALONG WALLS, FENCES, AND AT BUILDING FOUNDATIONS AND WILL BE MAINTAINED AT AN APPROPRIATE HEIGHT FOR CLEAR VISIBILITY.
2. FINISH GRADING, SHALL BE POSITIVE SURFACE DRAINAGE ACROSS PLANTED AREAS AND AWAY FROM BUILDING FOUNDATIONS. REFER TO LANDSCAPE GRADING PLAN FOR ALL EXISTING AND PROPOSED GRADE INFORMATION.
3. ALL AREAS ON GRADE SHALL RECEIVE 6" OF TOP SOIL AND 3" OF BARK MULCH. SOIL AMENDMENTS WILL BE ADDED BASED ON SOIL LAB RECOMMENDATIONS.
4. STORMWATER MANAGEMENT TO COMPLY WITH SPECIAL PROJECT CATEGORY 'B' C3 REQUIREMENTS AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP). BIOSWALES AND/OR INFILTRATION PLANTERS WILL BE USED TO TREAT STORM WATER. REFER TO CIVIL DOCUMENTS.
5. LANDSCAPE FEATURES EMPLOYED TO MINIMIZE RUNOFF AND PROMOTE SURFACE FILTRATION INCLUDE:
   A) PROVIDING GENTLE SLOPES NOT TO EXCEED 10 PERCENT IN LANDSCAPE AREAS.
   B) INSTALLING PLANTS WITH LOW WATER REQUIREMENTS.
   C) INSTALLING PLANTS APPROPRIATE FOR THE LOCATION AND MICRO-CLIMATE.
   D) UTILIZING BIOSWALES AND/OR INFILTRATION PLANTERS TO CAPTURE RUNOFF BEFORE IT EXITS THE SITE.
   E) INSTALLING COBBLE SPLASH PADS WHERE RUNOFF IS DISCHARGED INTO BIOSWALES OR INFILTRATION PLANTERS TO AVOID EROSION.
6. ON SITE LANDSCAPE LIGHTING TO BE PROVIDED BY POLES AND BOLLARDS.
7. ALL PLANTING GROUPS ARE DESIGNED FOR WATER USE AND ARRANGED BY WATER HYDROZONES BASED ON WATER NEEDS.
8. "WATER USE RATING IS BASED ON WATER USE CLASSIFICATION OF LANDSCAPE SPECIES (WUCOLS), UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION. VL=VERY LOW, L=LOW, M=MEDIUM, H=HIGH

IRRIGATION DESIGN CRITERIA

1. IRRIGATION DESITN TO COMPLY WITH ABA 1881 REQUIREMENTS. FOLLOW THE STATEWIDE MODEL ORDINANCE DESIGN GUIDELINES AND CITY REQUIREMENTS WITH USE OF WATER EFFICIENT LANDSCAPING AND LOW WATER-WISE PLANTS. ALL PLANTED AREAS SHOWN WILL BE IRRIGATED BY AN AUTOMATIC IRRIGATION SYSTEM.
2. THE IRRIGATED SYSTEMS WILL BE A PERMANENT BELOW GROUND AUTOMATED SYSTEMS ADEQUATE FOR THE ESTABLISHMENT AND MAINTENANCE OF ALL PLANT MATERIAL.
3. ALL TREE, SHRUB AND GROUNDCOVER AREAS WILL BE IRRIGATED BY A PERMANENT, AUTOMATIC, UNDERGROUND DRIP OR LOW FLOW IRRIGATION SYSTEM. TREE, SHRUB, AND GROUND COVER AREAS SHALL BE ON SEPARATE VALVES.
4. ALL IRRIGATION SYSTEMS SHALL BE DESIGNED, MAINTAINED AND MANAGED TO MEET OR EXCEED MINIMUM EFFICIENCY.
5. ALL IRRIGATION EQUIPMENT SHALL BE SCREENED APPROPRIATELY FROM VIEW IN PUBLIC AREAS.
6. THE FINAL IRRIGATION PLAN SHALL ACCURATELY AND CLEARLY IDENTIFY:
   A) LOCATION AND SIZE OF WATER METERS FOR THE LANDSCAPE.
   B) LOCATION, TYPE AND SIZE OF ALL COMPONENTS OF THE IRRIGATION SYSTEM, INCLUDING AUTOMATIC CONTROLLERS, MAIN AND LATERAL LINES, VALVES, SPRINKLER HEADS, RAIN SWITCHES, QUICK COUPLERS, AND BACKFLOW PREVENTION DEVICES.
   C) STATIC WATER PRESSURE AT THE POINT OF CONNECTION TO THE PUBLIC WATER SUPPLY.
   D) FLOW RATE (GALLONS PER MINUTE), AND REMOTE CONTROL VALVE SIZE.
7. QUICK COUPLERS WILL BE LOCATED AT EVERY 80 TO 100 FEET ALONG THE IRRIGATION MAIN LINE.
8. IRRIGATION SYSTEM AND FINAL DESIGN SHALL BE PROVIDED AT A LATER DATE.
9. IRRIGATION SYSTEM FEATURES EMPLOYED TO ACHIEVE WATER CONSERVATION GOALS INCLUDE:
   A) SMART IRRIGATION CONTROLLERS CAPABLE OF RESPONDING TO ON-SITE WEATHER CONDITIONS.
   B) CONTROLLERS WITH MULTIPLE PROGRAMS.
   C) WATERING SCHEDULES EMPLOYING SHORT CYCLES.
   D) RAIN SHUT-OFF DEVICES TO PREVENT IRRIGATION AFTER SIGNIFICANT PRECIPITATION.
   E) DRIP AND/OR BUBBLER IRRIGATION FOR SHRUBS AND TREES IN PLANTER AREAS WHICH HAVE A SHRUB DENSITY THAT WILL CAUSE EXCESSIVE SPRAY INTERFERENCE OF AN OVERHEAD SYSTEM.
   F) USE OF FLOW REDUCERS TO MITIGATE SPRAY OF BROKEN HEADS NEXT TO SIDEWALK, STREETS, AND DRIVEWAYS.

SCALE: 1/16" =1'-0"

0' 8' 16' 32' NORTH

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berkeley, ca 94703
510.916.0167
www.brick-llp.com

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REGISTERED LANDSCAPE ARCHITECT
TOM L. CARTER
C 5693
9/30/15
6/2/15
STATE OF CALIFORNIA

1900 broadway

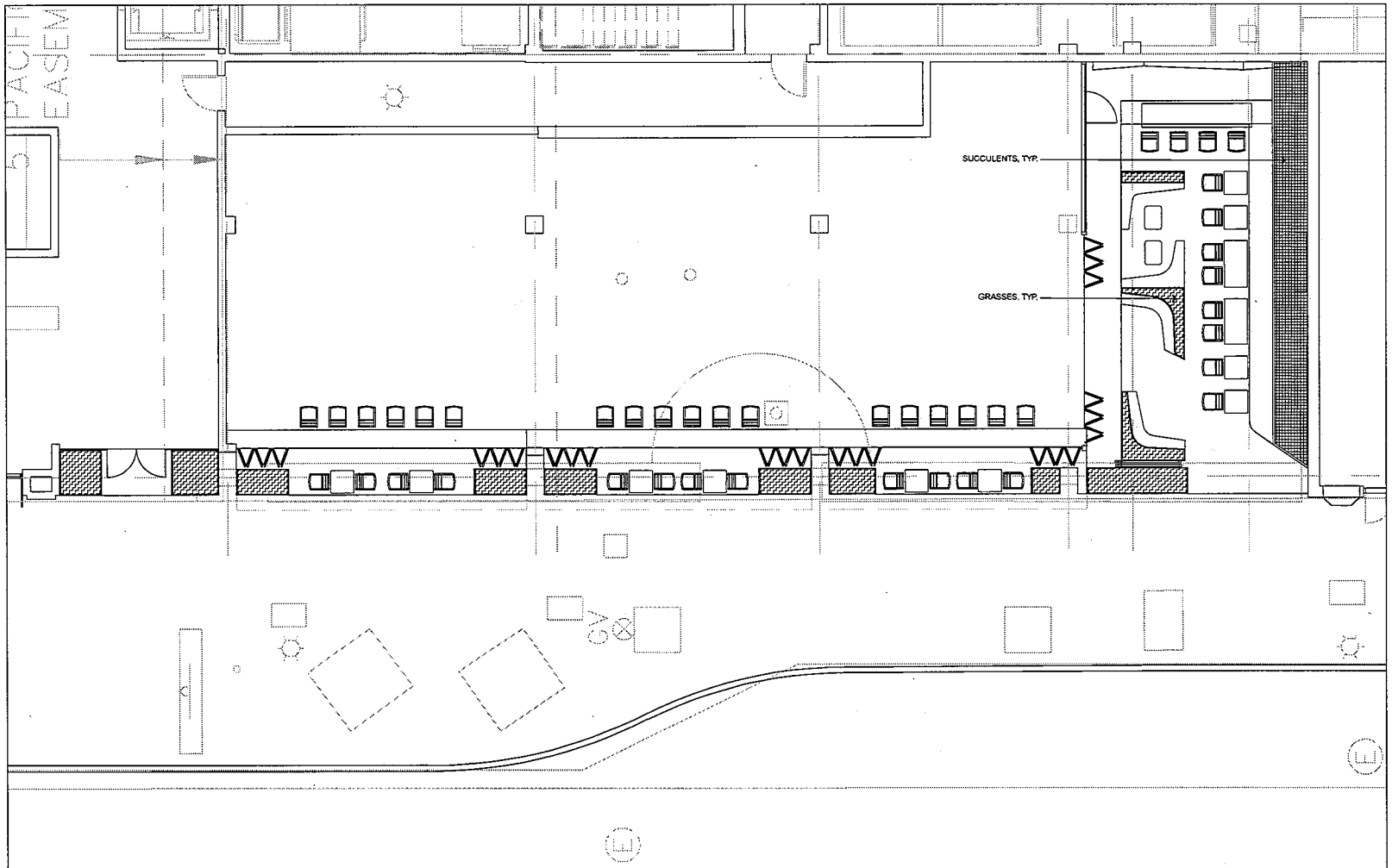
1900 broadway oakland california

project number: Project Number

scale: as noted
date: 06.02.2015

SCHEMATIC DESIGN
OVERALL PLANTING

L2.0



RESTAURANT DINING PATIO ENLARGEMENT

SCALE: 1/4" =1'-0"

0' 2' 4' 8'

NORTH

NOTE: SEE L2.1 FOR LANDSCAPE PLANTING LEGEND

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ARCHITECT
brick, llp
928 cadelon street
berkeley, ca 94710
510.518.0167
www.brick-llp.com

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REGISTERED LANDSCAPE ARCHITECT
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9/30/15
6/2/15
STATE OF CALIFORNIA

1900
broadway

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project number: Project Number

scale: as noted

date: 06.02.2015

SCHEMATIC DESIGN

OUTDOOR RESTAURANT PLANTING PLAN

L2.1

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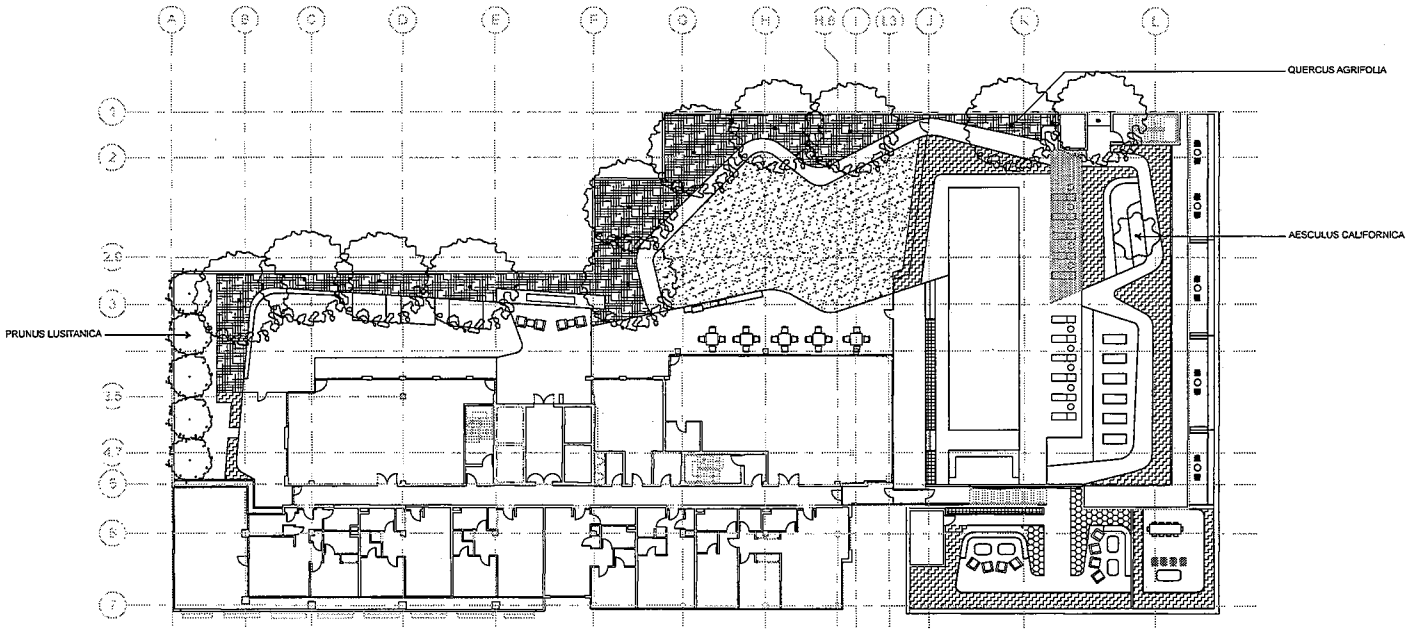

6TH FLOOR ROOF GARDEN

SCALE: 1/16" = 1'-0"

NORTH

PROPOSED PLANT LIST

SYMBOL	BOTANICAL NAME (COMMON NAME)	SIZE	*WATER USE
TREES			
	QUERCUS AGRIFOLIA (COAST LIVE OAK)	36" BOX	VL
	PRUNUS LUSITANICA (PORTUGUESE LAUREL)	24" BOX	L
	AESCULUS CALIFORNICA (CALIFORNIA BUCKEYE)	24" BOX	VL
OAK WOODLAND			
	BACCHARIS PILULARIS 'PIGEON POINT' (PROSTRATE COYOTE BRUSH)	5 GAL	L
	BERBERIS REPENS (CREEPING BARBERRY)	5 GAL	L
	RIBES VIBURNIFOLIUM (EVERGREEN CURRANT)	5 GAL	L

SYMBOL	BOTANICAL NAME (COMMON NAME)	SIZE	*WATER USE
SHRUBS			
	ARCTOSTAPHYLOS CULTIVARS (MANZANITA)	5 GAL	L
	CEANOTHUS SPP. (CALIFORNIA LILAC)	5 GAL	VL
	RHAMNUS CALIFORNICUS (COFFEE BERRY)	5 GAL	L
	WESTRINGIA FRUTICOSA 'MORNING LIGHT' (COAST ROSEMARY)	5 GAL	L
SUCCULENTS			
	AGAVE ATTENUATA (FOXTAIL AGAVE)	5 GAL	L
	SENECIO MANDRALISCAE (BLUE CHALK STICK)	1 GAL	L
GRASSES			
	CALAMAGROSTIS 'KARL FORESTER' (FEATHER REED GRASS)	5 GAL	L
	DESCHAMPSIA CESPITOSA (TUFTED HAIR GRASS)	5 GAL	L

SYMBOL	BOTANICAL NAME (COMMON NAME)	SIZE	*WATER USE
GRASSES CONTINUED			
	CAREX DIVULSA (BERKELEY SEDGE)	1 GAL	L
	HELICTOTRICHON SEMPERVIRENS (BLUE OAT GRASS)	5 GAL	L
	NASSELLA TENUISSIMA (MEXICAN FEATHER GRASS)	5 GAL	L
GROUND COVER			
	'NATIVE PRESERVATION MIX' BY DELTA BLUEGRASS CO. (NO MOW GRASS MEADOW)	SOD	L

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brick, llp
928 carleton street
berkeley, ca 94710
510.516.0167
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REGISTERED LANDSCAPE ARCHITECT C 5693 9/30/15 6/2/15 STATE OF CALIFORNIA

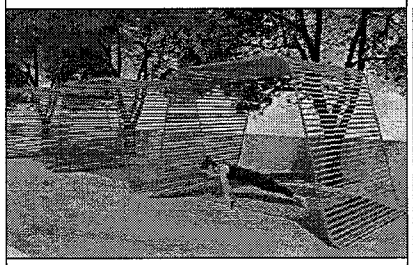
1900 broadway

1900 broadway oakland california
project number: Project Number

scale: as noted
date: 06.02.2015

SCHEMATIC DESIGN
6TH FLOOR ROOF GARDEN PLANTING PLAN

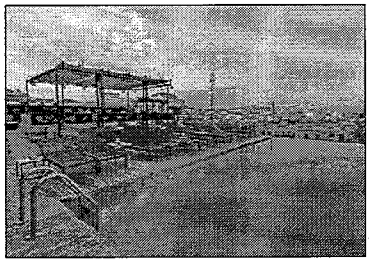
L2.2



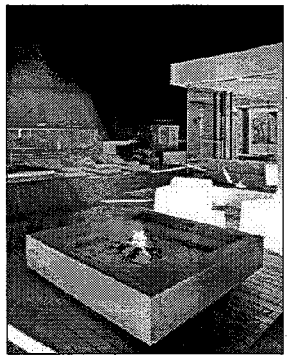
10 YOGA PAVILION AT EXERCISE DECK



7 INFORMAL OUTDOOR RESTAURANT SEATING AT STREET LEVEL



4 INFINITY EDGE SPA AND WOOD POOL DECK



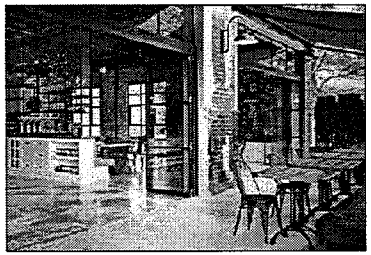
1 FIRE PIT



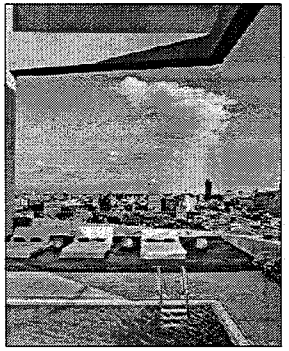
11 OUTDOOR FIRE PLACE WITH LOUNGE SEATING



8 OUTDOOR COUCH SEATING AT ROOF DECK



5 OUTDOOR RESTAURANT DINING SEATING AT STREET LEVEL



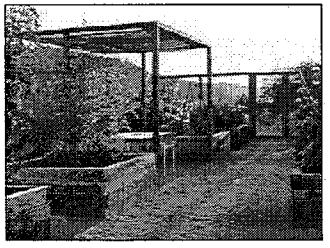
2 POOL AT ROOF DECK



12 SHADE TRELLIS AT POOL DECK



9 CAFE SEATING AND PLANTERS



6 RAISED VEGETABLE GARDEN



3 GLASS GUARDRAIL AT ROOF DECK

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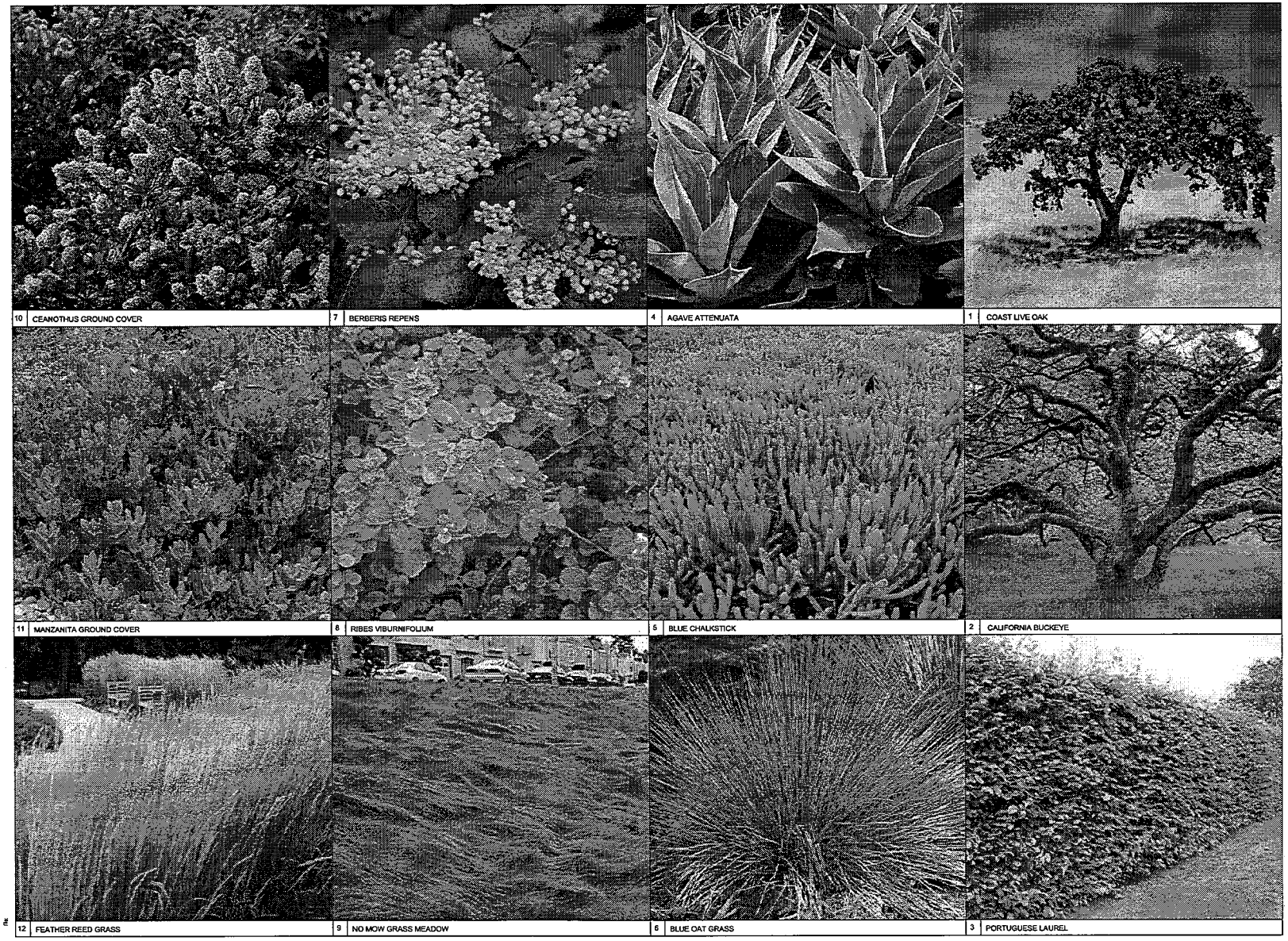
SCHEMATIC DESIGN
HARDSCAPE MATERIALS IMAGES

L3.0



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6/2/15
STATE OF CALIFORNIA

1900
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SCHEMATIC
DESIGN
PLANT MATERIAL

L4.0

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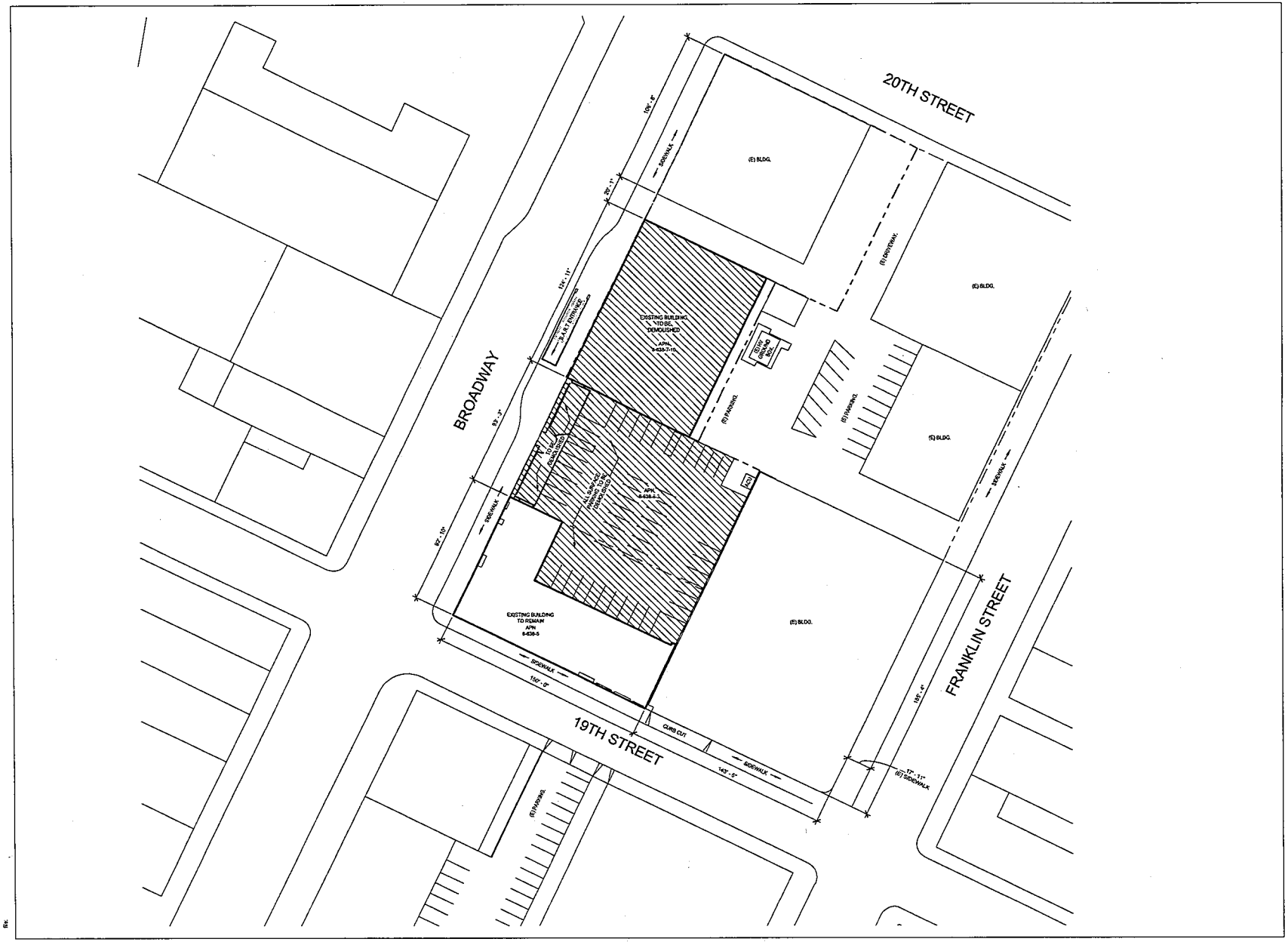

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berkeley, ca 94710
510.516.5167
www.brick-llp.com

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C-31419
11-30-15
RENEWAL DATE

1900 broadway

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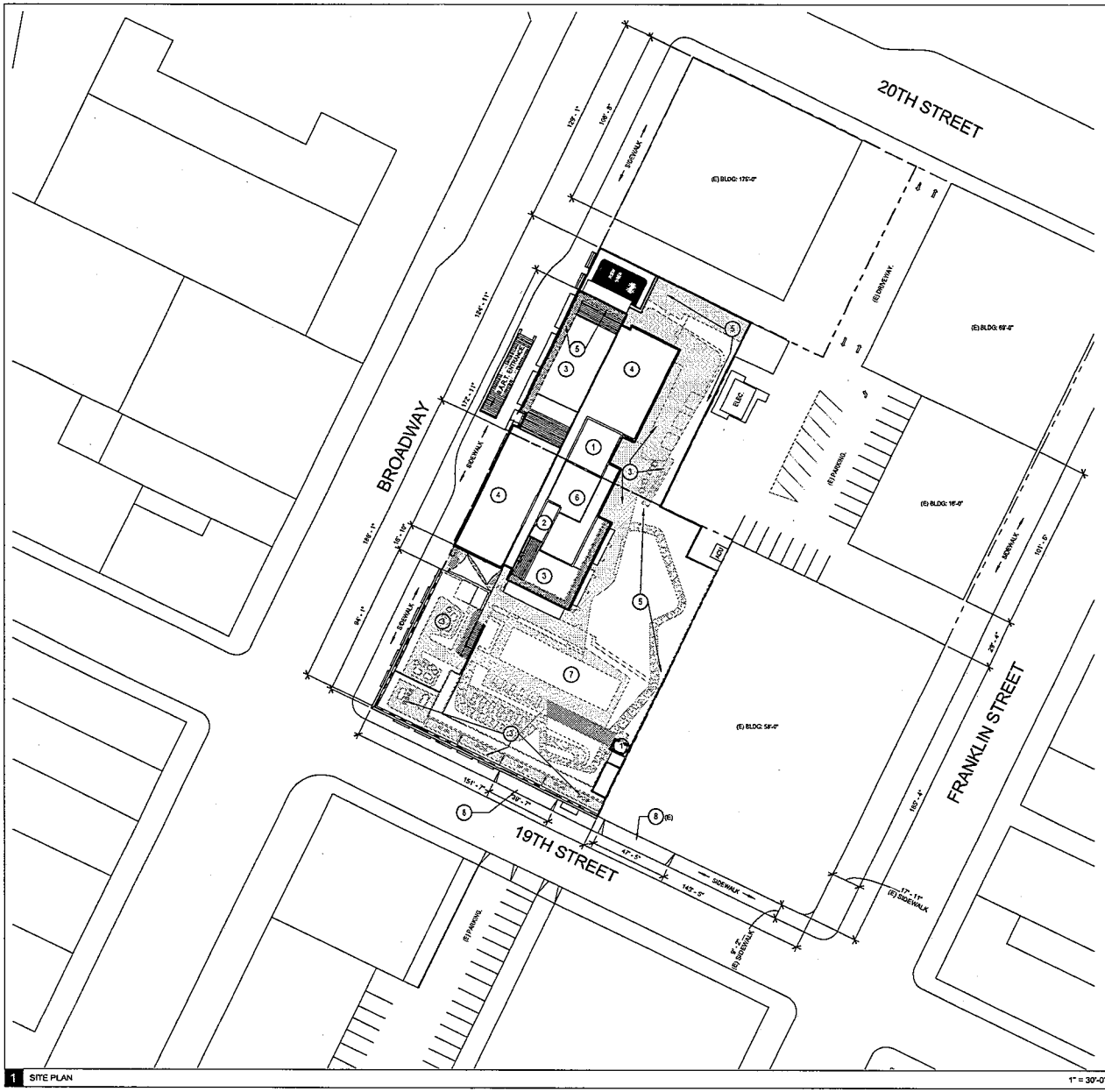
project number: Project Number

scale: as noted
date: 06.02.16

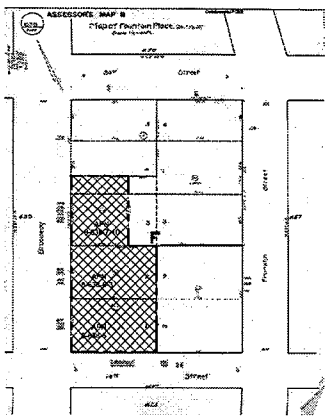
DESIGN DEVELOPMENT

EXISTING / DEMO SITE PLAN

A1.1



1 SITE PLAN 1" = 30'-0"



ZONING INFORMATION:

BLOCK F - LOT #: 1,2,3
ZONE: CBD-P CENTRAL BUSINESS DISTRICT PEDESTRIAN RETAIL (O.M.C. 17.58)

CBD-P: ZONE IS TO CREATE, MAINTAIN, AND ENHANCE AREAS OF THE CENTRAL BUSINESS DISTRICT FOR GROUND-LEVEL, PEDESTRIAN-ORIENTED, ACTIVE STOREFRONT USES. UPPER STORY SPACES ARE INTENDED TO BE AVAILABLE FOR A WIDE RANGE OF OFFICE AND RESIDENTIAL ACTIVITIES.

CBD-P SETBACKS:

MIN. FRONT:	0 FT
MAX. FRONT AND SIDE FOR 1ST STORY:	5 FT
MAX. FRONT AND SIDE FOR 2ND,3RD STORY 5FT	
MIN. INTERIOR SIDE:	0 FT
MINIMUM CORNER SIDE:	0 FT
REAR	0 FT

CBD-P DESIGN REGULATIONS:

GROUND FLOOR COMMERCIAL TRANSPARENCY:	65%
MIN. HEIGHT OF GROUND FLOOR:	15 FT
MAX HEIGHT - BUILDING BASE:	120 FT
MAX HEIGHT - TOTAL:	NO LIMIT
MAX FAR:	20
MAX RESIDENTIAL DENSITY:	300 UNITS/GROSS ACRE
	GEN. PLAN CBD

OPEN SPACE CALCULATIONS

LOT #: 1,2,3 (ZONE CBD-P)

LEVEL	GROUP (SF)	PRIVATE (SF)
1	711	0
2	0	0
3	0	0
4	3,100	1,247
5	0	1,240
6	20,986	0
7	0	102
8	0	102
9	0	102
10	0	102
11	0	102
12	0	102
13	0	102
14	0	102
15	0	102
16	0	102
17	0	102
18	0	102
19	0	102
20	0	102
21	0	102
22	0	102
23	0	102
24	0	102
25	0	102
26	0	102
27	0	102
28	0	102
29	0	102
30	0	102
31	0	102
32	0	157
33	1,750	2,244
TOTAL	26,547 (SF)	7,438 (SF)
TOTAL OPEN SPACE:		33,985 SF

REQUIRED OPEN SPACE: 755F X 345 UNITS =25,875 SF

6	MECHANICAL		
5	PLANTER		
4	FLAT ROOF		
3	LANDSCAPE PODIUM / ROOF DECK		
2	STAIR CORE	8	CURB CUT
1	ELEVATOR CORE	7	SWIMMING POOL
	PROPERTY LINE		

NORTH

SITE PLAN LEGEND NTS

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C-31415
19.30.15
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1900
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scale: as noted
date: 06.02.15

DESIGN
DEVELOPMENT
SITE PLAN

A1.2

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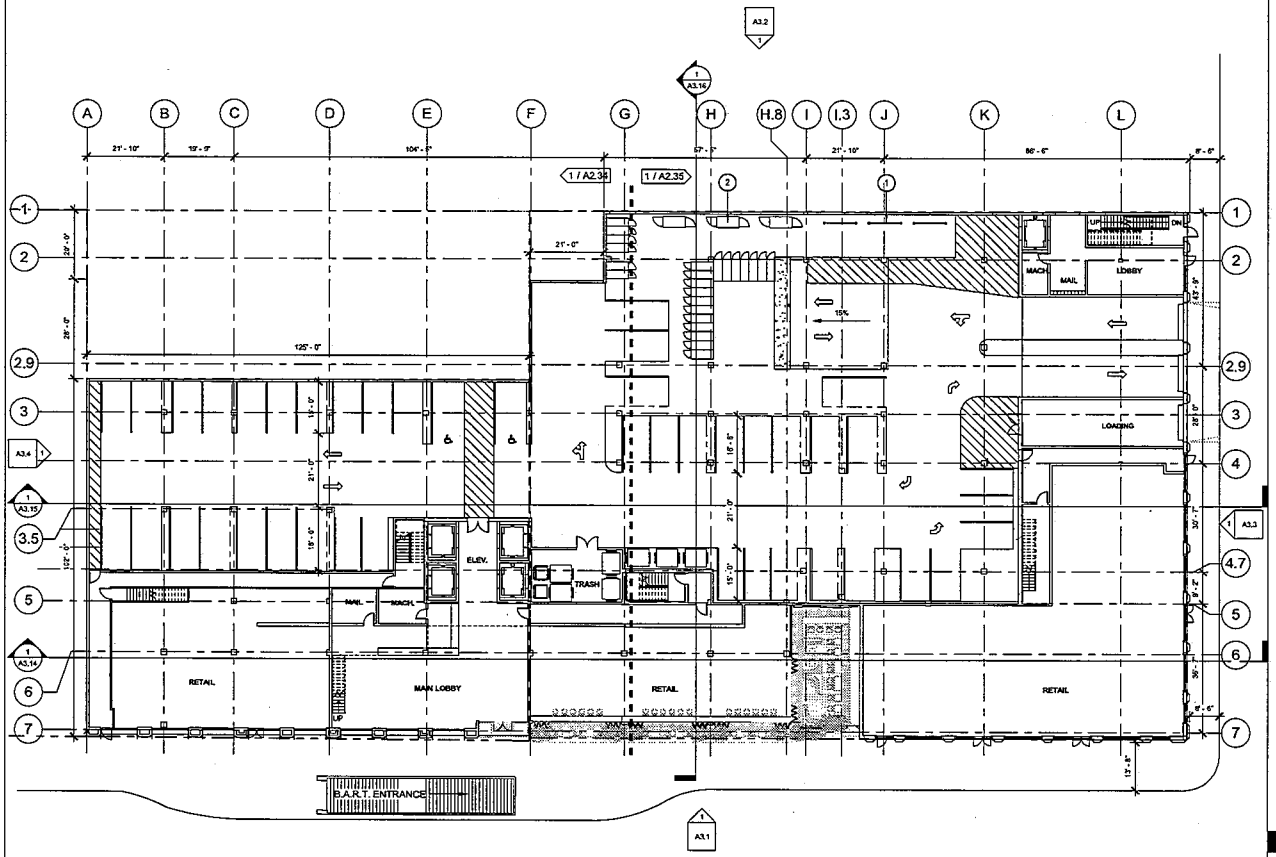

1 LEVEL 1 OVERALL 1/16" = 1'-0"

CAR PARKING		BICYCLE PARKING	
REGULAR SPACES:	119	PUBLIC SHORT TERM:	44
INTERMEDIATE SPACES:	49	PUBLIC LONG TERM:	54
COMPACT:	165		
TOTAL:	333	TOTAL:	98

PARKING TABULATION NTS

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.06
2. SEE SHEETS A2.34 - A2.49 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.60 - A2.63
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5	BALCONY	10	
4	MACHINE ROOMLESS GEARLESS TRACTION ELEVATOR	9	
3	RECESSED ENTRANCE GRILL, 6'-0" DEEP	8	DECOMMISSIONED STAIR PENTHOUSE
2	PUBLIC BIKE LOCKER (LONG TERM)	7	COMMON ROOF DECK
1	PUBLIC BIKE RACK (SHORT TERM)	6	PRIVATE ROOF DECK

FLOOR PLAN KEYNOTES NTS

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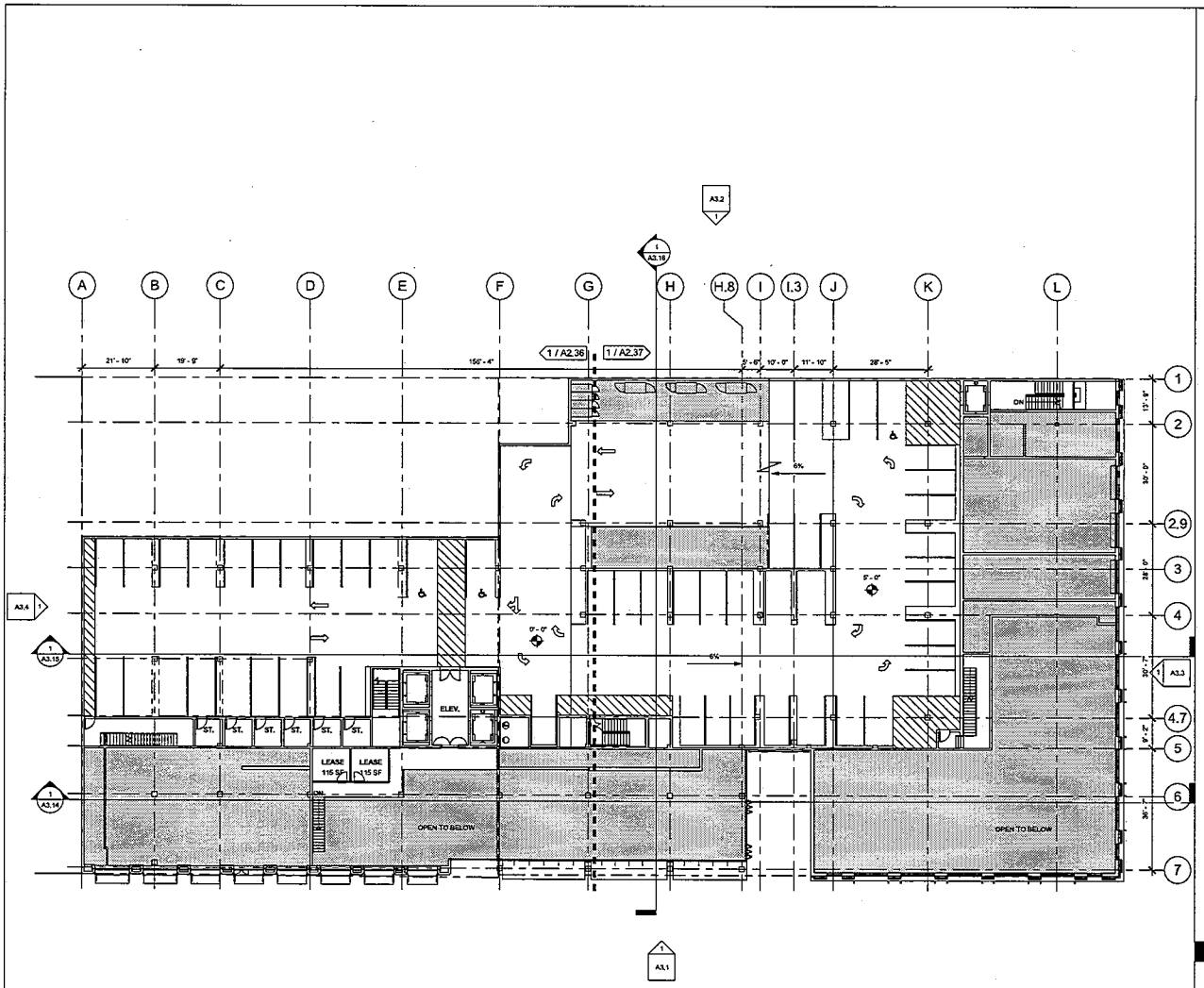
DESIGN DEVELOPMENT

OVERALL LEVEL 1 FLOOR PLAN

A2.1



1 LEVEL 1 MEZZANINE 1/16" = 1'-0"

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.06
2. SEE SHEETS A2.34 - A2.39 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.60 - A2.63
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5	BALCONY	10	
4	MACHINE ROOM-LESS GEARLESS TRACTION ELEVATOR	9	
3	RECESSED ENTRANCE GRILL, 6'-0" DEEP	8	DECOMMISSIONED STAIR PENTHOUSE
2	PUBLIC BIKE LOCKER (LONG TERM)	7	COMMON ROOF DECK
1	PUBLIC BIKE RACK (SHORT TERM)	6	PRIVATE ROOF DECK

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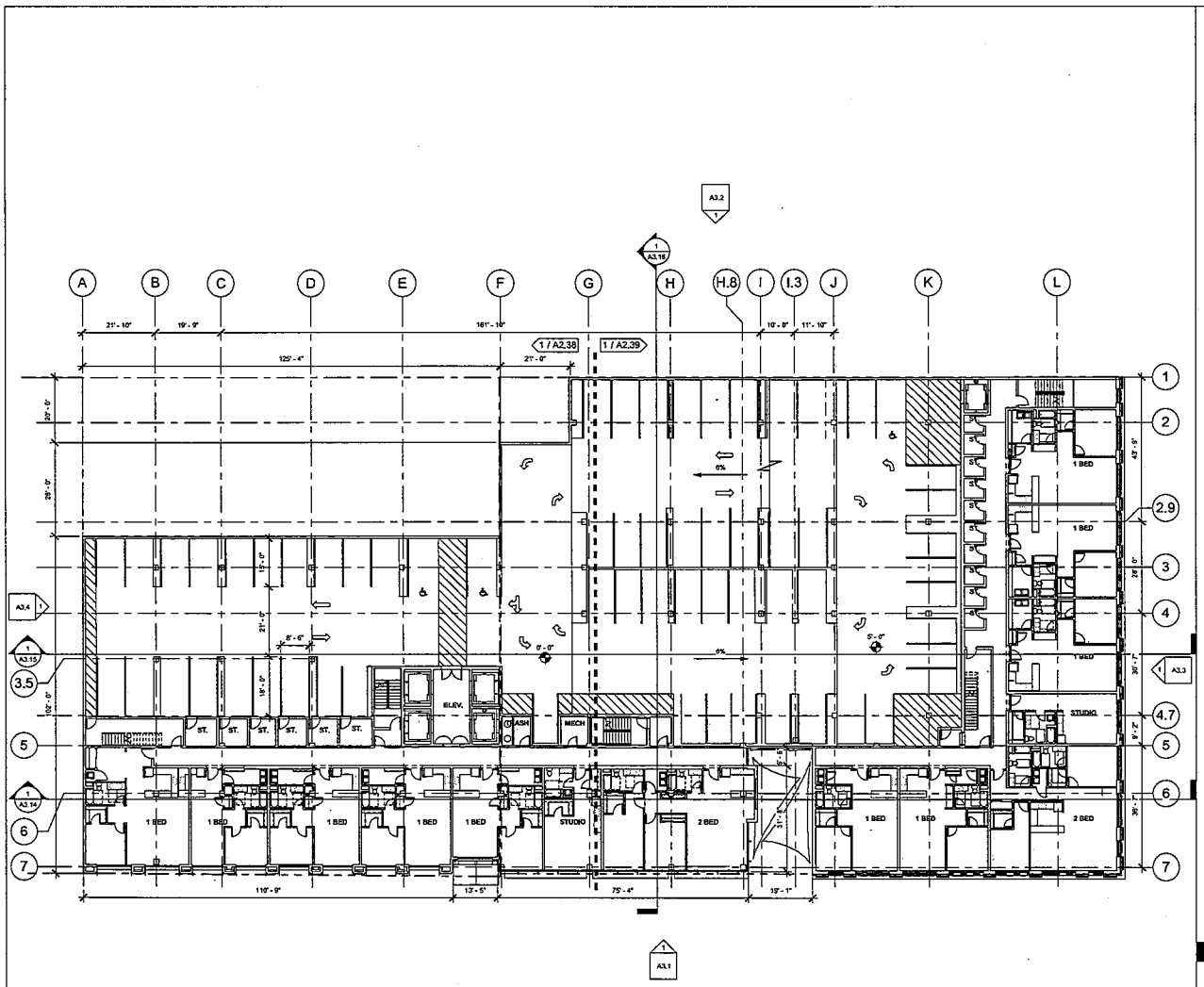
DESIGN DEVELOPMENT

OVERALL LEVEL 1 MEZZANINE

A2.2



1 LEVEL 2 OVERALL 1/16" = 1'-0"

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.06
2. SEE SHEETS A2.34 - A2.49 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.50 - A2.63
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5	BALCONY	10	
4	MACHINE ROOM-LESS GEARLESS TRACTION ELEVATOR	9	
3	RECESSED ENTRANCE GRILL, 6'-0" DEEP	8	DECOMMISSIONED STAIR PENTHOUSE
2	PUBLIC BIKE LOCKER (LONG TERM)	7	COMMON ROOF DECK
1	PUBLIC BIKE RACK (SHORT TERM)	6	PRIVATE ROOF DECK

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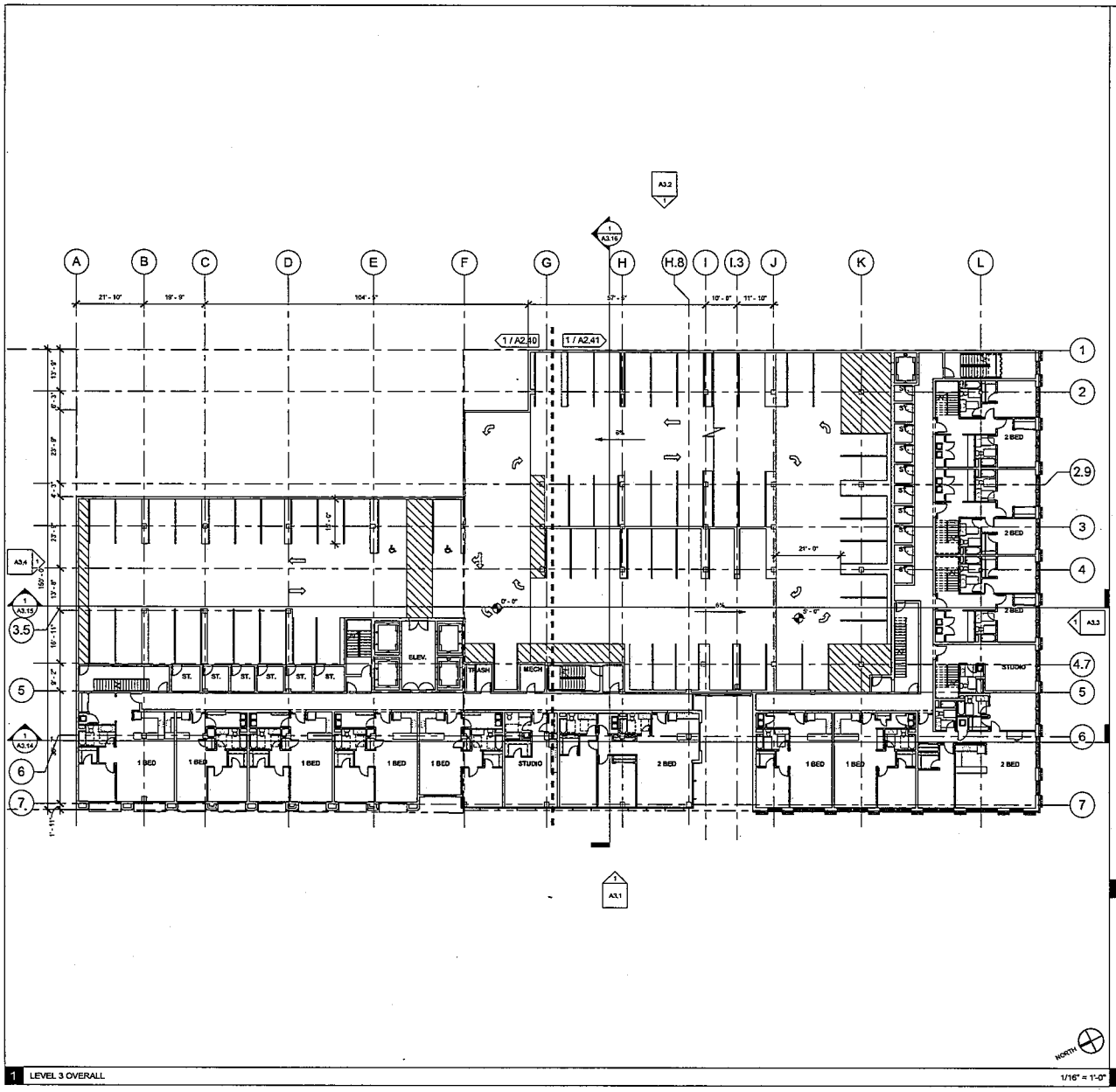
DESIGN DEVELOPMENT

OVERALL LEVEL 2 FLOOR PLAN

A2.3



1 LEVEL 3 OVERALL 1/16" = 1'-0"

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.06
2. SEE SHEETS A2.24 - A2.49 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.60 - A2.63
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5	BALCONY	10	
4	MACHINE ROOM-LESS GEARLESS TRACTION ELEVATOR	9	
3	RECESSED ENTRANCE GRILL, 6'-0" DEEP	8	DECOMMISSIONED STAIR PENTHOUSE
2	PUBLIC BIKE LOCKER (LONG TERM)	7	COMMON ROOF DECK
1	PUBLIC BIKE RACK (SHORT TERM)	6	PRIVATE ROOF DECK

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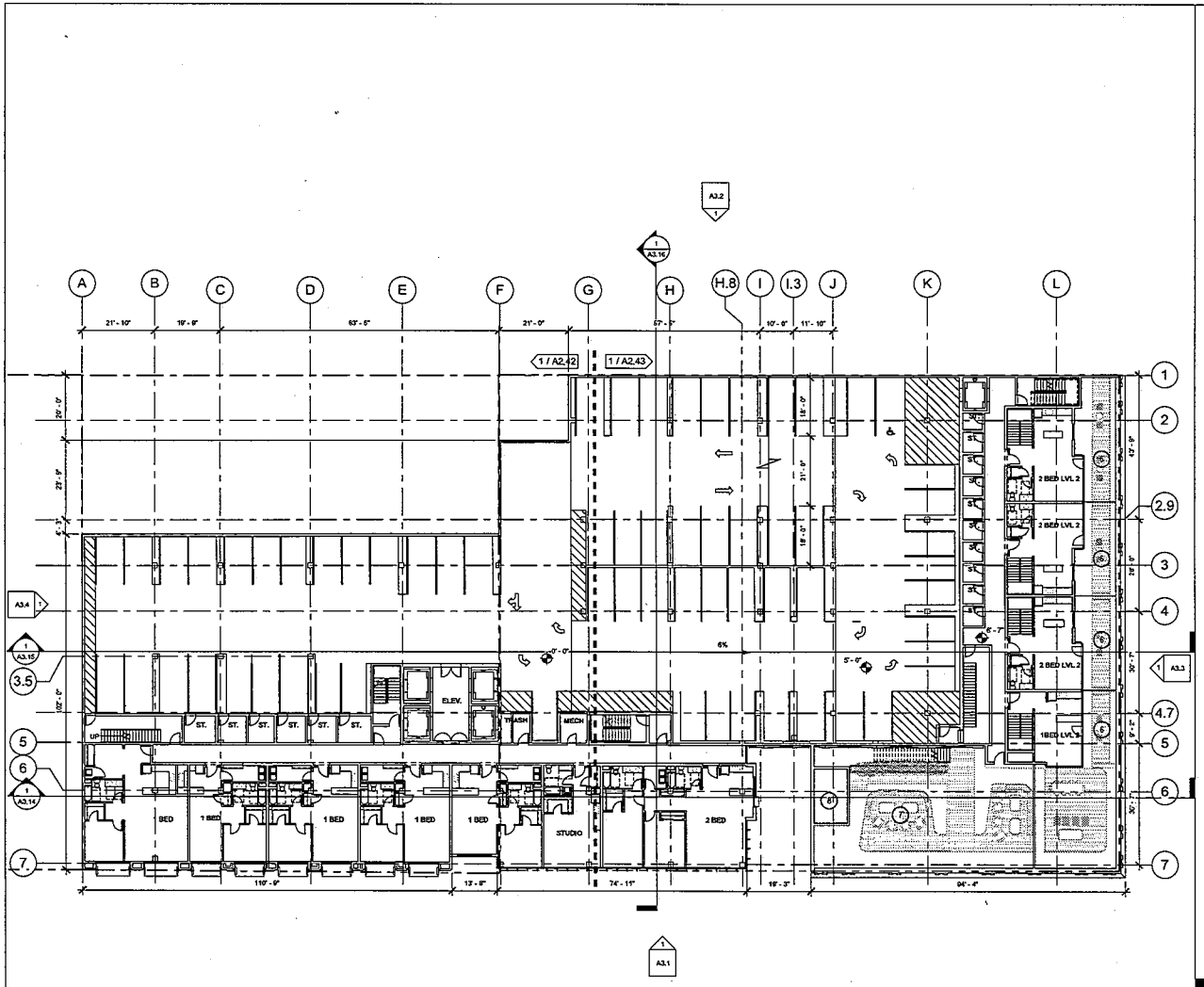
DESIGN DEVELOPMENT

OVERALL LEVEL 3 FLOOR PLAN

A2.4



1 LEVEL 4 OVERALL 1/16" = 1'-0"

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.06
2. SEE SHEETS A2.34 - A2.49 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.60 - A2.63
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5	BALCONY	10	
4	MACHINE ROOM-LESS GEARLESS TRACTION ELEVATOR	9	
3	RECESSED ENTRANCE GRILL, 6'-0" DEEP	8	DECOMMISSIONED STAIR PENTHOUSE
2	PUBLIC BIKE LOCKER (LONG TERM)	7	COMMON ROOF DECK
1	PUBLIC BIKE RACK (SHORT TERM)	6	PRIVATE ROOF DECK

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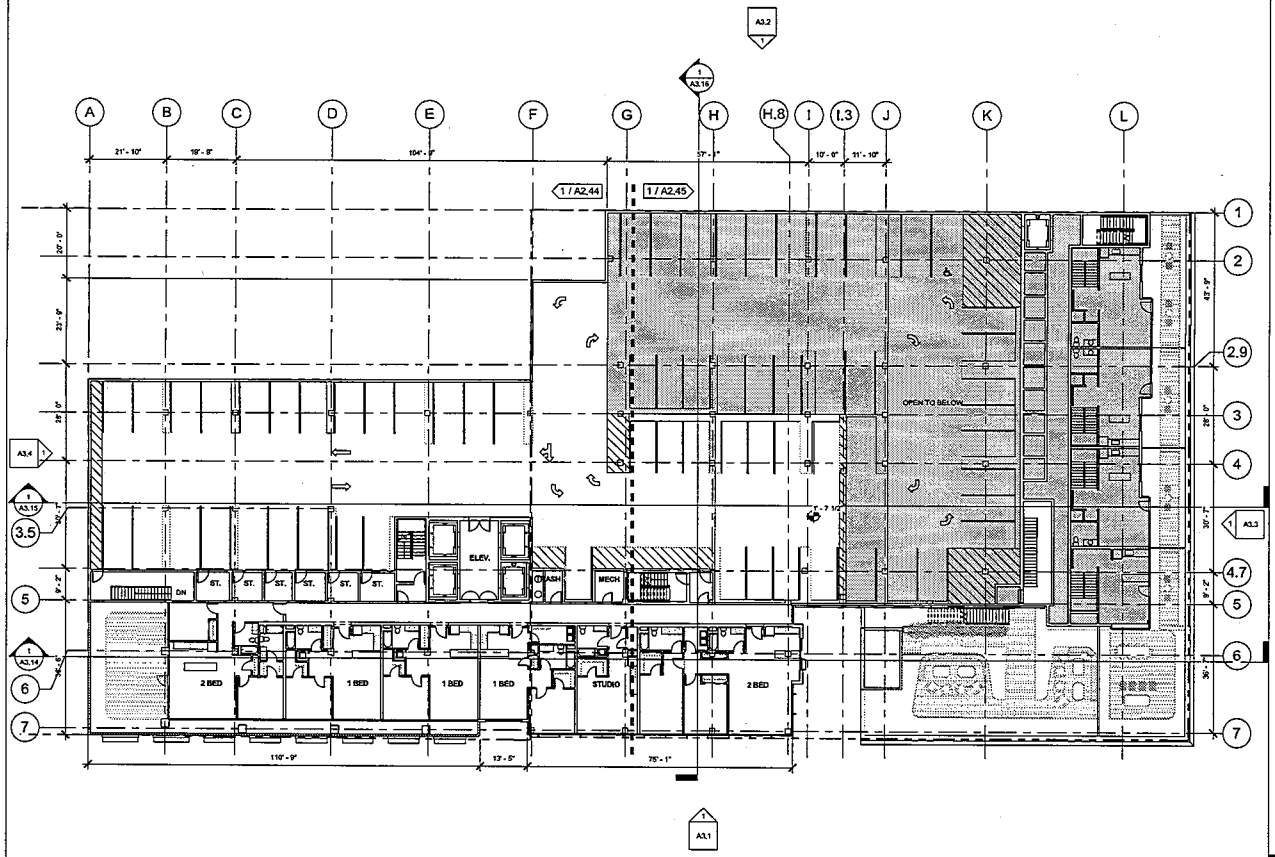
DESIGN DEVELOPMENT

OVERALL LEVEL 4 FLOOR PLAN

A2.5



1 LEVEL 5 OVERALL 1/16" = 1'-0"

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.08
2. SEE SHEETS A2.34 - A2.48 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.60 - A2.63
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5	BALCONY	10	
4	MACHINE ROOM-LESS GEARLESS TRACTION ELEVATOR	9	
3	RECESSED ENTRANCE GRILL, 6'-0" DEEP	8	DECOMMISSIONED STAIR PENTHOUSE
2	PUBLIC BIKE LOCKER (LONG TERM)	7	COMMON ROOF DECK
1	PUBLIC BIKE RACK (SHORT TERM)	6	PRIVATE ROOF DECK

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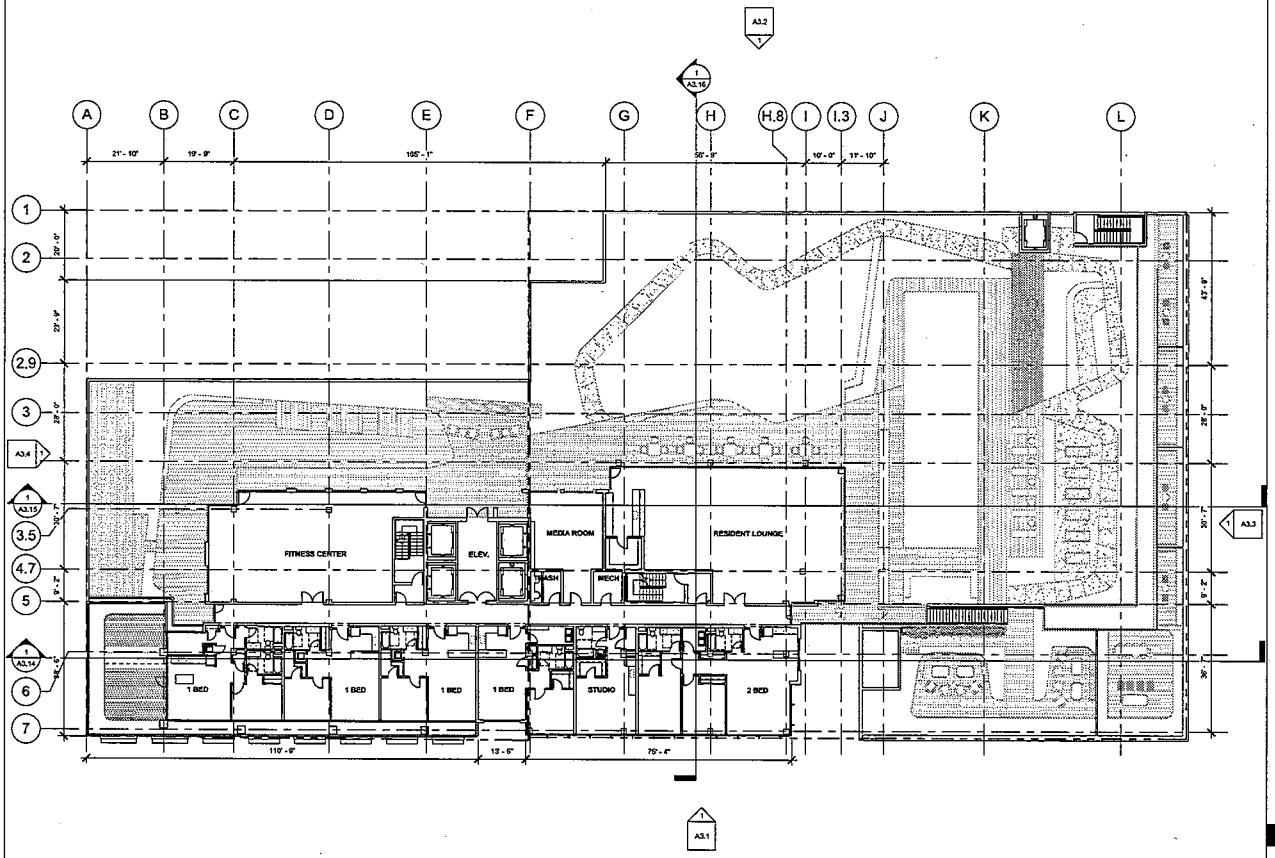
DESIGN DEVELOPMENT

OVERALL LEVEL 5 FLOOR PLAN

A2.6



1 LEVEL 6 OVERALL 1/16" = 1'-0"

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.06
2. SEE SHEETS A2.34 - A2.49 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.60 - A2.63
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5 BALCONY
4 MACHINE ROOMLESS GEARLESS TRACTION ELEVATOR
3 RECESSED ENTRANCE GRILL, 6'-0" DEEP
2 PUBLIC BIKE LOCKER (LONG TERM)
1 PUBLIC BIKE RACK (SHORT TERM)
10
9
8 DECOMMISSIONED STAIR PENTHOUSE
7 COMMON ROOF DECK
6 PRIVATE ROOF DECK

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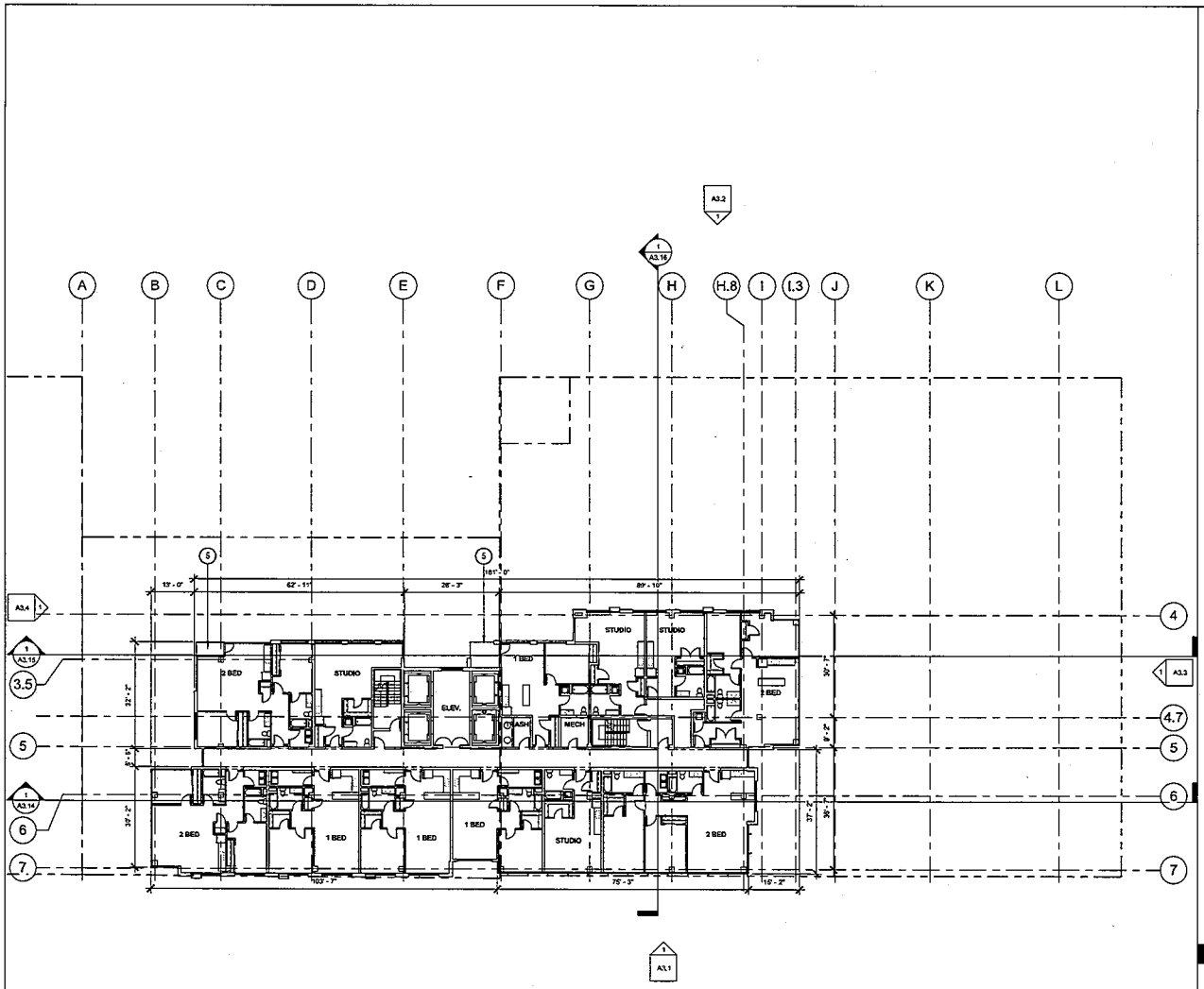
DESIGN DEVELOPMENT

OVERALL LEVEL 6 FLOOR PLAN

A2.7



1 LEVEL 7-13 OVERALL PLAN 1/16" = 1'-0"

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.06
2. SEE SHEETS A2.34 - A2.49 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.60 - A2.63
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5	BALCONY	10	
4	MACHINE ROOM-LESS GEARLESS TRACTION ELEVATOR	9	
3	RECESSED ENTRANCE GRILL 6'-0" DEEP	8	DECOMMISSIONED STAIR PENTHOUSE
2	PUBLIC BIKE LOCKER (LONG TERM)	7	COMMON ROOF DECK
1	PUBLIC BIKE RACK (SHORT TERM)	6	PRIVATE ROOF DECK

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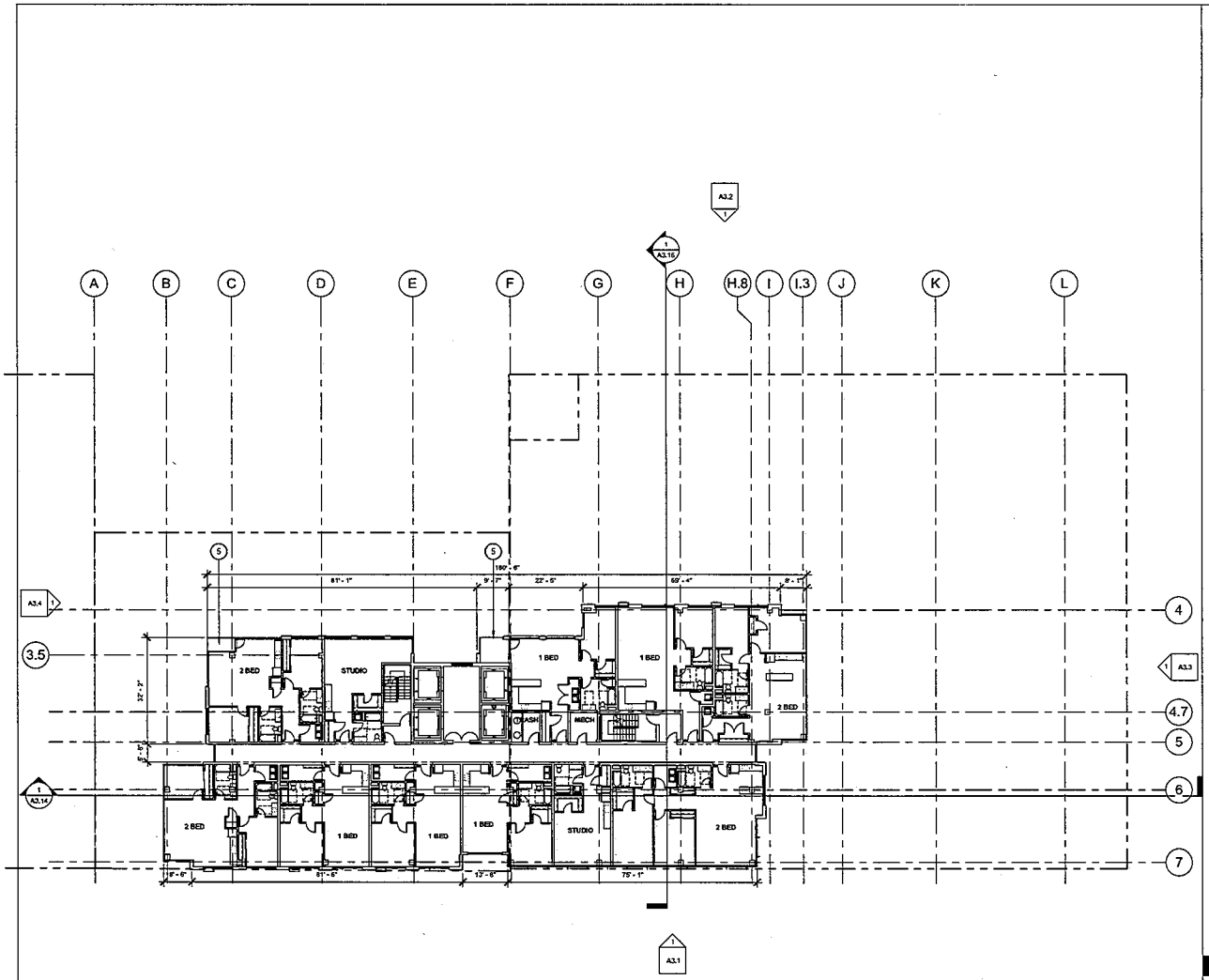
DESIGN DEVELOPMENT
OVERALL LEVEL 7-13 FLOOR PLAN

A2.8



1 LEVEL 14-32 OVERALL PLAN 1/16" = 1'-0"

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.06
2. SEE SHEETS A2.24 - A2.49 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.60 - A2.63
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5	BALCONY	10	
4	MACHINE ROOM-LESS GEARLESS TRACTION ELEVATOR	9	
3	RECESSED ENTRANCE GRILL, 6'-0" DEEP	8	DECOMMISSIONED STAIR PENTHOUSE
2	PUBLIC BIKE LOCKER (LONG TERM)	7	COMMON ROOF DECK
1	PUBLIC BIKE RACK (SHORT TERM)	6	PRIVATE ROOF DECK

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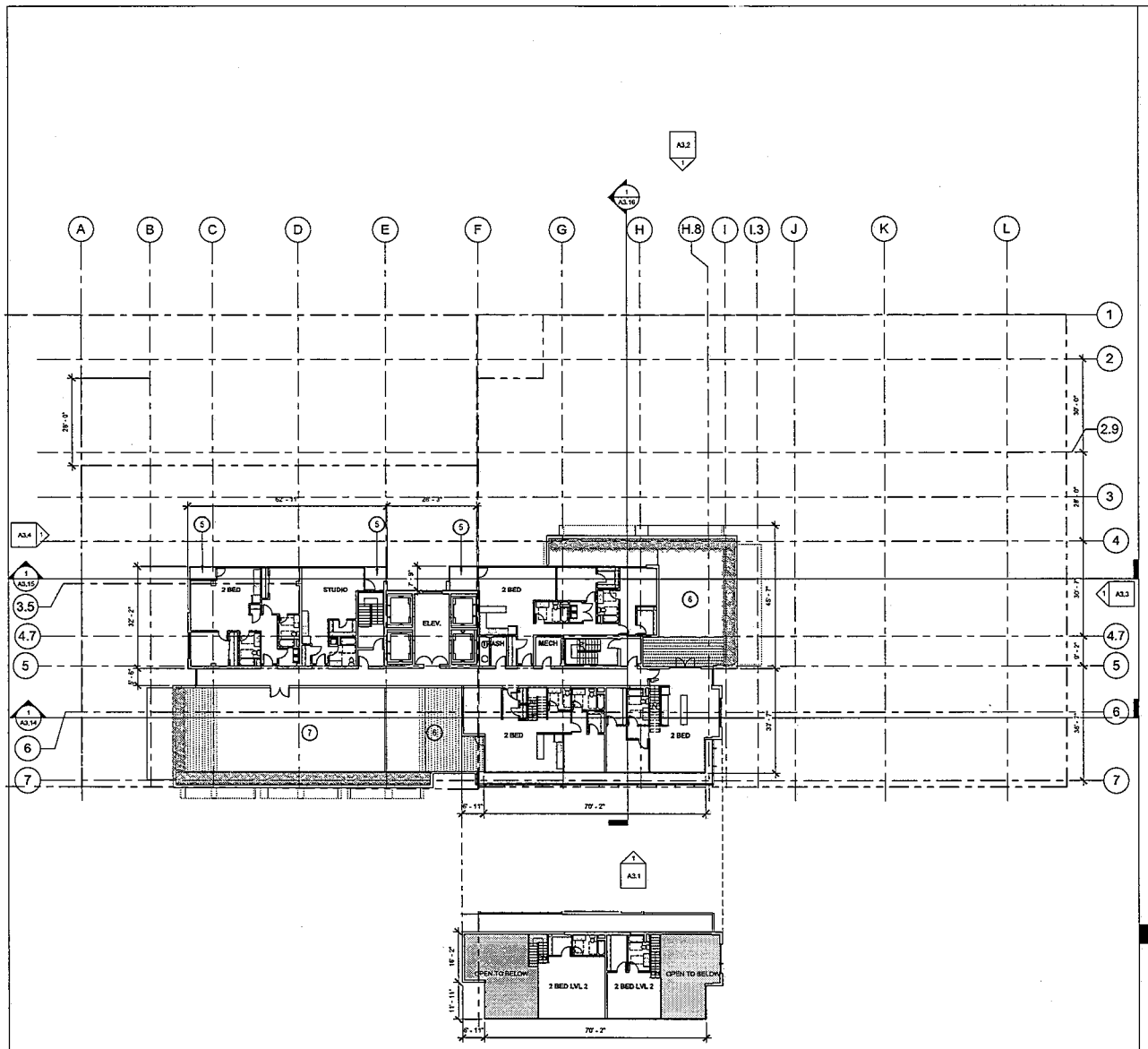
DESIGN DEVELOPMENT

OVERALL LEVEL 14-32 FLOOR PLAN

A2.9



1 LEVEL 33 OVERALL 1/16" = 1'-0"

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.06
2. SEE SHEETS A2.34 - A2.49 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.50 - A2.53
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5	BALCONY	10	
4	MACHINE ROOM-LESS GEARLESS TRACTION ELEVATOR	9	
3	RECESSED ENTRANCE GRILL, 6'-0" DEEP	8	DECOMMISSIONED STAIR PENTHOUSE
2	PUBLIC BIKE LOCKER (LONG TERM)	7	COMMON ROOF DECK
1	PUBLIC BIKE RACK (SHORT TERM)	6	PRIVATE ROOF DECK

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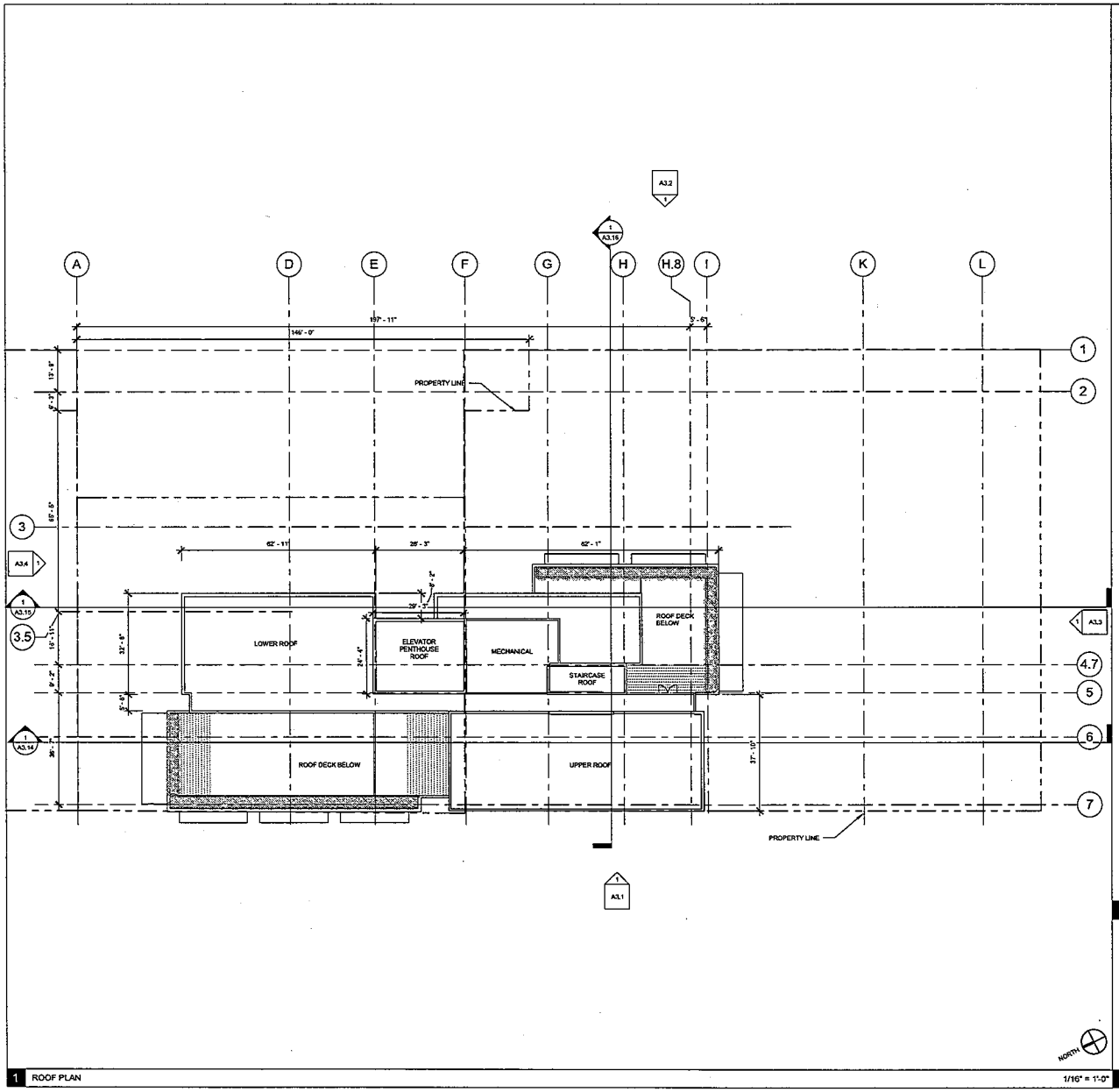
DESIGN DEVELOPMENT

OVERALL LEVEL 33 FLOOR PLAN

A2.10



1 ROOF PLAN 1/16" = 1'-0"

1. CAL GREEN MANDATORY MEASURES CHECKLIST LOCATED ON G.05
2. SEE SHEETS A3.34 - A3.49 FOR ENLARGED PLANS AT 1/8" = 1'-0"
3. FOR LANDSCAPE INFORMATION SEE SHEETS L0.1 - L4.0
4. FOR LIGHTING INFORMATION SEE SHEETS A2.60 - A2.63
5. FOR TREE SURVEY SEE C0.0

GENERAL NOTES - FLOOR PLAN 12" = 1'-0"

5	BALCONY	10	
4	MACHINE ROOM-LESS GEARLESS TRACTION ELEVATOR	9	
3	RECESSED ENTRANCE GRILL, 6'-3" DEEP	8	DECOMMISSIONED STAIR PENTHOUSE
2	PUBLIC BIKE LOCKER (LONG TERM)	7	COMMON ROOF DECK
1	PUBLIC BIKE RACK (SHORT TERM)	6	PRIVATE ROOF DECK

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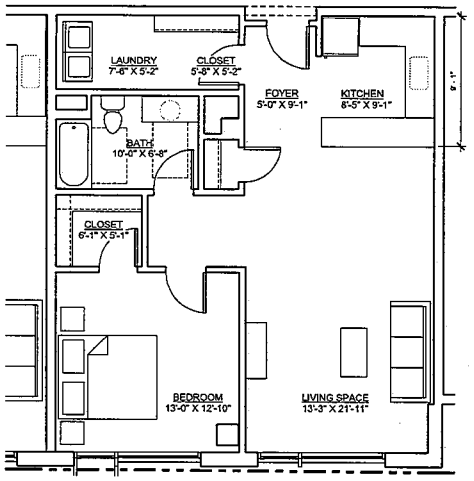
DESIGN DEVELOPMENT

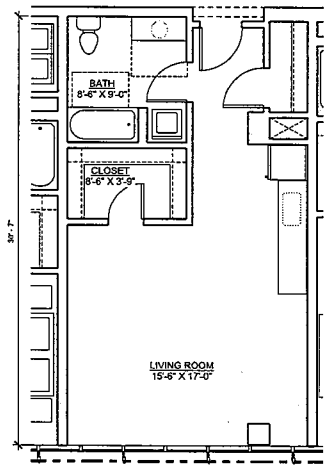
ROOF PLAN

A2.11



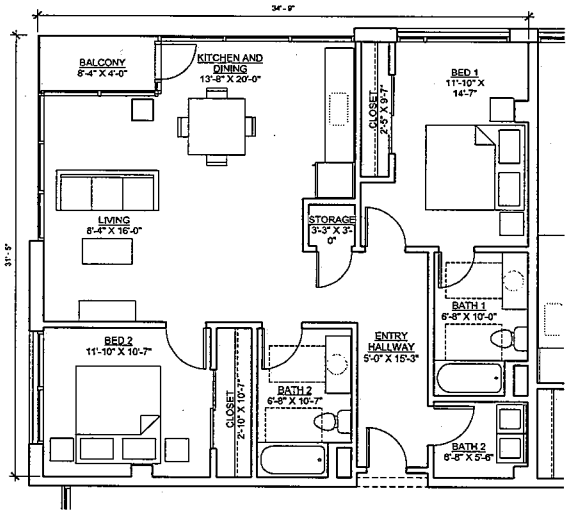
UNIT COUNT: 176
AREA: 825 SFT

11 1 BED UNIT-TYPICAL PLAN 1/4" = 1'-0"



UNIT COUNT: 74
AREA: 799 SFT

10 STUDIO TYPICAL PLAN 1/4" = 1'-0"



UNIT COUNT: 119
AREA: 1356 SFT

4 2 BED UNIT TYPICAL PLAN 1/4" = 1'-0"

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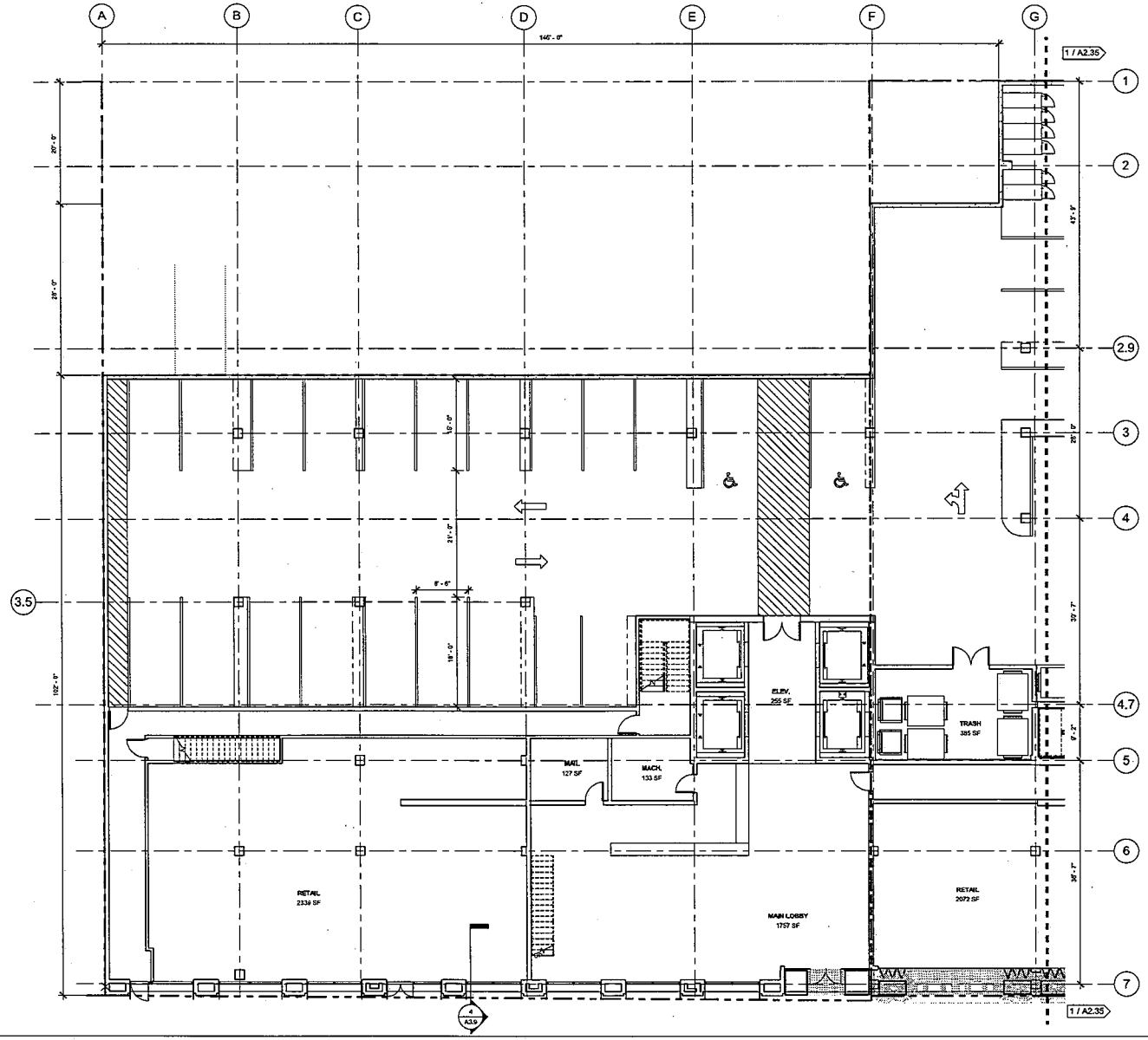
DESIGN
DEVELOPMENT

BEDROOM UNITS
AND STUDIOS

A2.20



1 LEVEL 1 ENLARGED AREA A

1/8" = 1'-0"

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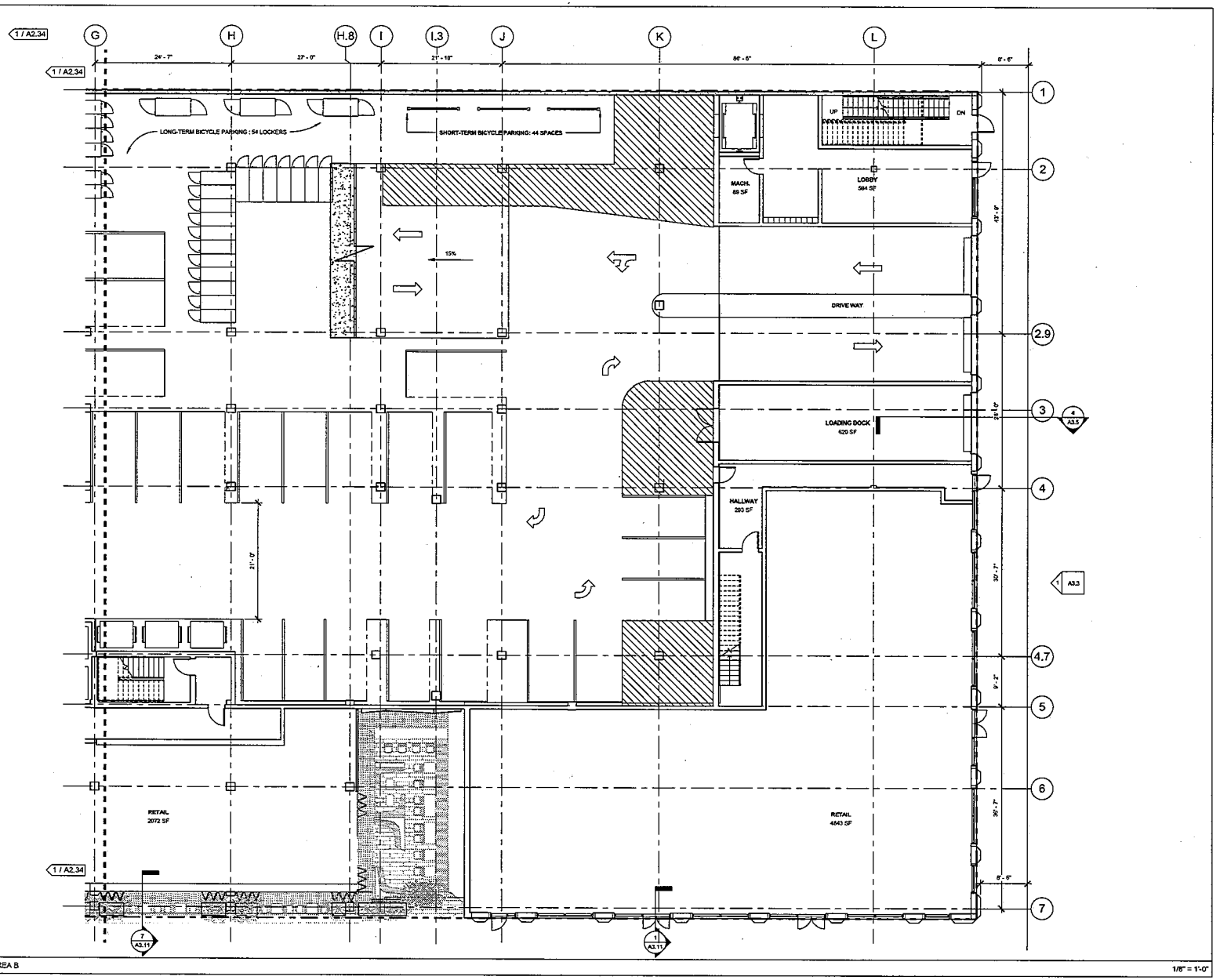
DESIGN DEVELOPMENT

LEVEL 1 FLOOR PLAN AREA A

A2.34



1 LEVEL 1 ENLARGED AREA B

1/8" = 1'-0"

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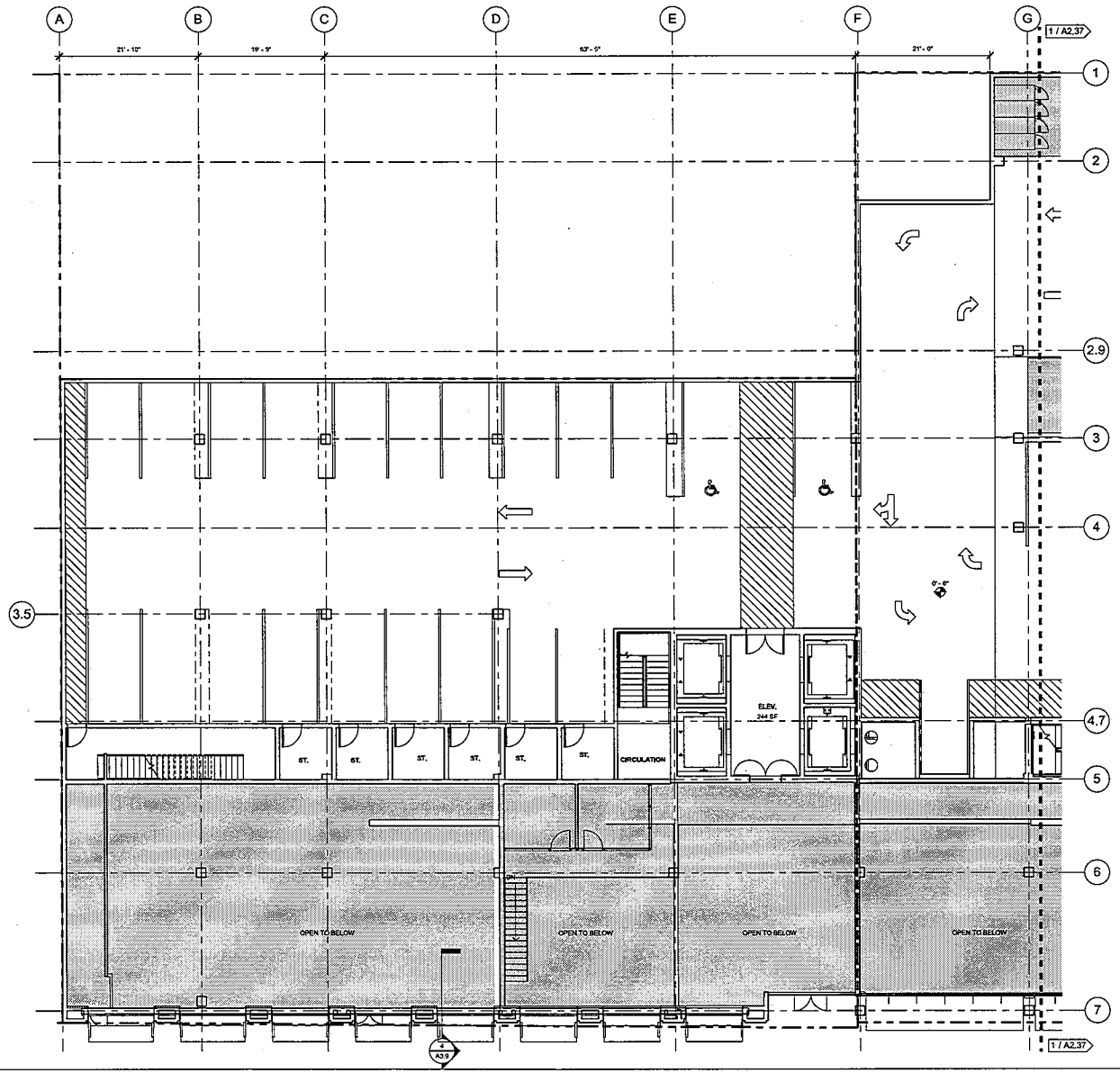
DESIGN
DEVELOPMENT

LEVEL 1 FLOOR
PLAN AREA B

A2.35



1 LEVEL 1 MEZZANINE ENLARGED A

1/8" = 1'-0"

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DESIGN
DEVELOPMENT

LEVEL 1
MEZZANINE
FLOOR PLAN
AREA A

A2.36

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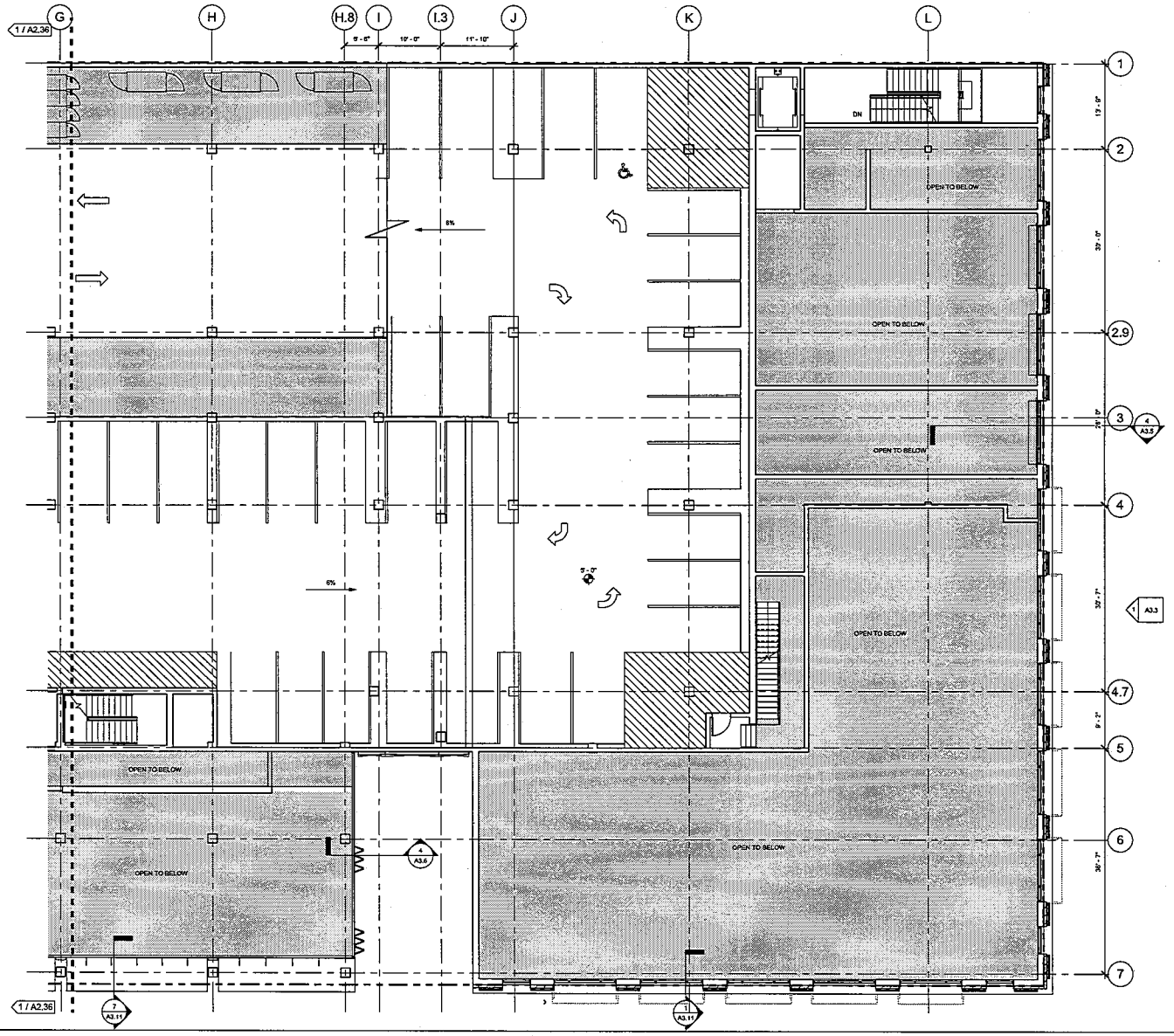

1 LEVEL 1 MEZZANINE ENLARGED B

1/8" = 1'-0"

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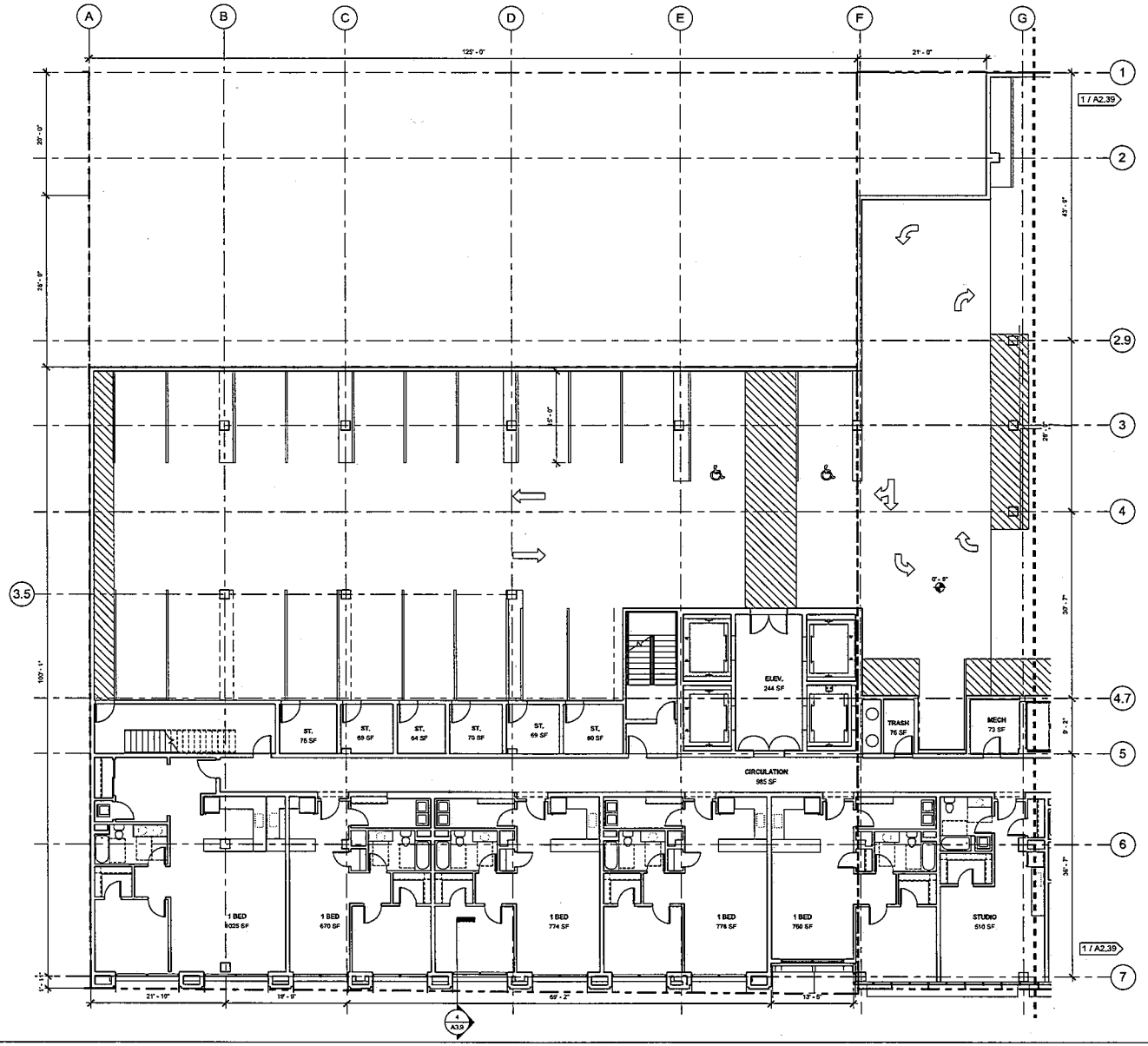
DESIGN
DEVELOPMENT

LEVEL 1
MEZZANINE
FLOOR PLAN
AREA B

A2.37



1 LEVEL 2 ENLARGED AREA A

1/8" = 1'-0"

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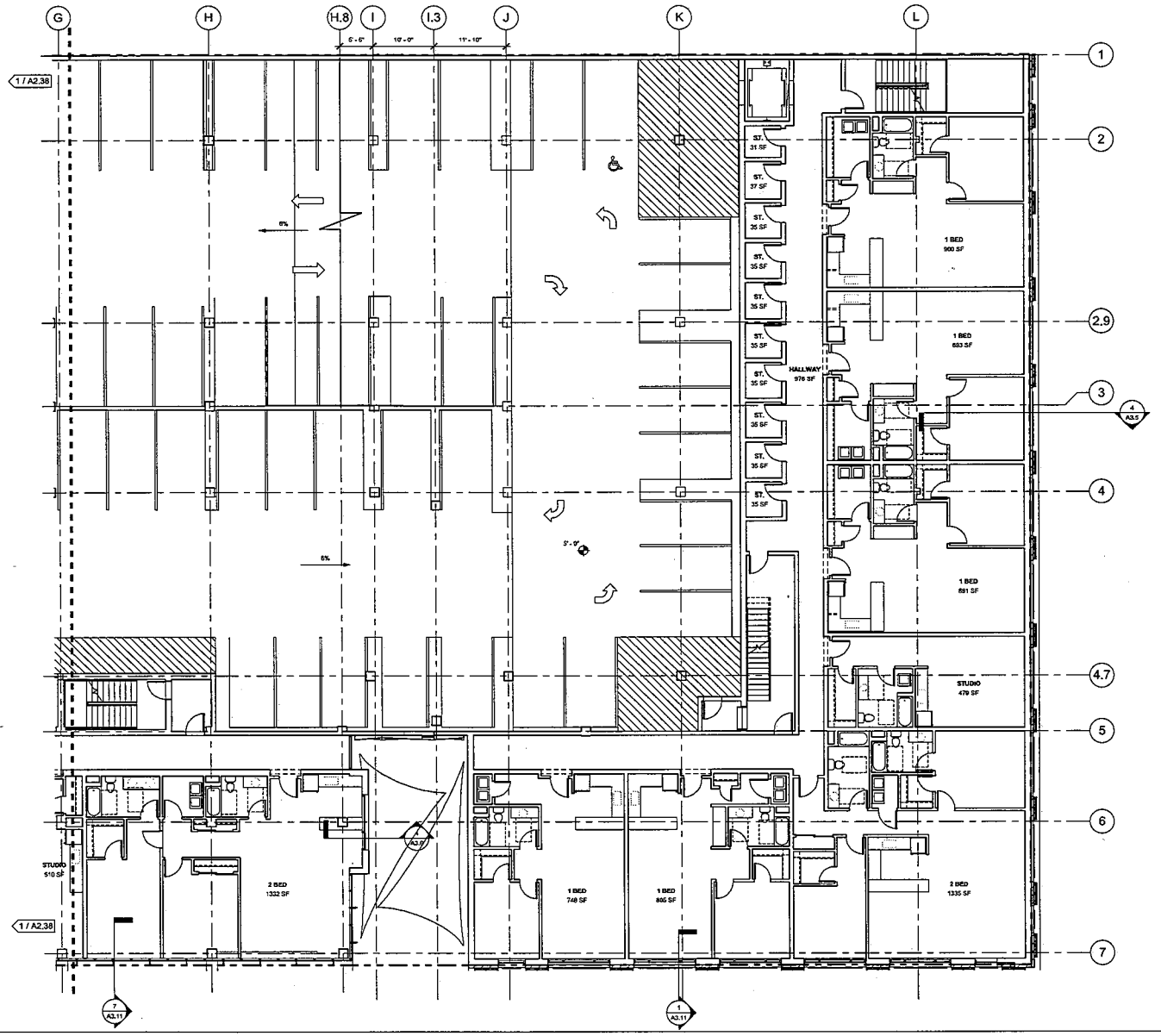
DESIGN DEVELOPMENT
LEVEL 2 FLOOR PLAN AREA A

A2.38



1 LEVEL 2 ENLARGED AREA B

1/8" = 1'-0"

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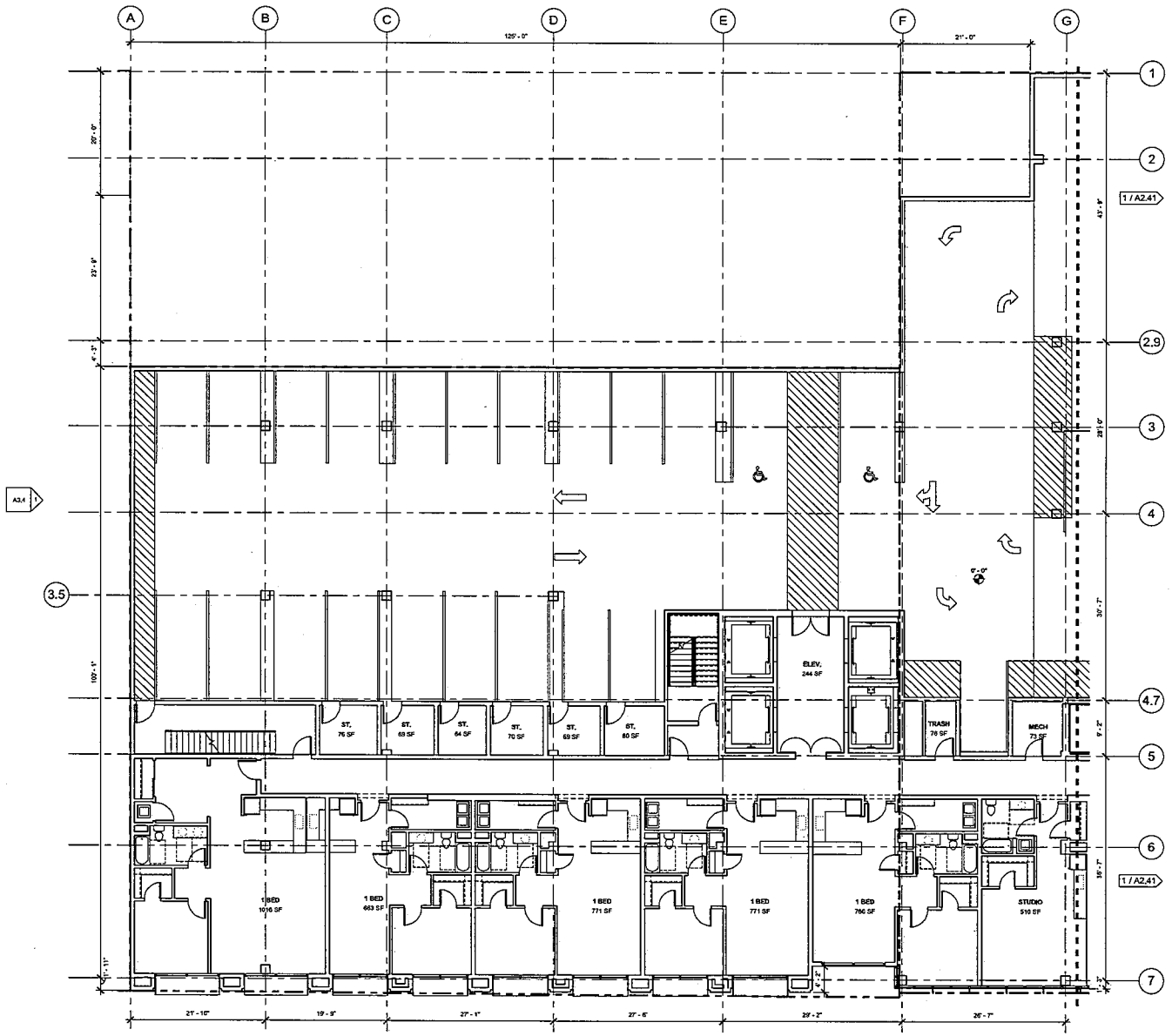
DESIGN
DEVELOPMENT

LEVEL 4 FLOOR
PLAN AREA A

A2.39



1 LEVEL 3 ENLARGED PLAN A

1/8" = 1'-0"

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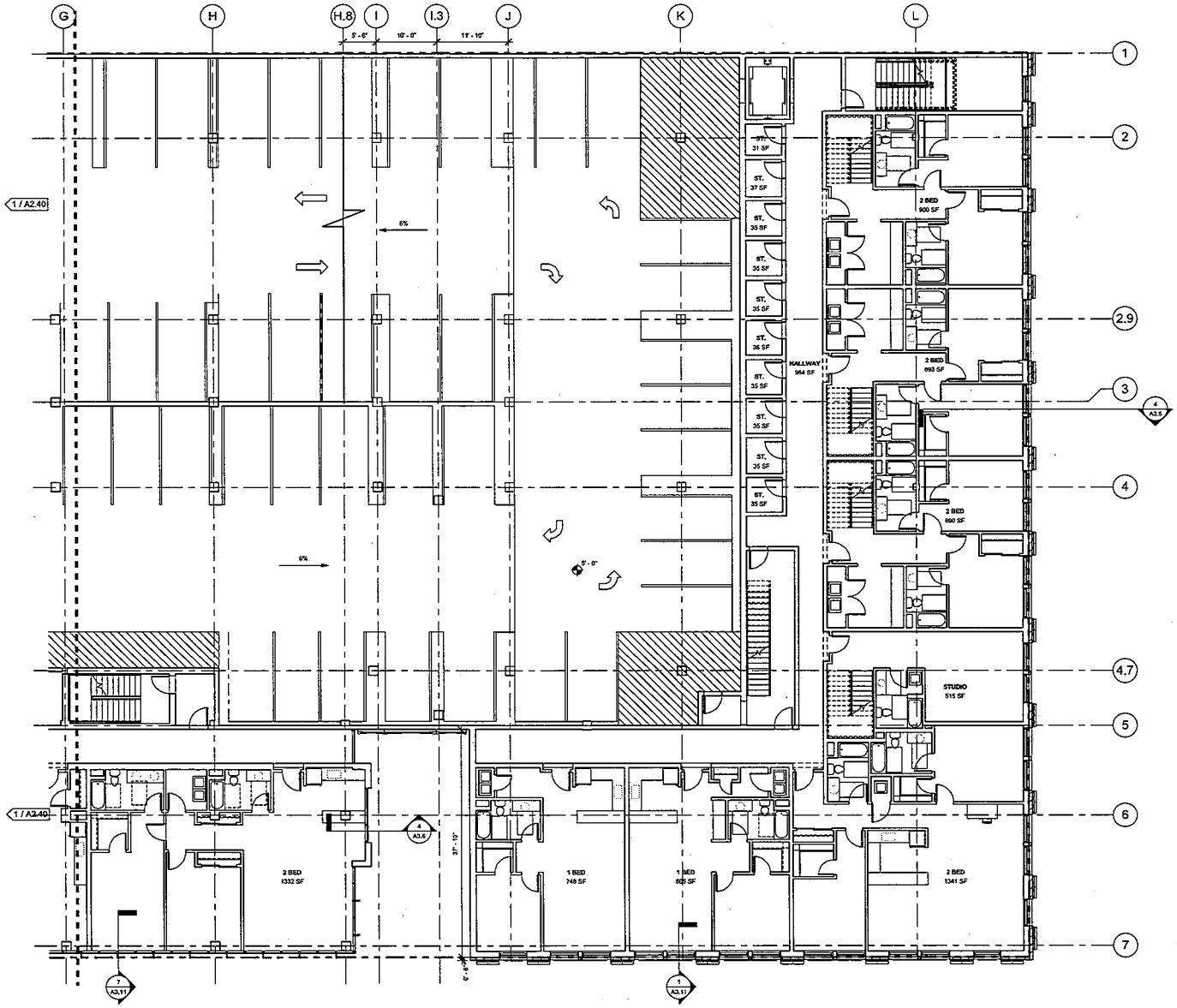
DESIGN
DEVELOPMENT

LEVEL 3 FLOOR
PLAN AREA A

A2.40



1 LEVEL 3 ENLARGED PLAN B

1/8" = 1'-0"

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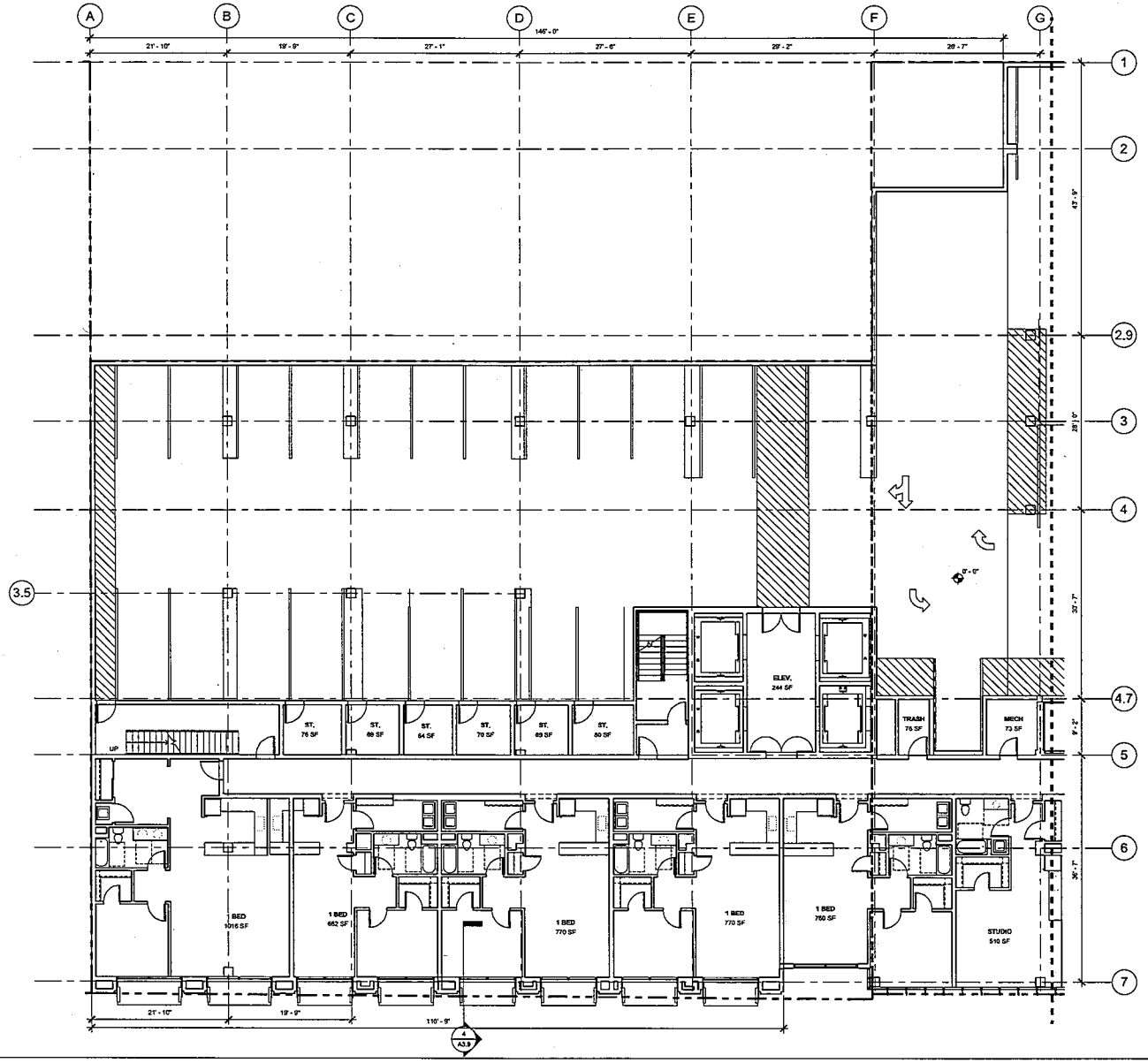
DESIGN
DEVELOPMENT

LEVEL 3 FLOOR
PLAN AREA B

A2.41



1 LEVEL 4 ENLARGED PLAN A

1/8" = 1'-0"

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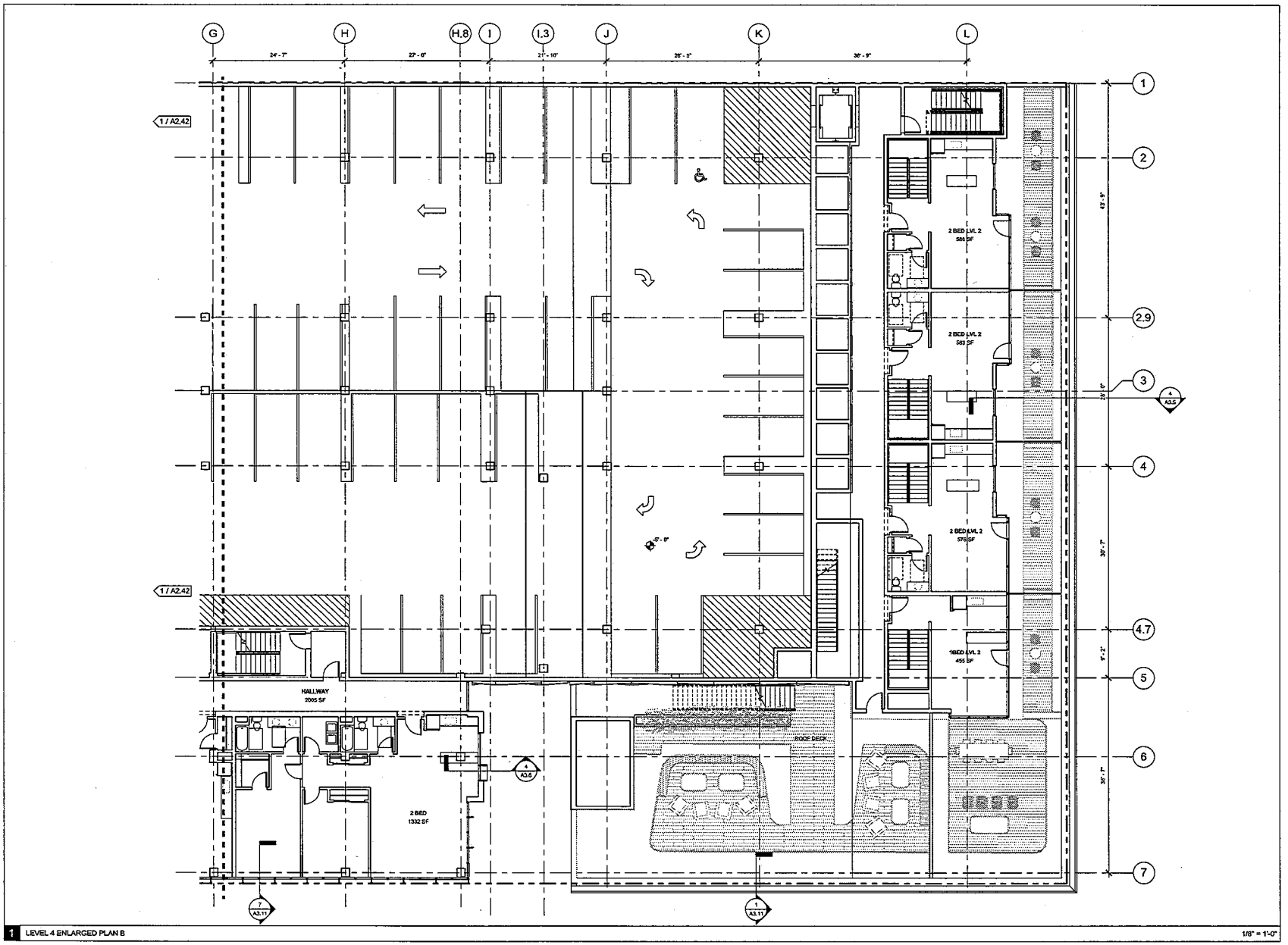
DESIGN
DEVELOPMENT

LEVEL 4 FLOOR
PLAN AREA A

A2.42



1 LEVEL 4 ENLARGED PLAN B

1/8" = 1'-0"

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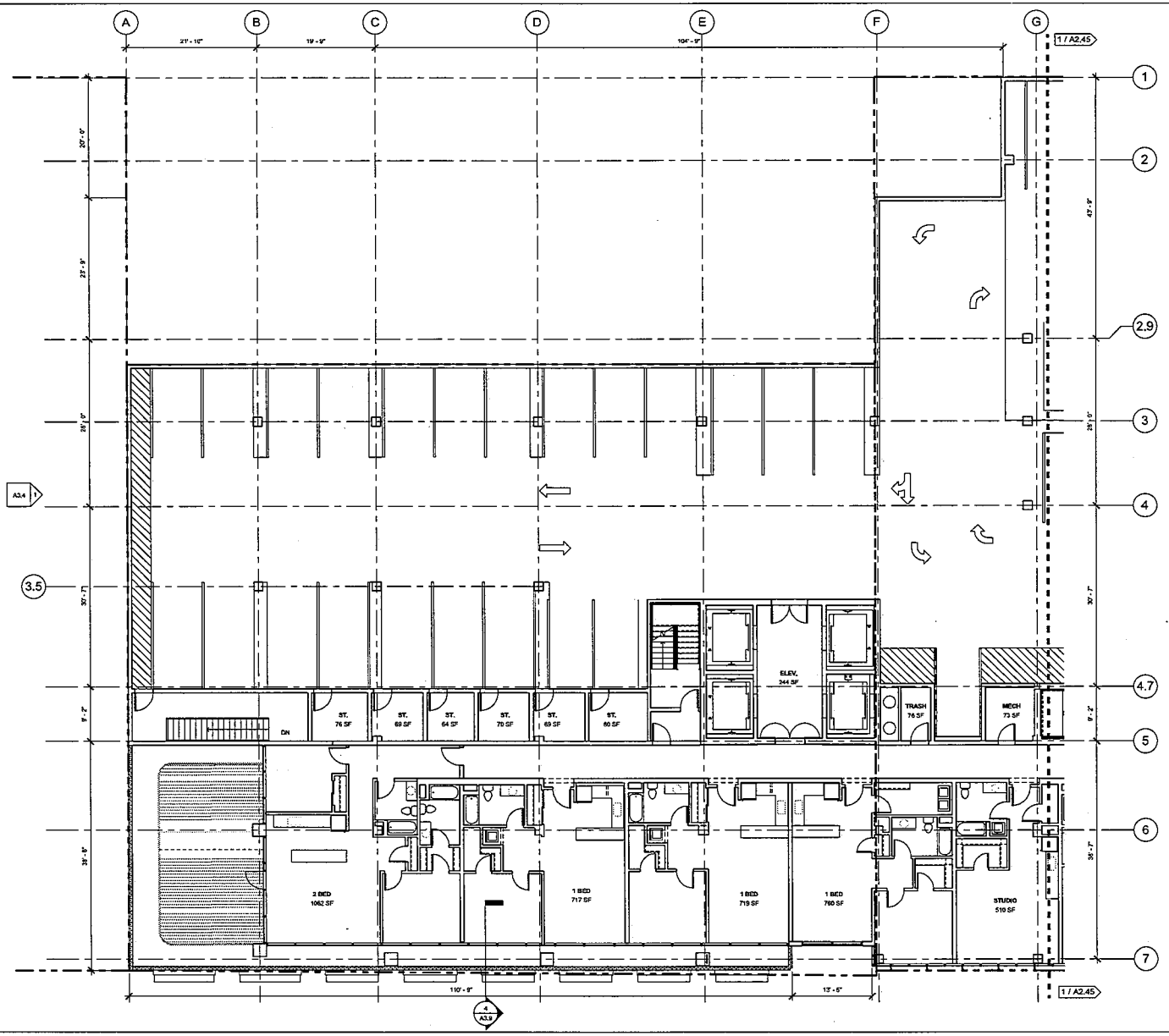
DESIGN DEVELOPMENT

LEVEL 4 FLOOR PLAN AREA B

A2.43



1 LEVEL 5 ENLARGED PLAN AREA A

1/8" = 1'-0"

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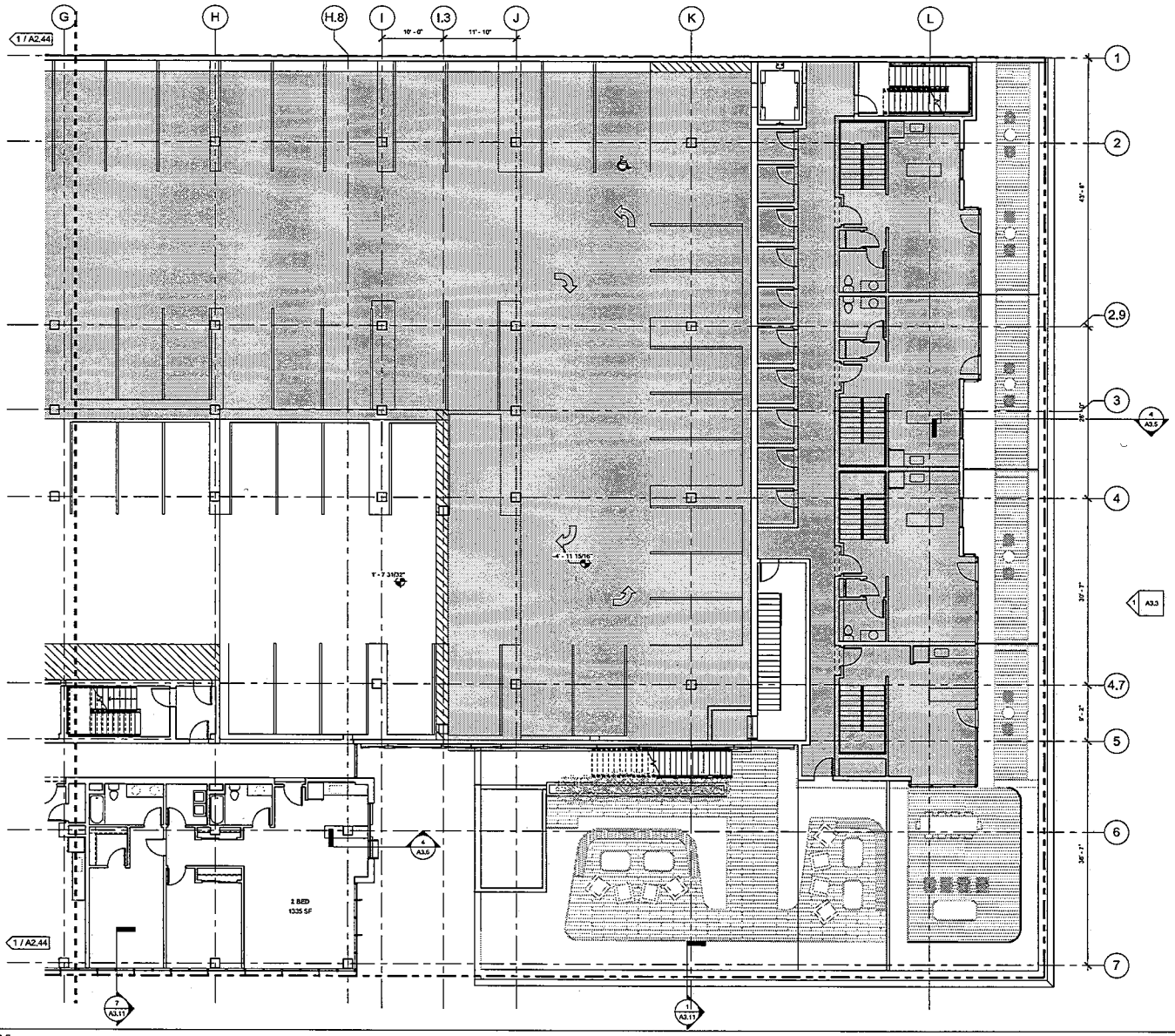
DESIGN
DEVELOPMENT

LEVEL 5 FLOOR
PLAN AREA A

A2.44



1 LEVEL 5 ENLARGED PLAN AREA B

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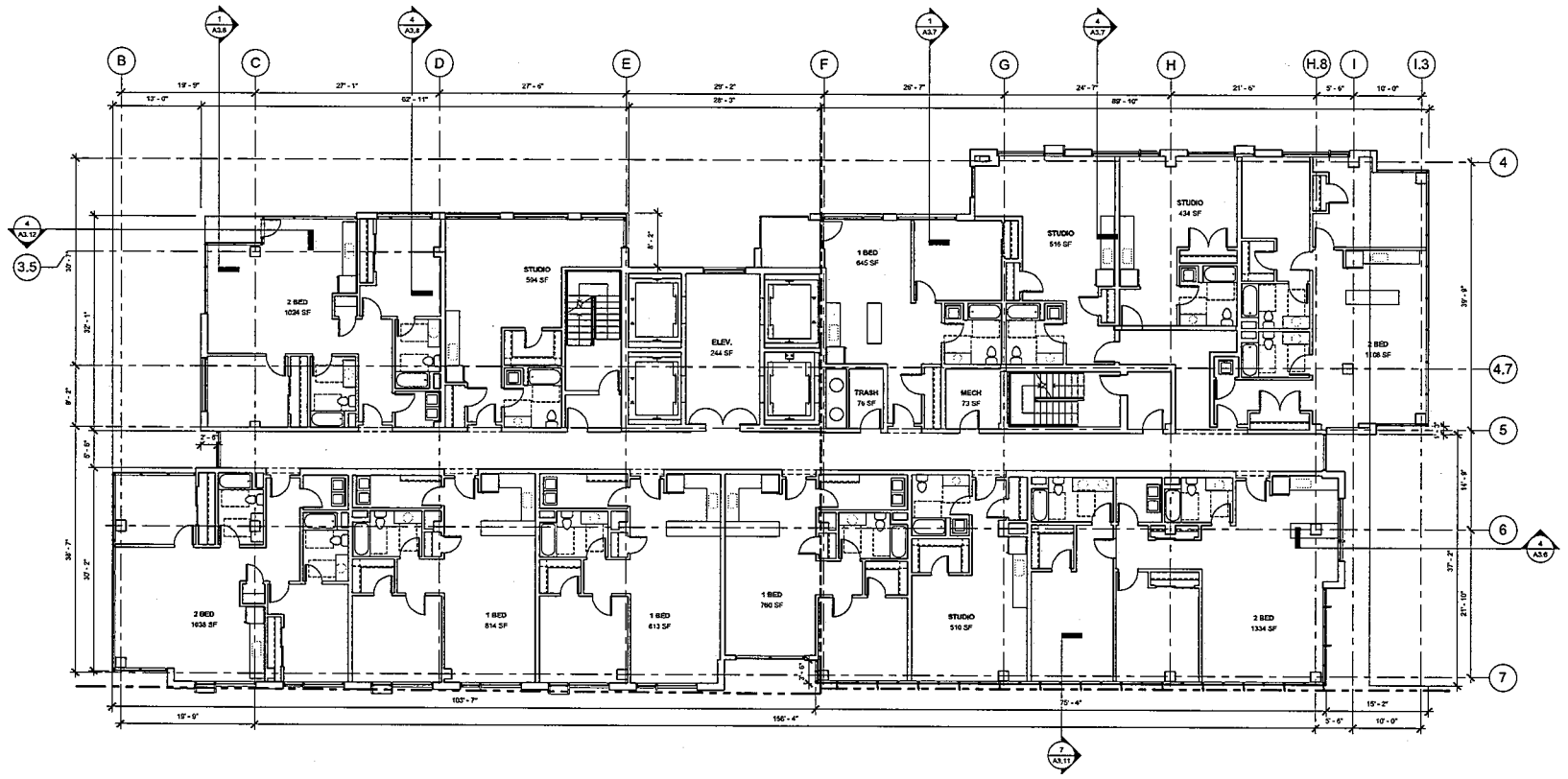
DESIGN
DEVELOPMENT
LEVEL 5 FLOOR
PLAN AREA B

A2.45



1 LEVEL 13 (TYPICAL) ENLARGED

1/8" = 1'-0"

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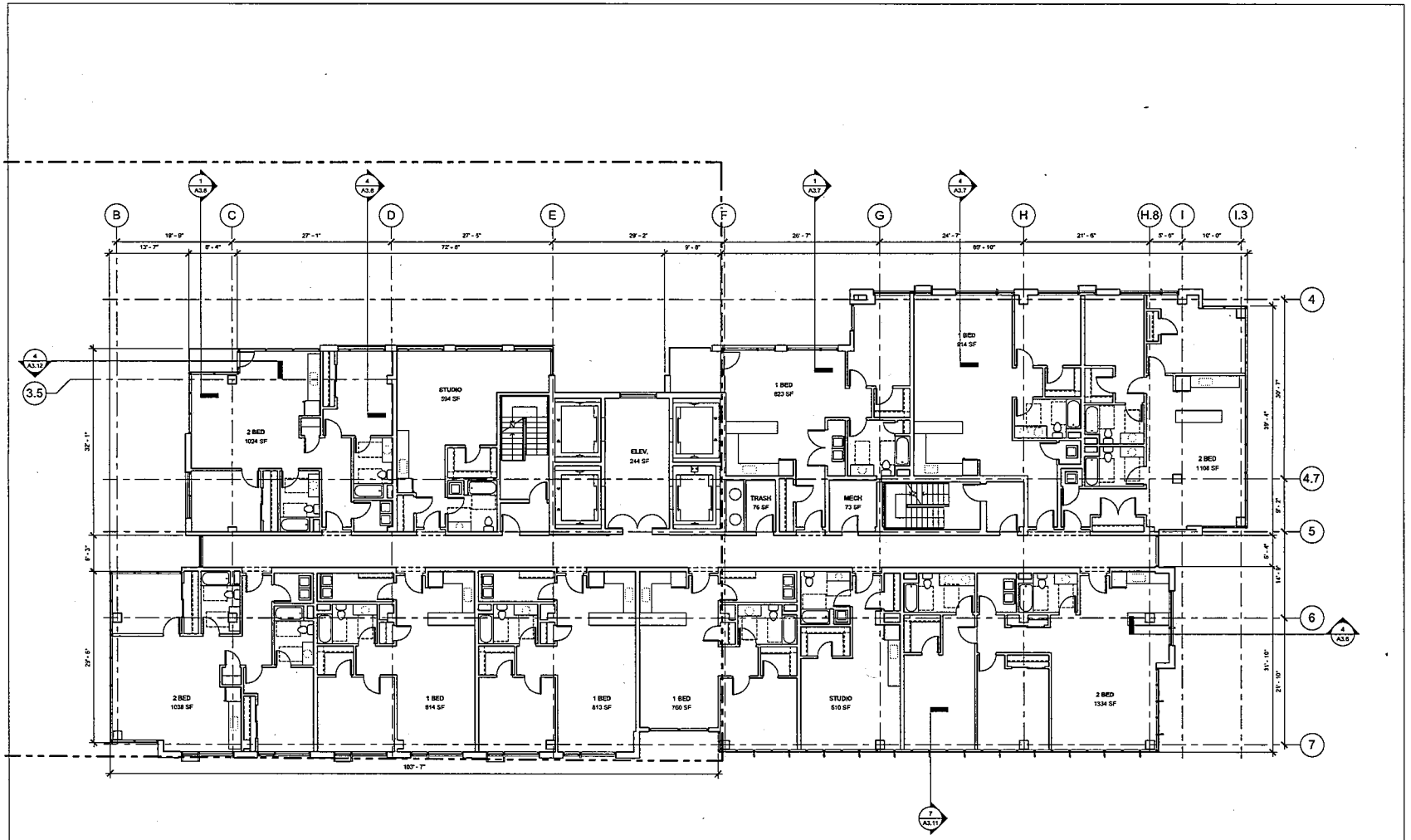
DESIGN
DEVELOPMENT

LEVEL 13TH
FLOOR PLAN

A2.46



1 LEVEL 14 (TYPICAL) ENLARGED

1/8" = 1'-0"

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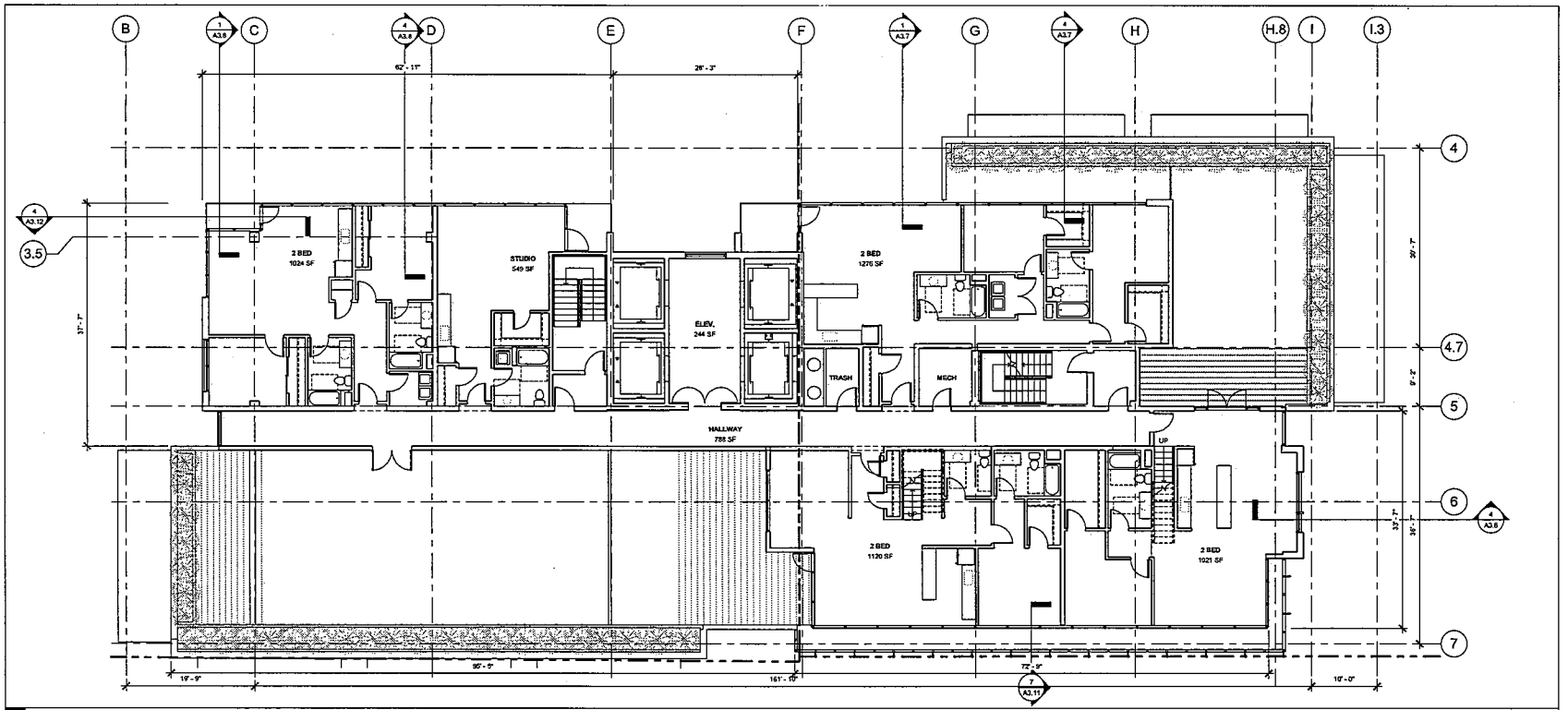
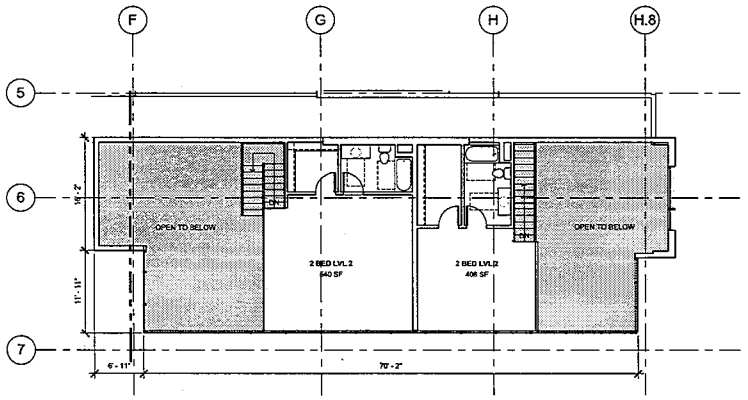
DESIGN
DEVELOPMENT

LEVEL 14 FLOOR
PLAN

A2.47



1 LEVEL 33 ENLARGED 1/8" = 1'-0"



2 LEVEL 33 LOFT ENLARGED 1/8" = 1'-0"

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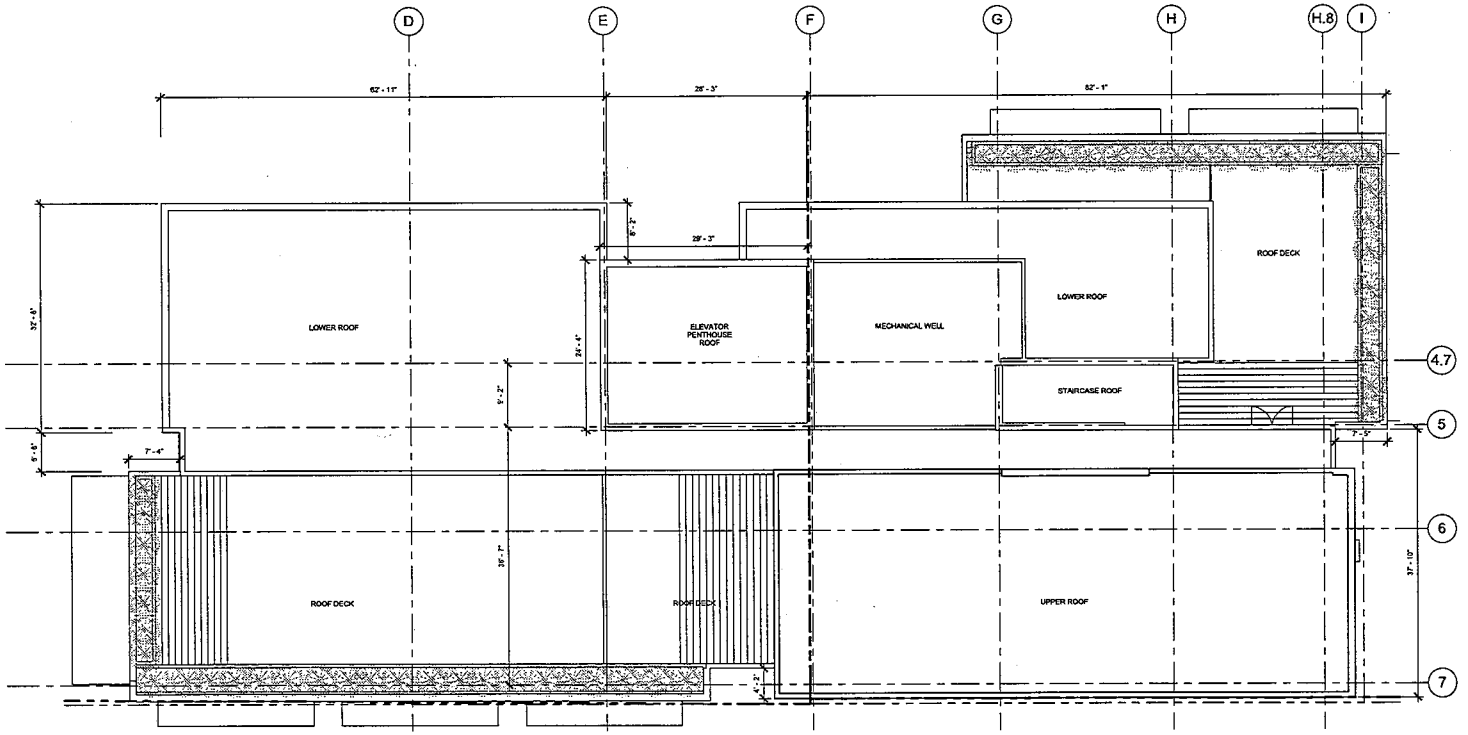
DESIGN
DEVELOPMENT
LEVEL 33 AND 34

A2.48



1 ROOF PLAN ENLARGED

1/8" = 1'-0"

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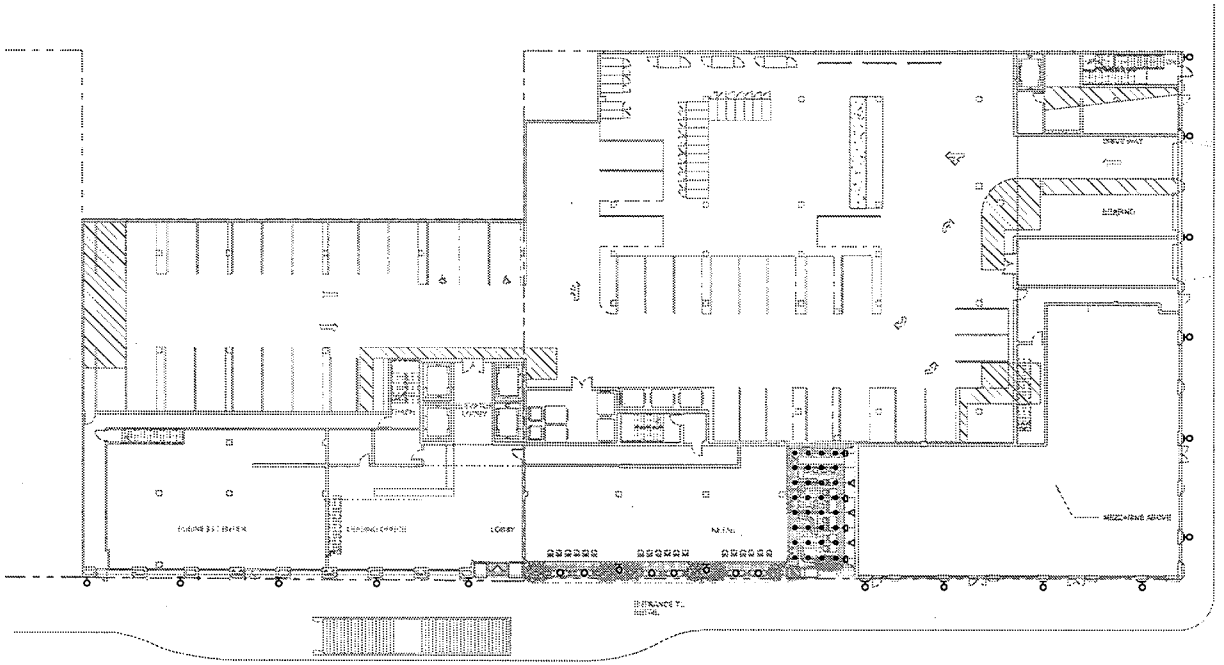
DESIGN DEVELOPMENT

ROOF PLAN

A2.49



1 LIGHTING PLAN-LEVEL 1

1/16" = 1'-0"

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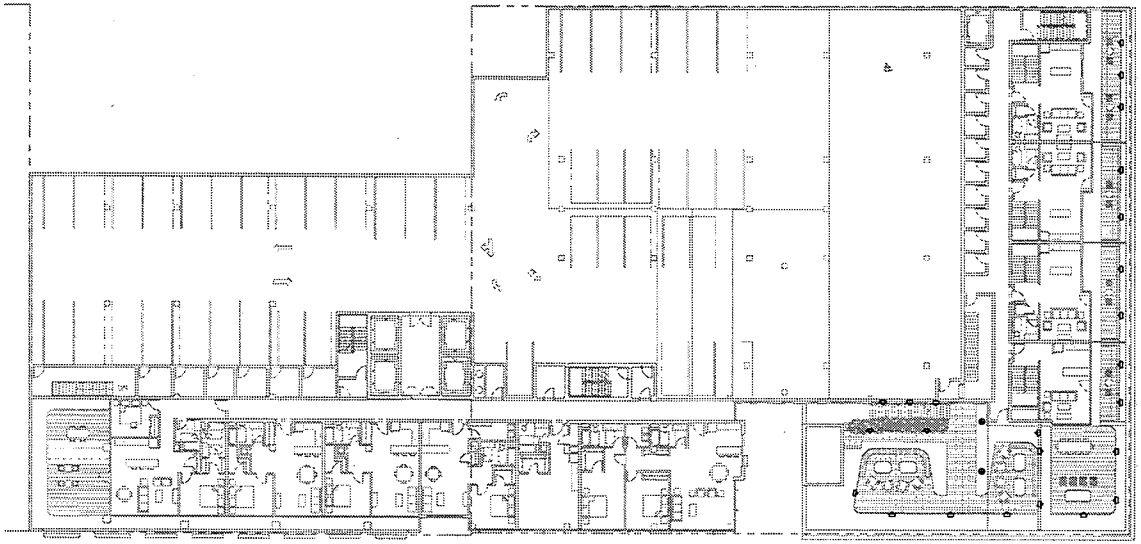
DESIGN DEVELOPMENT

LIGHTING PLAN-LEVEL 1

A2.60



LEGEND

- RECESSED STEP LIGHT
- SCONCE
- DOWNLIGHT
- POLE LIGHT
- CATENARY LIGHT
- UPLIGHT

1 LIGHTING PLAN- LEVEL EXISTING 4 — 1/16" = 1'-0"

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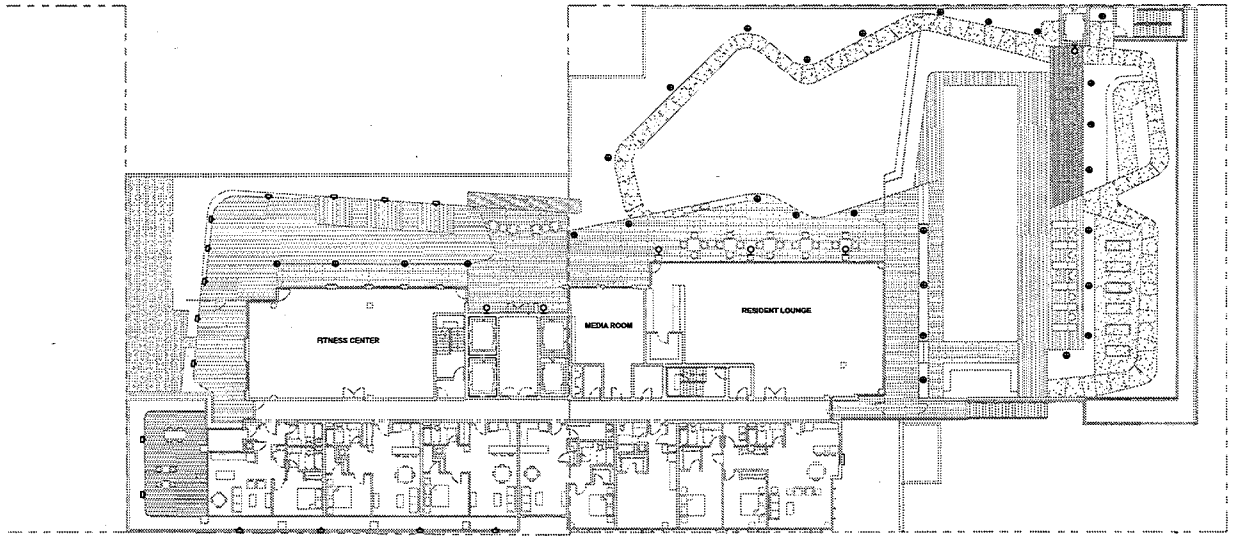
DESIGN DEVELOPMENT

LIGHTING PLAN- LEVEL 4 EXISTING

A2.61



LEGEND

- RECESSED STEP LIGHT
- SCONCE
- DOWNLIGHT
- POLE LIGHT
- CATENARY LIGHT
- UPLIGHT

1 LIGHTING PLAN- LEVEL 6 — 1/16" = 1'-0"

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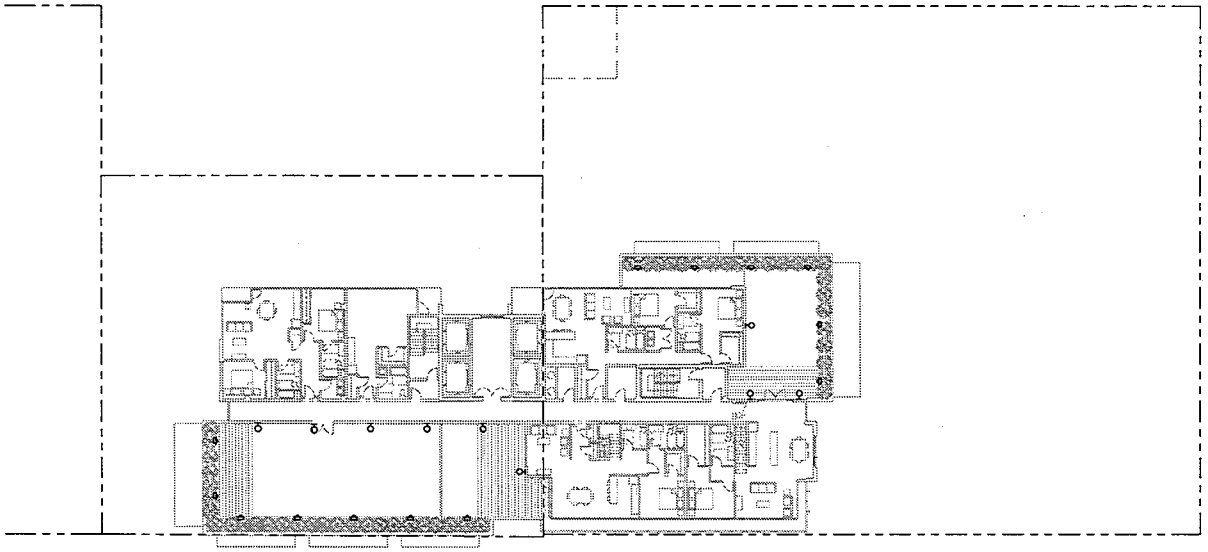
DESIGN DEVELOPMENT

LIGHTING PLAN-LEVEL 6

A2.62



LEGEND

- RECESSED STEP LIGHT
- SCONCE
- DOWNLIGHT
- POLE LIGHT
- CATENARY LIGHT
- UPLIGHT

1 LIGHTING PLAN- LEVEL 33

1/16" = 1'-0"

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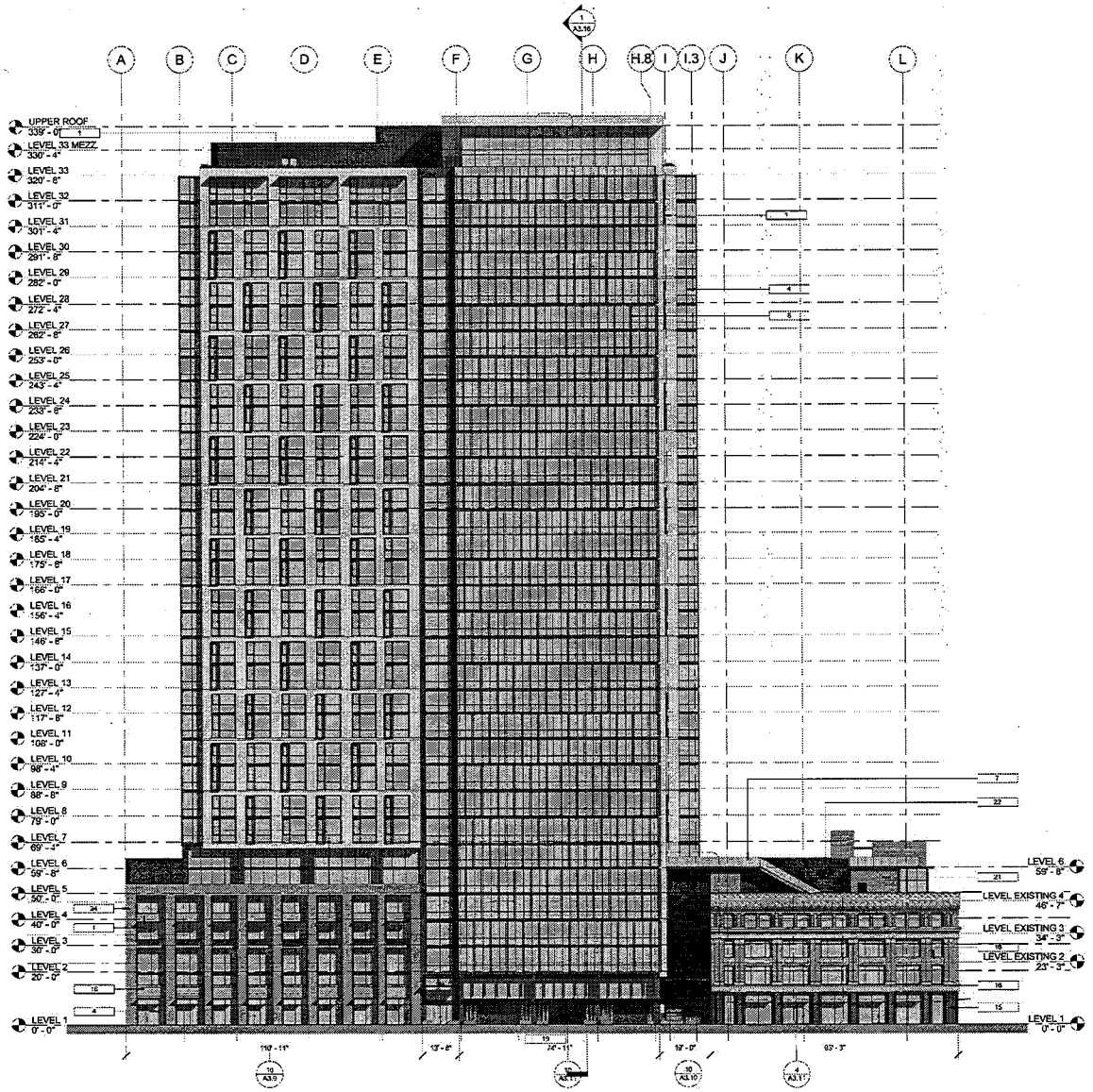
DESIGN DEVELOPMENT

LIGHTING PLAN-LEVEL 33

A2.63



1 WEST ELEVATION 1" = 20'-0"

KEYNOTES

1	PRECAST CONCRETE
3	BRICK : THINSET
4	WINDOW WALL SYSTEM
5	ALUMINUM WINDOW
6	ALUMINUM SUNSHADE
7	GLASS GUARDRAIL
15	STAINLESS STEEL PANEL
16	TERRA COTTA PANELING
18	LIVING WALL
19	GLASS FINS
20	CAST IN PLACE CONCRETE
21	GFRC RAIN-SCREEN SYSTEM
22	GREEN WALL
23	GFRC PANEL
24	THINSET BRICK O/PRECAST CONCRETE

TENANT SIGNAGE; APPROXIMATE SIZE AND LOCATION OF SIGNAGE SUBJECT TO APPROVAL BY THE CITY OF OAKLAND PLANNING DEPARTMENT UNDER A SEPARATE SIGNAGE PACKAGE

ELEVATION LEGEND NTS

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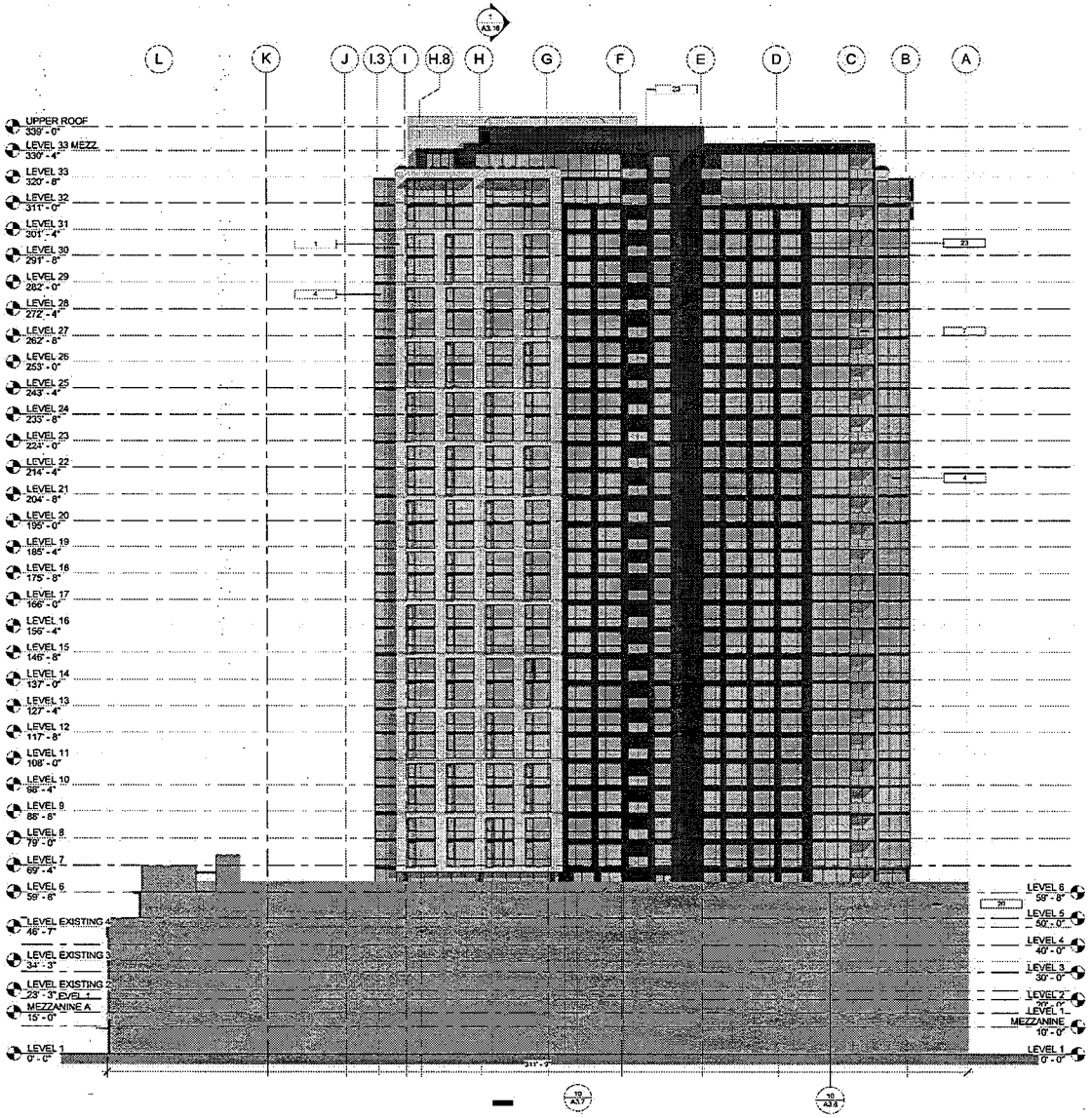
DESIGN DEVELOPMENT
WEST ELEVATION

A3.1



1 EAST ELEVATION 1" = 20'-0"

KEYNOTES

1	PRECAST CONCRETE
3	BRICK - THINSET
4	WINDOW WALL SYSTEM
5	ALUMINUM WINDOW
6	ALUMINUM SUNSHADE
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22	GREEN WALL
23	GFRC PANEL
24	THINSET BRICK O/PRECAST CONCRETE

TENANT SIGNAGE: APPROXIMATE SIZE AND LOCATION OF SIGNAGE SUBJECT TO APPROVAL BY THE CITY OF OAKLAND PLANNING DEPARTMENT UNDER A SEPARATE SIGNAGE PACKAGE

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DESIGN DEVELOPMENT
EAST ELEVATION

A3.2

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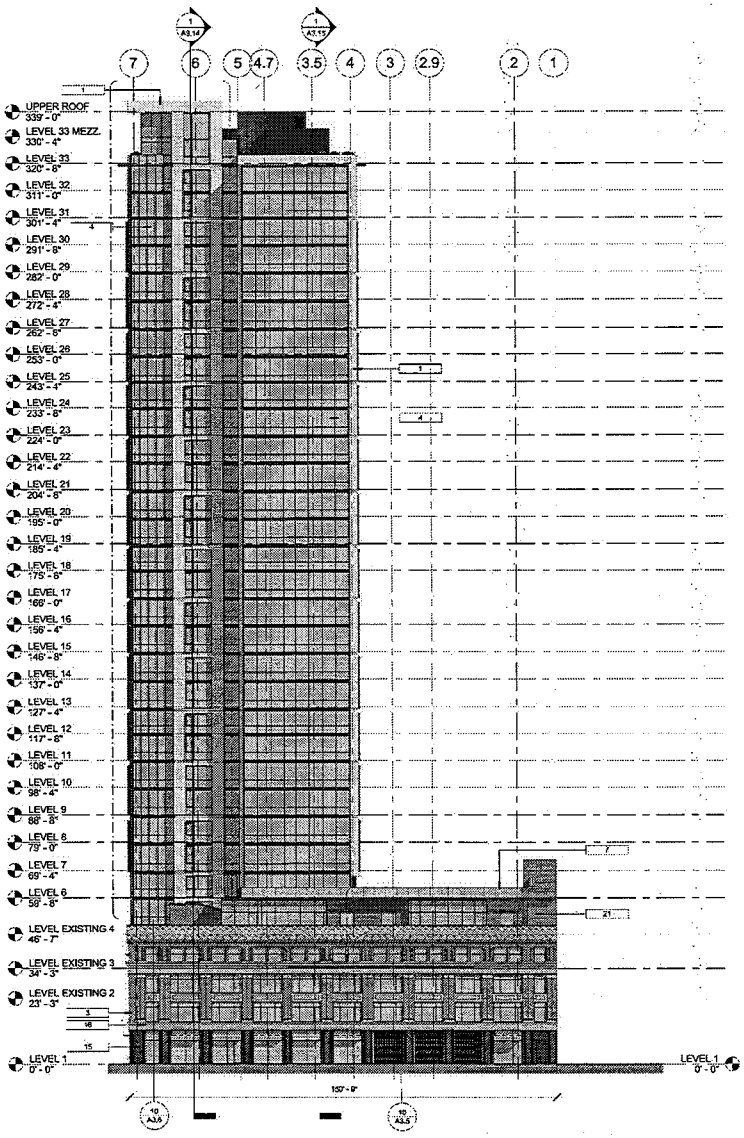

1 SOUTH ELEVATION 1" = 20'-0"

KEYNOTES

1	PRECAST CONCRETE
3	BRICK - THINSET
4	WINDOW WALL SYSTEM
5	ALUMINUM WINDOW
6	ALUMINUM SUNSHADE
7	GLASS GUARDRAIL
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22	GREEN WALL
23	GFRC PANEL
24	THINSET BRICK O/PRECAST CONCRETE

TENANT SIGNAGE, APPROXIMATE SIZE AND LOCATION OF SIGNAGE SUBJECT TO APPROVAL BY THE CITY OF OAKLAND PLANNING DEPARTMENT UNDER A SEPARATE SIGNAGE PACKAGE

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DESIGN DEVELOPMENT

SOUTH ELEVATION

A3.3

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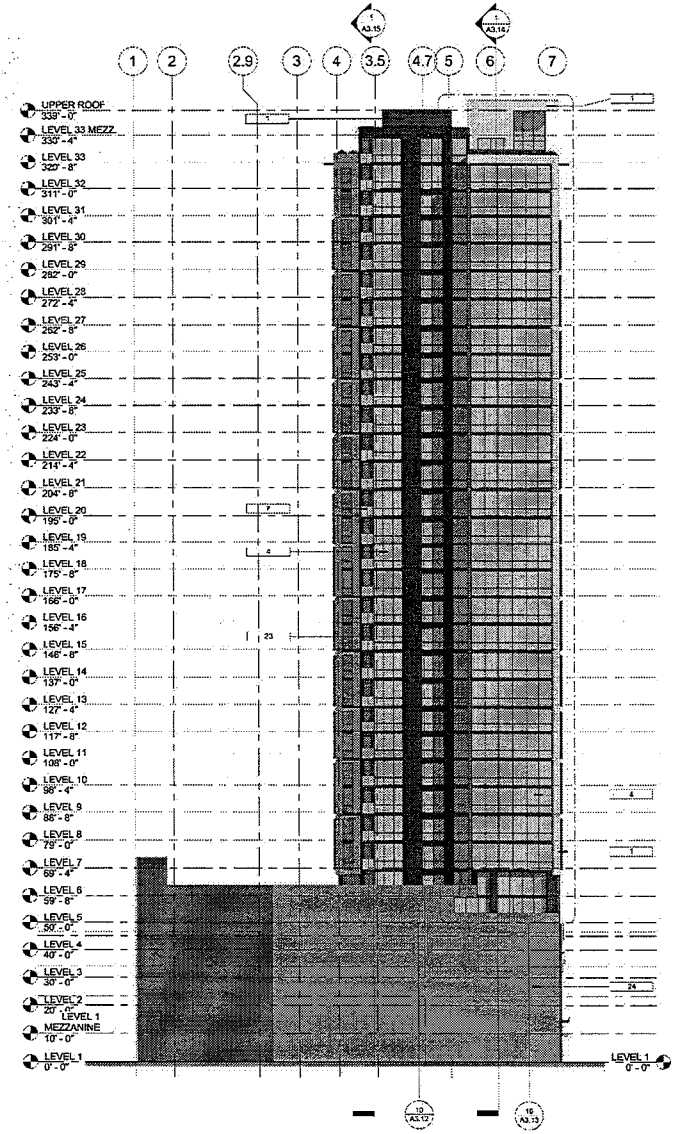

1 NORTH ELEVATION 1" = 20'-0"

KEYNOTES

1	PRECAST CONCRETE
3	BRICK - THINSET
4	WINDOW WALL SYSTEM
5	ALUMINUM WINDOW
6	ALUMINUM SUNSHADE
7	GLASS GUARDRAIL
15	STAINLESS STEEL PANEL
16	TERRA COTTA PANELING
18	LIVING WALL
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22	GREEN WALL
23	GFRC PANEL
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TENANT SIGNAGE: APPROXIMATE SIZE AND LOCATION OF SIGNAGE SUBJECT TO APPROVAL BY THE CITY OF OAKLAND PLANNING DEPARTMENT UNDER A SEPARATE SIGNAGE PACKAGE.

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DESIGN DEVELOPMENT

NORTH ELEVATION

A3.4

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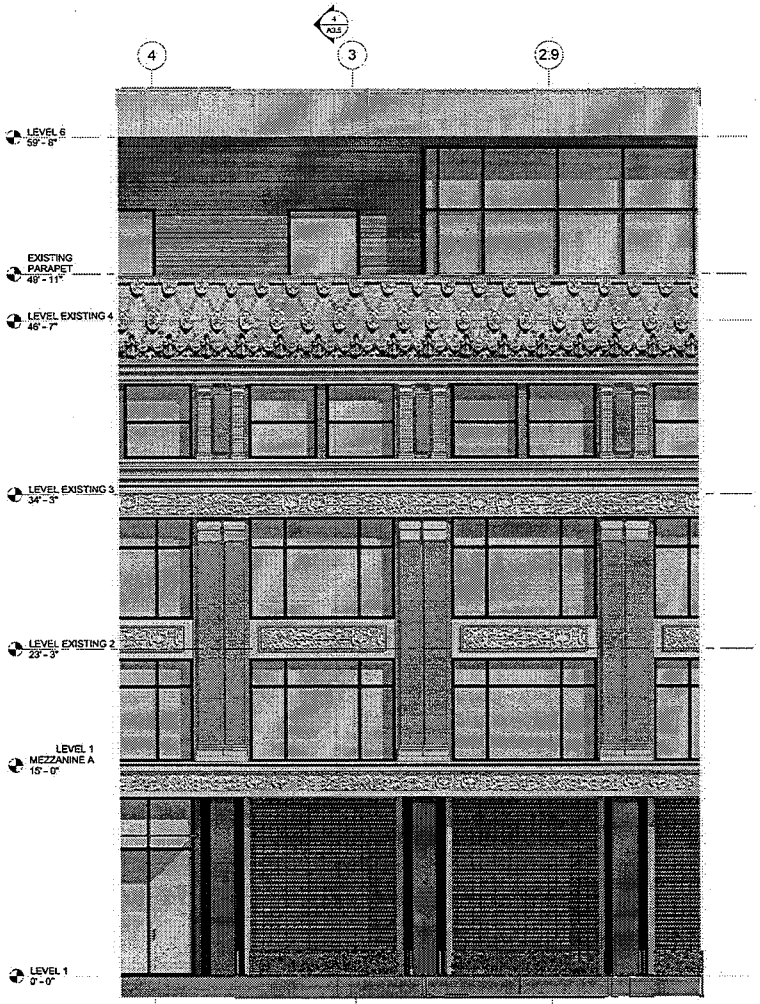
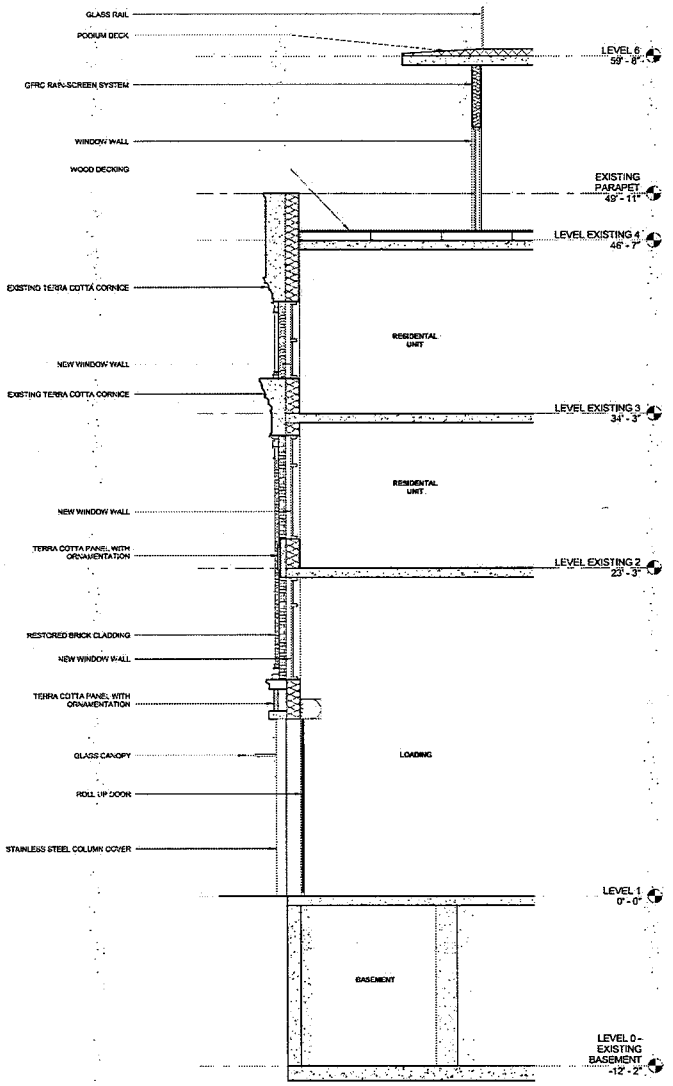


10 ENTL EAST ELEVATION CALLOUT1 1/4" = 1'-0"



4 EAST CALLOUT 1 SECTION 1 1/4" = 1'-0"

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DESIGN DEVELOPMENT

ENLARGED ELEVATION / WALL SECTIONS

A3.5

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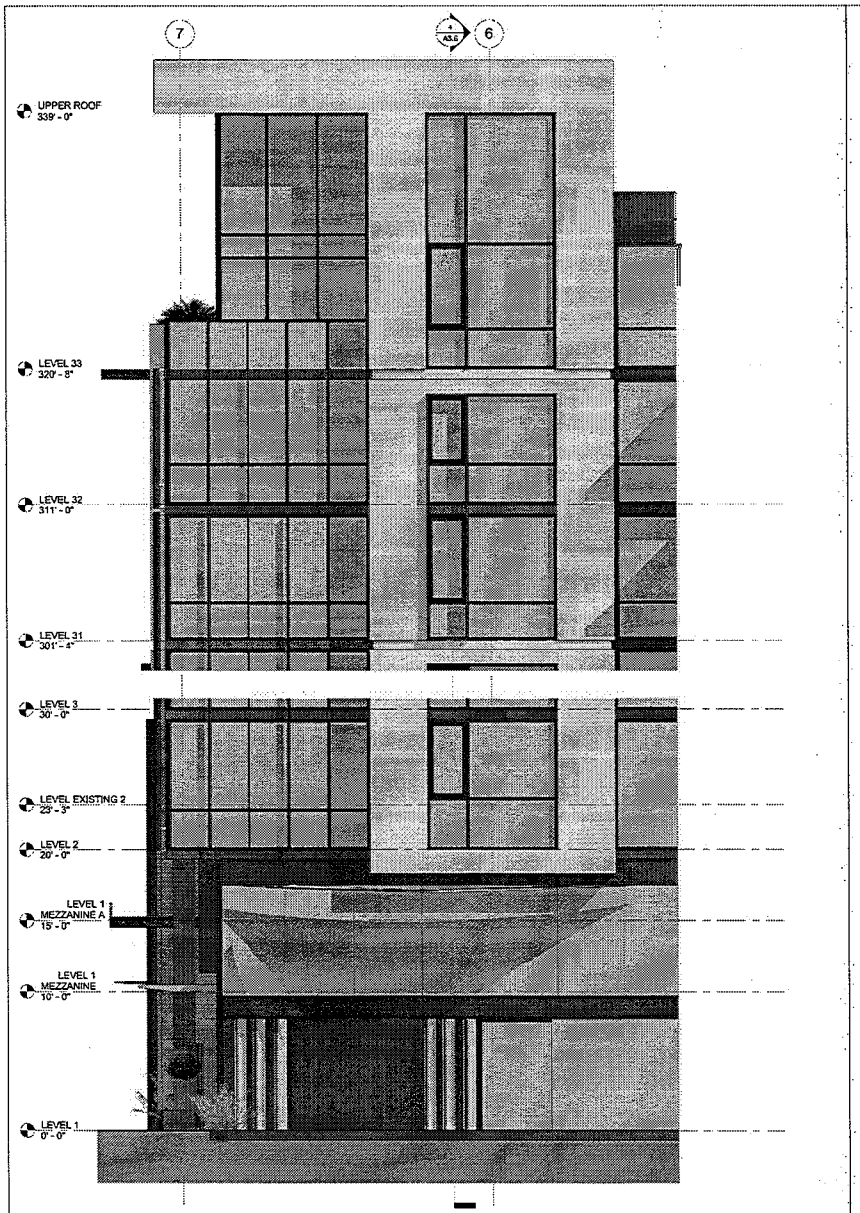
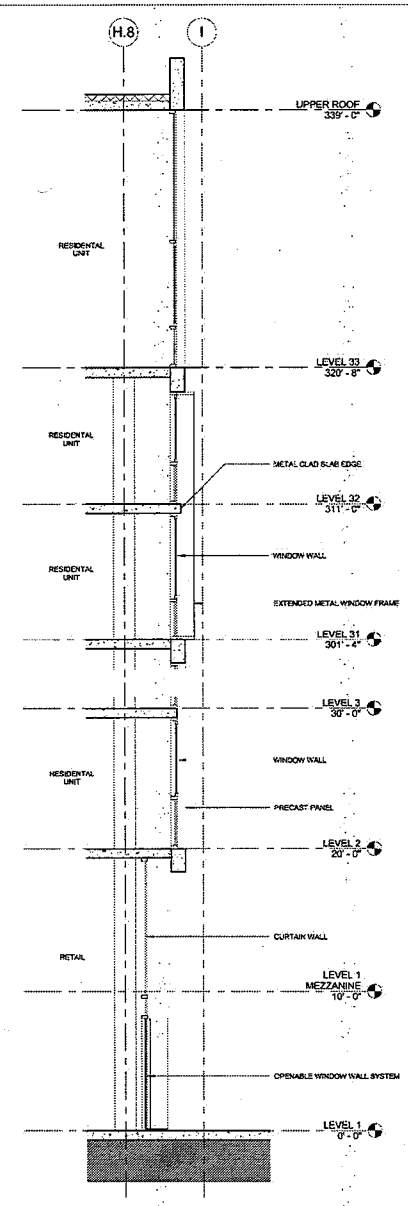


10 SECTION THROUGH COURT 1/4" = 1'-0"



4 EAST CALLOUT 3 SECTION 1 1/4" = 1'-0"

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DESIGN DEVELOPMENT

ENLARGED ELEVATION / WALL SECTIONS

A3.6

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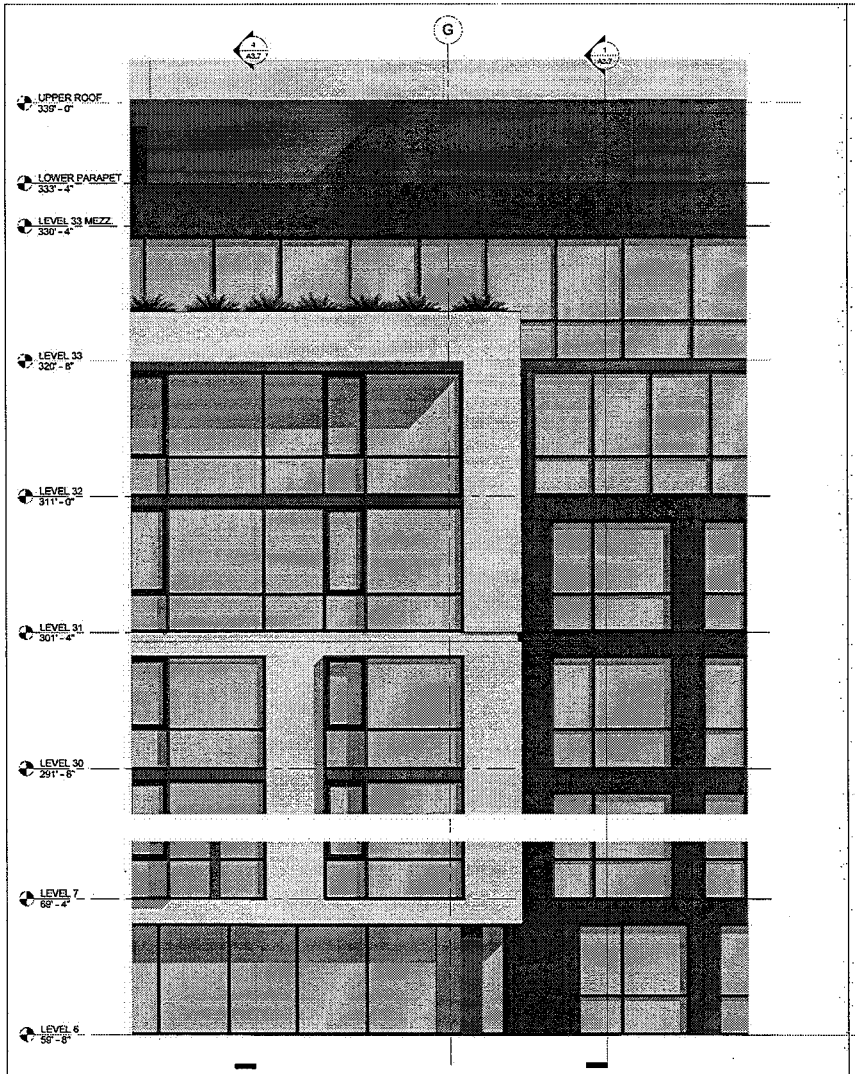
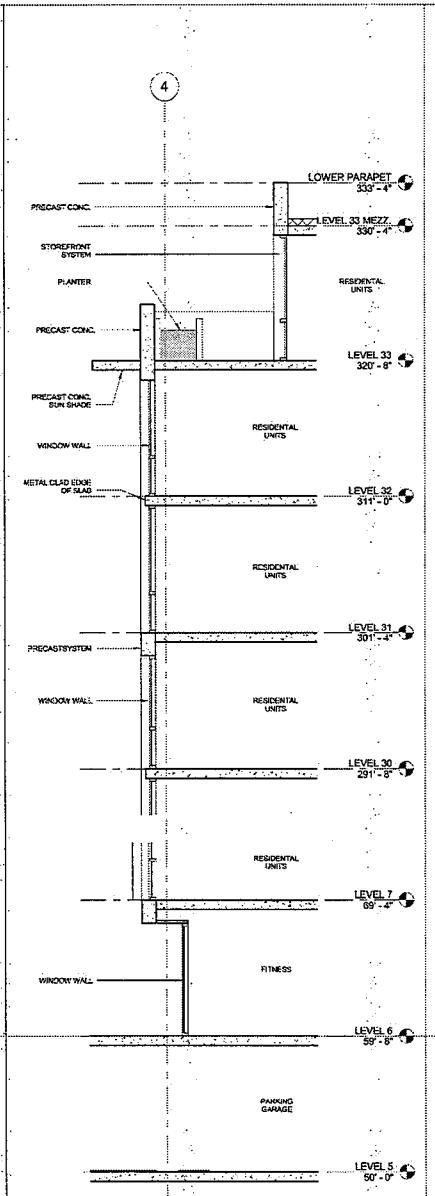
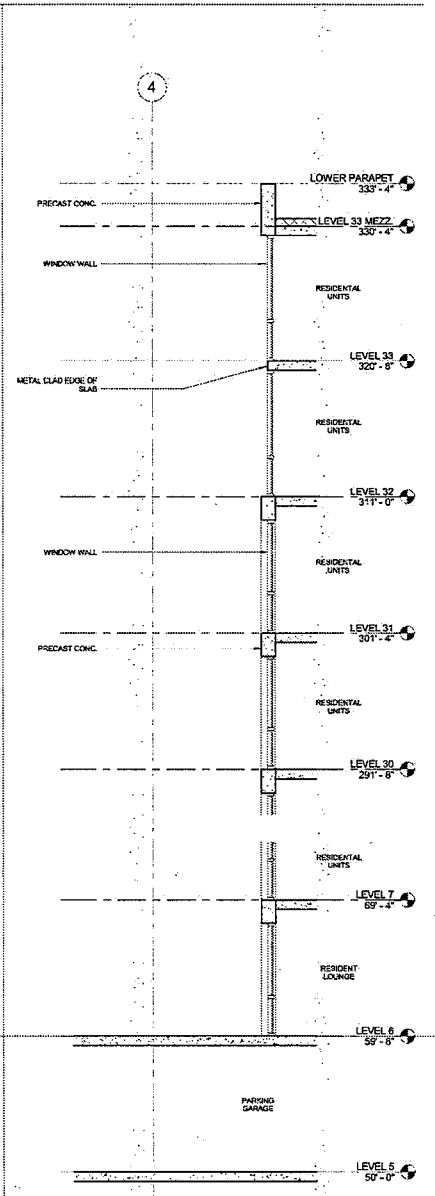


10 EAST ELEVATION CALLOUT 1 1/4" = 1'-0"



4 NORTH CALLOUT SECTION 1 1/4" = 1'-0"



1 NORTH CALLOUT 1 SECTION 2 1/4" = 1'-0"

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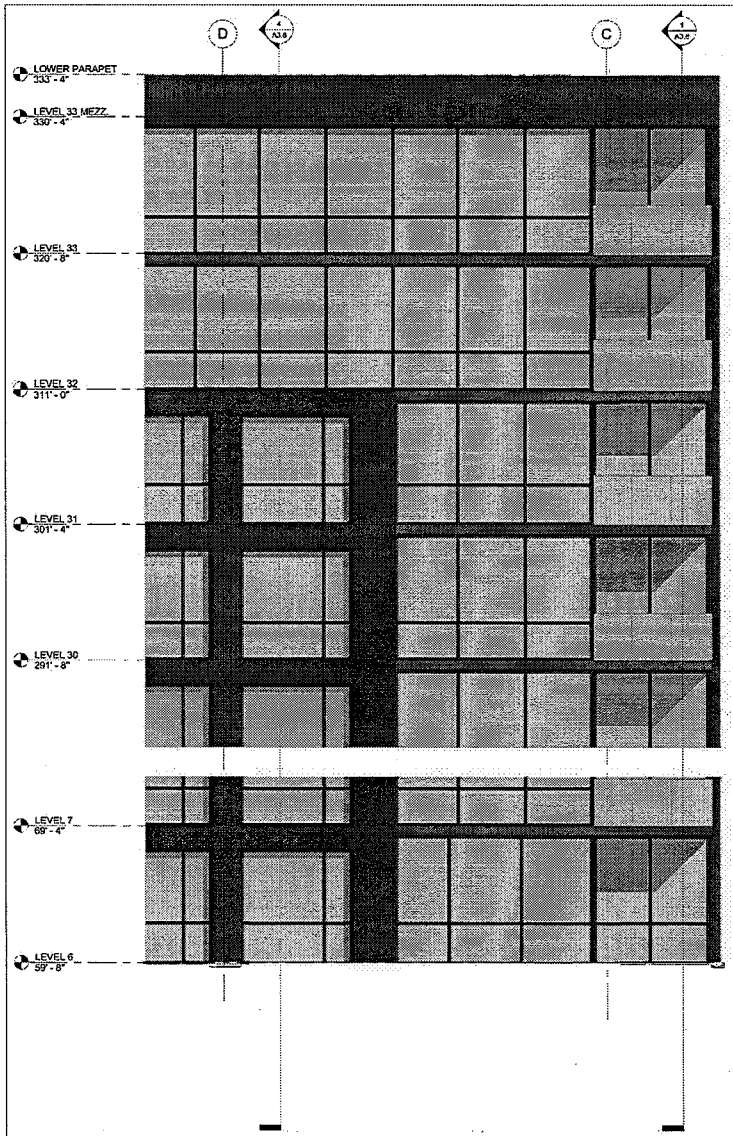
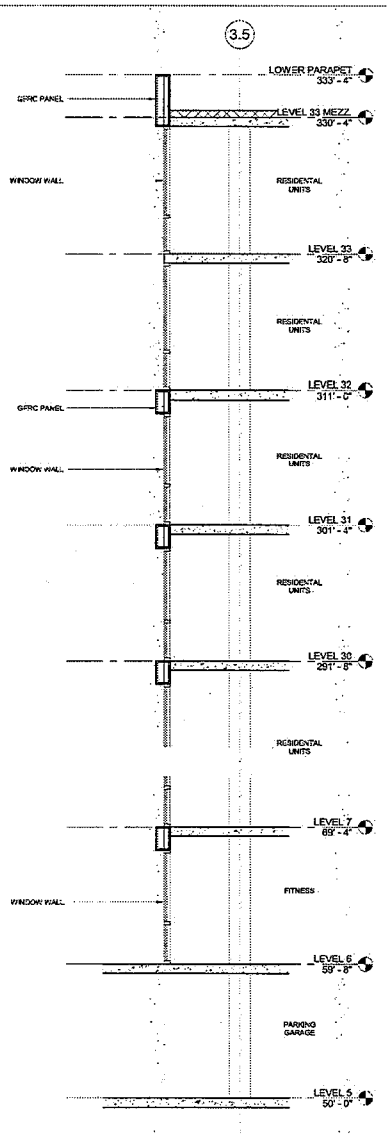
DESIGN DEVELOPMENT

ENLARGED ELEVATION / WALL SECTIONS

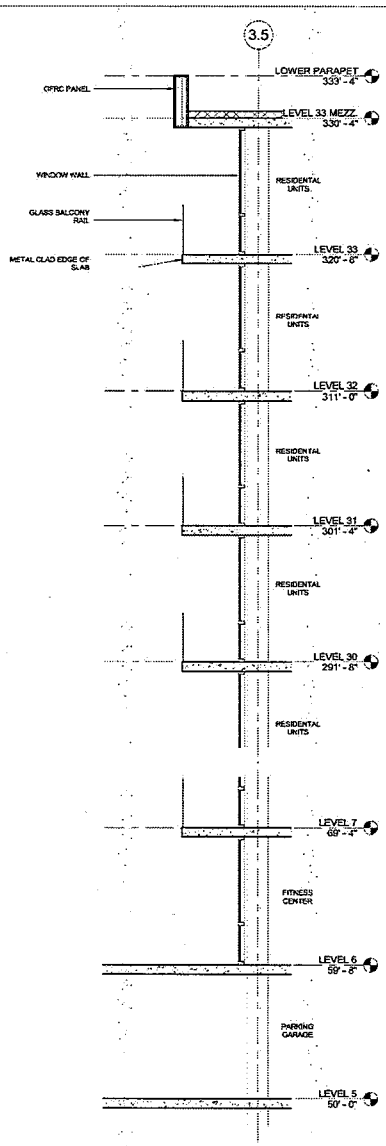
A3.7



10 EAST ELEVATION CALLOUT 2 1/4" = 1'-0"



4 NORTH CALLOUT SECTION 2 1/4" = 1'-0"



1 NORTH CALLOUT 2 SECTION 2 1/4" = 1'-0"

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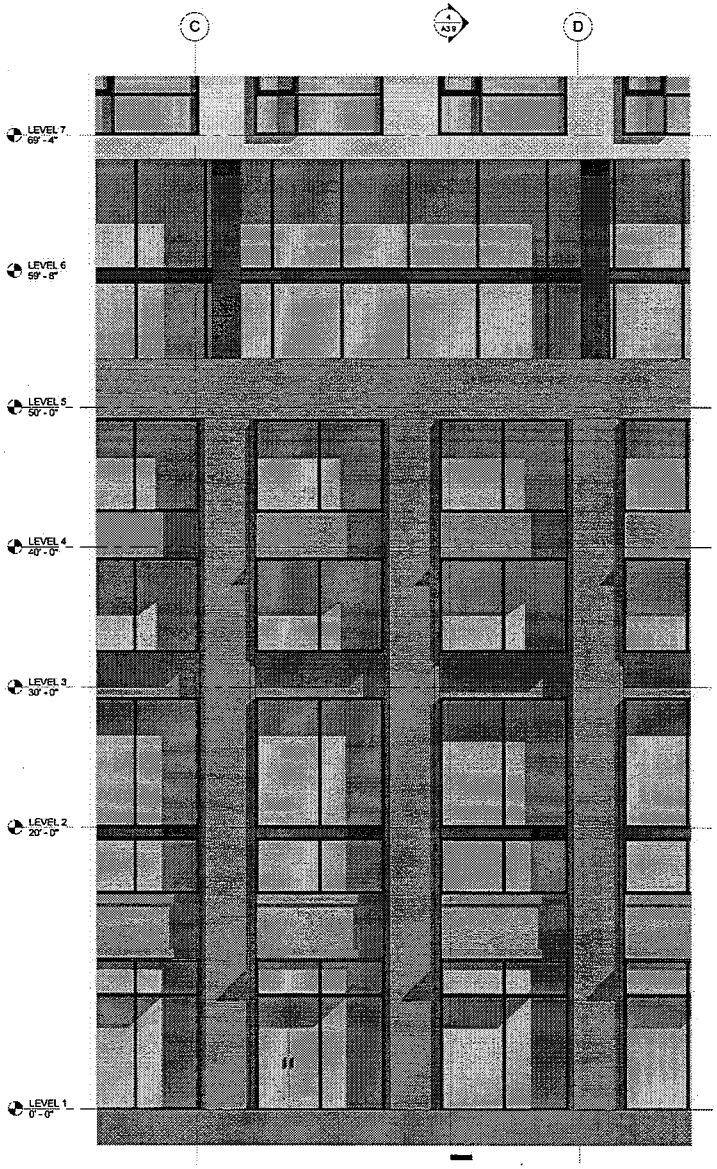
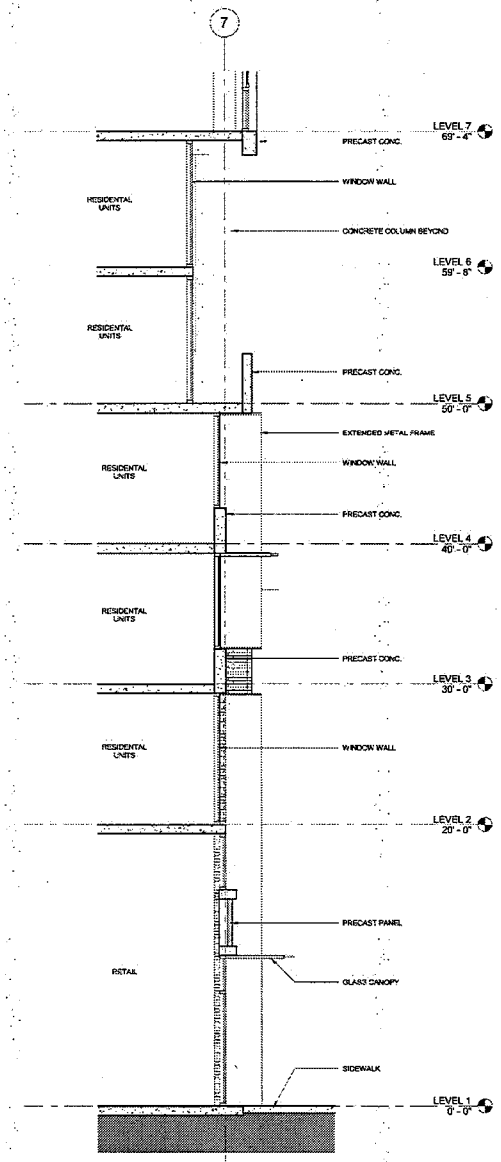
DESIGN DEVELOPMENT

ENLARGED ELEVATION / WALL SECTIONS

A3.8



10 WEST ELEVATION CALLOUT 1 1/4" = 1'-0"



4 SOUTH CALLOUT 1 SECTION 1 1/4" = 1'-0"

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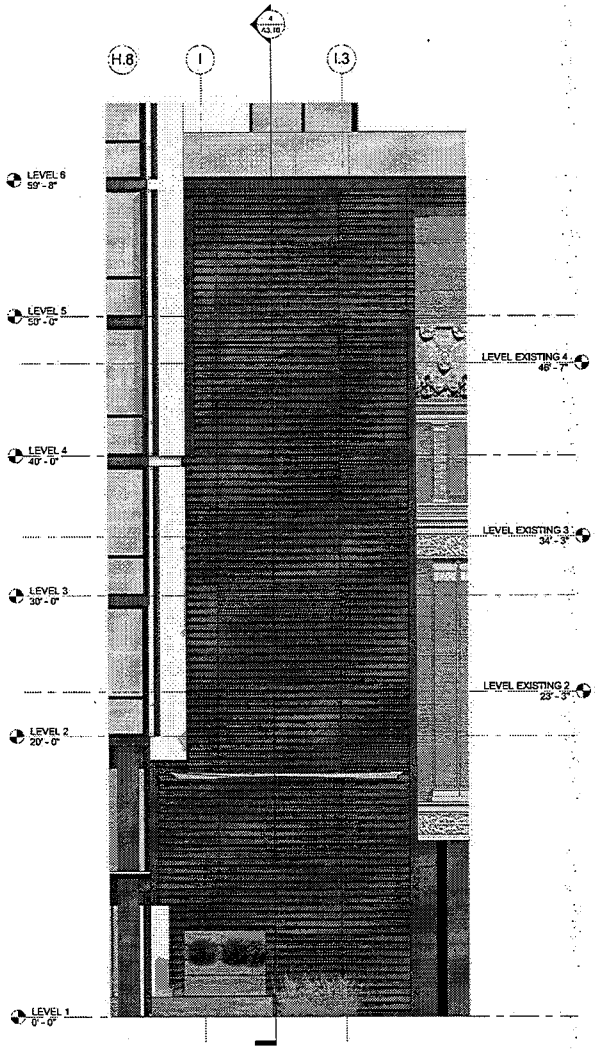
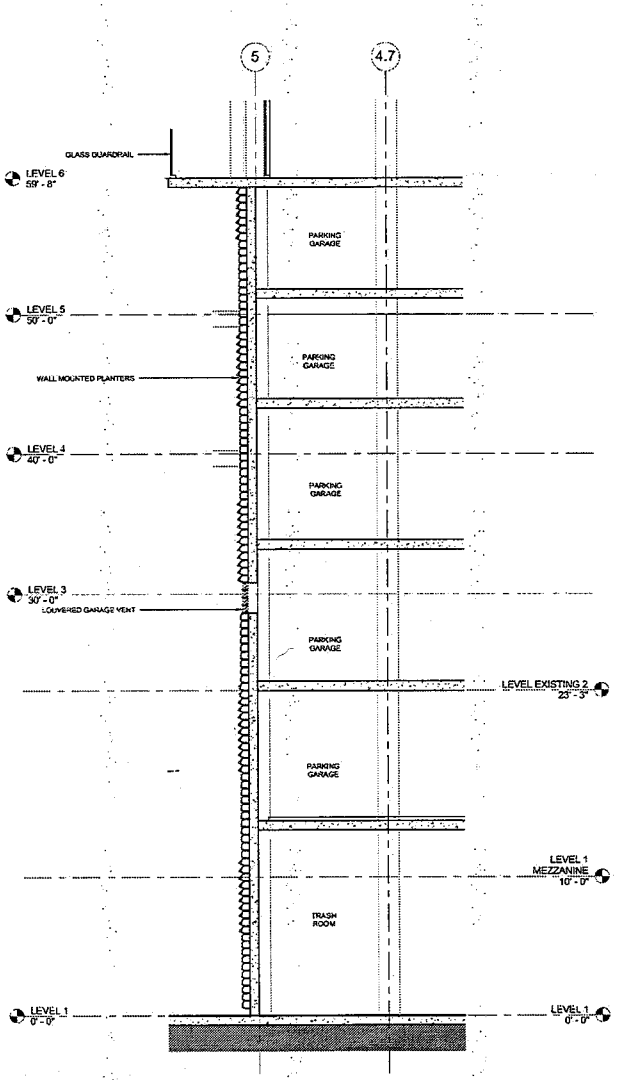
DESIGN DEVELOPMENT

ENLARGED ELEVATION / WALL SECTIONS

A3.9



10 CALLOUT OF WEST ELEVATION 1/4" = 1'-0"



4 SOUTH CALLOUT 22 SECTION 1 1/4" = 1'-0"

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DESIGN DEVELOPMENT

ENLARGED ELEVATION / WALL SECTIONS

A3.10

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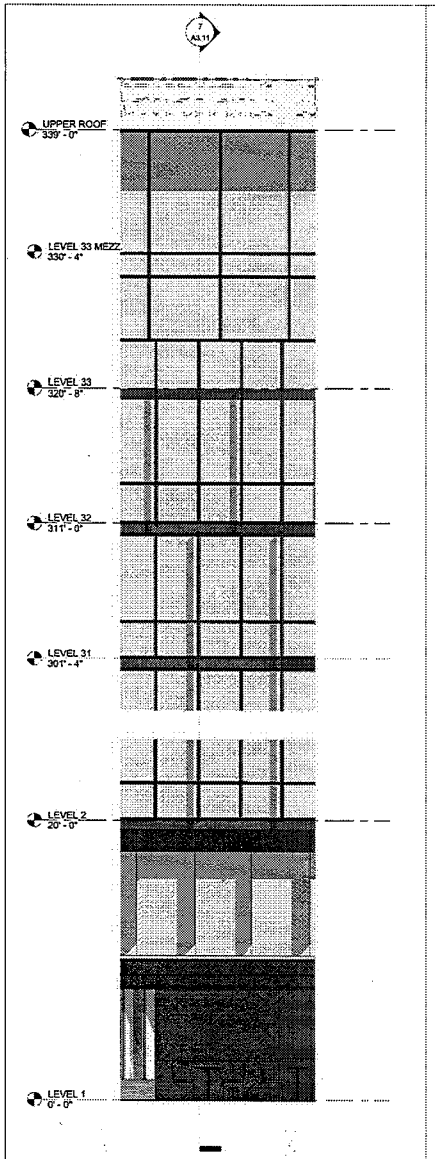
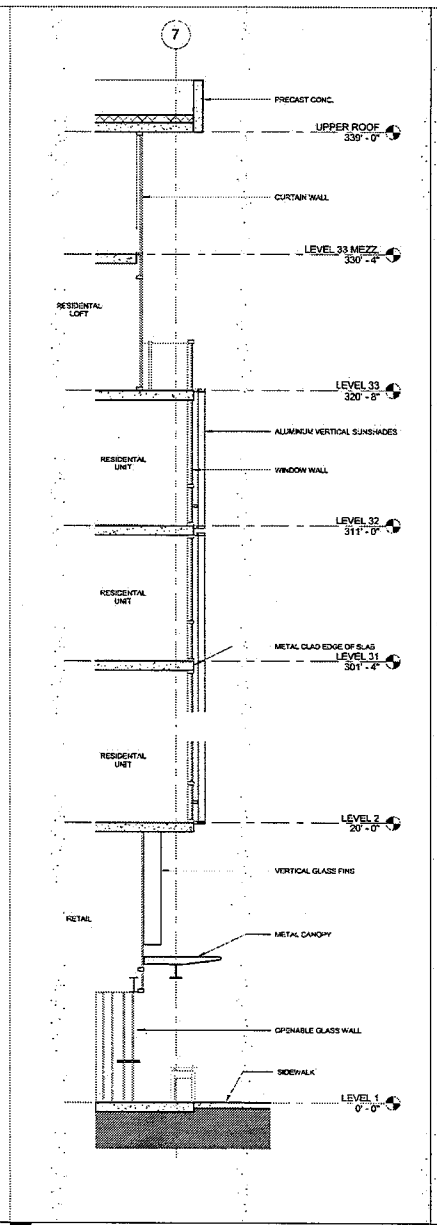
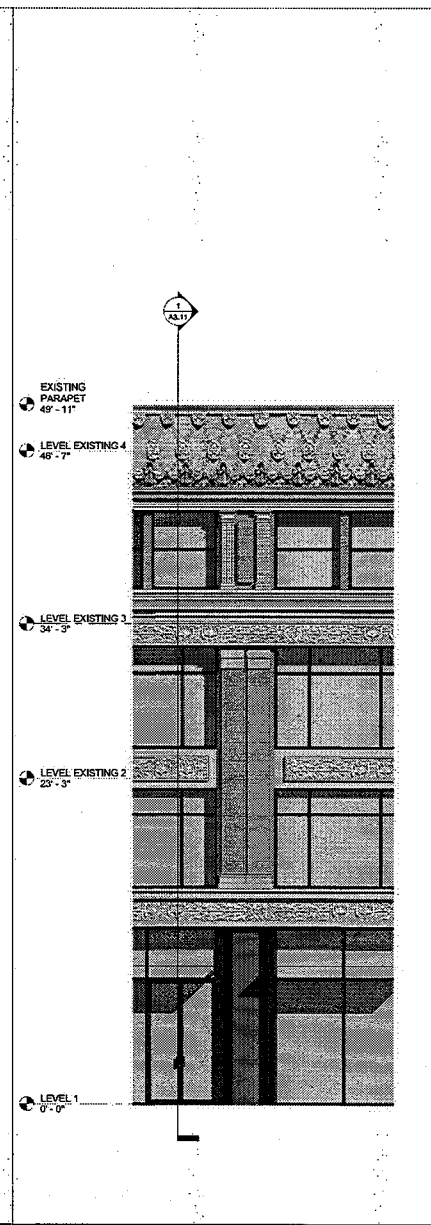


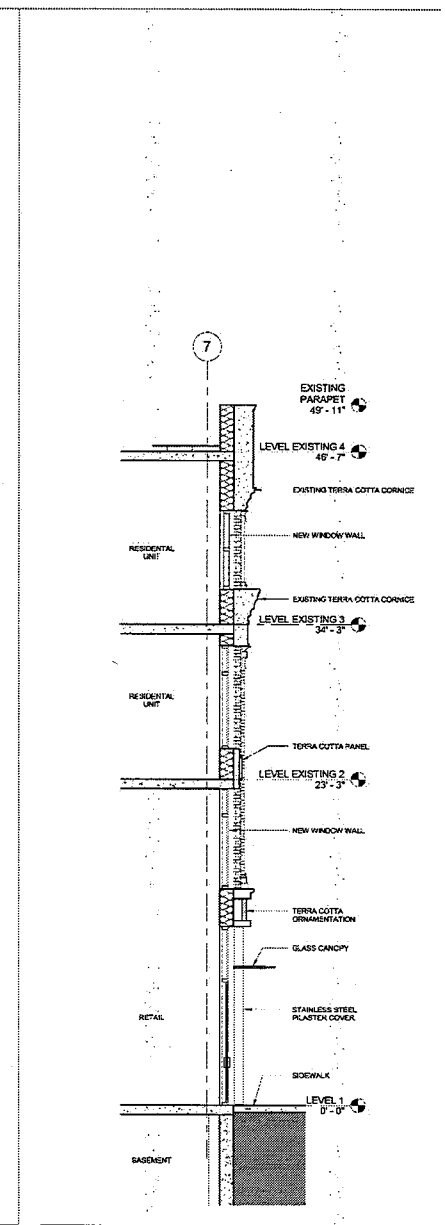
10 WEST ELEVATION CALLOUT 2 1/4" = 1'-0"



7 SOUTH CALLOUT 2 SECTION 2 1/4" = 1'-0"



4 WEST ELEVATION CALLOUT 3 1/4" = 1'-0"



1 SOUTH CALLOUT 3 SECTION 3 1/4" = 1'-0"

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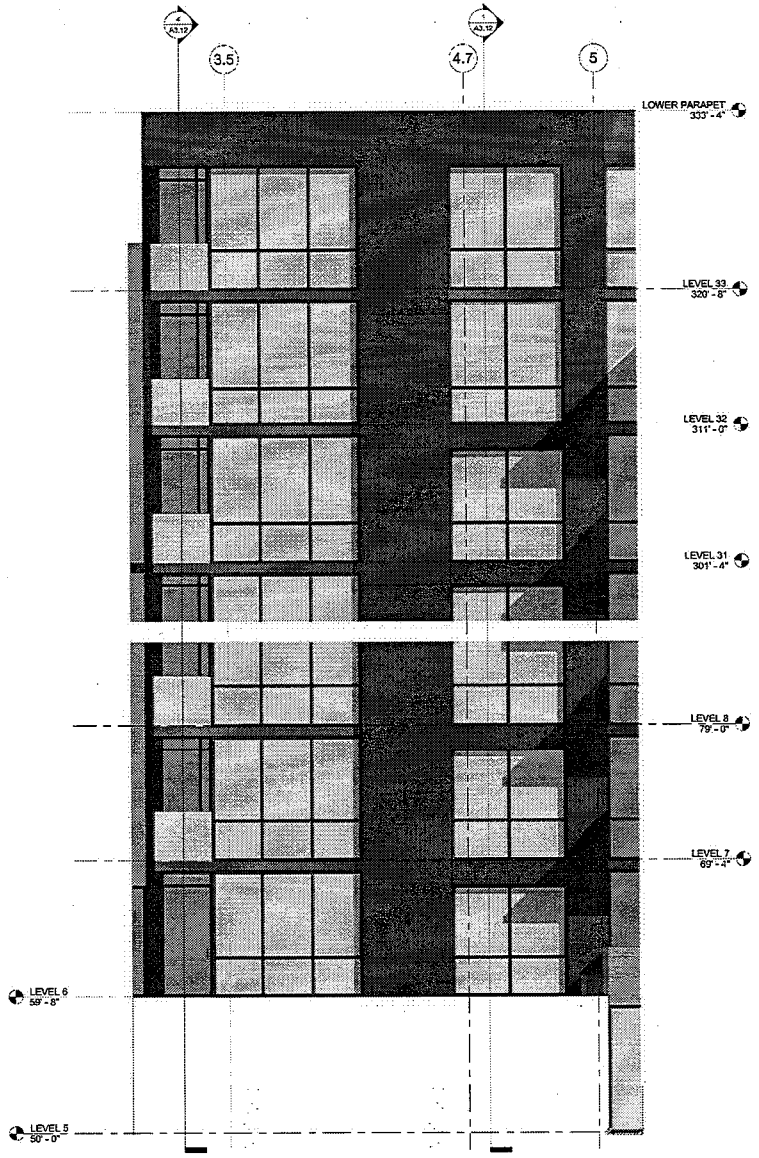
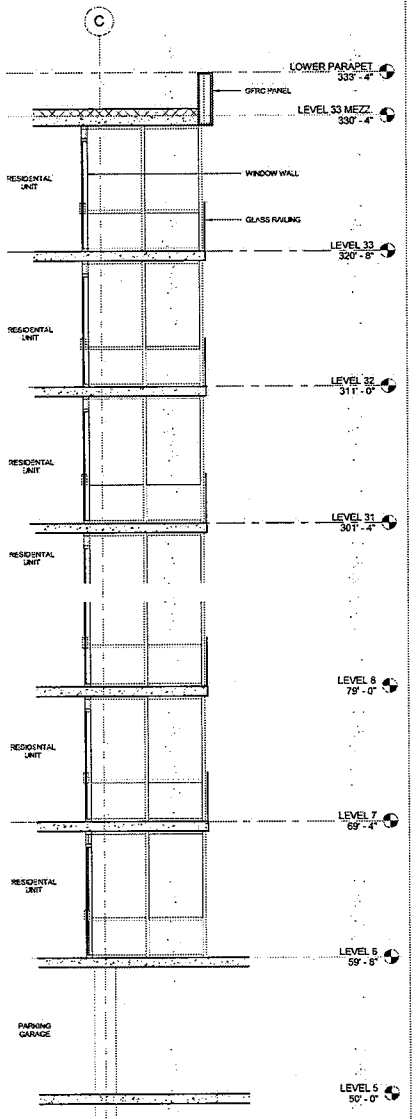
DESIGN DEVELOPMENT

ENLARGED ELEVATION / WALL SECTIONS

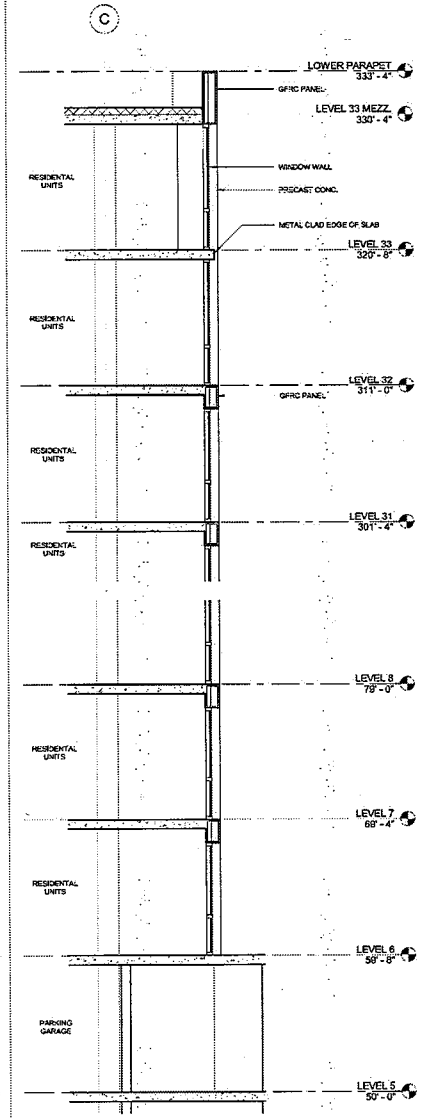
A3.11



10 NORTH ELEVATION CALLOUT 1 1/4" = 1'-0"



4 NORTH CALLOUT 1 SECTION 4 1/4" = 1'-0"



1 NORTH CALLOUT 1 SECTION 1 1/4" = 1'-0"

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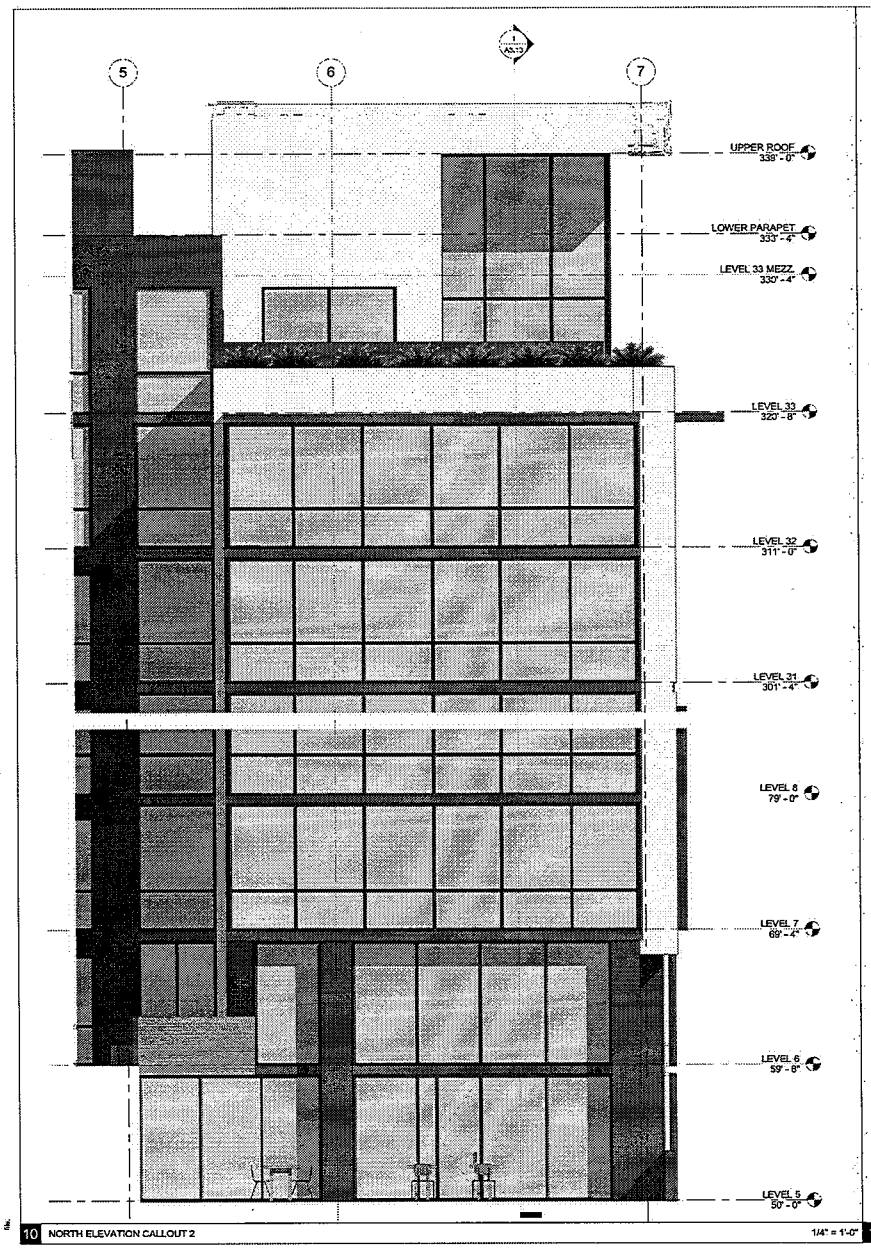
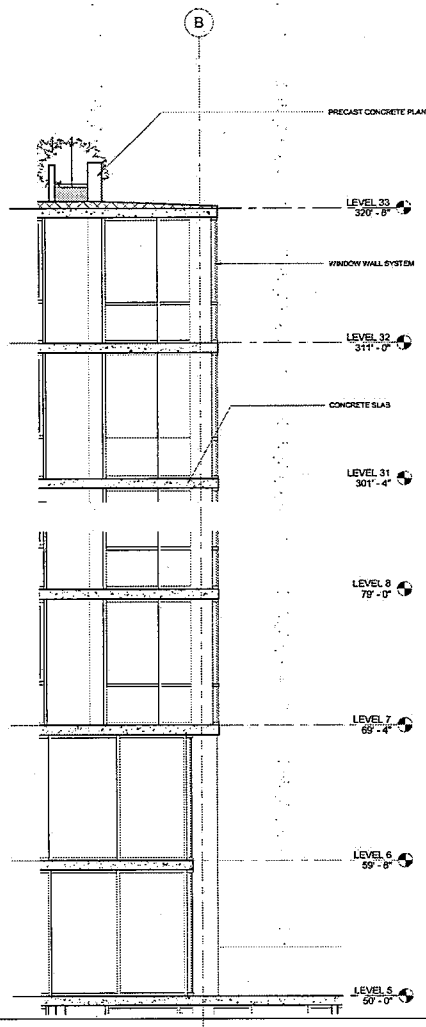
DESIGN DEVELOPMENT

ENLARGED ELEVATION / WALL SECTIONS

A3.12



10 NORTH ELEVATION CALLOUT 2 1/4" = 1'-0"



1 NORTH SECTION 2 1/4" = 1'-0"

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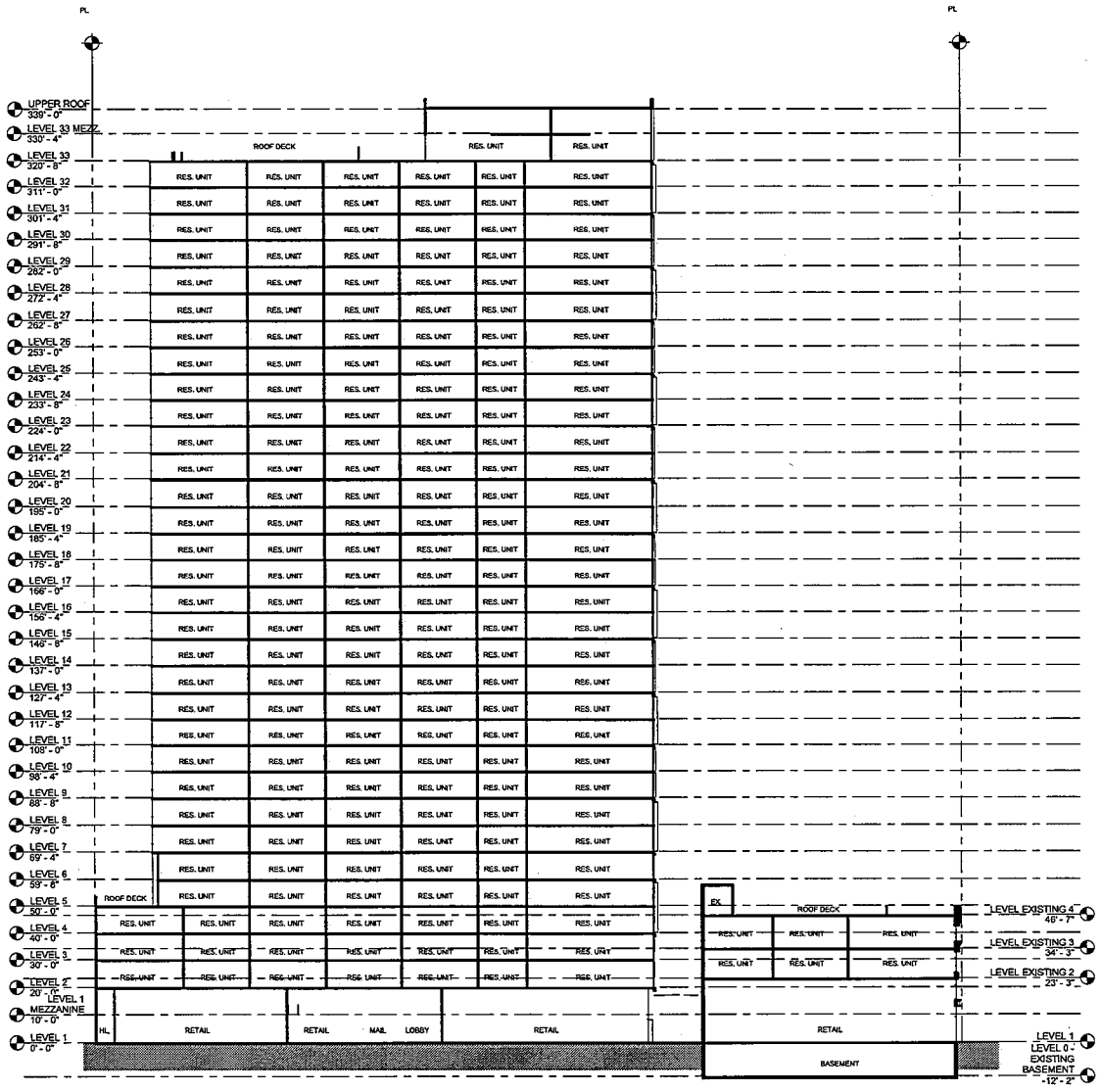
ENLARGED
ELEVATION /
WALL SECTIONS

A3.13



1 BUILDING SECTION LOOKING NORTH

1" = 20'-0"

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file:

brick.

ARCHITECT
brick., llp
928 carleton street
berkeley, ca 94710
510.516.0167
www.brick-llp.com

CLIENT
19th and broadway associates, llc

rev date issue

C-31415
11-30-15
RENEWAL DATE

1900 broadway

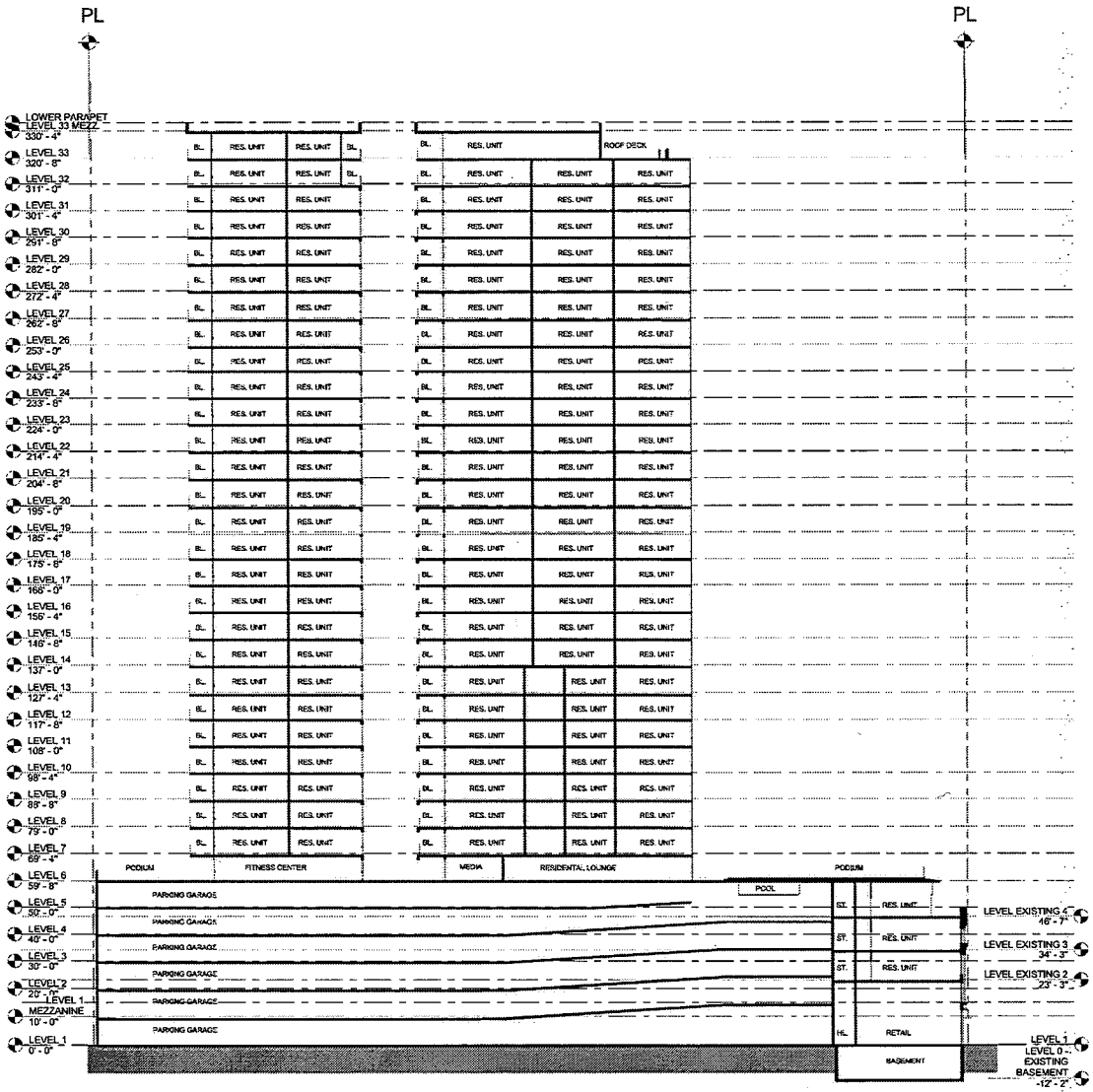
1900 broadway oakland california
project number: Project Number

scale: as noted
date: 06.02.15

DESIGN DEVELOPMENT

BUILDING SECTION

A3.14



1 BUILDING SECTION LOOKING SOUTH

1" = 20'-0"

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brick.

ARCHITECT
brick., llp
828 creveden street
berkeley, ca 94710
510.528.0157
www.brick-llp.com

CLIENT
19th and broadway associates, llc

TBM	Date	Issue

C-31415
12-16-15
RENEWAL
08.02

1900 broadway

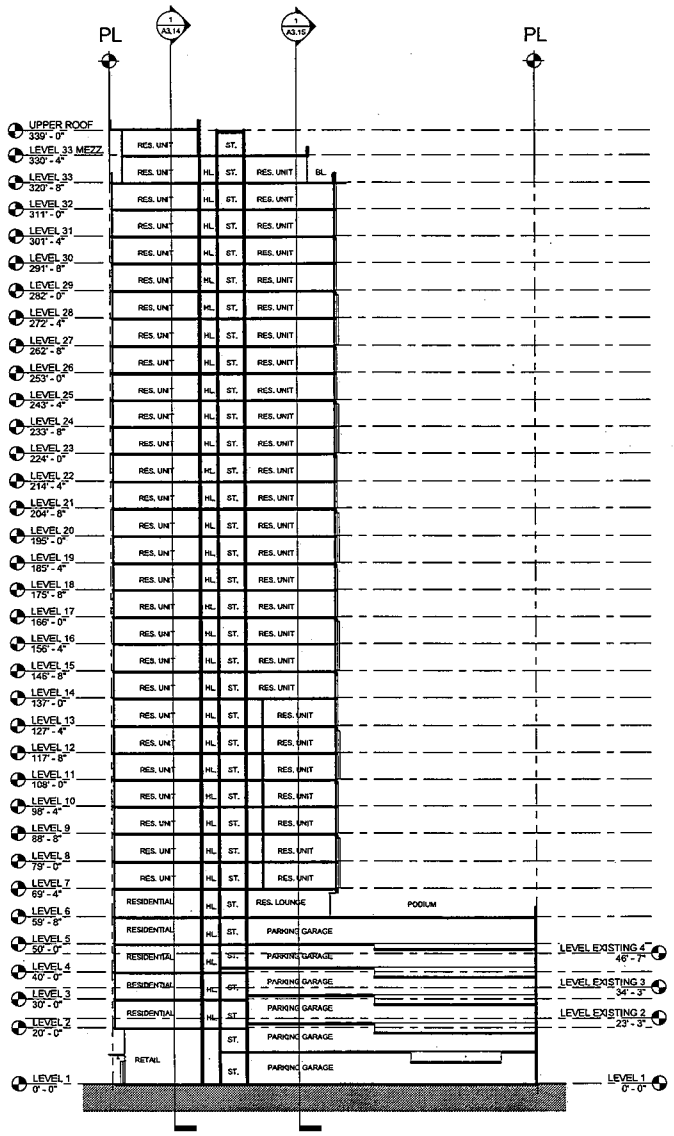
1900 broadway oakland california
project number: Project Number

scale: as noted
date: 08.02.15

DESIGN DEVELOPMENT

BUILDING SECTION

A3.15



1 BUILDING SECTION LOOKING WEST

1" = 20'-0"

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ARCHITECT
brick., llp
925 carleton street
berkeley, ca 94710
510.516.0107
www.brick-llp.com

CLIENT
19th and broadway associates, llc

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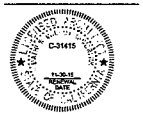


1900
broadway

1900 broadway oakland california
project number: Project Number

scale: as noted
date: 05.22.15

DESIGN
DEVELOPMENT

BUILDING
SECTION

A3.16

Design Review Committee STAFF REPORT

Case File Number PLN15179-R01 **February 28, 2018**

Location:	1900-1944 Broadway (APNs: 008-0638-005-00; 008-0638-006-03; 008-0638-007-10). **(See map on reverse)**
Proposal:	Revision of a proposal to construct a new 36-story building with 451 residential units and approximately 50,000 square feet of commercial space. The project also includes reconditioning an existing four story, historically-rated (Cb+1+) building and demolishing a one story commercial building that has no historic rating.
Applicant/Owner:	Seth Hamalian, 19th and Bway Associates, LLC
Planning Permits Required:	Design Review for new construction in a CBD zone; Major Conditional Use Permit for new construction over 250 feet in height or 200,000 square feet in floor area; Minor Conditional Use Permits for a reduction of the parking requirement in the CBD zone and a reduction in the size of a loading berth; and a Minor Variance for a reduction of the number of loading berths from two to one.
General Plan:	Central Business District
Zoning:	CBD-P Central Business District Pedestrian Retail Commercial Zone and CBD-C Central Business District General Commercial Zone
Environmental Determination:	Exempt, State CEQA Guidelines Sections 15332 – In-fill projects and 15183 - Projects consistent with a community plan, general plan, or zoning.
Historic Status:	Existing building at the corner of 19th Street and Broadway is rated Cb+1+ and the site is within the Uptown Commercial Area of Primary Importance. This building will be refurbished as part of this project.
City Council District:	3
Status:	Previously approved
Action to be Taken:	Review proposed changes to project and direct staff
For Further Information:	Contact case planner **Neil Gray** at **510-238-3878** or **ngray@oaklandnet.com**

SUMMARY

The subject project has been approved to be a new, 36-story tower with 451 residential units and approximately 75,000 square feet of office and 25,000 square feet of retail space at 1900 Broadway in Downtown. The approved project also includes reconditioning an existing four story, highly rated historic structure known as the Tapscott Building. The current proposal is a revision to the approved project that includes 37 stories with 433 units and approximately 75,000 square feet of office space and 21,000 square feet of retail space. The revised proposal also includes changes to the exterior of the building.

Staff recommends that the DRC analyze the proposed design changes to the proposal and provide direction to staff and the applicant.

#1

ATTACHMENT C

BACKGROUND AND PROPOSAL

This project was originally approved at the August 5, 2015 City Planning Commission meeting. This approval included the construction of a new 36-story tower with 451 residential units and approximately 50,000 square feet of commercial space at 1900 Broadway. The project also included reconditioning an existing four story, highly rated historic structure, known as the Tapscott Building (rated Cb+1+ and considered a contributor to the Uptown Historic District by the Office of Cultural Heritage Survey).

Staff administratively approved a revision to the proposal on March 25, 2016 that increased the scope of the project as described in the following table:

	2015 Planning Commission Approved Project	2016 First Revised Project	Difference
Height (ft)	330	368	+38 ft
Stories	33	36	+3 stories
Residential Units	345	451	+106 dwelling units
Office Space (sf)	0	25,000	+25,000 sf
Retail Space (sf)	4,000	5,000	+1,000 sf
Restaurant Space (sf)	6,000	20,000	+14,000 sf

Other than the additional height, the revision did not include any significant changes to the exterior of the tower and included the same renovation of the Tapscott Building (see Attachment B for plans). The revision was approved administratively after noticing the neighborhood and the completion of a detailed environmental analysis.

On February 6, 2018, the applicant submitted another set of revised plans that showed additional changes to the exterior of the tower (see Attachment A). Staff believes the exterior changes merit review by the Design Review Committee but does not believe the changes require approval from the full Planning Commission because there are no major changes to the massing of the tower. The renovation of the Tapscott building continues to be included in the project.

Attachment C contains comments received regarding the proposal during the notice period for this agenda item and the extension of the project, which was approved by the Planning Commission on February 2, 2018.

PROPERTY DESCRIPTION

This flat, 40,674 square-foot, site is at the northeast corner of the intersection of Broadway and 19th Street. Approximately 400 linear feet of the site faces Broadway and 150 linear feet faces 19th Street. The four-story, L-shaped Tapscott commercial building, constructed in 1922-1923, fronts both Broadway and 19th Street. This building has an historic rating of Cb+1+ and is a contributor to the Uptown Commercial Historic District. Although brown brick and terra cotta materials, a tall ground floor, and detailing contribute to the historic significance of the building, it is in substantial disrepair – the storefronts are in particularly poor condition, the tapestry trim on the building is badly damaged, and the original vertical spandrels on the upper floors were removed in the 1960's. A second commercial building, which is without historical or architectural interest, is also located at the site.

An entrance to the 19th Street BART Station and an AC Transit bus stop is located on Broadway, directly in front of the site.

NEIGHBORHOOD DESCRIPTION

The site is in within the heart of Downtown Oakland's commercial district and on the edge of the historic Uptown Commercial District, a retail and entertainment area that is anchored by the art-deco styled Fox and Paramount Theaters and I. Magnin Building. The district contains several night clubs, restaurants, retail stores, and galleries. Several low-rise commercial buildings that contribute to the historic character of the district are located to the south, across the Broadway, and on 19th Street. The four-story, approximately 60-foot tall Sears Building at the corner of Broadway and 20th Street is currently being renovated for office uses and a ground floor market hall. The adjacent 12-story Golden West Office Building, constructed in 1968, has a post-modern design with reflective windows and a block shape. According to the City's Office of Cultural Heritage Survey, the Uptown Historic District does not have a consistent height context that should influence the appropriate height of new buildings.

PROJECT DESCRIPTION

Overall

The following table compares the project data of the newly revised design to that of the previously approved revision:

	2016 Revised	2018 Proposed Revision	Difference
Height (ft)	368	379'-6"	+11'-6" sf
Stories	36	37	+1 story
Residential Units	451	433	-18 dwelling units
Office Space (sf)	25,000 (all in the Tapscott Building)	74,649 (25,000 in the Tapscott Building)	+49,679 sf
Commercial Space (sf)	25,000	21,286	-3,714 sf
Parking Spaces	338 (above grade)	171 (141 below grade)	-167 sf

One of the biggest changes between the currently proposed revised project and approved plans is a reduction in parking spaces and the addition of office space. These changes are due to the proposed undergrounding of the parking, which is required for structural reasons related to construction over a BART tunnel. Staff believes this trade-off between parking and office space is consistent with City and regional policies regarding maximizing the use of transit through increased development intensity in the Central Business District. The developer envisions the offices to be a co-working space such as that found at the Hive at Broadway and 23rd Street.

Site Plan

The high-rise tower would sit atop a three-story podium building, which is two stories fewer than the previously proposed podium. A 20-foot wide outdoor plaza would be created between the new construction and the Tapscott Building to create outdoor seating for a restaurant, provide a visual separation between the two buildings, and expose historic advertising art on the Tapscott Building's north façade.

The ground floor would contain two retail spaces, a lobby, a leasing office and amenities. A 5,043 square-foot retail space would be 78 feet deep (more than twice the depth of the approved retail space), and a 1,243 square-foot retail space would be approximately 33 feet deep. A ramp to the underground parking, 30 mechanical parking spaces, and bike storage would be behind the commercial spaces and the lobby. Vehicular and loading access into the site would be from 19th Street, which allows Broadway, the site's primary pedestrian frontage, to be free of curb cuts and potential conflicts between pedestrians, bikes, and cars. Two stories of office space would be between the retail space and the apartments above.

An open space podium deck that includes landscaping, outdoor furniture, and a pool with views to the bay would be located where the base of the tower and top of the podium meet. The positioning of the tower's narrow north and south elevations will preserve views of the Oakland Hills and the Jack London Square area from Broadway.

Building Design

Using façade material changes, the massing of the tower in the original design creates the appearance of two separate buildings while the revised treatment gives the appearance of one building with light tinted curtain walls that is separated by a vertical element into two distinct masses. Each window of the curtain wall is proposed to contain narrow, vertical, dark mechanical louvres at their edge. According to applicant, this treatment may be removed if alternative HVAC systems are installed. On the Broadway elevation, the vertical element is provided through group balconies that have alternating shapes to create a zipper-like appearance. The facade behind the balconies would be a light gray brick that relates to the Tapscott Building. The northern elevation contains a similar vertical feature, except it contains windows instead of balconies. A discussion of these facades is contained in the "Key Issues and Impacts" section of this report.

At 15 feet in height, the ground floor is prominent and matches the height of the ground floor of the Tapscott Building. The storefront includes a floor to ceiling glass window wall system vertically separated by a balcony/awning feature. The ground floor is recessed behind a catwalk, and vertical brick columns separate the storefront windows.

The building would have a rooftop community room with an open deck with views to the Bay and San Francisco. This feature creates a top for the Broadway side of the building that would be lit up at night to create a lantern affect.

KEY ISSUES AND IMPACTS

Elevations

In general, staff believes that the proposed changes in the elevations take the design in a positive direction. The "zipper" element on the Broadway elevation will break up the volume of the building and provide visual interest to the façade. Further, its brick backing will relate to the Tapscott Building and the brick accents proposed for the ground floor façade. Replacing the parking with windows for office space will enhance the visual quality of each façade.

However, staff is concerned that the east elevation has not been given the same level of design attention as the west elevation. The east elevation, which will be highly visible from the Lake Merritt area and beyond, does not have a roof element to define the top of the building, and the recess separating the volumes on the façade contains windows instead of a more visually interesting element, such as the zipper in the front facade.

Staff also requests input from the Design Review Committee regarding the level of articulation on both facades because the curtain wall will create a 36-story flat surface. As of the writing of this report, staff has not received a material sample of the windows and cannot assess whether the details of the windows will provide adequate visual interest. However, the applicant has provided digital samples in Attachment A and will bring physical samples of the windows to the meeting for an assessment by the DRC.

RECOMMENDATION: Review and evaluate the proposed changes to the planned 1900 Broadway project.

Prepared by:

NEIL GRAY
Planner IV

Approved for forwarding to the Design Review Committee:

CATHERINE PAYNE
Acting Development Planning Manager

ATTACHMENTS:
A. Proposed Plans
B. Previously approved plans
C. Input from noticed parties

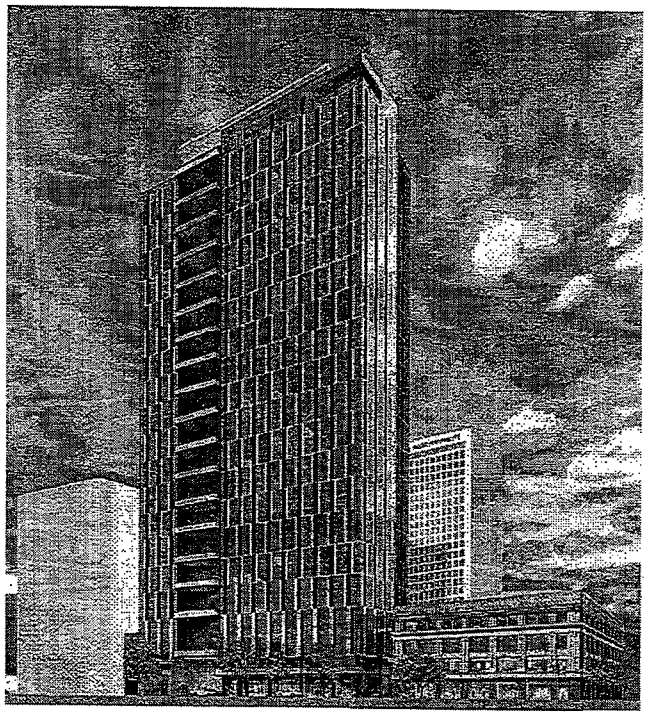
SOLOMON CORDWELL BUENZ

1900 Broadway
Oakland, CA

BEHRING

DESIGN REVIEW COMMISSION
SUBMITTAL PACKAGE

02 - 16 - 2018



Attachment A

EXECUTIVE SUMMARY: COMPARISON OF CONCEPT TO PREVIOUSLY ENTITLED

Building Massing

- Same podium and tower configuration and orientation
- Tower floor footprint +/- 6% larger but more compact length and diagonal dimensions
- Same splitting architecturally of the Broadway and south facades to break down mass
- Smaller total above grade building mass (overall GSF)
- Smaller, shorter podium footprint, increasing size and quality of ground floor and street facing open space
- Reduced overall unit count
- Less than 11% increase in height from initial approved plan to accommodate replacement of podium level residential/parking with office and the addition of some larger family-oriented / affordable-by-sharing residential units (two floors added, two mezzanine levels subtracted)

Streetfront/Open Space

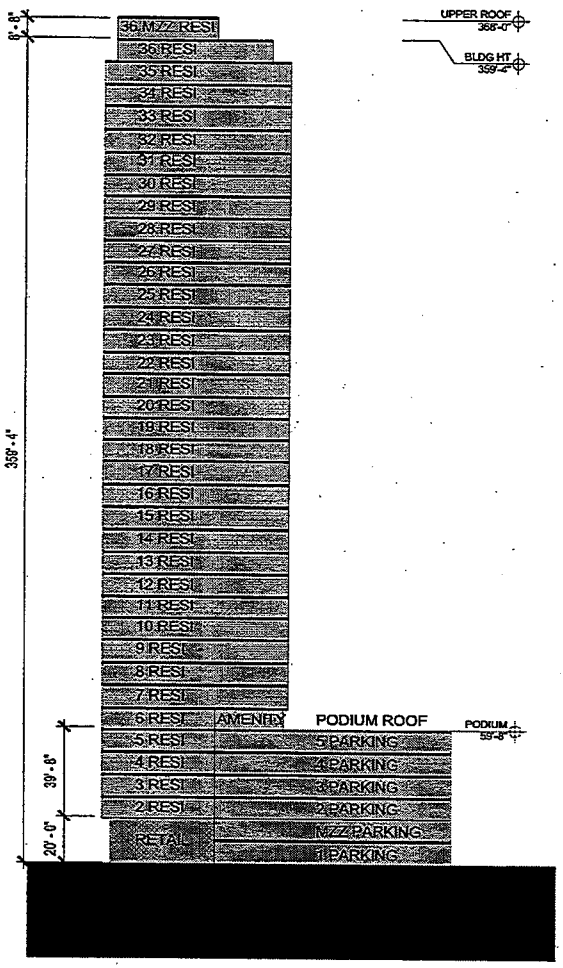
- Vastly improved retail depth by moving most parking below grade, creating deeper, higher quality retail and ground level open space
- Residential lobby elements moved deeper into the building, freeing up more Broadway frontage for retail use
- Additional outdoor cafe seating space created at recessed building core adjacent to retail
- Replaced podium floors of parking and residential units with office, creating more vibrant ground floor open space
- Pocket Park in same relative position but doubled in size and activated with direct and visual connections to retail and office use
- Large residential communal terraces and second floor continuous office terrace creates additional active use open spaces on Broadway

Architectural Design

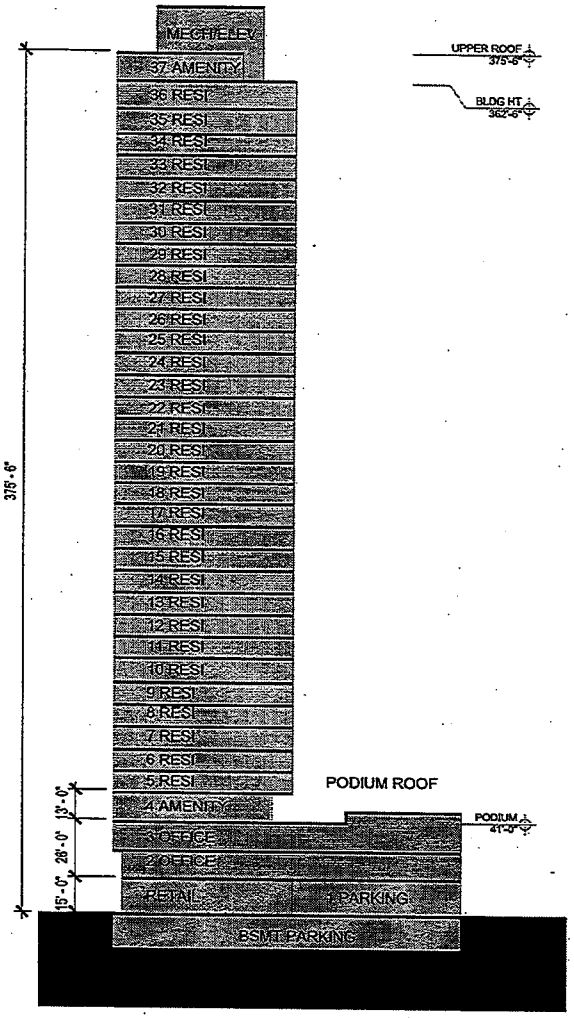
- Tower facade harmonized with a more uniform and higher-quality (curtain wall) facade upgrade throughout
- Architectural interest added with gentle angle at SW corner to pocket park, zipper of balconies leading up to rooftop "lantern" amenity crown

PLANNING/ENTITLEMENT COMPARISON*

	APPROVED INITIAL	APPROVED 2016.03.25	CURRENT CONCEPT	TAPSCOTT	DELTA CHANGE FROM: INITIAL	DELTA CHANGE FROM: REVISED
HEIGHT**	330'-4" (to upper flr) 339'-0" (to upper roof)	359'-4" (to upper flr) 368'-0" (to upper roof)	363'-6" (to upper flr) 375'-6" (to upper roof)	-	10% 10.8%	1.1% 2.0%
STORIES	33 + 2 mezz (5 + mezz podium)	36 + 2 mezz (5 + mezz podium)	36 + rooftop amenity (3 level podium)	-	-	-
RESIDENTIAL UNITS	345	451	433 (as-of-right 90 sf/unit)	0	25.5%	-4.0%
OFFICE SPACE	0	25,000 SF	50,279 SF	25,000 SF	-	-
RETAIL SPACES	10,000 SF	25,000 SF	6,286 SF	15,000 SF	-	-
PARKING SPACES	333 spaces (all above grade)	338 spaces (all above grade)	171 spaces (30 at grade, 141 below)		-49%	-49.4%
TYPICAL TOWER FLOORPLATE	12,402 SF	12,580 SF	13,264 SF		6.9%	5.4%
MAX. TOWER LENGTH/DIAGONAL	194' L / 207'-7" DIAG.	194' L / 207'-7" DIAG.	185'-4" L / 192'-7" DIAG.		-4.4% / -7.2%	-4.4% / -7.2%
* Previous approvals include Tapscott; current approval bifurcates + separates site ** Previous approvals measured to floor of highest habitable level. Typ. zoning methodology shown to upper roof level - both shown for clarification						
TOTAL GSF TOWARD FAR	**419,633 GSF**	**469,576 GSF**	**509,198 GSF (NEW) + 35,377 GSF (EXIST) = 544,575 GSF**		29.8%	16.0%
TOTAL ABOVE GRADE GSF	**537,454 GSF**	**586,675 GSF**	**523,584 GSF (NEW) + 35,377 GSF (EXIST) = 558,961 GSF**		4.0%	-4.7%



ENTITLED BLDG SECTION



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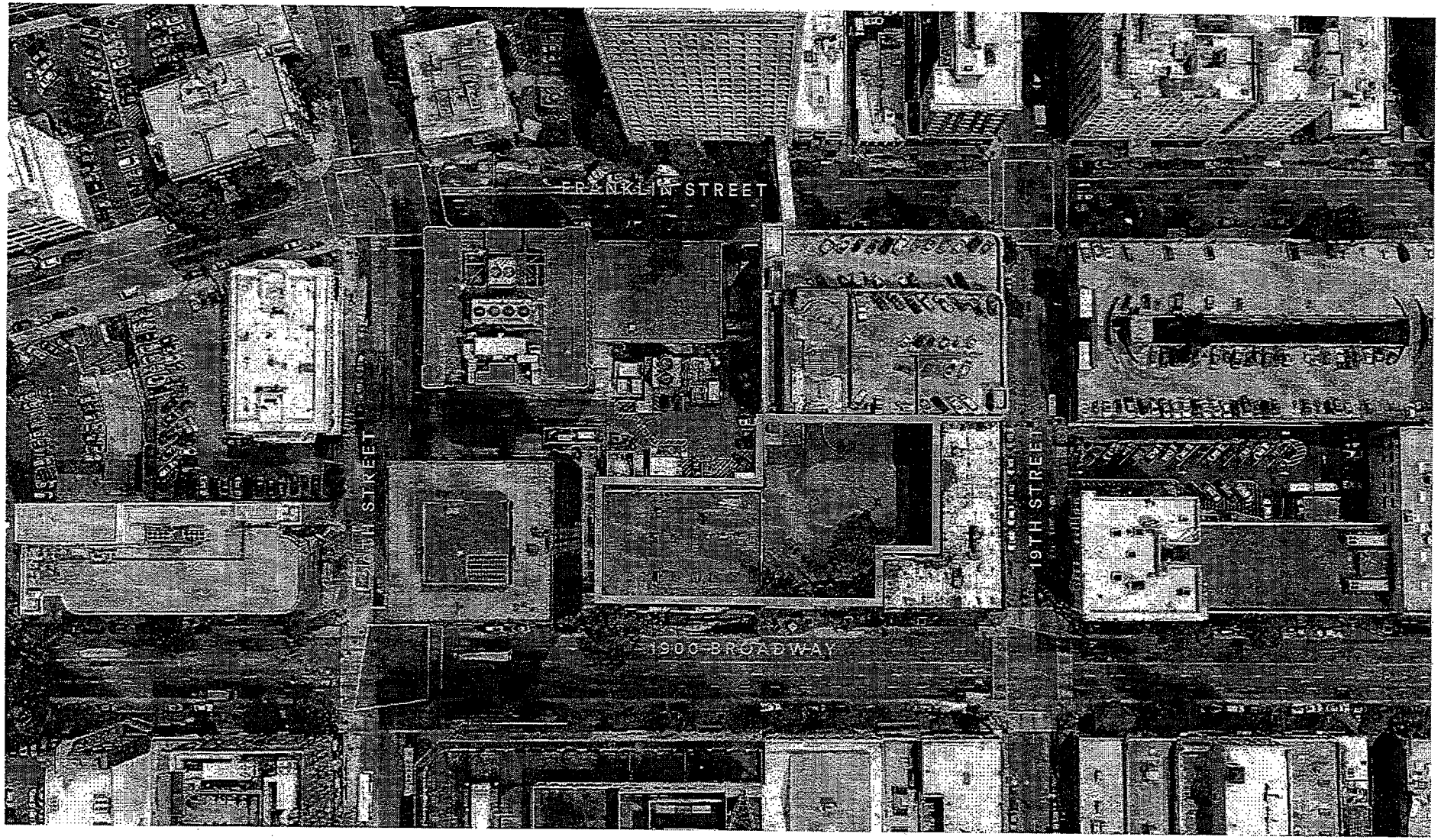
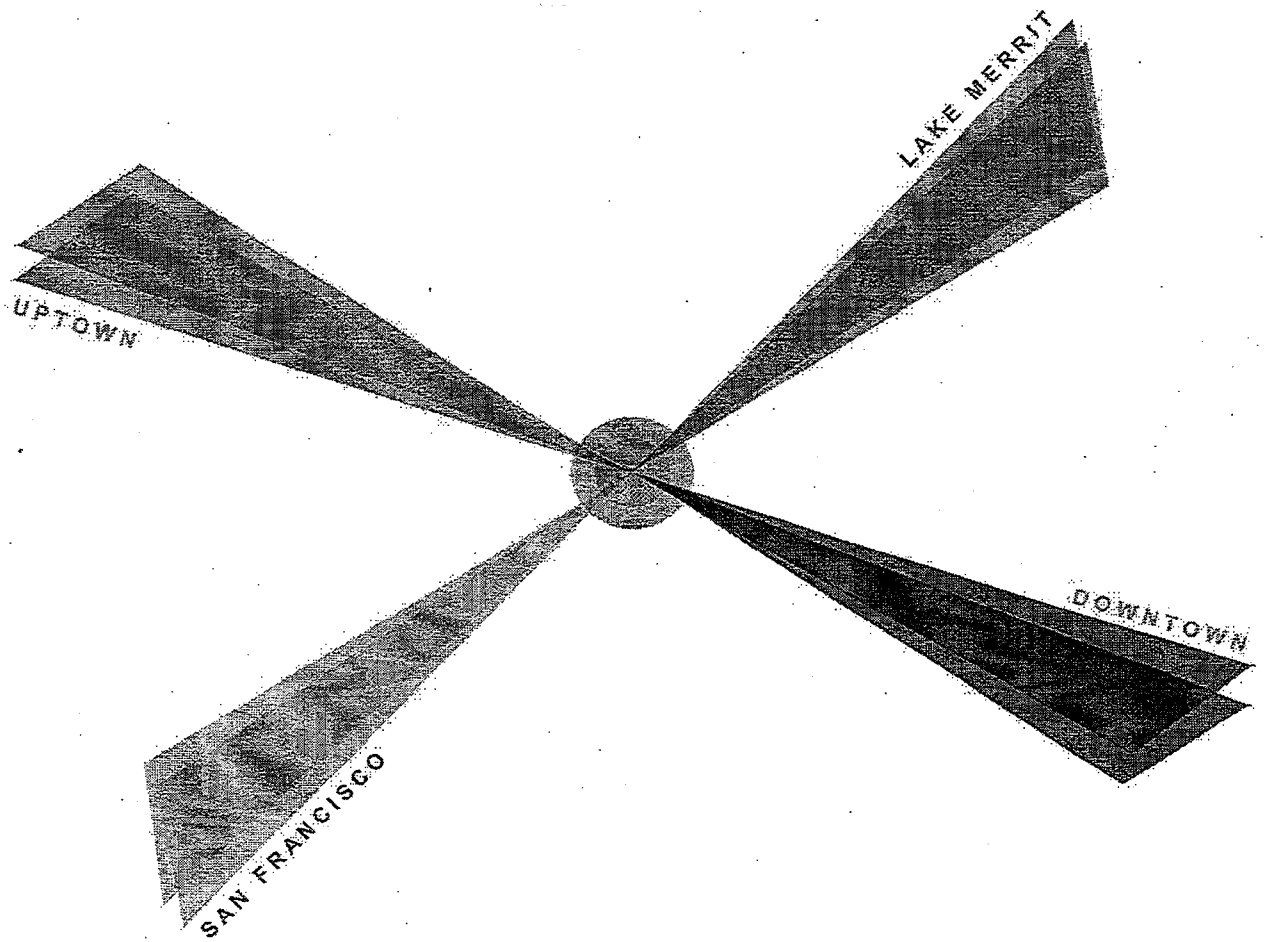
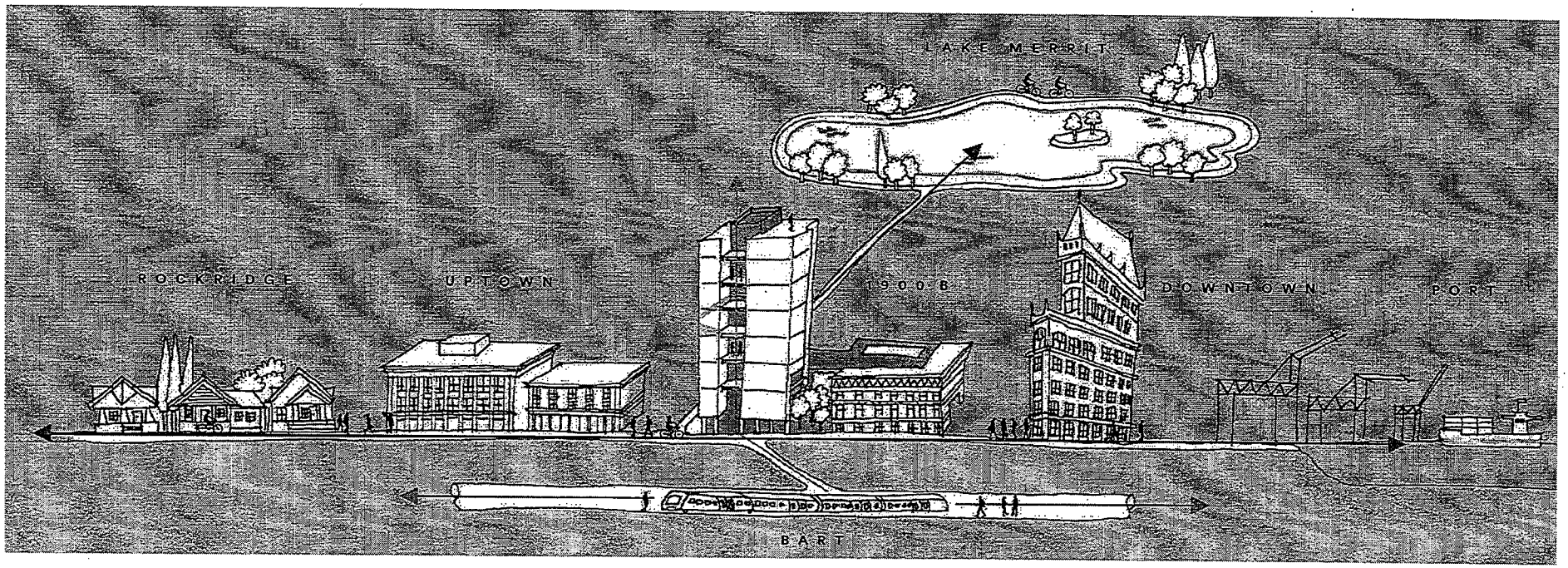


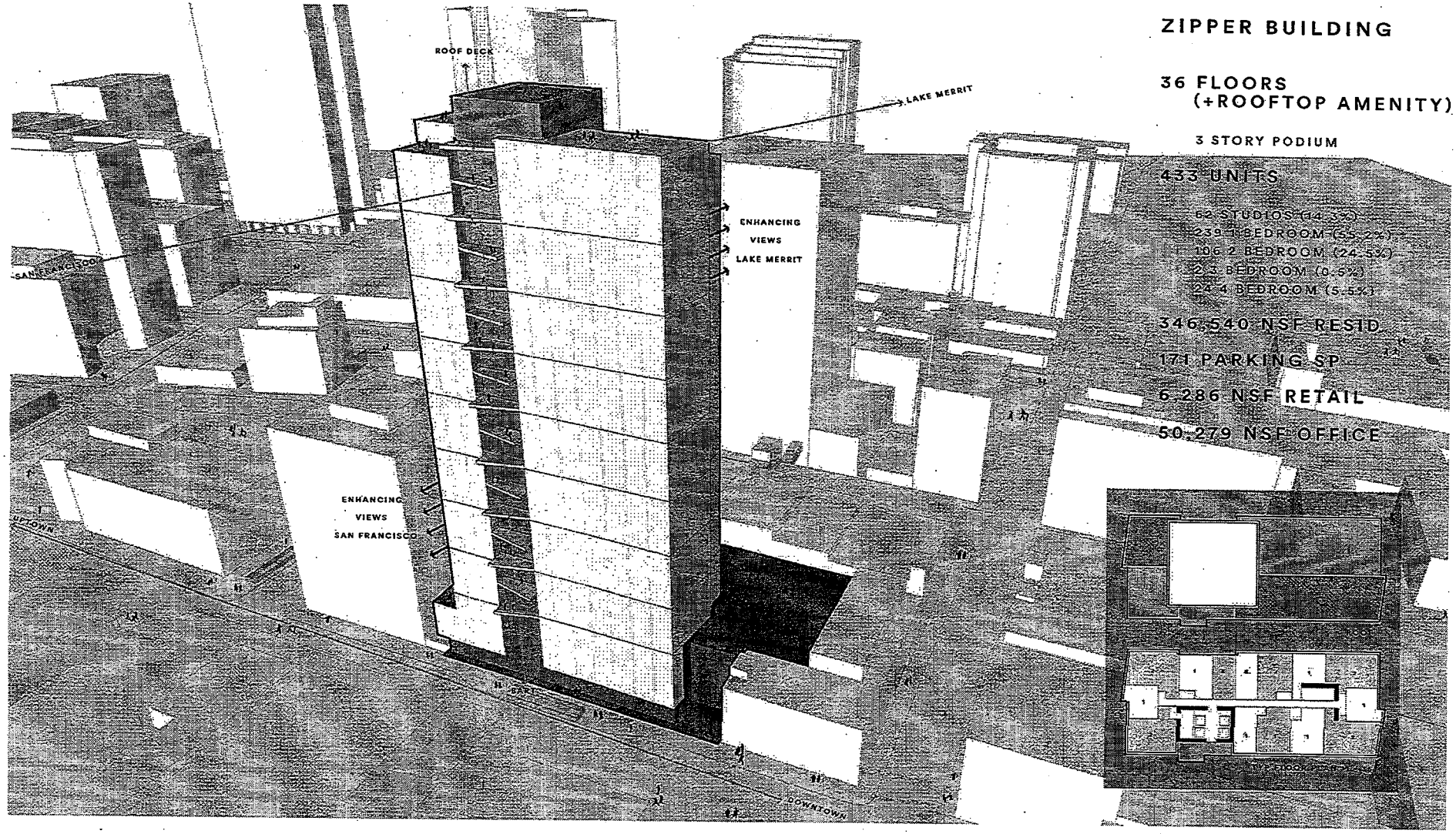
SITE AERIAL



CONCEPT | CONNECTIONS DIAGRAM



CONCEPT | CITY CONNECTIONS



ZIPPER BUILDING

36 FLOORS
(+ROOFTOP AMENITY)

3 STORY PODIUM

433 UNITS

64 STUDIOS (14.3%)
239 1 BEDROOM (55.2%)
106 2 BEDROOM (24.5%)
2 3 BEDROOM (0.5%)
24 4 BEDROOM (5.5%)

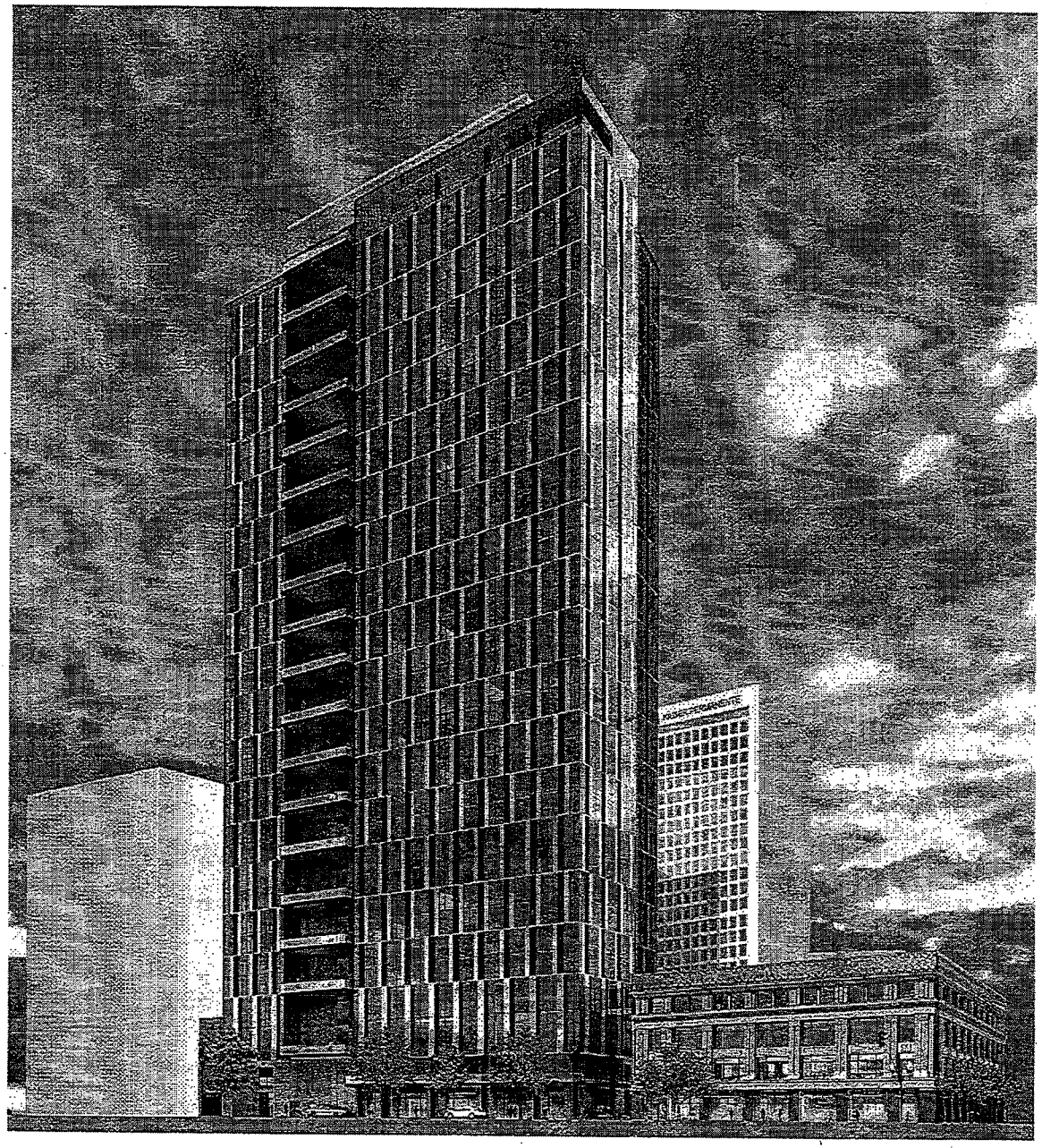
346,540 NSF RESID.

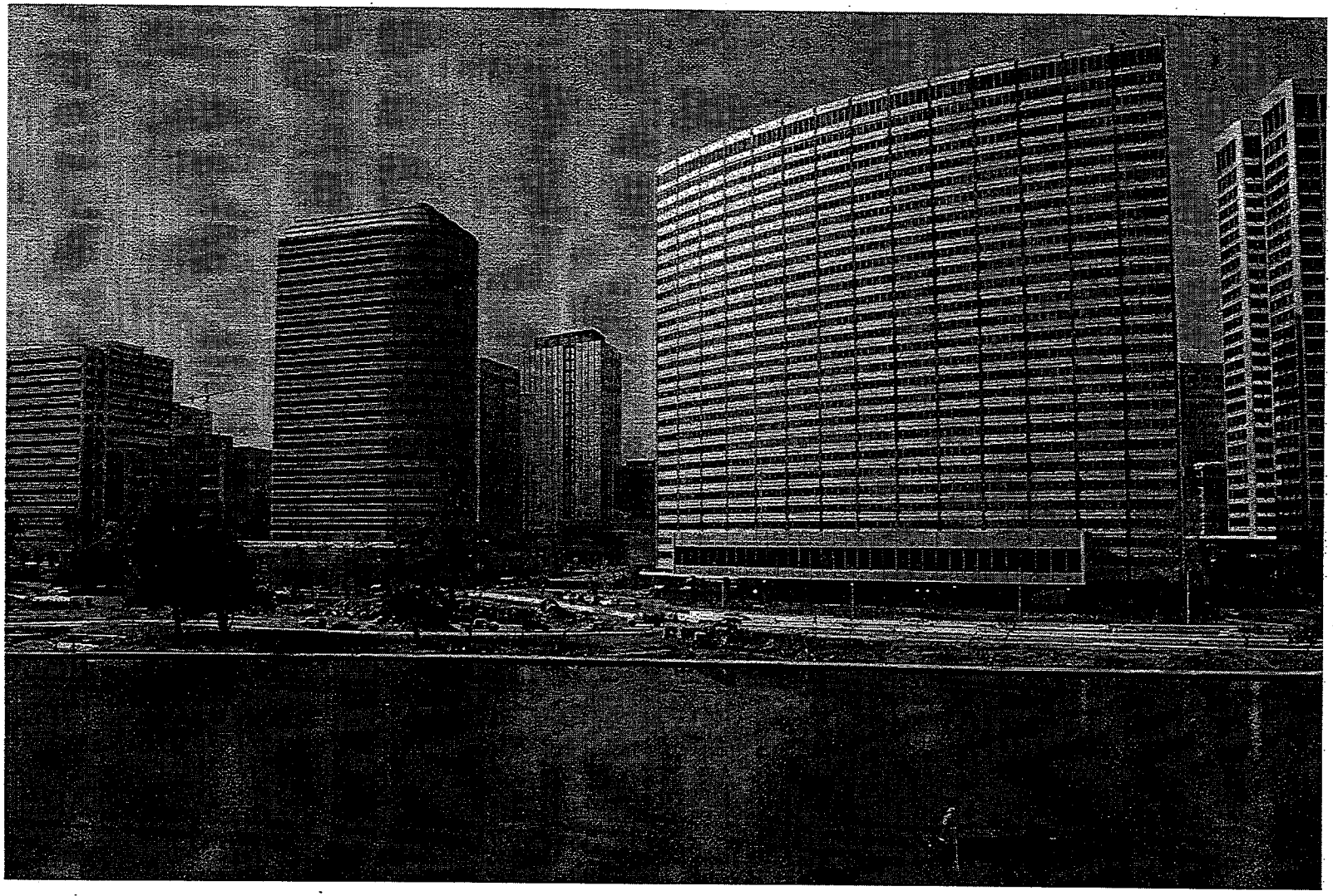
171 PARKING SP.

6,286 NSF RETAIL

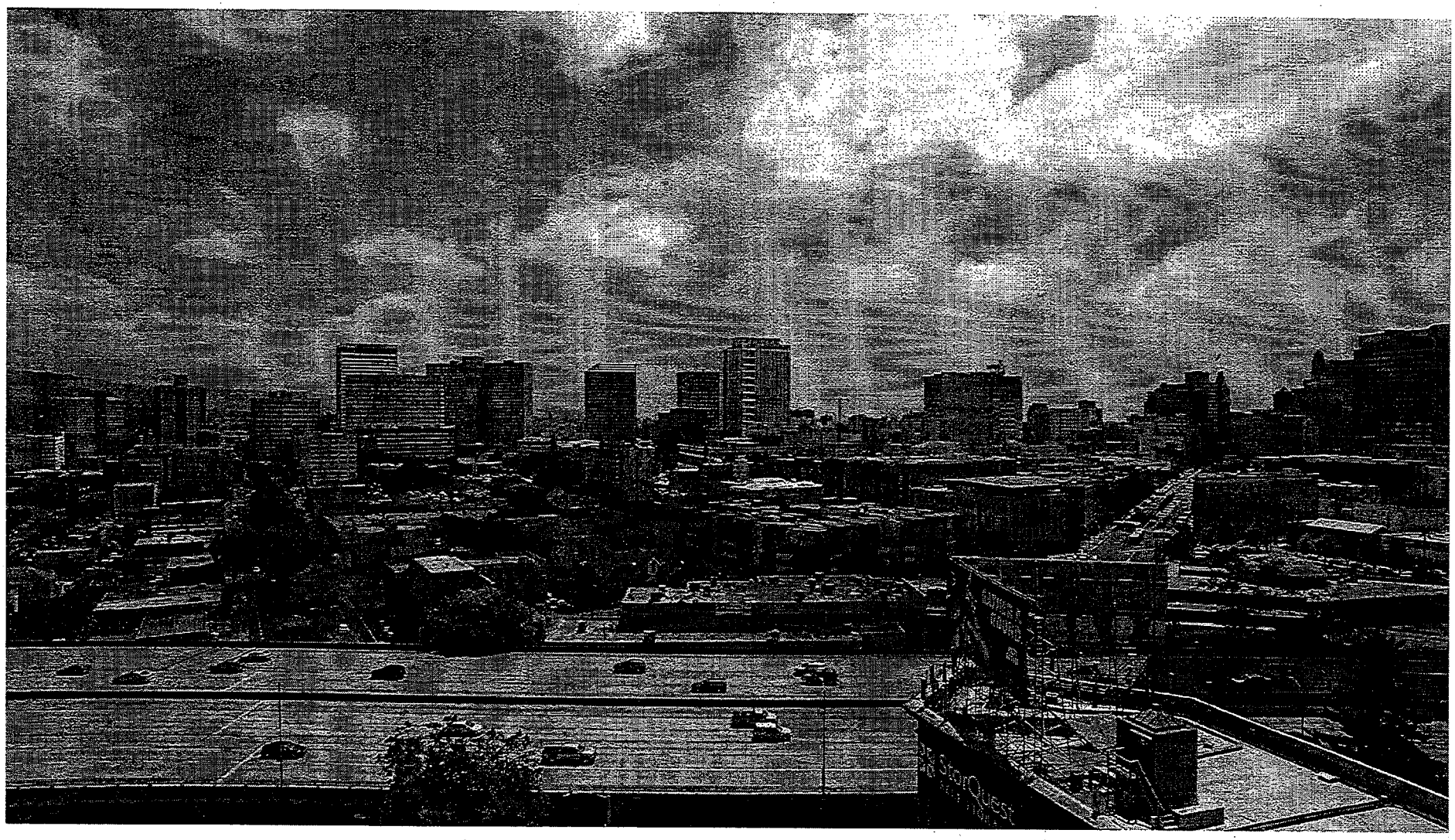
50,279 NSF OFFICE

ZIPPER

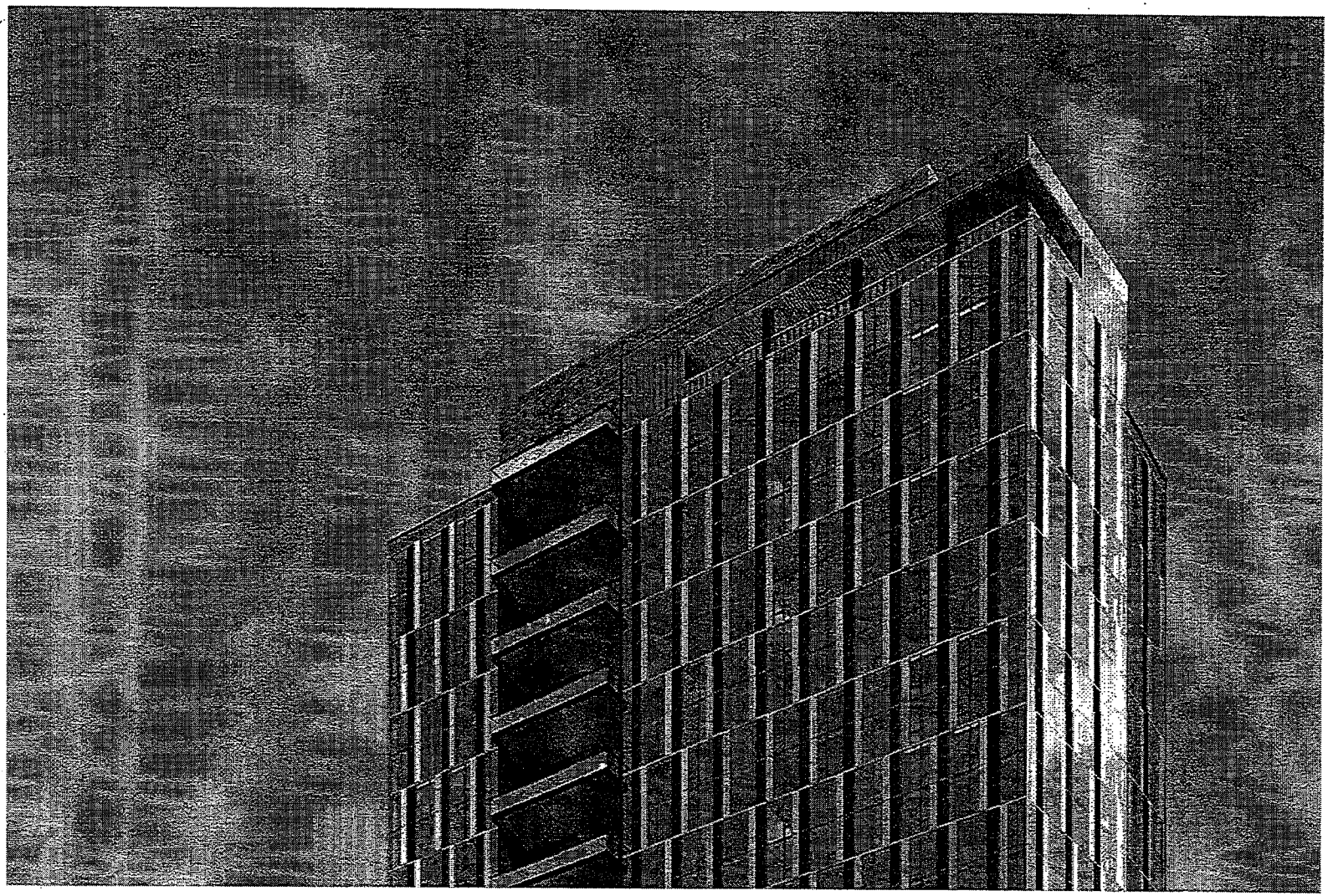




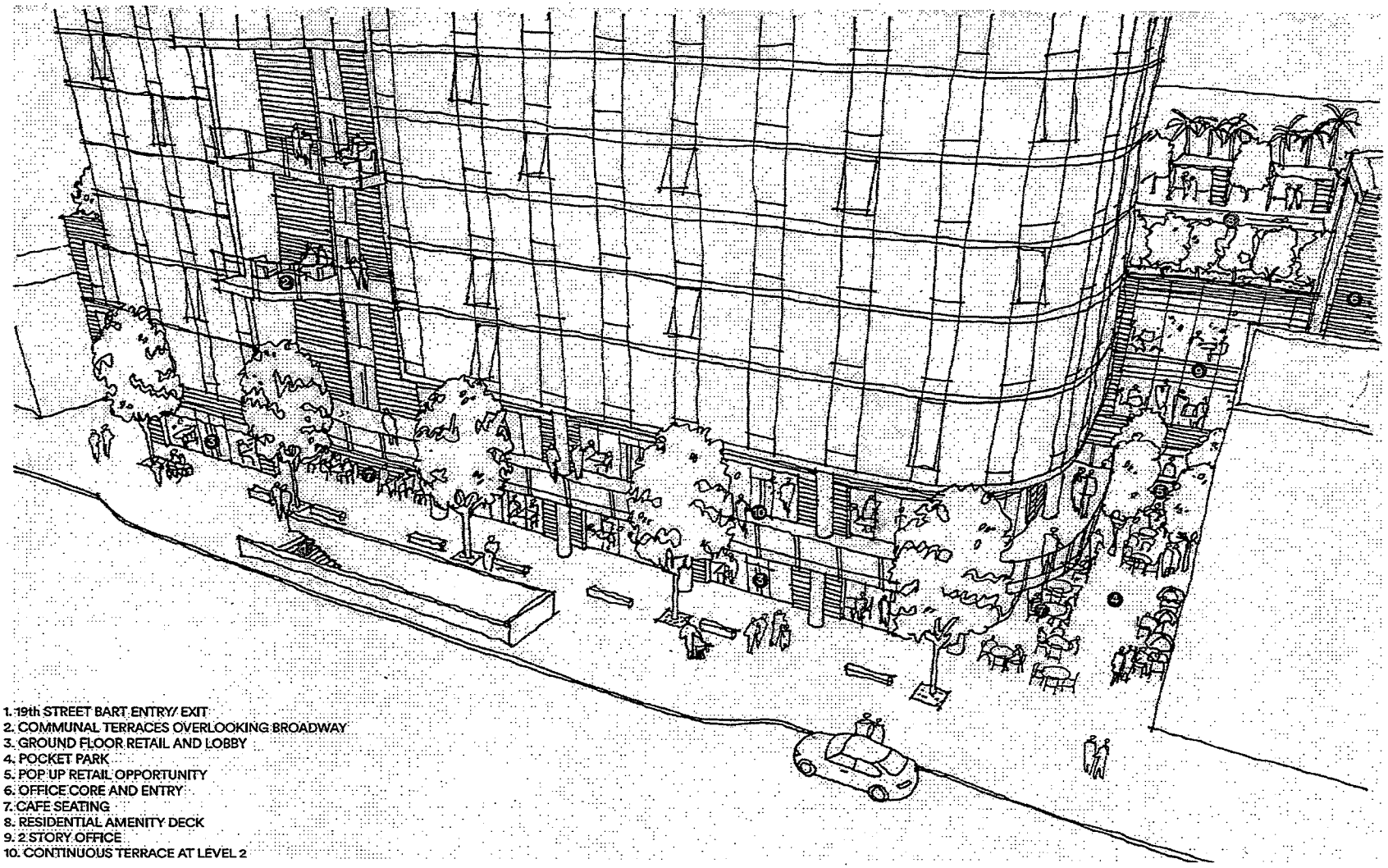
VIEW FROM LAKE MERRITT



VIEW FROM HWY 980

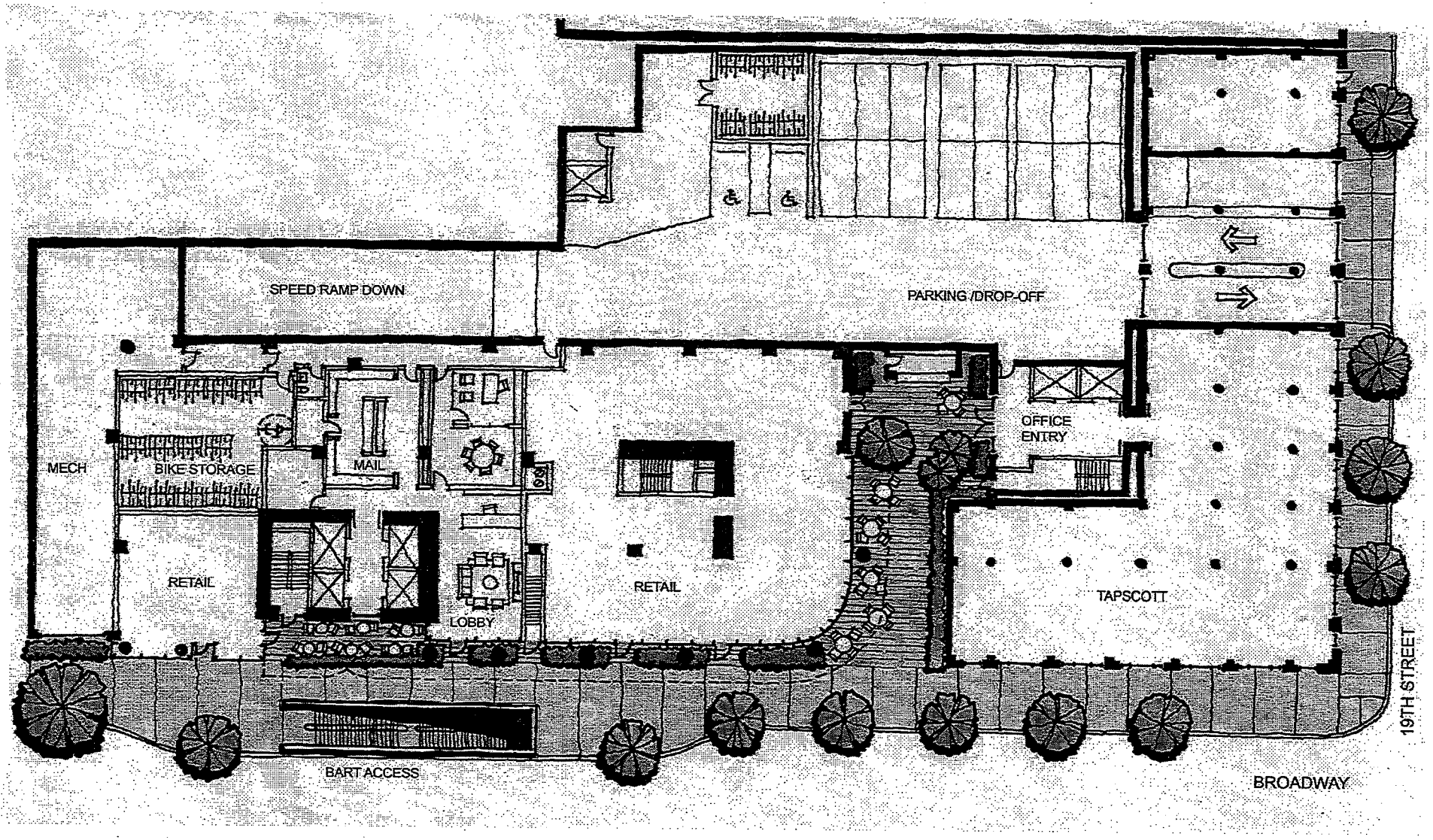


BUILDING CROWN PERSPECTIVE

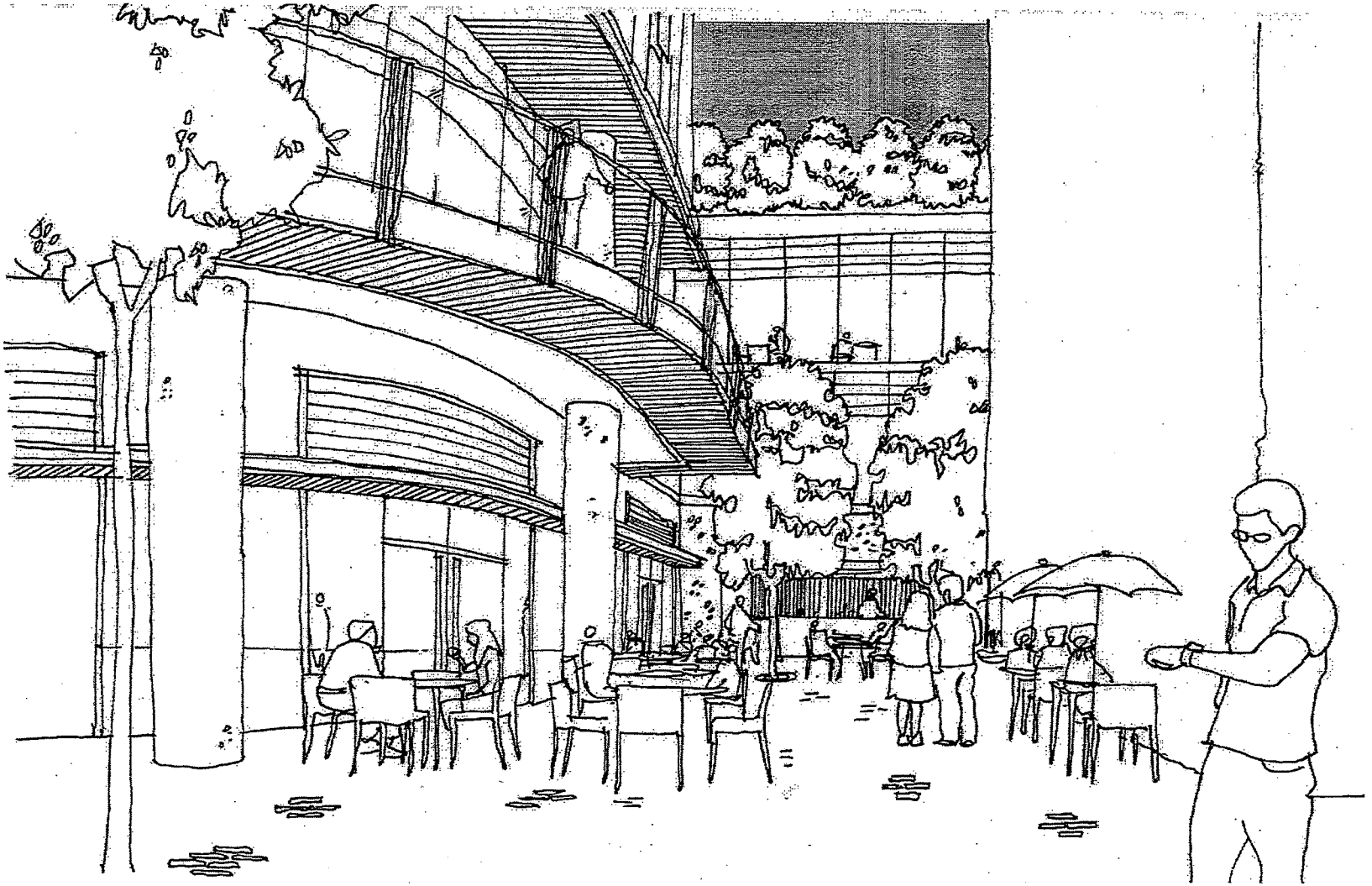


1. 19th STREET BART ENTRY/ EXIT
2. COMMUNAL TERRACES OVERLOOKING BROADWAY
3. GROUND FLOOR RETAIL AND LOBBY
4. POCKET PARK
5. POP UP RETAIL OPPORTUNITY
6. OFFICE CORE AND ENTRY
7. CAFE SEATING
8. RESIDENTIAL AMENITY DECK
9. 2 STORY OFFICE
10. CONTINUOUS TERRACE AT LEVEL 2

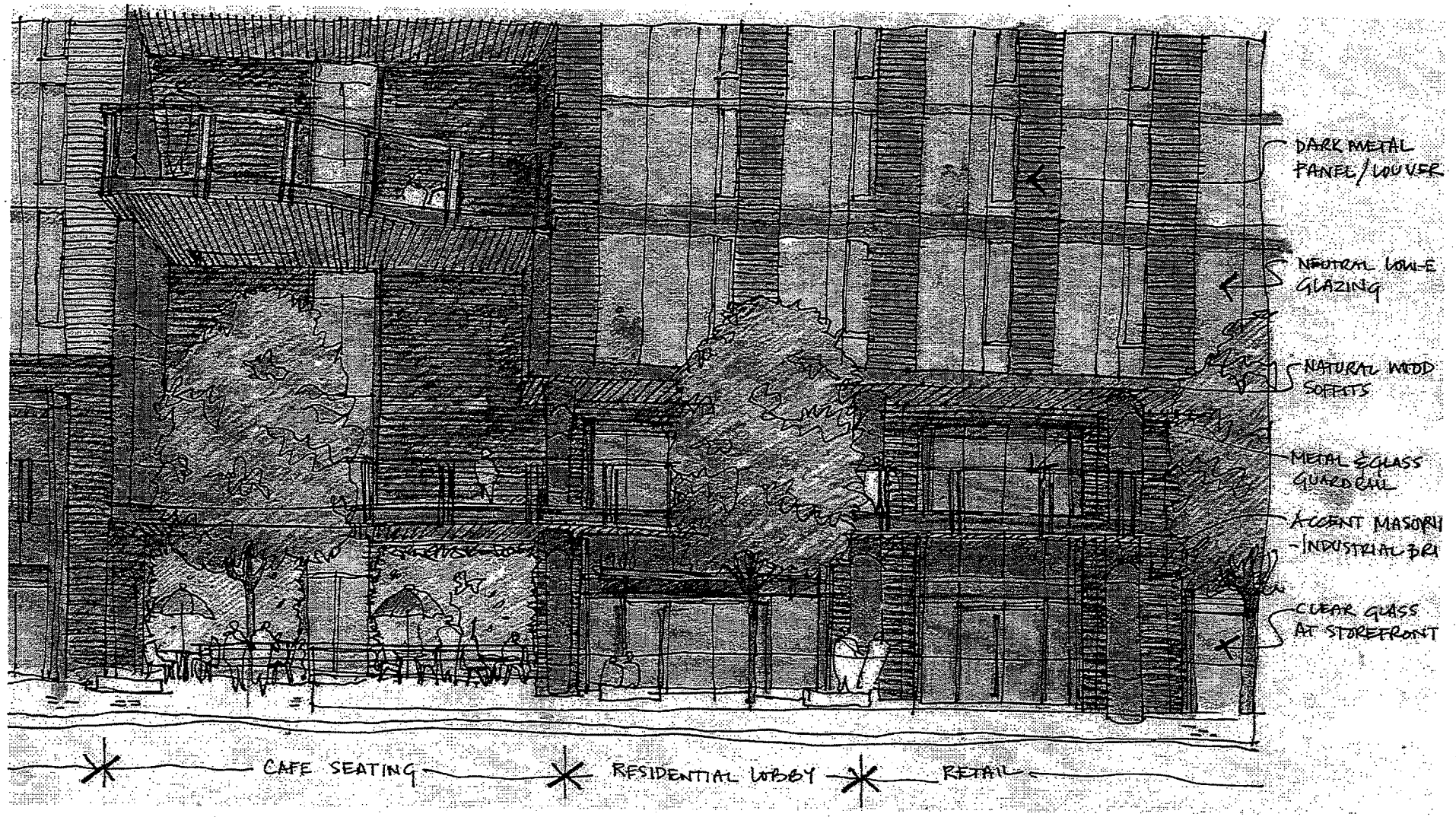
GROUND FLOOR EXPERIENCE



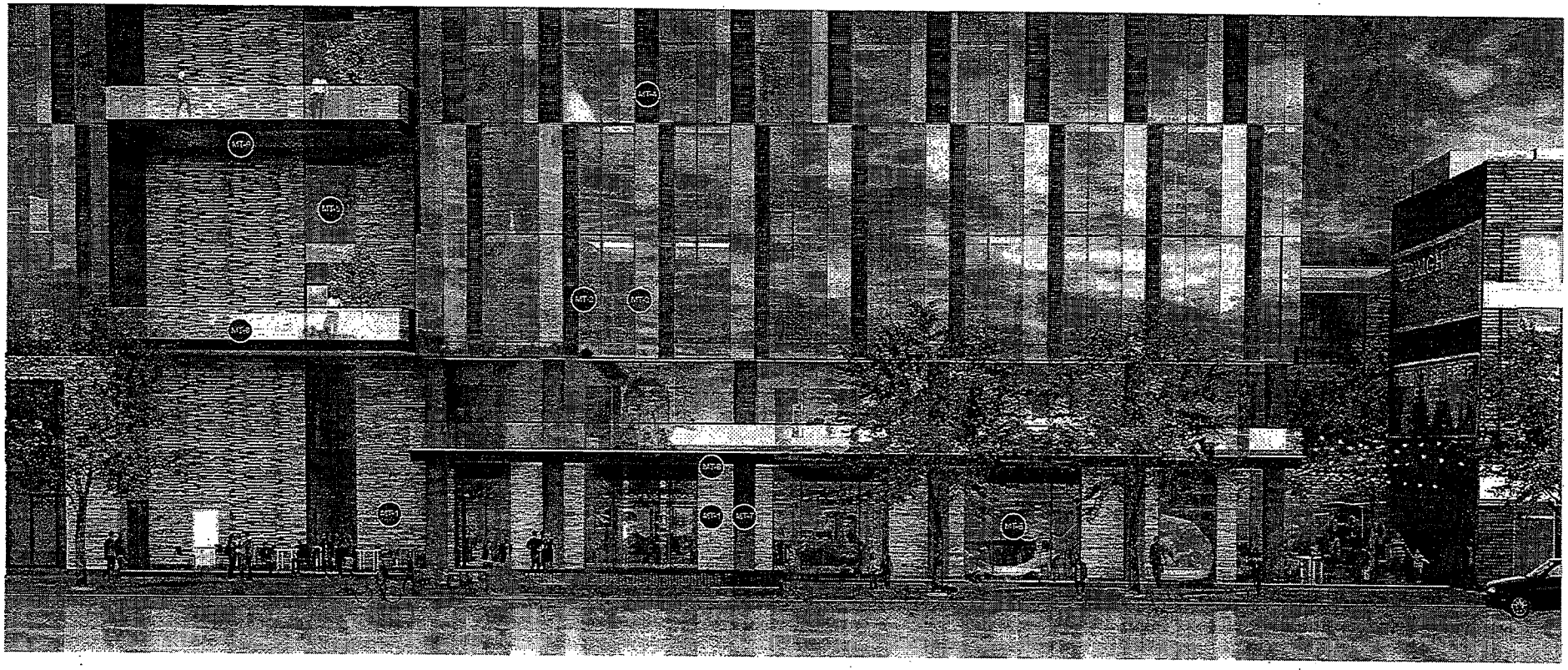
GROUND FLOOR EXPERIENCE



POCKET PARK



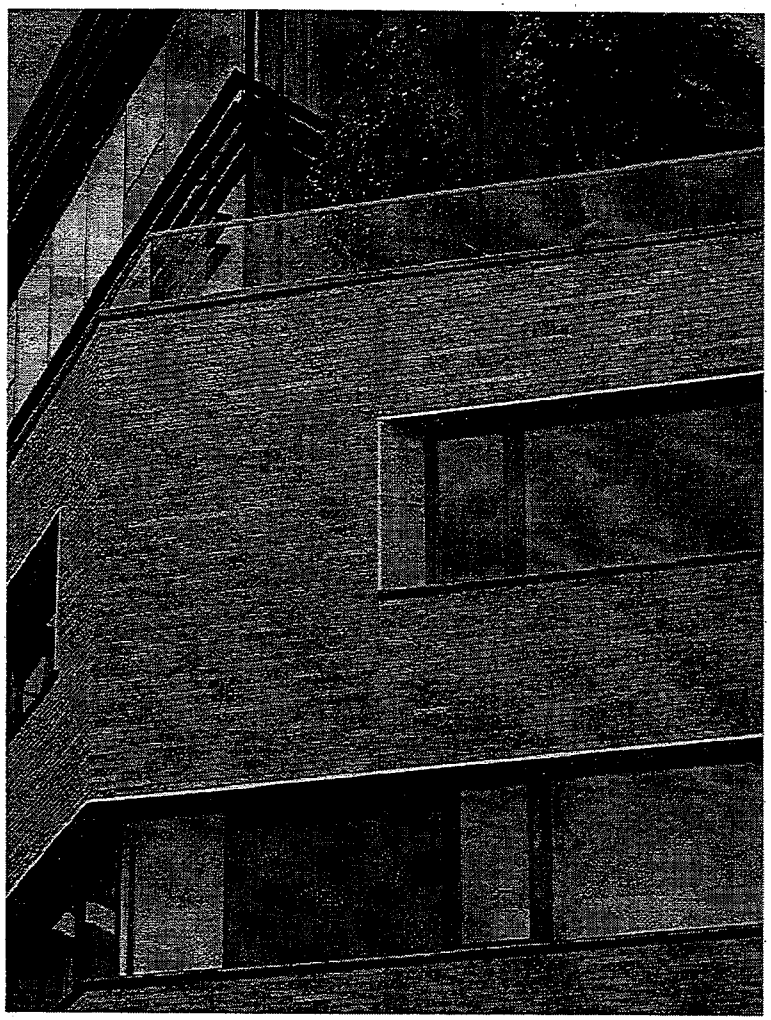
BROADWAY ST | STREET LIFE SKETCH



MATERIALS KEY:

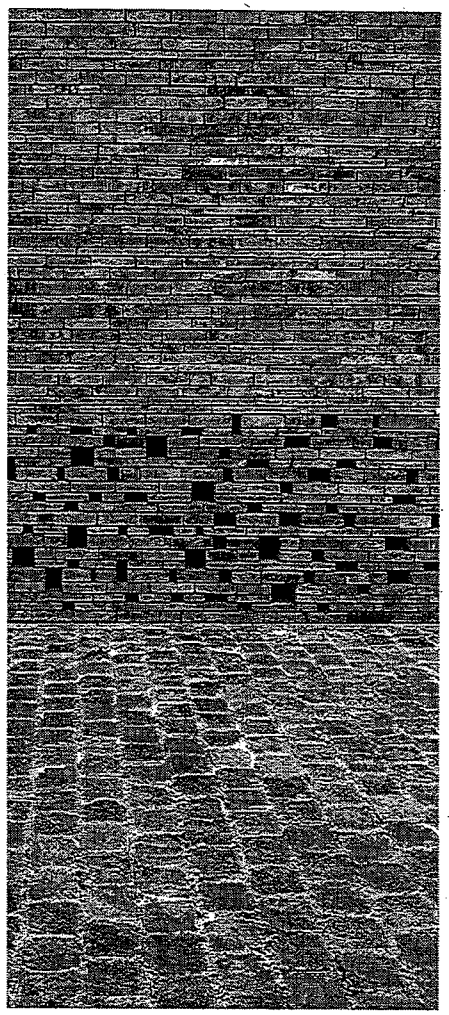
MT-1 ACCENT MASONRY CLADDING
MT-2 HIGH PERFORMANCE INSULATED GLAZING + ALUM CURTAIN WALL SYSTEM
MT-3 SPANDREL GLAZING PANEL (LIGHT ACCENT COLOR FINISH)
MT-4 INTEGRATED LOUVER PANEL (MED-DARK FINISH)
MT-5 PREFINISHED ALUM WINDOW FRAME (MED-DARK FINISH)
MT-6 CONC/CMU BLOCK WALL W/ SKIM COAT FINISH
MT-7 METAL PANEL COLUMN COVER (MED-DARK FINISH)
MT-8 METAL AND GLASS GUARDRAIL
MT-9 WOOD PANEL / SOFFIT

BUILDING STREETFRONT MATERIAL PALETTE



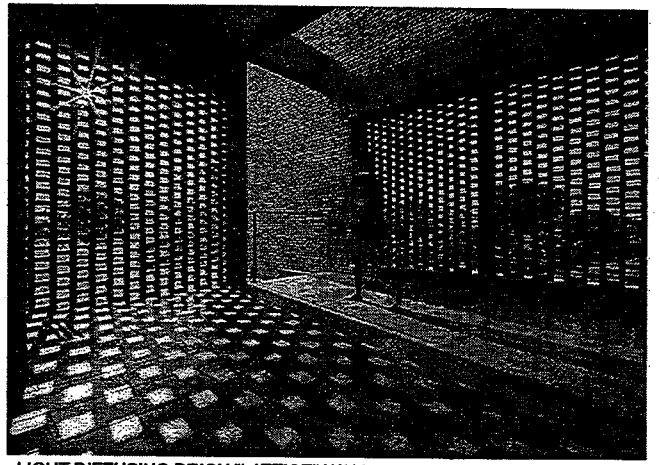
LIGHT GRAY NORMAN MODULE BRICK WITH WARM ACCENT TONES AT CORE

MT-1 MT-2 MT-5



LIGHT GRAY BRICK AND PAVERS AT BASE AND POCKET PARK

MT-1



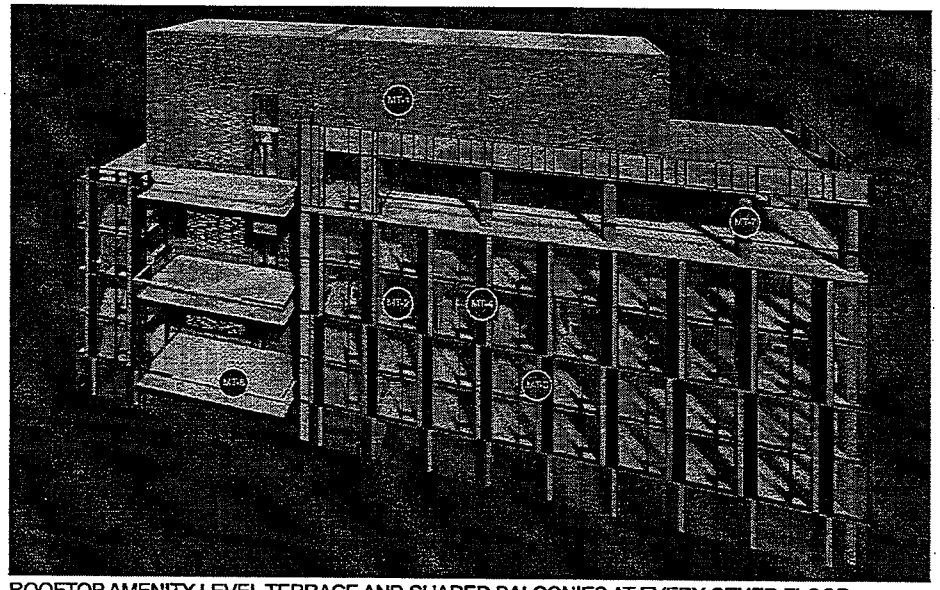
LIGHT DIFFUSING BRICK "LATTICE" WALL



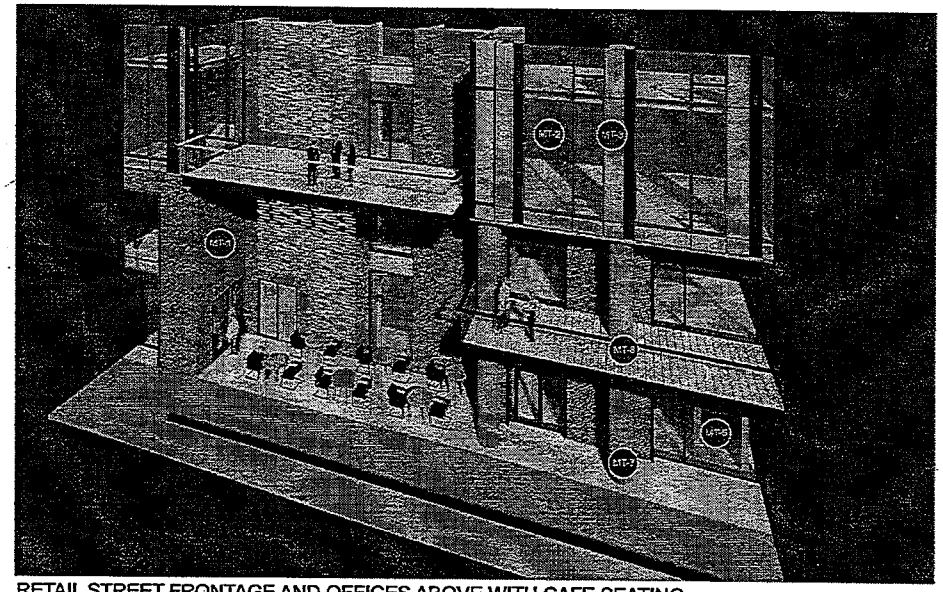
ARTICULATED DETAIL AT STOREFRONT OPENING SURROUNDS

MT-1 MT-5

MATERIALS PRECEDENT - STREETFRONT AND ZIPPER



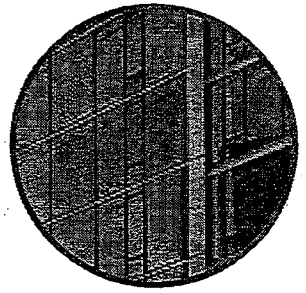
ROOFTOP AMENITY LEVEL TERRACE AND SHARED BALCONIES AT EVERY OTHER FLOOR



RETAIL STREET FRONTAGE AND OFFICES ABOVE WITH CAFE SEATING, EXPANSIVE STOREFRONTS AND WIDE TERRACES

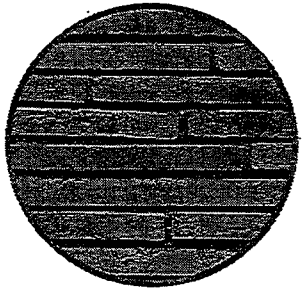
MATERIALS KEY:

MT-1 ACCENT MASONRY CLADDING
MT-2 HIGH PERFORMANCE INSULATED GLAZING + ALUM CURTAIN WALL SYSTEM
MT-3 SPANDREL GLAZING PANEL (LIGHT ACCENT COLOR FINISH)
MT-4 INTEGRATED LOUVER PANEL (MED-DARK FINISH)
MT-5 PREFINISHED ALUM WINDOW FRAME (MED-DARK FINISH)
MT-6 CONC/CMU BLOCK WALL W/ SKIM COAT FINISH
MT-7 METAL PANEL COLUMN COVER (MED-DARK FINISH)
MT-8 METAL AND GLASS GUARDRAIL
MT-9 WOOD PANEL / SOFFIT



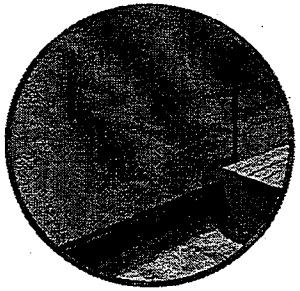
HIGH PERFORMANCE CURTAIN WALL SYSTEM

MT-2



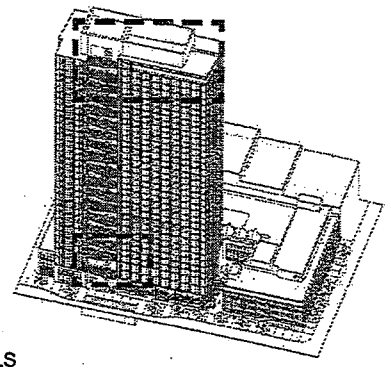
LIGHT GRAY NORMAN BRICK AT VERTICAL "ZIPPER"

MT-1

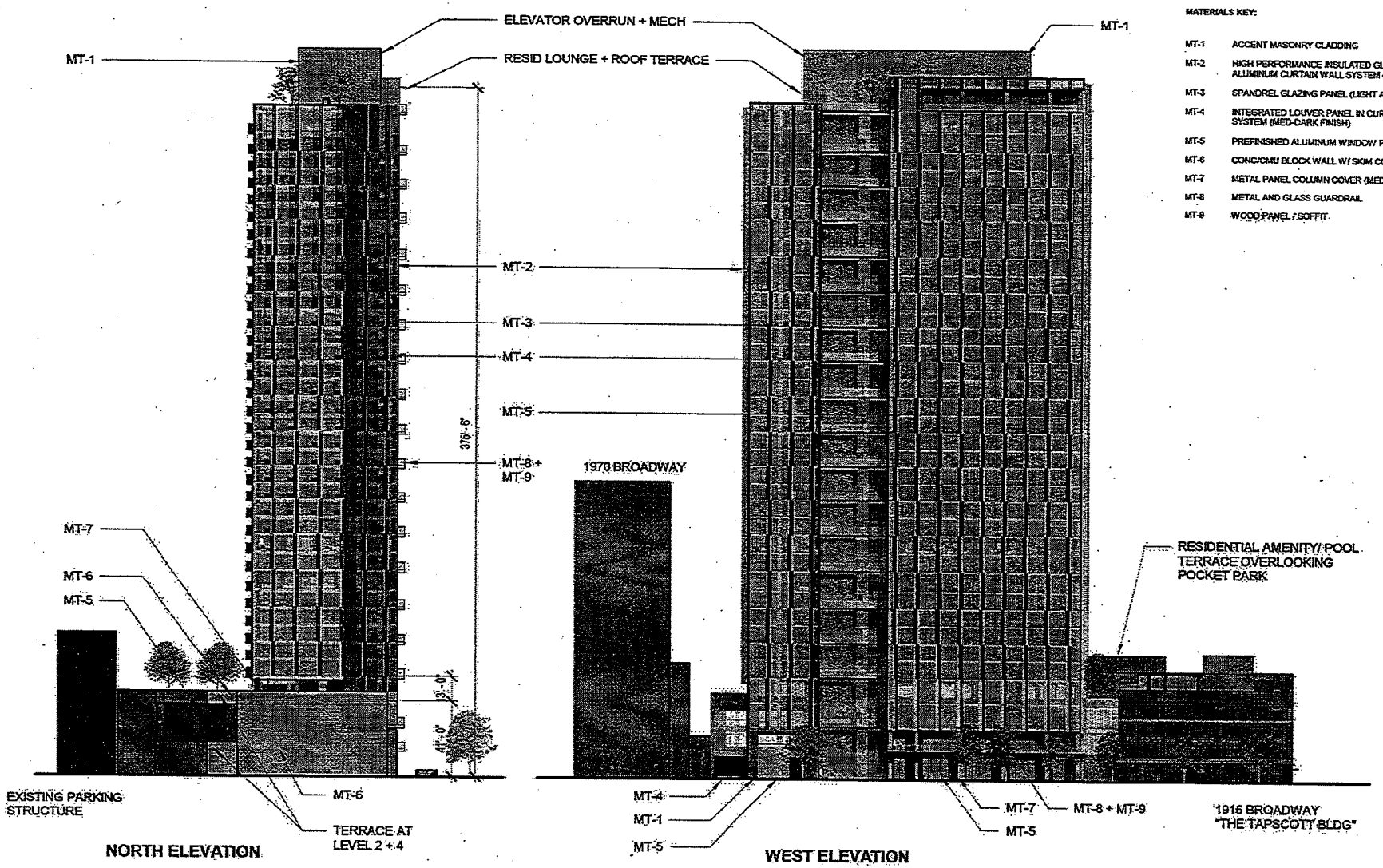


TACTILE PAVING SURFACES PAIRED WITH ACCENT MATERIALS

MT-4



MATERIAL APPLICATIONS



MATERIALS KEY:

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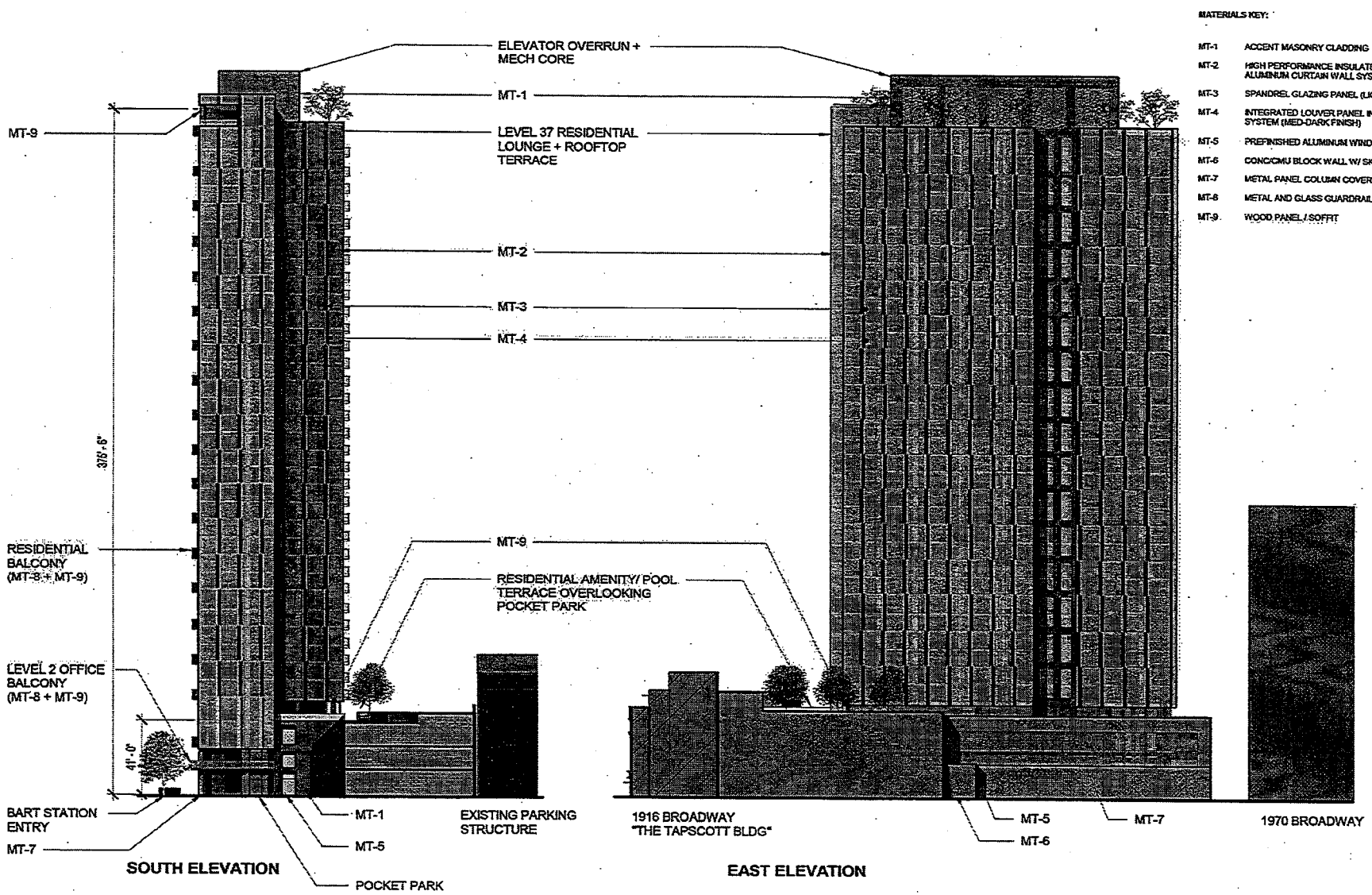
MT-2	HIGH PERFORMANCE INSULATED GLAZING (LOW-E COATING) + ALUMINUM CURTAIN WALL SYSTEM (MED-DARK FINISH)
MT-3	SPANDREL GLAZING PANEL (LIGHT ACCENT COLOR FINISH)
MT-4	INTEGRATED LOUVER PANEL IN CURTAIN WALL SYSTEM (MED-DARK FINISH)
MT-5	PREFINISHED ALUMINUM WINDOW FRAME (MED-DARK FINISH)
MT-6	CONC/CMU BLOCK WALL W/ SKIM COAT FINISH
MT-7	METAL PANEL COLUMN COVER (MED-DARK FINISH)
MT-8	METAL AND GLASS GUARDRAIL
MT-9	WOOD PANEL / SOFFIT

ELEVATIONS NORTH + WEST



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MT-9	WOOD PANEL / SOFFIT

ELEVATIONS SOUTH + EAST

EXECUTIVE SUMMARY: RESPONSE TO DRC HEARING AND STAFF REPORT COMMENTS FROM FEBRUARY 28, 2018

STAFF REPORT COMMENT: "Staff is concerned that the east elevation has not been given the same level of design attention as the west elevation. The east elevation, which will be highly visible from the Lake Merritt area and beyond, does not have a roof element to define the top of the building, and the recess separating the volumes on the facade contains windows instead of a more visually interesting element, such as the zipper in the front facade"

RESPONSE: The design creates a consistent, high quality curtain wall expression which tracks around the full perimeter of the tower, with a rhythmic pattern which creates visual interest in a subtle, nuanced way. This wall has been improved with more vision glass and the omission of the louvered panels by introducing a higher quality, better performing mechanical system which does not require them. The east and west facades are both divided into three parts to create a vertical articulation. On the west side, this break is signified with a shared balcony on every other floor, an element referred to in the staff report as the "zipper". Because the east side is not directly on street frontage, it is typically experienced from a more distant vantage point, such as Franklin Street or Lake Merritt. This creates more of a long range view focused on the entire building mass, rather than discreet parts. As the new rendering of the east facade and elevations (pp. 12, 17) show, the elevation is still divided into a tripartite scheme, with the recessed center portion expressed as a curtain wall without the visual patterning created by champagne strips. This more horizontal expression helps to break down the scale. Though subtle, this shift creates enough of a change to pick up on the three vertical elements defining the facade. Taken in tandem with the bipartite north and south angled facades, the overall composition reads as a lively series of slender volumes turning the corner. Furthermore, while the west facade features a covered terrace as a crown, the east facade is topped by an expressively taller masonry crown which features taller planted elements such as bamboo groves and vines on a rooftop terrace.

ISSUES BROUGHT UP DURING DRC COMMITTEE HEARING, 2018.02.28:

1. Comment brought up concerning the amount of the yellow/champagne color on the facade, that amount of the material was too much, and used "relentlessly".

RESPONSE: The thickness of the champagne bands at the typical tower floors has been reduced by nearly 50% by reducing the width of the elements, and stopping them short of building corners to allow for more vision glass. As a result, they no longer read as strong visual elements which immediately catch the eye, but more as complimentary pieces creating a rhythmic pattern.

2. Comment that there needs to be a stronger break to distinguish the building base/podium from the tower. The pattern of the curtain wall aligned with the Tapscott Building needs to change from the tower pattern vertically to create a more distinguishable horizontal.

RESPONSE: The difference in the visual patterning of the glass facade between floors 4 and 5, which coincides with the top of the Tapscott, has been accentuated. The amount of champagne panel in the base has been reduced, and completely offset from the curtain wall pattern above. This creates a more distinctive break from the tower when taken in tandem with the difference in lighting between office/retail/amenity spaces below the break and residential units above.

ATTACHMENT D

180 Grand Avenue
Suite 1050
Oakland, CA 94612
510.839.5066 phone
510.839.5825 fax

www.esassoc.com

memorandum

date May 17, 2018

to City of Oakland
Attn: Neil Gray, Planner IV
Bureau of Planning
250 Frank H. Ogawa, Suite 2114
Oakland, CA 94612
510 238-3878
ngray@oaklandnet.com

from Elizabeth Kanner
Senior Associate
ESA
ekanner@esassoc.com

subject **Update to the CEQA Analysis for the 1900 Broadway Project, Oakland, California**

I. Introduction

This memorandum provides the basis for environmental review for amendments to the development proposal at 1900 Broadway (referred to hereafter as the 2018 Project) in the City of Oakland (City), and includes supplemental technical analyses to support California Environmental Quality Act (CEQA) compliance, evaluates the validity of the previous CEQA analyses for the 1900 Broadway Project, and provides an update to these analyses to current City environmental review standards. The City will ultimately determine the appropriate and required CEQA document to be prepared for the 2018 Project, which it may determine after its review of the supplemental analyses prepared.

II. Background / Previous Environmental Documentation

At the August 5, 2015 City Planning Commission meeting, the City approved the 19th Street and Broadway Residential Project (2015 Approved Project). The original approval included the construction of a new 36-story tower with 451 residential units and approximately 50,000 square feet of commercial space at 1900 Broadway. The 2015 Approved Project also included reconditioning of the existing Tapscott Building, a four story, highly rated historic structure (rated Cb+1+ and considered a contributor to the Uptown Historic District by the Office of Cultural Heritage Survey). The previous analysis for the 2015 Approved Project, presented and published in the *July 2015 Initial Technical Analysis Working Document,* established that the 2015 Approved Project would qualify for CEQA exemptions under CEQA Guidelines §15183 and §15332.

In 2016, the project applicant updated specific components of the proposal and amended the 2015 Approved Project (2016 Update Project). Other than the additional height, the revision did not include any significant changes to the exterior of the tower and included the same renovation of the Tapscott Building. In March 2016, the City provided an update to the *July 2015 Initial Technical Analysis Working Document*, with the *March 2016 CEQA Checklist/Exemption Report*. These reports, considered together, remain valid and sufficient for the 2016 Updated Project. After noticing the neighborhood, City staff administratively approved a revision to the proposal on March 25, 2016 that increased the scope of the 2016 Updated Project as described in **Table II-1** below:

TABLE II-1
2015 APPROVED PROJECT AND 2016 UPDATED PROJECT COMPARISON

	2015 Approved Project	2016 Updated Project	Difference
Height (feet)	330	368	**+38 feet**
Stories	33	36 + rooftop amenity	**+3 stories**
Residential Units	345	451	**+106 units**
Office Space (square feet)	0	25,000[a]	**+25,000 square feet**
Retail Space (square feet)	4,000	5,000	**+1,000 square feet**
Restaurant Space (square feet)	6,000	20,000	**+14,000 square feet**
Parking Spaces	328	338 (above grade)	**+10 spaces**

NOTES:
[a] all in Tapscott Building

SOURCE: ESA, 2018.

On February 6, 2018, the project applicant submitted another set of revised plans to the City that showed considerable changes to the exterior of the tower (DRC Project), eight feet of additional height, 433 dwelling units, increased office floor area, and reduced and undergrounded parking, and other minor changes. City staff determined that the changes merited review by the Design Review Committee (DRC) but did not believe the changes required approval from the full Planning Commission because there were no major changes to the massing of the tower. The renovation of the Tapscott building continued to be included in the 2018 Project. This project was heard in front of the DRC on February 28, 2018, which recommended administrative approval pending this environmental review and minor design changes.

Note that, to be conservative, the analyses and updates presented in this memo evaluate a project design that differs slightly from the proposal reviewed by the DRC on February 28, 2018. As noted above, the DRC included 433 residential units, 75,000 square feet of office use, approximately 21,000 square feet of commercial use, and 36 stories (with a height of approximately 363 feet). The project described below, referred to in this memo as the "2018 Project," is considered the CEQA project. The number of residential units, square feet of uses, number of stories, and overall building height would be greater (see Table III-1 below). Therefore, while the 2018 Project is suitable for a

conservative CEQA analysis, the results of the CEQA analysis would not constitute any City approval beyond what is in the staff report dated February 28, 2018.

Supplemental technical analyses and updates to approved analyses to current City environmental review standards for the 2018 Project are provided below to determine if the 2018 Project would qualify for CEQA exemptions under CEQA Guidelines §15183 and §15332.

III. Project Description

Project Setting and Surrounding Uses

The approximately 40,683 square foot (0.934 acre) project site is comprised of three parcels (APNs: 008-0638-005-00; 008-0638-006-03; 008-0638-007-10) located at 1900-19744 Broadway, at the northeast corner of the intersection of Broadway and 19th Street, in Downtown Oakland. Approximately 400 linear feet of the project site faces Broadway and 150 linear feet faces 19th Street.

The southern portion of the project site contains the four-story, L-shaped Tapscott commercial building, constructed in 1922-1923, that fronts both Broadway and 19th Street. The Tapscott building is considered a historic resource, that has a historic rating of "Cb+1+" and is a contributor to the Uptown Commercial Historic District, an "Area of Primary Importance" in Oakland's Local Register. Brown brick and terra cotta materials, a tall ground floor, and detailing contribute to the historic significance of the building. However, the Tapscott building is currently in disrepair, as the storefronts are in poor condition, the tapestry trim on the building is damaged, and the original vertical spandrels on the upper floors were removed in the 1960's. The middle portion of the project site consists of a paved surface parking lot accessible only from the adjoining Kaiser Permanente garage located to the east (fronting Franklin and 19th Streets), which is gated off and partially screened from Broadway with an architectural element and low-rise landscaping. The north end of the project site is occupied by a single story, barrel roofed commercial building that has multiple retail tenants fronting Broadway.

The project site is within an urban downtown context, surrounded by zero-lot line commercial development in buildings ranging from one-story to high-rises within an urban street grid. The majority of buildings in the immediate area of the project site are older, and two or more stories in height. Medium to high-rise buildings exist in all directions of the surrounding area. Primary land uses around the project site include commercial office, retail, and restaurant uses, educational and institutional uses, as well as entertainment uses and parking.

The project site is bounded by a commercial and mixed use development immediately to the north, commercial development and a surface parking lot immediately to the east, commercial mixed-use along 17th Street to the south, and Webster Street to the west. Regional access includes Interstate 980 (I-980), approximately 0.73 mile to the west, and I-580, approximately 1.10 mile to the northeast. An entrance to the 19th Street Bay Area Rapid Transit (BART) station and an Alameda-Contra Costa (AC) Transit bus stop are located on Broadway, directly in front of the project site.

The project site is within the City's Central Business District under the General Plan land use designation and is zoned Central Business District Pedestrian Retail Commercial Zone (CBD-P).

Project Characteristics

The 2018 Project would amend the 2016 Updated Project and construct an approximately 38-story, approximately 395-foot-tall (to the upper roof) mixed-use building on two parcels north of an existing vacant office building at the northeast corner of 19th Street and Broadway.[1] The 2018 Project would amend the 2016 Updated Project by including more square footage of uses, fewer parking spaces, a new basement level for parking (see **Table III-1**, below).

TABLE III-1
2016 UPDATED PROJECT AND 2018 PROJECT COMPARISON

	2016 Updated Project	2018 Project	Difference
Height (feet)	368	395	**+27 feet**
Stories	36 + rooftop amenity	38 + rooftop amenity	**+ 2 stories**
Residential Units	451	452	**+1 unit**
Office Space (square feet)	25,000 (all in Tapscott Building)	85,000 (27,000 in Tapscott Building)	**+60,000 square feet**
Retail Space (square feet)	5,000	5,000 (2,500 in Tapscott Building)	**No change**
Restaurant Space (square feet)	20,000	20,000 (15,000 in Tapscott Building)	**No change**
Parking Spaces	338 (above grade)	171 (141 below grade)	**-167 spaces**

SOURCE: ESA, 2018.

One of the biggest changes between the 2018 Project and 2016 Updated Project is a reduction in parking spaces and the addition of office space. These changes are due to the new proposed basement level, which would be required for structural reasons related to construction over a BART tunnel.

The approximately 38-story high-rise tower would sit atop a three-story podium building, which is two stories fewer than the 2016 Updated Project podium. A 20-foot wide outdoor plaza would be created between the new construction and the Tapscott building to create outdoor seating for a restaurant, provide a visual separation between the two buildings, and expose historic advertising art on the Tapscott building's north façade.

The ground floor of the tower would match the height of the ground floor of the Tapscott building, and contain two retail spaces, a lobby, a leasing office and amenities. A ramp to the underground parking, 30 mechanical parking spaces, and bike storage would be behind the commercial spaces and the lobby. Vehicular and loading access into the site would be from 19th Street, which allows Broadway, the site's primary pedestrian frontage, to be free of curb cuts

[1] Per City of Oakland protocol, Broadway runs in the north-south direction.

and potential conflicts between pedestrians, bikes, and cars. The 2018 Project's loading berth would be reduced from two to one, and the size of the loading berth would also be reduced. Two stories of office space would occupy the floors between the retail space and the residential units in the tower above. An open space podium deck that would include landscaping, outdoor furniture, and a pool with views to the bay would be located where the base of the tower and top of the podium meet. The positioning of the tower's narrow north and south elevations would preserve views of the Oakland Hills and the Jack London Square area from Broadway. The tower would also have a rooftop community room with an open deck that would be lit up at night to create a lantern affect.

IV. Discussion of Previous Analyses

The following sections from the analysis for the 2016 Updated Project do not require additional technical analysis as explained below.

Section 4.2, Criterion §15332(b): Project Location, Size & Context

The 2018 Project's location, lot size, and context have not changed, therefore the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Section 4.3, Criterion §15332(c): Endangered, Rare or Threatened Species

Existing fully developed and paved conditions on the project site have not changed, and the site continues to provide no value for habitat for any endangered, rare, or threatened plant or animal species. Therefore, the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Section 4.5, Criterion §15332(d): Noise

The previous analyses for the 2015 Approved Project and 2016 Updated Project found that the 2015 Approved Project and the 2016 Updated Project would not exceed the City's applicable significance thresholds related to noise. The 2018 Project would be required to implement the applicable City of Oakland's Standard Conditions of Approval (SCAs) pertaining to noise which were found by the previous analyses for the 2015 Approved Project and the 2016 Updated Project to reduce construction noise impacts to a less-than-significant level.

The previous analyses for the 2015 Approved Project and 2016 Updated Project found that noise from project operations (from vehicular and stationary sources) would increase peak hour noise levels by less than 5.0 dBA at all roadway segments in the project vicinity and, therefore, operational impacts from noise would be less-than-significant. The 2018 Project would not introduce new stationary sources of noise compared with the 2015 Approved Project and 2016 Updated Project. Operational noise from new vehicular trips was quantified for the 2016 Updated

Project and results show that the greatest increase in traffic noise would be 0.4 dBA.[2] The 2018 Project trip generation would be greater than the 2016 Updated Project and the maximum peak hour trips would increase by approximately 12 percent compared with the maximum peak hour trips for the 2016 Updated Project (312 trips versus 279 trips during the AM peak hour). The 2016 Updated Project maximum impact of a 0.4 dBA increase is well below the threshold of a 5.0 dBA increase and the additional trips for the 2018 Project would not result in a meaningful difference with respect to noise and thus do not trigger a need to revise the modeling or analysis herein. Therefore, the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Section 4.7, Criterion §15332(d): Water Quality

The 2018 Project would be required to implement applicable City of Oakland SCAs pertaining to water quality which were identified by the previous analyses for the 2015 Approved Project and the 2016 Updated Project. Implementation of City of Oakland SCAs would ensure that the 2018 Project will have a less-than-significant impact related to water quality. Therefore, the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Section 4.8, Criterion §15332(e): Utilities & Public Services

The project site and surrounding land uses remain already served by required utilities and public services. Therefore, consistent with the findings of the 2015 Approved Project and the 2016 Updated Project, the 2018 Project can be adequately served by all required utilities and public services, and, therefore, adheres to the criteria of CEQA Guidelines §15332(e). Additionally, the 2018 Project would adhere to applicable City of Oakland SCAs pertaining to utilities and public services. Therefore, the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Section 5.1, Criterion 15300.2(a): Location

The 2018 Project's location has not changed, therefore the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Section 5.2, Criterion 15300.2(b): Cumulative Impact

The previous analyses for the 2015 Approved Project and 2016 Updated Project found that the 2015 Approved Project and the 2016 Updated Project would not have a considerable contribution to any cumulative effects related to including cultural resources, aesthetics, land use and planning, geologic and seismic safety, hazardous materials, water quality, and biological resources. As discussed for Section 4.5, Criterion §15332(d): Noise, the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid. Therefore, the 2018 Project would not have a considerable contribution to any cumulative effects related to noise.

[2] The dBA, or A-weighted decibel, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies.

Consistent with the previous analysis conducted for the 2015 Approved Project and 2016 Updated Project, the detailed technical analyses conducted for traffic, air quality, wind, GHG emissions, and shadow, factor in the cumulative effects of the 2018 Project combined with the potential effects of other development in the area. Impacts are discussed in Section V below, and the 2018 Project would not have a considerable contribution to any cumulative effects.

Consistent with the previous analyses, the 2018 Project would incorporate applicable City SCAs and is not expected to have a considerable contribution to any cumulative impacts.

Section 5.3, Criterion 15300.2(c): Significant Effect

The location of the 2018 Project has not changed. Therefore, there remain no unusual circumstances specific to the 2018 Project, compared to its surroundings and similar projects (high-rise, mixed use, in-fill development downtown) that would pose a reasonable possibility of the 2018 Project having a significant effect on the environment. Therefore, the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Section 5.4, Criterion 15300.2(d): Scenic Highway

The 2018 Project's location has not changed, and there remain no designated scenic highways in the immediate Project vicinity. Therefore, the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Section 5.5, Criterion 15300.2(e): Hazardous Waste Sites

The 2018 Project's location has not changed, and the project site is not included on any of the data resources that provide information regarding the facilities or sites identified as meeting the "Cortese List" requirements. Therefore, the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Section, 5.6 Criterion 15300.2(f): Historical Resources

The previous analyses for the 2015 Approved Project and 2016 Updated Project found that the 2015 Approved Project and the 2016 Updated Project would not cause a substantial adverse change in the significance of a historical resource. The renovation of the Tapscott building continues to be included in the 2018 Project. As with the 2015 Approved Project and 2016 Updated Project, the 2018 Project would comply with all 10 applicable Rehabilitation Standards and would undo many of the harmful alterations that have impaired the integrity of the Tapscott Building—it would not only avoid altering in an adverse manner those characteristics that justify the property's eligibility for inclusion in the City's Historic Study List, but enhance its integrity and possibly result in its eligibility for the California Register or the National Register. Therefore, the 2018 Project would not cause a substantial adverse change in the significance of a historical resource and the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Sections that Required Revised Technical Analysis

The following sections from the analysis for the 2016 Updated Project require updated or supplemental technical analysis, as the standard methodology for analysis has been updated since the 2016 Updated Project was approved and/or the 2018 Project entails a change that warrants additional analysis.

- Section 4.1, Criterion §15332(a): General Plan & Zoning Consistency
- Section 4.4, Criterion §15332(d): Traffic
- Section 4.6, Criterion §15332(d): Air Quality
- Section 5.7, Criterion 15300.2: Other Potential Effects (Wind, Greenhouse Gas, Shadow)

City of Oakland's Standard Conditions of Approval (SCA)

The City of Oakland established its *Standard Conditions of Approval and Uniformly Applied Development Standards* (SCAs) in 2008, and they have since been amended and revised several times. Specifically, on May 1, 2018, the City of Oakland released a revised set of all City of Oakland SCAs, which largely still include SCAs adopted by the City in 2008, along with supplemental, modified, and new SCAs. The SCAs are measures that would minimize potential adverse effects that could result from implementation of a proposed project, and specify how the conditions are implemented and monitored. The revised set of the City of Oakland SCAs includes new, modified, and reorganized SCAs; however, none of the revisions diminish or negate the ability of the SCAs considered "environmental protection measures" to minimize potential adverse environmental effects. Therefore, the SCAs identified for the 2016 Updated Project were updated based on the May 1, 2018 revision of the SCAs and may contain differing coding and language.

SCAs that would apply to the 2018 Project are listed in Attachment A to this document, which is incorporated by reference into this CEQA analysis. Because the SCAs are mandatory City requirements, the impact analysis for the 2018 Project assumes that they will be imposed and implemented, which the project applicant has agreed to do or ensure as part of the 2018 Project. If this CEQA analysis or its attachments inaccurately identifies or fails to list a mitigation measure or SCA, the applicability of that mitigation measure or SCA to the proposed project is not affected.

V. Supplemental Technical Analysis

1. General Plan / Zoning Consistency Discussion

Thresholds of Significance

To qualify for an exemption under CEQA Guidelines §15332 as a Class 32 urban in-fill development, under criterion §15332(a), a project must be consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

Previous Project Analysis (Section 4.1, Criterion §15332[a])

The 2015 Approved Project and 2016 Updated Project found that the project adheres to the criteria of CEQA Guidelines §15332(a) as being consistent with the General Plan and applicable zoning regulations for the site.

Methodology and Analysis

Since the 2018 Project includes updates to the bulk, height, and intensity of the proposed development, an updated general plan and zoning consistency discussion was prepared below.

General Plan

The project site is designated by the General Plan as Central Business District (CBD). As specified in the Land Use and Transportation Element (LUTE) of the General Plan, the desired character and uses within the CBD include a mix of large-scale offices, commercial, urban (high-rise) residential, institutional, open space, cultural, educational, arts, entertainment, service, community facilities, and visitor uses. The 2018 Project would include a mix of office, high-rise residential, restaurant, and retail uses, and would, therefore, be consistent with the intent and desired character of the CBD. Since uses surrounding the project site include existing mixed-use residential and commercial uses within the urban downtown context, the 2018 Project would also be appropriate in consideration of the characteristics of the surrounding area.

The project would be consistent with Transportation and Transit-Oriented Development, Downtown, and Neighborhood policies contained in the General Plan. An entrance to the 19th Street BART Station and an AC Transit bus stop is located on Broadway, directly in front of the project site. Therefore, the 2018 Project would support transit-oriented development (Policy T2.1) and be pedestrian oriented (Policies T2.2 and D3.1). Parking would also be screened from public view by utilizing a new basement level for a majority of parking spaces (Policy T3.8), and the 2018 Project would involve streetscape improvements (Policy T6.2). The 2018 Project would also rehabilitate the historic Tapscott building (Policy D6.2), and aid in concentrating office uses and adding higher density housing on an infill parcel near the 19th Street BART station (Policies D8.1, D8.3, D10.2, D10.3, D10.6, and N8.1). The 2018 Project would include approximately 5,000 square feet of retail space and 20,000 square feet of restaurant space that could support daytime and evening uses, and, therefore, would also represent a mixed-use development in which the residential and commercial components are compatible (Policy D11.2). Therefore, the 2018 Project would promote implementation of the General Plan.

Zoning

The project site has a zoning designation of Central Business District Pedestrian Retail Commercial Zone (CBD-P). The intent of the CBD-P zone is to create, maintain, and enhance areas of the Central Business District for ground-level, pedestrian-oriented, active storefront uses. Upper story spaces are intended to be available for a wide range of office and residential activities. The 2018 Project would be consistent with the CBD-P zoning intent because it would provide a mix of office and high-rise residential uses, with ground-level retail, and restaurant uses.

In regards to bulk, height, and intensity, the 2018 Project is consistent with the existing zoning of the site. The project site is located in the CBD Height Area 7, which imposes a 120-foot maximum building base height limit and no overall height limit. The average per story lot coverage above the base in CBD Height Area 7 cannot exceed 85 percent of site or 10,000 square feet, whichever is greater. The CBD-P zone allows one dwelling unit per 90 square feet of lot area or approximately 452 units on the 40,683 square foot project site. The maximum Floor Area Ratio (FAR) for CBD Height Area 7 is 20.0. However, the 2018 Project would require a Major Conditional Use Permit to accommodate new construction of more than 200,000 square feet of new floor area and a new building over two hundred fifty 250 feet in height. The 2018 Project would also be subject to Design Review, as required for residential use in the CBD-P.

The City of Oakland Planning Code (Section 17.58.070) outlines usable open space standards for the project site. Usable open space is required at a rate of 75 square feet per dwelling unit, or 33,900 square feet for 452 units. The 2018 Project would provide approximately 33,905 square feet of shared open space.

The City of Oakland Planning Code (Section 17.116.060) has no parking minimum requirement and allows a maximum of 1.25 spaces per unit for multi-family residential developments in the CBD-P zone. For commercial uses in the CBD-P zone, the code (Section 17.116.080) has no parking minimum requirement and allows a maximum of one space per 300 square feet of ground floor space and one space per 500 square feet of above ground floor space. Therefore, the City Code has no minimum parking requirement for the 2018 Project and would allow for a maximum of 794 spaces. The 2018 Project would provide 171 off-street parking spaces. However, the 2018 Project would require a minor conditional use permit for a reduction in the size of a loading berth; and a minor variance for a reduction in the number of loading berths from two to one. Similar variances were approved for the 2015 Approved Project and 2016 Updated Project.

The City of Oakland Planning Code (Section 17.117) prescribes the amount of bicycle parking required in the CBD-P zone. The project would include long-term on-site parking for 237 bicycles and short-term parking in the form of bike racks along the Project frontage for 38 bicycles, which would meet the City's minimum requirements for bicycle parking.

Conclusion

The 2018 Project, consistent with the 2015 Approved Project and 2016 Updated Project, adheres to the criteria of CEQA Guidelines §15332(a) as being consistent with the General Plan and applicable zoning regulations for the site.

2. Traffic – Vehicle Miles Traveled (VMT) Analysis

Thresholds of Significance

On September 21, 2016, the City of Oakland's Planning Commission directed staff to update the City of Oakland's CEQA Thresholds of Significance Guidelines related to transportation impacts in order to implement the directive from Senate Bill 743 (Steinberg 2013) to modify local environmental review processes by removing automobile delay, as described solely by level of

service (LOS) or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA. The Planning Commission direction aligns with draft proposed guidance from the Governor's Office of Planning and Research and the City's approach to transportation impact analysis; and with adopted plans and polices related to transportation that promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. Consistent with the Planning Commission direction and Senate Bill 743 requirements, the City of Oakland published the revised Transportation Impact Review Guidelines (TIRG) on April 14, 2017 to guide the evaluation of the transportation impacts associated with land use development projects.

Thresholds of Significance for VMT

According to the City of Oakland TIRG, the following are thresholds of significance related to substantial additional VMT:

- For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15-percent.
- For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15-percent.
- For retail projects, a project would cause substantial additional VMT if it results in a net increase in total VMT.

VMT Screening Criteria

VMT impacts would be less than significant for a project if any of the identified screening criteria outlined below are met:

1. **Small Projects:** The project generates fewer than 100 vehicle trips per day.
2. **Low-VMT Areas:** The project meets map-based screening criteria by being located in an area that exhibits below threshold VMT, or 15-percent or more below the regional average.
3. **Near Transit Stations:** The project is located in a Transit Priority Area or within a one-half mile of a Major Transit Corridor or Stop[3] and satisfies the following:
    - Has a Floor Area Ratio (FAR) of more than 0.75,
    - Includes less parking for use by residents, customers, or employees of the project than other typical nearby uses, or more than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site), and
    - Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the MTC).

[3] "Major transit stop" is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

Previous Project Analysis (Section 4.4, Criterion §15332[d])

VMT analysis was not conducted for the 2015 Approved Project or the 2016 Updated Project as it was not City practice to do so at the time. The following VMT analysis is included here to update the existing CEQA analysis for the 2018 Project to current City environmental review standards.

Methodology and Analysis

Many factors affect travel behavior, including density of development, diversity of land uses, design of the transportation network, access to regional destinations, distance to high-quality transit, development scale, demographics, and transportation demand management. Typically, low-density development that is located at a great distance from other land uses, in areas with poor access to non-single occupancy vehicle travel modes, generate more vehicle travel compared to development located in urban areas, where a higher density of development, a mix of land uses, and non-single occupancy vehicle travel options are available.

Given these travel behavior factors, most of Oakland has lower VMT per capita and VMT per worker ratios than the nine-county San Francisco Bay Area region. Further, within the City of Oakland, some neighborhoods may have lower VMT ratios than others.

VMT Estimate

Neighborhoods within Oakland are expressed geographically in transportation analysis zones, or TAZs, which are used in transportation planning models for transportation analysis and other planning purposes. The Metropolitan Transportation Commission (MTC) Travel Model includes 116 TAZs within Oakland that vary in size from a few city blocks in the downtown core, to multiple blocks in outer neighborhoods, to even larger geographic areas in lower-density neighborhoods.

The MTC Travel Model is a model that assigns all predicted trips within, across, or to/from the nine-county San Francisco Bay Area region onto the roadway network and the transit system by mode (single-driver and carpool vehicle, biking, walking, or transit) and transit carrier (bus, rail) for a particular scenario.

The travel behavior from MTC Travel Model is modeled based on the following inputs:

- Socioeconomic data developed by the Association of Bay Area Governments (ABAG)
- Population data created using the 2000 US Census and modified using the open source PopSyn software
- Zonal accessibility measurements for destinations of interest
- Travel characteristics and vehicle ownership rates derived from the 2000 Bay Area Travel Survey (BATS)
- Observed vehicle counts and transit boardings

The daily VMT output from the MTC Travel Model for residential and office uses comes from a tour-based analysis. The tour-based analysis examines the entire chain of trips over the course of

a day, not just trips to and from the project site. In this way, all of the VMT for an individual resident or employee is included, not just trips into and out of the person's home or workplace. For example, a resident leaves her apartment in the morning, stops for coffee, and then goes to the office. In the afternoon she heads out to lunch, and then returns to the office, with a stop at the drycleaners on the way. After work, she goes to the gym to work out, and then joins some friends at a restaurant for dinner before returning home. All the stops and trips within her day form her "tour". The tour-based approach would add up the total number of miles driven over the course of her tour and assign it as her daily VMT.

Based on the MTC Travel Model, the regional average daily VMT per capita is 15.0 under 2020 conditions and 13.8 under 2040 conditions, and the regional average daily VMT per worker is 21.8 under 2020 conditions and 20.3 under 2040 conditions.

VMT Impact Analysis

The Project satisfies the Low-VMT Area (#2) and Near Transit Stations (#3) criteria as described below.

Criterion #1: Small Projects

The Project would generate more than 100 vehicle trips per day and, therefore, does not meet Criterion #1.

Criterion #2: Low-VMT Area

Table V.2-1 shows the estimated 2020 and 2040 VMT per capita for TAZ 971, the TAZ in which the project site is located, as well as the applicable VMT thresholds of 15-percent below the regional average. As shown in Table V.2-1, the 2020 and 2040 estimated average daily VMT per capita in the project TAZ is less than the regional averages minus 15-percent. The 2018 Project meets Criterion #2.

TABLE V.2-1
DAILY VEHICLE MILES TRAVELED SUMMARY

	Bay Area				TAZ 971	
	2020		2040			
Land Use	Regional Average	Regional Average minus 15%	Regional Average	Regional Average minus 15%	2020	2040
Residential (VMT per Capita)[a]	15.0	12.8	13.8	11.7	4.5	4.1
Office (VMT per worker)[b]	21.8	18.5	20.3	17.3	12.7	12.0

NOTES:
[a] MTC Model results at analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerCapita and accessed in February 2018.
[b] MTC Model results at analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerWorker and accessed in February 2018.

SOURCE: Fehr & Peers, 2018.

Criterion #3: Near Transit Stations

The project site is adjacent to the 19th Street BART Station, is within 0.3 miles of frequent bus service along Broadway (Routes 6 and 51A with 10-minute peak headways, the Broadway Shuttle with 11-minute peak headways, and Routes 18, 33, and 72 with 15-minute peak headways), and is within 0.1 miles of the Route 72R stop (12-minute peak headways) on Thomas L Berkeley Way. The 2018 Project would satisfy Criterion #3 because it would meet the following three conditions for this criterion:

- The Project would have a FAR greater than 0.75.
- The City of Oakland Planning Code (Section 17.116.060) has no parking minimum requirement and allows a maximum of 1.25 spaces per unit for multi-family residential developments in the CBD-P zone. For commercial uses in the CBD-P zone, the code (Section 17.116.080) has no parking minimum requirement and allows a maximum of one space per 300 square feet of ground floor space and one space per 500 square feet of above ground floor space. Therefore, City Code has no minimum parking requirement for the 2018 Project and allows for a maximum of 794 spaces. The 2018 Project would provide 171 off-street parking spaces. Therefore, the 2018 Project would provide less parking than the maximum allowed by City Code without a conditional use permit.
- The Project is located within the Downtown and Jack London Square Priority Development Area (PDA) as defined by Plan Bay Area, and is, therefore, consistent with the region's Sustainable Communities Strategy.

VMT Screening Conclusion

The 2018 Project would satisfy the Low-VMT Area (#2) and the Near Transit Stations (#3) criteria and is, therefore, presumed to have a less-than-significant impact on VMT with respect to the threshold for residential and office uses. For the restaurant/retail use, according to the TIRG, retail spaces less than 80,000 square feet are considered local-serving and are not expected to contribute to an increase in VMT. Therefore, it is presumed that the 2018 Project, which would include approximately 25,000 square feet of retail and restaurant space, would not result in substantial additional VMT. The 2018 Project impacts with respect to VMT would be less than significant and would not result in new impacts not identified in the 2015 Approved Project and the 2016 Updated Project analyses.

Transportation Demand Management (TDM) Plan

The 2018 Project would generate more than 50 peak hour trips and, therefore, preparation and implementation of a Transportation Demand Management Plan (TDM Plan) is required, in accordance with SCA TRA-4 and consistent with the TIRG. It is current City practice to prepare this plan concurrent with the environmental review process. For this reason, Fehr & Peers prepared a TDM Plan for the 2018 Project (see Appendix A).

Conclusion

The 2018 Project would not exceed the City's applicable significance thresholds related to traffic. The 2018 Project would not result in a significant effect relating to traffic and would, therefore, adhere to the criteria of CEQA Guidelines Section 15332(d). Moreover, the 2018 Project would

incorporate all applicable Oakland SCAs addressing TDM, construction, and operation-generated traffic as included in Attachment A.

3. Air Quality[4]

Thresholds of Significance

To qualify for an exemption under CEQA Guidelines §15332 as a Class 32 urban in-fill development, under criterion §15332(d), a project must not result in any significant effects relating to air quality.

For purposes of this environmental review document, the following lists the significance thresholds relevant to the assessment of the 2018 Project's ability to meet the conditions of a categorical exemption. A summary of these thresholds is shown in **Table V.3-1**.

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 nine parts per million (ppm) averaged over eight hours and 20 ppm for one 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 canyons, and below-grade roadways)];

4. For new sources of Toxic Air Contaminants (TACs), during either project construction or project operation expose sensitive receptors to substantial levels of TACs resulting in (a) an increase in cancer risk level greater than 10 in one million, (b) an increase in 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 sensitive 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.];

[4] Note the Air Quality analysis, including the Construction HRA, evaluated a previous and slightly smaller version of the 2018 Project. It differed only in the square footage of residential use (361,993 versus 381,480), number of stories (36 + rooftop amenity versus 38 + rooftop amenity), and height (376 feet to the upper roof versus 395 to the upper roof). Information provided by the applicant indicates an additional 16 days of construction would be required during the building construction phase. Project impacts are well below the respective thresholds; therefore, these changes would not make a meaningful difference with respect to the air quality evaluation and results and thus do not trigger a need to revise the modeling or analysis herein.

TABLE V.3-1
SUMMARY OF CITY'S CEQA SIGNIFICANCE THRESHOLDS APPLIED IN THIS ANALYSIS

	Construction-Related Thresholds of Significance	Operational Thresholds of Significance	
	Maximum Daily Emissions (pounds/day)	**Maximum Daily Emissions (pounds/day)**	**Annual Emissions (tons/year)**
Criteria Pollutants and Precursors (Regional)			
ROG	54	**54**	**10**
NO_x	54	**54**	**10**
PM_{10}	82[a]	**82**[b]	**15**[b]
$PM_{2.5}$	54[a]	**54**[b]	**10**[b]
PM_{10} (Fugitive Dust)	Best Management Practices	**N/A**	**N/A**
Criteria Air Pollutants and Precursors (Local)			
CO	None	**9.0 ppm (8-hour average) 20.0 ppm (1-hour average)**	
Risks and Hazards			
Siting a New Source or Receptor (Individual Project)	Cancer Risk: >10 in a million Non-Cancer Hazard Index: >1.0 $PM_{2.5}$ Level: >0.3 $\mu g/m^3$ annual average	**Cumulative Cancer Risk: >100 in a million Cumulative Non-Cancer Hazard Index: >10.0**	

NOTES:
[a] Includes exhaust emissions only
[b] Includes total emissions

SOURCE: City of Oakland; BAAQMD, 2013.

5. Expose new sensitive receptors to substantial ambient levels of Toxic Air Contaminants (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]; or

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)].

Previous Project Analysis (Section 4.6, Criterion §15332[d])

The 2016 Updated Project was found not to exceed the City's applicable significance thresholds related to air quality, and consistent with the findings of the 2015 Approved Project. The 2016 Updated Project was found to result in a less-than-significant impact relating to air quality, including health risk, and would adhere to CEQA Guidelines §15332(d). Additionally, the 2016 Updated Project would incorporate all applicable Oakland SCAs addressing air quality.

Methodology and Analysis

Construction Air Emissions

The 2016 Updated analysis found that annual average daily construction emissions for the 2016 Updated Project would not exceed the City's Thresholds for ROG, NO_X, PM_{10} or $PM_{2.5}$. The 2018 Project involves one additional residential unit, more square footage of office use, fewer parking spaces, and a new basement level for parking. Additionally, for the new tower construction, pre-fabricated panels will be used for exterior finishing, which would reduce criteria pollutant emissions from architectural coating, mainly ROG.

The average daily construction emissions estimated for the 2018 Project are shown in **Table V.3-2** below.

TABLE V.3-2
UNMITIGATED AVERAGE DAILY EMISSIONS FROM CONSTRUCTION (POUNDS PER DAY)[a]

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Average Daily Construction Emissions	1.7	16.8	0.6	0.6
City of Oakland Thresholds	54	54	82	54
Significant?	**No**	**No**	**No**	**No**

NOTES:

[a] Project construction emissions estimates were made using CalEEMod, version 2016.3.2. Emissions shown are daily emissions averaged over the construction period of the project.

SOURCE: ESA, 2018.

As shown in Table V.3-2, average daily construction emissions for the 2018 Project would not exceed the City's Thresholds for ROG, NOX, PM10 or PM2.5. These thresholds were developed to represent a cumulatively considerable contribution to regional air quality and as such, represent not only a project level threshold but a cumulative threshold as well. Thus, the cumulative impacts of the 2018 Project would also be less than significant.

The 2018 Project would also include demolition of the existing structures. The existing building and building material (for interior portions of the Tapscott Building to be removed) may contain Asbestos Containing Materials (ACM) which could pose a health risk to workers and nearby receptors during demolition. Consistent with SCA AIR-6, the 2018 Project would comply with all applicable laws and regulations regarding demolition and renovation of ACM. Therefore, the potential impact of the 2018 Project regarding exposure of existing receptors to construction would be less than significant.

Operational Air Emissions

The 2016 Updated analysis found that annual average daily regional operational emissions for the 2016 Updated Project would not exceed the City's thresholds for ROG, NO_X, PM_{10} or $PM_{2.5}$. The 2018 Project involves one additional residential unit, more square footage of office use, fewer parking spaces, a new basement level for parking, and a small increase in daily vehicle trips.

The daily operational emissions for the 2018 Project are shown in **Table V.3-3** below.

As shown in Table V.3-3, annual average daily regional emissions for the 2018 Project would not exceed the City's thresholds for ROG, NO_X, PM_{10} or $PM_{2.5}$. These thresholds were developed to represent a cumulatively considerable contribution to regional air quality and as such, represent not only a project-level threshold but a cumulative threshold as well. Thus, the operational air emissions for the 2018 Project would be less than significant.

TABLE V.3-3
UNMITIGATED AVERAGE DAILY EMISSIONS FROM OPERATION (POUNDS PER DAY)[A]

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Area Source Emissions	11.84	0.45	0.12	0.12
Energy Emissions	0.27	2.35	0.18	0.18
Project Mobile Source Emissions[b]	4.98	31.89	13.29	3.69
Backup Diesel Generator	0.01	0.25	0.01	0.01
Total Proposed Project Emissions	**17.1**	**34.9**	**13.6**	**4.0**
City of Oakland Thresholds	54	54	82	54
Significant (Yes or No)?	**No**	**No**	**No**	**No**

NOTES:
[a] Project operational emissions were estimated using CalEEMod, version 2016.3.2.
[b] Mobile source emissions are based on ITE trip generation rates (9th edition) for the proposed uses adjusted with a reduction assumed based on City of Oakland Transportation Impact Study Guidelines data for development in an urban environment within 0.5 miles of a BART Station.

SOURCE: ESA, 2017.

Carbon Monoxide

Consistent with the 2015 Approved Project and 2016 Updated Project analyses, regional concentrations of CO in the Bay Area have not exceeded the state or national ambient air quality standards since the Bay Area was designated as attainment with respect to carbon monoxide standards in April 1998. The primary source of CO emissions from development projects is vehicle traffic. Construction-related CO emissions represent less than one percent of the Bay Area total basin-wide CO emissions and are not expected to cause exceedances. Given the low background concentrations, 2016 Updated Project operational traffic was found not likely to contribute to exceedances even during peak traffic hours, and the marginal increase in an additional 170 trips for the 2018 Project is also not likely to contribute to exceedances. Furthermore, the BAAQMD has demonstrated, based on modeling, that in order to exceed the California ambient air quality standard of 9.0 ppm (8-hour average) or 20.0 ppm (1-hour average) for CO, project traffic in addition to existing traffic would need to exceed 44,000 vehicles per hour at affected intersections (or 24,000 vehicles per hour where vertical and/or horizontal mixing is limited). In Oakland, only the MacArthur Maze portion of Interstate 580 exceeds the 44,000 vehicles per hour screening criteria. Consequently, CO impacts from 2018 Project traffic at intersections in the project vicinity remain less than significant. Therefore, the previous analyses for the 2015 Approved Project and 2016 Updated Project under threshold criterion 3 remain valid.

Health Risk Assessment

Construction Health Risk Assessment

Potential health risks from project construction were evaluated for the 2016 Updated Project. The analysis concluded that, although project construction activities would produce Diesel Particulate Matter (DPM) and $PM_{2.5}$ emissions, implementation of SCA AIR-3 would reduce emissions by 85 percent and the potential impact of the Updated Project regarding exposure to construction related health risks would be less-than-significant.

At the time this report was prepared, it was City practice to implement SCA AIR-3(a)(i) and prepare a Construction Health Risk Assessment (HRA) concurrent with the environmental review process. For this reason, ESA prepared a Construction HRA for the 2018 Project (see Appendix B). The results of this HRA show that health risks (cancer and chronic) to receptors of all age groups and $PM_{2.5}$ concentrations resulting from project construction would be less than the applicable significance thresholds for both the 2018 Project and the TAC impact of project construction on existing receptors would be less than significant.

Operational Health Risk Assessment

As with the 2016 Updated Project, the 2018 Project would include a backup generator which would be the only new operational source of Toxic Air Contaminants (TAC). Newer generators have substantially reduced TAC emissions compared to older existing units and would be required to comply with the BAAQMD's permit requirements for a stationary source. The BAAQMD would not approve an Authority to Construct or a Permit to Operate any new or modified source of TACs that exceeds a cancer risk of 10 in one million or a chronic or acute hazard index of 1.0. This would be consistent with the requirements of SCA AIR-5 (see Attachment A) which would

apply to the 2018 Project and ensure that operational health risks from the 2018 Project's stationary sources to nearby receptors would be less than significant. Cumulative TAC health risks to project receptors were addressed in the analysis for the 2016 Updated Project and found to be less than significant. The 2018 Project would include the same new operational source of TAC emissions and, therefore, the previous analyses for the 2015 Approved Project and 2016 Updated Project remain valid.

Odors

The 2018 Project involves one additional residential unit, more square footage of office use, fewer parking spaces, and a new basement level for parking. Thus, the 2018 Project would not create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people, and, therefore, the impact with respect to criterion 6, above, would be less-than-significant. Therefore, the previous analyses for the 2015 Approved Project and 2016 Updated Project under this threshold criterion remain valid.

Conclusion

Similar to the 2015 Approved Project and 2016 Updated Project, the 2018 Project would not exceed the City's applicable significance thresholds related to air quality. Therefore, consistent with the findings of the 2015 Approved Project and 2016 Updated Project, the 2018 Project would result in a less-than-significant impact relating to air quality, including health risk, and adheres to CEQA Guidelines §15332(d). Additionally, the 2018 Project would incorporate all applicable Oakland SCAs addressing air quality included in Attachment A.

4. Wind

Significance Thresholds

The City of Oakland considers a significant wind impact to occur if a project were to create winds that exceed 36 miles per hour (mph) for more than one hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown. These impacts would be limited to ground-level winds in public pedestrian corridors and public open spaces.

Previous Project Analysis (Section 5.7, Criterion 15300.2)

The 2015 Approved Project and 2016 Updated Project found less than significant impacts in regard to wind. Wind tunnel tests were conducted by RWDI for the 2015 Approved Project. Results from those tests showed the 2015 Approved Project would not result in wind speeds exceeding the threshold for a significant wind impact, and that the 2015 Approved Project would not result in a significant impact with respect to wind hazards. RWDI examined the 2016 Updated Project design changes from the 2015 Approved Project and concluded they were not substantial with respect to wind, would result in no new wind impact compared with the 2015 Approved Project design, and that the results of the wind analysis for the 2015 Approved Project remained valid and sufficient for

the 2016 Updated Project. Appendix C includes the original 1900 Broadway wind tunnel test report from 2015 and the memo evaluating the 2016 Update Project.

At the time of the 2015 Approved Project wind tunnel test, no cumulative projects of significant size were proposed in the vicinity of the project site. Therefore, no cumulative scenario was included in the analysis.

Methodology and Analysis

Consistent with the City of Oakland's current methodology for wind analyses, RWDI prepared a technical memo documenting their conclusions for the 2018 Project (see Appendix C). As with the 2016 Updated Project, RWDI examined the 2018 Project design changes compared with the 2015 Approved Project.

For the cumulative analysis, in 2017, RWDI reviewed the cumulative configuration that was tested by RWDI for a project approximately 260 feet from the project site at 1750 Broadway. The 2015 Approved Project tower model was used in the wind tunnel test for the cumulative configuration together with eight proposed buildings in the surrounding area. The results showed that, in the cumulative configuration, wind speeds are not expected to increase or cause any hazard conditions at any of the tested locations. Rather, wind speeds are expected to reduce with the inclusion of future buildings in the cumulative configuration. As the 2018 Project tower would be located adjacent to the north of the 1750 Broadway Project, the 1750 Broadway cumulative wind study was deemed adequate to assess the cumulative wind conditions for the 2018 Project.

Wind Hazard

As described in the 2015 Approved Project analysis, the prevailing winds in the project area are from the westerly directions. These winds would be intercepted by the proposed tower and redirected down to the street level. Redirected winds are the main reason for potentially increased wind activity at entrances, sidewalks and other pedestrian areas on the ground. However, no wind hazard exceedance was detected for either the existing conditions or the 2015 Approved Project conditions. Further, an assessment of the design changes proposed in 2016 shows the increased height would not be substantial, with respect to wind, and thus would not result in new wind impact compared with the 2015 Approved Project design.

A taller tower would increase the exposure of the tower to the prevailing winds and result in slightly increased downwashing wind flows. However, the narrower west façade, the lower podium, the continuous terrace at Level 2, the large communal terraces along Broadway, and added articulation to the building façade for the 2018 Project would disrupt any downwashing winds off of the tower and thereby reduce the wind speeds at grade. Therefore, the proposed changes for the 2018 Project would have no wind impact.

As shown in the 1750 Broadway wind study (see Appendix C), wind speeds at all 39 grade level locations tested met the wind hazard criterion under cumulative conditions. Compared with the existing conditions, the average wind speed is anticipated to increase slightly (from 24 mph to 25 mph) with the addition of cumulative projects but now new wind hazards would result. Based

on the conclusion of no wind impact caused by the proposed design changes for the 2018 Project, no additional wind impact is anticipated to be caused by these design changes on the wind conditions on and around the proposed 1750 or 1900 Broadway developments for the Cumulative configuration and the results of the 1750 Broadway Report remain valid.

Conclusion

The results of the 2015 Approved Project wind study, the 1750 Broadway cumulative wind analysis, and the technical assessment of potential effects from proposed design changes show that the 2018 Project would not result in wind speeds exceeding the threshold for a significant wind impact and the 2018 Project would not result in a significant impact with respect to wind hazards. Therefore, the potential impacts of the 2018 Project regarding wind would be similar to those identified in the 2015 Approved Project and the 2016 Updated Project analyses.

5. Greenhouse Gas Emissions

The analysis herein evaluates the potential for the 2018 Project to result in significant effects relating to Greenhouse Gases (GHGs). GHG emissions that would primarily be generated by the 2018 Project include carbon dioxide (CO_2), with much smaller amounts of nitrous oxide (N_2O), and methane (CH_4, often from unburned natural gas). GHG emissions are often quantified and reported as CO_2-equivalent (CO_2e) emissions because GHGs have different global warming potentials (i.e., the amount of heat trapped in the atmosphere by a certain mass of the gas), and CO_2 is the most common reference gas for climate change. For any quantity and type of GHG, its CO_2e signifies the amount of CO_2 which would have the equivalent global warming impact. The global warming potential of CH_4 and N_2O are 25 times and 298 times that of CO_2, respectively.[5]

Thresholds of Significance

The analysis presented below is based on the significance criteria contained in the BAAQMD 2010 CEQA Guidelines and adopted by the City of Oakland. These thresholds are consistent with and authorized by CEQA Guidelines §15064. The methodology used for assessing GHG/global climate change impacts (e.g. calculating emissions) is based on the latest version of the BAAQMD's CEQA Guidelines and guidelines published by other regional, state, and federal regulatory agencies.

Though the BAAQMD most recently updated its CEQA Air Quality Guidelines in May 2017, the update included no substantive changes to the data and assumptions underlying the analytical methodologies, significance thresholds, and mitigation strategies since the update in June 2010. The guidelines recommend that lead agencies develop their own thresholds of significance. However, the guidelines offer the thresholds in the BAAQMD's 1999 Guidelines (a table of thresholds promulgated by other California air districts), and refer to California Air Pollution Control Officers Association and State Air Resources Board guidance, as possibilities for significance thresholds. Reference to the BAAQMD CEQA Thresholds Options and Justification Report developed by district staff in 2009 is also an option and one that provides lead agencies with a justification for continuing to rely on the BAAQMD 2010 thresholds. Based on this, the

[5] California Air Resources Board, Global Warming Potentials webpage, last reviewed June 6, 2017. Available online at: http://www.arb.ca.gov/cc/inventory/background/gwp.htm. Accessed April 26, 2018.

City's Thresholds for greenhouse gases appropriately rely upon and are generally based upon the BAAQMD 2010 CEQA Guidelines and Thresholds.

For purposes of this analysis, the following significance thresholds are relevant to the assessment of the 2018 Project's ability to cause a significant GHG impact.

a) 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. 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.

b) Fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing Greenhouse Gas emissions.

Previous Project Analysis (Section 5.7.2, Criterion §15300)

The 2016 Updated Project was found not to exceed the City's applicable significance thresholds related to GHG, and consistent with the findings of the 2015 Approved Project, the 2016 Updated Project would not result in any significant GHG-related impacts, and there is no exception to the Class 32 exemption relative to GHG criteria.

Methodology and Analysis

Construction GHG Emissions

Emissions of GHG emissions during 2018 Project construction were estimated using CalEEMod (Version 2016.3.2) using the assumptions listed below.[6] Construction of the Tower and renovation of the Tapscott building were considered separately for estimation of emissions.

- Construction of 452 units of residential units, 85,000 square feet of office space, 20,000 square feet of restaurant space, and 5,000 square feet of retail use along with approximately 35,070 square feet of parking facilities.
- Construction was assumed to begin in December 2018 and last for a period of 31 months.
- The duration of the various construction/renovation phases (e.g., demolition, grading, building construction, etc.) were provided by the applicant.
- The number and types of construction equipment used, their size and activity level during each phase were provided by the applicant.
- The numbers of construction related worker, vendor and hauling trips during each construction phase were also provided by the applicant.

6 As with the Air Quality analysis, the GHG analysis evaluated a previous and slightly smaller version of the 2018 Project. It differed only in the square footage of residential use (361,993 versus 381,480), number of stories (36 + rooftop amenity versus 38 + rooftop amenity), and height (376 feet to the upper roof versus 395 to the upper roof). Information provided by the applicant indicates an additional 16 days of construction would be required during the building construction phase. Project impacts are well below the respective thresholds, therefore, these changes would not make a meaningful difference with respect to the GHG evaluation and results and thus do not trigger a need to revise the modeling or analysis herein.

- Demolition of 16,575 square feet of existing structures.
- In-fill of 5,000 cubic yards and off-haul of 33,000 cubic yards of material during the grading phase.
- Off-haul of 8,000 cubic yards of renovation debris from the Tapscott building
- The Project proposes to use pre-fabricated panels for building exterior, hence no emissions from architectural coatings for the building exterior surfaces was assumed.
- CalEEMod defaults were assumed for all other inputs.

Project construction-related GHG emissions would total 1,167 metric tons of CO_2 equivalents (CO_2e) over the entire construction duration. In accordance with the City of Oakland's CEQA guidance for evaluating the GHG thresholds of significance, the construction CO_2e emissions were annualized over an assumed project life of 40 years. Construction-related GHG emissions would be 29.2 metric tons per year of CO_2e. These emissions are factored into the total operational GHG emissions calculation below to determine significance.

Operational GHG Emissions

The 2018 Project would generate operational GHG emissions from many of the same sources that generate air quality emissions, such as area, energy and mobile sources. Additionally, GHGs would be generated indirectly by increased electrical and water demand as well as increased wastewater and solid waste generation. Operational emissions estimated by the CalEEMod run were based on the following assumptions:

- Trip generation rates for the proposed uses were based on the estimates for the 2018 Project from Fehr & Peers
- Based on the design of the East Bay Municipal Utility District's wastewater treatment plant, emissions estimated from wastewater treatment assumed a process with 100 percent aerobic biodegradation and 100 percent anaerobic digestion.
- Based on the Project design, no woodstoves and only gas fireplaces (CalEEMod default number) were included in the operations.
- Compliance with the mandatory measures described under the current CALGreen Code would reduce indoor water use by approximately 20 percent.[7]
- PG&E emission factor of 290 lbs of CO_2 per MWh for the buildout year based on the California Public Utilities Commission (CPUC) GHG Calculator, which provides an independent forecast of PG&E's emission factors on how the electricity sector would reduce emissions under AB 32.
- Implementation of the City of Oakland Zero Waste goal, which reduces GHG emissions from waste by 89% between 2005 and 2020.
- Sequestration from landscaping was assumed to be negligible and, therefore, was not included in the analysis.

7 CaGreen, *2013 CalGreen Residential Mandatory Measures*, effective January 1, 2014.

As noted above, annualized construction-related GHG emissions are added into the total operational GHG emissions calculation. The average annual GHG emissions per service population were determined based on a service population of 1,144 persons.[8]

The Project site is located within a "Regional Center" Priority Development Area pursuant to the Plan Bay Area which represents the Sustainable Communities Strategy (SCS) for the greater San Francisco Bay Area (MTC, 2013). Per CEQA Guidelines Section 15183.5 (c), environmental documents for certain residential and mixed-use projects and transit priority projects, as defined in Section 21155 of the Public Resources Code, that are consistent with the general use designation, density, building intensity and applicable policies specified for the project area in an applicable SCS or alternative planning strategy, need not analyze global warming impacts resulting from cars and light duty trucks. A lead agency should consider whether such projects may result in GHGs from other sources, however, consistent with the CEQA Guidelines. Consequently, if a project meets the requirements of a transit priority project, its mobile sources need not be included in the assessment of GHG impacts.

Section 21155 of the *California Public Resources Code* defines transit priority projects as projects which:

1. Contain at least 50 percent residential use, based on total building square footage and, if the project contains between 26 percent and 50 percent nonresidential uses, a floor area ratio of not less than 0.75;
2. Provide a minimum net density of at least 20 dwelling units per acre; and
3. Be located within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan. A major transit stop is as defined in Section 21064.3, except that, for purposes of this section, it also includes major transit stops that are included in the applicable regional transportation plan. For purposes of this section, a high quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. A project shall be considered to be within on-half mile of a major transit stop or high-quality transit corridor if all parcels within the project have not more than 25 percent of their area farther than one-half mile from the stop or corridor and if not more than 10 percent of the residential units or 100 units, whichever is less, in the project are farther than one-half mile from the stop or corridor.

The 2018 Project would be approximately 472,000 square feet of mixed uses with approximately 362,000 square feet of residential uses, and, therefore, would contain residential uses in approximately 77 percent of the total development area, well above the 50 percent required to qualify the 2018 Project as a Transit Priority Project. The 2018 Project would construct 452 dwelling units on a 0.93-acre site; therefore, the net density would be approximately 484 dwelling units per acre. The 19th Street BART station entrance is on Broadway adjacent to the project site and 12th Street BART station is located approximately 0.3 miles to the south. AC Transit, the primary bus service provider for the City of Oakland also operates several routes in the vicinity of the

[8] Assumes a residential density of 1.8 residents per unit, 3.3 employees per 1,000 square feet of general office space, and 2 employees per 1,000 square feet of non-office commercial space, as established in the certified Broadway Valdez District Specific Plan EIR—a recent EIR with a Plan Area boundary approximately four blocks south of the project site.

project site with stops within one-half mile. A portion of Broadway just west of the project site qualifies as a "High Quality Transit Corridor" because fixed bus route services are provided through AC Transit with service intervals no longer than 15 minutes during peak commute hours.

As discussed above, the 2018 Project satisfies requirements 1), 2) and 3) and would, therefore, qualify as a Transit Priority Project (and thereby a mixed-use residential project per PRC Section 21159.28[d]). Therefore, 2018 Project mobile source emissions have not been included in the GHG inventory below.

The total average annual CO_2e emissions and the total average annual CO_2e emissions per service population for the 2018 Project are compared to the City's thresholds in **Table V.5-1** below. For informational purposes only, the table presents the project-related GHG emissions with and without the mobile emissions. As discussed above, for the purposes of assessing the impact relative to the City's thresholds, mobile emissions are not included. As shown in the table, the 2018 Project would exceed the City's threshold of 1,100 metric tons of CO_2e per year, but not exceed the 4.6 metric tons of CO_2e per service population threshold. The 2018 Project impact would be considered less than significant as the impact would be considered significant only if emissions exceed both the City thresholds.

TABLE V.5-1
GHG EMISSIONS FROM PROJECT OPERATION (METRIC TONS PER YEAR)[a]

Project Component	CO_2e[b]
Area Source Emissions	44.8
Energy Emissions	986.6
Mobile Emissions[c]	2,986.2
Solid Waste[d]	29.3
Water and Wastewater[e]	67.5
Annual Construction Emissions (Averaged over 40 years)	29.1
Total Emission with Mobile Sources	4,144
Total Emissions without Mobile Sources	**1,157**
City of Oakland Threshold	1,100
Exceeds Threshold?	Yes
Service population[f] (814 residents and 330employees)	1,144
Emissions per Service Population (excluding mobile emissions)	**1.0**
City Emissions per Service Population Threshold	4.6
Exceeds Threshold?	No
Significant?[g]	**No**

NOTES:
[a] Project operational emissions estimates were made using CalEEMod, version 2016.3.2.
[b] GHG emissions are expressed as CO_2e – Carbon dioxide equivalents
[c] GHG emissions from mobile sources relied on inputs from the Transportation Analysis by Fehr & Peers.
[d] Assumes implementation of the City of Oakland Zero Waste goal, which reduces GHG emissions from waste by 89% between 2005 and 2020
[e] 20 percent reduction in indoor water use assumed in compliance with CalGreen code.
[f] The service population is the total number of residents and employees of a project.
[g] Impact would be considered significant only if both thresholds are exceeded.

SOURCE: ESA, 2018

Emissions from the proposed backup generator were also estimated using CalEEMod and the estimated emissions are presented in **Table V.5-2**. These emissions are considered separately against the 10,000 tons per year stationary source threshold, which is not exceeded. Therefore, under the City's significance thresholds, the total operational GHG emissions would be less-than-significant.

TABLE V.5-2
AVERAGE GREENHOUSE GAS EMISSIONS FROM THE BACKUP GENERATOR

Source	CO_2e[a] (metric tons per year)
Project Backup Generator	7.6
City of Oakland's Threshold	10,000
Exceeds Threshold?	**No**

NOTES:
[a] CO_2e – Carbon dioxide equivalents

SOURCE: ESA, 2018

Project Consistency with Plans and Policies

The 2018 Project would comply with the Oakland Energy and Climate Action Plan, current City Sustainability Programs, and General Plan policies and regulations regarding GHG reductions and other local, regional and statewide plans, policies and regulations that are related to the reduction of GHG emissions and relevant to the 2018 Project.

Specifically, the 2018 Project would also be consistent with the State's Updated Climate Change Scoping Plan and the City of Oakland's Energy and Climate Action Plan in that it will include a number of sustainability design features. The City of Oakland has adopted a Green Building Ordinance for private development projects. In accordance with the Green Building Ordinance, the 2018 Project would be required to implement mandatory measures from the statewide CALGreen Code and complete a Green Building Compliance Checklist (e.g., LEED or GreenPoint Rater).[9] The 2018 Project will also meet the newly implemented Building Energy Efficiency Standards and will optimize the efficiency of the building envelopes and, through use of efficient heating, ventilation, and air conditioning (HVAC) and lighting systems, reduce domestic energy use compared to traditional development.

Therefore, the 2018 Project would not conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions.

Standard Conditions of Approval

City of Oakland Standard Condition of Approval (SCA) GHG-1 requires that a GHG Reduction Plan be prepared for projects of a certain minimum size that produce total GHG emissions during operations that exceed one or both of the City's established thresholds of significance for land use

[9] Rating system and checklist determined by City of Oakland Planning Department based on square footage of each use.

developments, or involve a stationary source (e.g., backup generator) that produce total GHG emissions that exceed the City's established threshold of significance for stationary sources. SCA GHG-1 requires project applicants to prepare a GHG Reduction Plan to increase energy efficiency and reduce GHG emissions to the greatest extent feasible below the BAAQMD's thresholds of significance. The GHG Reduction Plan would be required to include a detailed GHG emissions inventory and a comprehensive set of quantified GHG emissions reduction measures.

The City's current SCA GHG-1 applies to any project that meets **one or more** of the following three scenarios and has a net increase in GHG emissions:

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 GHG emissions screening criteria contained in the BAAQMD CEQA Guidelines, AND

(c) after a GHG analysis is prepared, would exceed both of the City's applicable thresholds of significance (1,100 metric tons of carbon dioxide equivalents [CO2e] annually and 4.6 metric tons of CO_2e per service population annually).

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 City's applicable thresholds of significance (1,100 metric tons of CO2e annually or 4.6 metric tons of CO_2e per service population annually), AND

(d) are considered to be "Very Large Projects."

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 exceed the City's applicable threshold of significance (10,000 metric tons of CO_2e annually).

The BAAQMD's screening criteria are included in Table 3-1 of the BAAQMD's 2010 CEQA Air Quality Guidelines. The screening criteria indicate which projects, based on land use and size, would have impacts that would be considered less than significant without a quantitative analysis of project emissions. The City's numerical thresholds of significance for GHG emissions from proposed land use developments and stationary sources are also derived from the BAAQMD's 2010 CEQA Air Quality Guidelines.

Table V.5-3 compares the development proposed under the 2018 Project to the criteria associated with each of the City of Oakland's three GHG emissions scenarios for SCA GHG-1. For a project

to be subject to SCA GHG-1 (and be required to prepare a GHG Reduction Plan), the project must meet all the criteria of one or more of the scenarios. As indicated in Table V.5-3, the Project would trigger the GHG Reduction Plan requirement because all the criteria under Scenario B of SCA GHG-1 are fully satisfied. Supporting analysis for the findings summarized in Table V.5-3 is provided below.

TABLE V.5-3
COMPARISON OF 2018 PROJECT WITH SCENARIOS FOR SCA GHG-1

Scenario	Criterion (a)	Criterion (b)	Criterion (c)	Criterion (d)	Applies to Project?
Scenario A	Involve land use development?	Exceeds BAAQMD's screening criteria? [a]	Exceeds both of the City's applicable thresholds? [b]	------	
1900 Broadway	Yes (mixed use)	Yes (452 residential units, 85,000 square feet of office, 20,000 square feet of restaurant and 5,000 square feet retail)	No (See Table GHG-1)	------	No
Scenario B	Involve land use development?	Exceeds BAAQMD's screening criteria? [a]	Exceeds one of the City's applicable thresholds? [b]	Very Large Project?	
1900 Broadway	Yes (mixed use)	Yes (452 residential units, 85,000 square feet of office, 20,000 square feet of restaurant and 5,000 square feet retail)	Yes (See Table GHG-1)	Yes (See Table GHG-4)	Yes
Scenario C	Involve a stationary source?	Exceeds the City's applicable thresholds? [c]	------	------	No
1900 Broadway	Yes	No (See Table GHG-2)	------	------	

NOTES

[a] Based on Table 3-1 of the BAAQMD's 2017 *CEQA Air Quality Guidelines*, a high-rise apartment building with 91 or less dwelling units OR a strip mall/regional shopping center with 19,000 or less square feet of area OR a general office building with 53,000 or less square feet of area OR a sit-down restaurant of area 7,000 square feet or less would have GHG emission levels below the City's applicable thresholds.

[b] For land use developments, the City's threshold of significance are 1,100 metric tons of CO_2e annually and 4.6 metric tons of CO2e per service population annually.

[c] For stationary sources, the City's threshold of significance are 10,000 metric tons of CO_2e annually.

Comparison of 2018 Project with the City's Criteria for a "Very Large Project"

As outlined in Scenario B of SCA GHG-1 (Table V.5-3), the 2018 Project should be compared to the City's criteria for identifying a Very Large Project. The City defines a Very Large Project as any of the following:

i. Residential development of more than 500 dwelling units;

ii. Shopping center or business establishment employing more than 1,000 persons or encompassing more than 500,000 square feet of floor space;

iii. Commercial office building employing more than 1,000 persons or encompassing more than 250,000 square feet of floor space;

iv. Hotel/motel development of more than 500 rooms;

v. Industrial, manufacturing, processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or encompassing more than 650,000 square feet of floor area; or

vi. Any combination of smaller versions of the above that when combined result in equivalent annual GHG emissions as the above.

Table V.5-4 shows the combined residential, office, restaurant and retail uses, and evaluates each component of the project as a percentage of the criteria for Very Large Projects. If the sum of these percentages adds up to 100 or more, then the project would constitute a Very Large Project. As shown in Table V.5-4, the combined project components would result in equivalent GHG emissions that represent a Very Large Project. Therefore, the 2018 Project would be considered a Very Large Project.

TABLE V.5-4
COMPARISON OF PROJECT WITH CRITERION F FOR A VERY LARGE PROJECT

Land Use	Unit Metric	Project	Very Large Project	Project Component's Percentage of a Very Large Project
Residential	Dwelling Units	452	500	90%
Retail & Restaurant	Square feet	25,000	500,000	5%
Office	Square feet	85,000	250,000	34%
			Total of all Project Components	129%

As shown in the analysis above, the 2018 Project would be a mixed use development project that exceeds the BAAQMD screening criteria for GHG emissions and meets the City's criteria for a "Very Large Project". In addition, 2018 Project emissions exceed one of the two City GHG significance thresholds. Based on this, the Project would trigger the requirements of a GHG Reduction Plan to comply with City SCA GHG-1.

Conclusion

The 2018 Project would not exceed the City's applicable significance thresholds related to GHG. The 2018 Project would comply with all applicable plans, policies, and regulations adopted for the purposes of reducing GHG emissions and result in a less-than-significant impact relating to GHG emissions. Therefore, consistent with the findings of the Approved Project and the Updated Project, the 2018 Project would result in a less-than-significant impact relating to GHG emissions, and, therefore, the exception to a CEQA exemption under CEQA Guidelines §15300.2 does not apply.

Nevertheless, the 2018 Project would be required to prepare a GHG Reduction Plan as it meets all the criteria described under Scenario B of SCA GHG-1. It is current City practice to prepare this plan concurrent with the environmental review process. For this reason, ESA has prepared a GHG Reduction Plan for the 2018 Project (see Appendix D).

6. Shadow

Significance Thresholds

Based on City of Oakland significance threshold criteria, potential adverse effects pertaining to shadow from new buildings within the downtown area of Oakland were considered as described below. Under City of Oakland thresholds of significance, a project would have a significant shadow impact if it would:

1. introduce landscape that would now or in the future cast substantial shadows on existing solar collectors;
2. cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;
3. cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or
4. cast shadow on an historic resource[10] such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its designation as an historic resource.

Previous Project Analysis (Section 5.7, Criterion 15300.2)

The 2015 Approved Project and 2016 Updated Project found less than significant impacts in regards to shadow on solar collectors and public parks and open spaces. Consistent with the findings of the 2015 Approved Project analysis, there were no unusual circumstances specific to the 2016 Updated Project compared to its surroundings and similar projects (high-rise, mixed use, in-fill development downtown) that would pose a reasonable possibility of the 2016 Updated Project generating a significant effect on the environment.

Methodology and Analysis

Consistent with the City of Oakland's current methodology for shadow analyses, PreVision Design prepared a shadow analysis for the 2018 Project. Using a virtual 3D model, PreVision simulated and rendered the 2018 Project shadow in the existing shading conditions, as well as in the cumulative shading conditions (including other proposed projects in the vicinity). Graphical depictions of the shadows that would be cast by the 2018 Project building at 9:00 AM, 12:00 PM, and 3:00 PM for the summer solstice (June 21st), spring/fall equinoxes (March 20th and September 22nd), and winter solstice (December 21st) were prepared (see Appendix E).[11]

[10] Local historic resources per city of Oakland Designated Landmarks webpage (http://www2.oaklandnet.com/government/o/PBN/OurServices/Historic/DOWD009012), and the Oakland Planning and Zoning Map, (http://oakgis.maps.arcgis.com/apps/webappviewer/index.html?id=3676148ea4924fc7b75e7350903c7224).

[11] The graphics presented in Appendix E relied on a previous and slightly smaller version of the 2018 Project. It differed only in the square footage of residential use (361,993 versus 381,480), number of stories (36 + rooftop amenity versus 38 + rooftop amenity), and height (376 feet to the upper roof versus 395 to the upper roof). However, these changes would not make a meaningful difference with respect to shadow impacts because, at the times depicted, no significant difference in shading cast on identified receptor sites would occur. The narrative description of shading effects reflects the current (taller) 2018 Project proposal.

The shadow analysis demonstrates that between the hours of 9:00 AM and 3:00 PM, the 2018 Project would cast net new shadow throughout the year as far as westward across Rashida Muhammad Street between 19th and 20th Streets, northwest across 22nd Street between San Pablo and Telegraph Avenues, northeast across the intersection of Franklin and 21st Streets, and eastward across 20th Street between Broadway and Franklin Street. The 2018 Project would not introduce any landscape that would affect solar collectors; however, the 2018 Project would generate net new shadow that could affect existing rooftop solar collectors, public parks/open spaces, and historic resources.

Solar Collectors

One site with rooftop solar collectors located at 618 21st Street would be affected by net new shadow from the 2018 Project. New shading would be cast on the rooftop panels during a few days around the winter solstice (December 21st). The rooftop solar panels would be affected from approximately 9 AM through 9:05 AM for a few minutes before shadows would move eastward off the panels.

In general, solar collectors collect sun power during the period from two hours prior and two hours post solar noon—the time at which the sun is directly south. Considering new Project shading would occur for an extremely short duration for only a few days a year around the winter solstice, and at times when solar panel efficiency would be lower than at other times of the day or year, the presence of new 2018 Project shading would not substantially impair the functioning of the solar collectors or compromise their effectiveness. Therefore, new 2018 Project shading would not result in a substantial loss of power, income, or use from the collectors and, as such, would not be considered a significant impact. No other solar collectors in the vicinity would be affected by the 2018 Project.

Parks/Public Open Spaces

The 2018 Project would add new shading to the Henry J. Kaiser Memorial Park from mid-February though late April and mid-August through late-October from approximately 9:00 AM until 9:35 AM. At 9 AM on the spring and fall equinoxes, new shadow would cover up to 80 percent of the park, however this shadow would recede to the east and leave the park by approximately 9:35 AM. During the early spring and late fall the amount of park affected by shade would fall to under 15 percent and the duration of new shadow would be reduced to 20 minutes or less. In late August, small amounts of new shadow would fall in the southeastern corner of the park at 9 AM, but would be gone no later than 9:10 AM. The affected area of the park includes a concrete sidewalk, a planting area, and one fixed bench. The remainder of the summer would see no net new shadow from the 2018 Project.

The 2018 Project's net new shadow would be present primarily during the spring and fall, affecting only a short duration in the morning, at a time not of typical high use. Although at certain times, the 2018 Project's largest shadows would cover a large area of the park, the short duration of such coverage would not substantially impair the beneficial use of park and would not be considered a significant impact. No other parks and/or public open spaces in the vicinity would be affected by net new shadow from the 2018 Project.

Historic Resources

In terms of historic resources, the City of Oakland's CEQA thresholds of significance state that a significant impact would occur if a project were to shade designated historic resources such that the new shadow would "materially impair" the resource's historic significance. While access to light is not typically an important characteristic of most historic buildings, it may be of historic places of worship where the light, specifically the light through stained glass windows, contributes to its architectural historical significance. As described in the attached shadow analysis, the 2018 Project would add new shading on seven historic buildings. Since the shadows cast by the 2018 Project would be cast for a short period of the day, on limited portions of seven historic buildings for which light is not an important historical characteristic, the presence of new shadow would not materially alter the physical characteristics that convey historical significance for any of the six historic resources.

The closest historic resource where sunlight contributes to its architectural historical significance is 2201 Telegraph (the Oakland Burmese Mission Baptist Church) which does contain stained glass windows. The 2018 Project would not cast new shadow over 2201 Telegraph. The longest shadows cast by the 2018 Project in the direction of 2201 Telegraph would occur on December 21st at approximately 11 AM, and would fall approximately 180 feet short of reaching the building. Therefore, the new 2018 Project shadow would not result in a significant impact. No other historic resources in the vicinity would be affected by net new shadow from the 2018 Project.

Cumulative Shading

The cumulative conditions analysis assesses the 2018 Project's potential impacts along with other proposed projects in the vicinity that have the potential to cast shadow on sites affected by 2018 Project shading. These projects are listed and cumulative shading is depicted in Appendix E. A couple of the cumulative projects would generate net new shadow that would overlap with shadow cast by the 2018 Project on historic resources. The building at 518 20th Street (Great Western Power Company Building) would be shaded by the 2018 Project the 2015 Telegraph project at the same time. At 2025 Broadway (Broadway Theatre), some winter midday shadow cast by the 2016 Telegraph project would overlap with shadow cast by the 2018 Project. However, since these are not historic buildings for which light is an important historical characteristic, the presence of new cumulative shadow would not materially alter the physical characteristics that convey historical significance for any of the historic resources. Therefore, cumulative shadow would not constitute a significant impact.

Conclusion

The 2018 Project would not introduce any landscape that would affect solar collectors, and the presence of new shading from the 2018 Project would not substantially impair the functioning of solar collectors in the vicinity of the project site. The presence of new shading at Henry J. Kaiser Memorial Park would not substantially impair the beneficial use of the park and the presence of new shadow on historic buildings in the Project vicinity would not materially alter the character defining features of those resources. Therefore, the 2018 Project would result in a less-than-significant impact relating to shadow and the potential impacts of the 2018 Project regarding

wind would be similar to those identified in the 2015 Approved Project and the 2016 Updated Project analyses.

VI. Conclusion

The information presented in this environmental review document supports that the 2018 Project, consistent with the 2015 Approved Project and 2016 Updated Project, meets all requirements under CEQA Guidelines §15183, §15183.3, and §15332 and does not trigger conditions in CEQA Guidelines §15300.2. As a result, the 2018 Project qualifies for CEQA exemptions under CEQA guidelines §15183, §15183.3, and §15332.

VII. List of Attachments and Appendices

Attachment A – Standard Conditions of Approval and Mitigation Monitoring and Reporting Program

Appendix A – Transportation and Parking Demand Management Plan

Appendix B – Health Risk Assessment

Appendix C – Wind Technical Memo

Appendix D – Green House Gas Reduction Plan

Appendix E – Shadow Study and Diagrams

ATTACHMENT A

Standard Conditions of Approval and Mitigation Monitoring and Reporting Program

This Standard Conditions of Approval (SCAs) and Mitigation Monitoring and Reporting Program (SCAMMRP) is based on the CEQA Analysis prepared for the 19th Street and Broadway Residential Project (2018 Project).

This SCAMMRP is in compliance with Section 15097 of the CEQA Guidelines, which requires that the Lead Agency "adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects." The SCAMMRP lists SCAs that apply to the 2018 Project. Specifically, on May 1, 2018, the City of Oakland released a revised set of all City of Oakland SCAs, which largely still include SCAs adopted by the City in 2008, along with supplemental, modified, and new SCAs. The SCAs are measures that would minimize potential adverse effects that could result from implementation of the 2018 Project, to ensure the conditions are implemented and monitored. The revised set of the City of Oakland SCAs includes new, modified, and reorganized SCAs; however, none of the revisions diminish or negate the ability of the SCAs considered "environmental protection measures" to minimize potential adverse environmental effects. As such, the SCAs identified in the SCAMMRP reflect the current SCAs only. This SCAMMRP also identifies the mitigation monitoring requirements for each mitigation measure and SCA.

This CEQA Analysis is also based on the analysis in the following Program EIRs that apply to the 2018 Project: Oakland's 1998 General Plan Land Use and Transportation Element (LUTE) EIR (1998 LUTE EIR), the 2010 General Plan Housing Element Update EIR and 2014 Addendum, and the Redevelopment Plan Amendments EIR. None of the mitigation measures or SCAs from these Program EIRs are included in this SCAMMRP because they, or an updated or equally effective SCA, are identified in this CEQA Analysis for the 2018 Project.

To the extent any mitigation measure and/or SCA identified in the CEQA Analysis were inadvertently omitted, they are automatically incorporated herein by reference.

- The first column of the SCAMMRP table identifies SCA applicable to that topic in the CEQA Analysis. While an SCA can apply to more than one topic, it is listed in its entirety only under its primary topic (as indicated in the mitigation or SCA designator). The SCAs are numbered to specifically apply to the 2018 Project and this CEQA Analysis; however, the SCAs as presented in the City's Standard Conditions of Approval and Uniformly Applied Development Standards document[1] are included in parenthesis for cross-reference purposes.

[1] A revised set of SCAs was published by the City of Oakland on May 1, 2018.

- The second column identifies the monitoring schedule or timing applicable to the 2018 Project.
- The third column names the party responsible for monitoring the required action for the 2018 Project.

The project applicant is responsible for compliance with any recommendations identified in City-approved technical reports all applicable mitigation measures adopted, and with all SCAs set forth herein at its sole cost and expense, unless otherwise expressly provided in a specific mitigation measure or condition of approval, and subject to the review and approval of the City of Oakland. Overall monitoring and compliance with the SCAs will be the responsibility of the Bureau or Planning, Zoning Inspections Division. Prior to the issuance of a demolition, grading, and/or construction permit, the project applicant shall pay the applicable mitigation and monitoring fee to the City in accordance with the City's Master Fee Schedule.

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
General		
SCA GEN-1 (Standard Condition of Approval 15) *Regulatory Permits and Authorizations from Other Agencies* Requirement: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies including, but not limited to, the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.	Prior to activity requiring permit/authorization from regulatory agency.	City of Oakland Bureau of Planning and applicable regulatory agency with jurisdiction
Aesthetics, Shadow, and Wind		
SCA AES-1 (Standard Condition of Approval 16) *Trash and Blight Removal* Requirement: The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and multi-family residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.	Ongoing.	City of Oakland Bureau of Building
SCA AES-2 (Standard Condition of Approval 17) *Graffiti Control* Requirement: ***a.*** During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation: i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces. ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces. iii. Use of paint with anti-graffiti coating. iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED). v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement. ***b.*** The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following: i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system. ii. Covering with new paint to match the color of the surrounding surface. iii. Replacing with new surfacing (with City permits if required).	Ongoing.	City of Oakland Bureau of Building
SCA AES-3 (Standard Condition of Approval 18) *Landscape Plan* ***a. Landscape Plan Required*** The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code. Proposed plants shall be predominantly drought-tolerant. Specification of any street trees shall comply with the Master Street Tree List and Tree Planting Guidelines (which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively), and with any applicable streetscape plan.	a. Prior to approval of construction-related permit. b. Prior to building permit final. c. Ongoing	a. City of Oakland Bureau of Planning b. City of Oakland Bureau of Building c. City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Aesthetics, Shadow, and Wind (cont.)		
b. Landscape Installation The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid. ***c. Landscape Maintenance*** 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. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.		
SCA AES-4 (Standard Condition of Approval 19): *Lighting* Requirement: Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector and that prevent unnecessary glare onto adjacent properties.	Prior to building permit final.	City of Oakland Bureau of Building
SCA AES-5 (Standard Condition of Approval 20) *Public Art for Private Development* Requirement: The project is subject to the City's Public Art Requirements for Private Development, adopted by Ordinance No. 13275 C.M.S. ("Ordinance"). The public art contribution requirements are equivalent to one-half percent (0.5%) for the "residential" building development costs, and one percent (1.0%) for the "non-residential" building development costs. The contribution requirement can be met through: 1) the installation of freely accessible art at the site; 2) the installation of freely accessible art within one-quarter mile of the site; or 3) satisfaction of alternative compliance methods described in the Ordinance, including, but not limited to, payment of an in-lieu fee contribution. The applicant shall provide proof of full payment of the in-lieu contribution and/or provide plans, for review and approval by the Planning Director, showing the installation or improvements required by the Ordinance prior to issuance of a building permit. Proof of installation of artwork, or other alternative requirement, is required prior to the City's issuance of a final certificate of occupancy for each phase of a project unless a separate, legal binding instrument is executed ensuring compliance within a timely manner subject to City approval.	Payment of in-lieu fees and/or plans showing fulfillment of public art requirement – Prior to Issuance of Building permit Installation of art/cultural space – Prior to Issuance of a Certificate of Occupancy.	City of Oakland Bureau of Planning and Bureau of Building
Also **SCA UTIL-2, Underground Utilities.** See *Utilities and Service Systems*, below.		
Air Quality		
SCA AIR-1 (Standard Condition of Approval 21) Dust Controls – *Construction Related* Requirement: The project applicant shall implement all of the following applicable dust control measures during construction of the project: a. Water all exposed surfaces of active construction areas at least twice daily. 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 feasible. 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. Limit vehicle speeds on unpaved roads to 15 miles per hour. e. All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.	During construction.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Air Quality (cont.)		
f. All trucks and equipment, including tires, shall be washed off prior to leaving the site. g. 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. h. Apply and maintain vegetative ground cover (e.g., hydroseed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). i. 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. j. When working at a site, install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity. k. Post a publicly visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours. l. 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.		
SCA AIR-2 (Standard Condition of Approval 22) *Criteria Air Pollutant Controls – Construction Related* Requirement: The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable: a. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two 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. b. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations"). c. 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. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed. d. Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and use propane or natural gas generators cannot meet the electrical demand. e. Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings. f. All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City, the project applicant shall provide written documentation that fleet requirements have been met.	During construction.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Air Quality (cont.)		
SCA AIR-3 (Standard Condition of Approval 23) *Diesel Particulate Matter Controls-Construction Related* ***a. Diesel Particulate Matter Reduction Measures*** Requirement: The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose **one** of the following methods: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction. - or - ii. All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract. ***b. Construction Emissions Minimization Plan (if required by a above)*** Requirement: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified DPM reduction measures (if any). The Emissions Plan shall be submitted to the City (and the Bay Area Air Quality District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date. ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract. **NOTE: SCA AIR-3(a)(i) has been implemented by the project applicant with a construction HRA and results indicate that no further action is required.**	a. Prior to issuance of a construction related permit (i), during construction (ii). b. Prior to issuance of a construction related permit.	a. City of Oakland Bureau of Planning and Bureau of Building. b. City of Oakland Bureau of Planning and Bureau of Building.
SCA AIR-4 (Standard Condition of Approval 24) *Exposure to Air Pollution (Toxic Air Contaminants)* ***a. 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: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and 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,	a. Prior to issuance of a construction related permit. b. Ongoing.	a. City of Oakland Bureau of Planning and Bureau of Building b. City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Air Quality (cont.)		
then health risk reduction measures are not required. If the HRA concludes that 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. - or - ii. 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 [insert MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required. • Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph). • 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 be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods. • Sensitive receptors shall be located on the upper floors of buildings, 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 poplar (*Populus deltoids X trichocarpa*), and Redwood *(Sequoia sempervirens*). • Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible. • Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible. • 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. ***b. 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. **NOTE: SCA AIR-4(a)(i) has been implemented by the project applicant with operational risk screening for the project and results indicate that no further action is required.**		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Air Quality (cont.)		
SCA AIR-5 (Standard Condition of Approval 25) *Stationary Sources of Air Pollution (Toxic Air Contaminants)* Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of 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 California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. 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. - or - ***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: i. Installation of non-diesel fueled generators, if feasible, or; ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building
SCA AIR-6 (Standard Condition of Approval 27) *Asbestos in Structures* Requirement: The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.	Prior to approval of construction-related permit	Applicable regulatory agency with jurisdiction
See **SCA TRA-4, Transportation and Parking Demand Management Plan**. See *Transportation and Circulation*, below.		
Biological Resources		
SCA BIO-1 (Standard Condition of Approval 30) *Tree Removal During Bird Breeding Season* Requirement: To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.	Prior to removal of trees	City of Oakland Bureau of Planning and Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Biological Resources (cont.)		
SCA BIO-2 (Standard Condition of Approval 31) *Tree Permit* ***a. Tree Permit Required*** Requirement: Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit. ***b. Tree Protection During Construction*** Requirement: Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist: i. Before the start of any clearing, excavation, construction, or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree. ii. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree. iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree. iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration. v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed. vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations. ***c. Tree Replacement Plantings*** Requirement: Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria:	a. Prior to approval of construction-related permit b. During construction. c. Prior to building permit final	a. City of Oakland Public Works Department, Tree Division and Bureau of Building b. City of Oakland Public Works Department, Tree Division and Bureau of Building c. City of Oakland Public Works Department and Tree Division; Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Biological Resources (cont.)		
i. No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered. ii. Replacement tree species shall consist of *Sequoia sempervirens* (Coast Redwood), *Quercus agrifolia* (Coast Live Oak), *Arbutus menziesii* (Madrone), *Aesculus californica* (California Buckeye), *Umbellularia californica* (California Bay Laurel), or other tree species acceptable to the Tree Division. iii. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate. iv. Minimum planting areas must be available on site as follows: v. For Sequoia sempervirens, three hundred fifteen (315) square feet per tree; vi. For other species listed, seven hundred (700) square feet per tree. vii. In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians. viii. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings which fail to become established within one year of planting shall be replanted at the project applicant's expense.		
Cultural Resources		
SCA CUL-1 (Standard Condition of Approval 33) *Archaeological and Paleontological Resources – Discovery During Construction* Requirement: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration 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, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. 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 practicable. 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. The project applicant shall implement the ARDTP at his/her expense.	During construction.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Cultural Resources (cont.)		
In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.		
SCA CUL-2 (Standard Condition of Approval 34) *Archaeologically Sensitive Areas – Pre-Construction Measures* Requirement: The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources. **Provision A: Intensive Pre-Construction Study.** The project applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City 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. At a minimum, the study shall include: a. Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources. b. A report disseminating the results of this research. c. 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 and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts 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, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction. **Provision B: Construction ALERT Sheet.** The project applicant shall prepare a construction "ALERT" sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, 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 utility firms 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, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: 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. The ALERT sheet shall also be posted in a visible location at the project site.	Prior to approval of construction-related permit; during construction.	City of Oakland Bureau of Planning and Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Cultural Resources (cont.)		
SCA CUL-3 (Standard Condition of Approval 35) *Human Remains – Discovery During Construction* Requirement: Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event 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 California Health and Safety Code. 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 and at the expense of the project applicant.	During construction.	City of Oakland Bureau of Building
Also **SCA NOI-6, Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities.** See *Noise*, below.		
Geology, Soils, and Geohazards		
SCA GEO-1 (Standard Condition of Approval 37) *Construction-Related Permit(s)* Requirement: The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
SCA GEO-2 (Standard Condition of Approval 38) *Soils Report* Requirement: The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
SCA GEO-3 (Standard Condition of Approval 40) *Seismic Hazards Zone (Landslide/Liquefaction)* Requirement: The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
Greenhouse Gases and Climate Change		
SCA GHG-1 (Standard Condition of Approval 42) *Greenhouse Gas (GHG) Reduction Plan* ***a. Greenhouse Gas (GHG) Reduction Plan Required*** Requirement: The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG) Reduction Plan for City review and approval and shall implement the approved GHG Reduction Plan. The goal of the GHG Reduction Plan shall be to increase energy efficiency and reduce GHG emissions to below at least one of the Bay Area Quality Management District's (BAAQMD's) CEQA Thresholds of Significance (1,100 metric tons of CO_2e per year or 4.6 metric tons of CO_2e per year per service population) AND to reduce GHG emissions by 36 percent below the project's 2005 "business-as-usual" baseline GHG emissions(as explained below) to help implement the City's Energy and Climate Action Plan (adopted in 2012) which calls for reducing GHG emissions by 36 percent below 2005 levels. The GHG Reduction Plan shall include, at a minimum, (a) a detailed GHG emissions inventory for the project under a "business-as-usual"	a. Prior to approval of construction-related permit. b. During construction. c. Ongoing.	a. City of Oakland Bureau of Planning b. City of Oakland Bureau of Planning and Bureau of Building c. City of Oakland Bureau of Planning

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Greenhouse Gases and Climate Change (cont.)		
scenario with no consideration of project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the project (including the City's Standard Conditions of Approval, proposed mitigation measures, project design features, and other City requirements), and additional GHG reduction measures available to further reduce GHG emissions, and (c) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. If the project is to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase. Potential GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council. The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "carbon credits") as explained below. The allowable locations of the GHG reduction measures include the following (listed in order of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; (4) off-site within the State of California; then (5) elsewhere in the United States. As with preferred locations for the implementation of all GHG reductions measures, the preference for carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; (3) within the State of California; then (4) elsewhere in the United States. The cost of carbon credit purchases shall be based on current market value at the time purchased and shall be based on the project's operational emissions estimated in the GHG Reduction Plan or subsequent approved emissions inventory, which may result in emissions that are higher or lower than those estimated in the GHG Reduction Plan. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits. ***b. GHG Reduction Plan Implementation During Construction*** Requirement: The project applicant shall implement the GHG Reduction Plan during construction of the project. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be implemented during construction. For physical GHG reduction measures to be incorporated into off-site projects, the project applicant shall obtain all necessary permits/approvals and the measures shall be included on drawings and submitted to the City Planning Director or his/her designee for review and approval. These off-site improvements shall be installed prior to completion of the subject project (or prior to completion of the project phase for phased projects). For GHG reduction measures involving the purchase of carbon credits, evidence of the payment/purchase shall be submitted to the City for review and approval prior to completion of the project (or prior to completion of the project phase, for phased projects). ***c. GHG Reduction Plan Implementation After Construction*** Requirement: The project applicant shall implement the GHG Reduction Plan after construction of the project (or at the completion of the project phase for phased projects). For operational GHG reduction measures to be incorporated into the project or off-site projects, the measures shall be implemented on an indefinite and ongoing basis. The project applicant shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. The GHG Reduction Plan requires regular periodic evaluation over the life of the project (generally estimated to be at least 40 years) to determine how the Plan is achieving required GHG emissions reductions over time, as well as the efficacy of the specific additional GHG reduction measures identified in the Plan.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Greenhouse Gases and Climate Change (cont.)		
Annual Report. Implementation of the GHG reduction measures and related requirements shall be ensured through compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the project, the project applicant shall prepare each year of the useful life of the project an Annual GHG Emissions Reduction Report ("Annual Report"), for review and approval by the City Planning Director or his/her designee. The Annual Report shall be submitted to an independent reviewer of the City's choosing, to be paid for by the project applicant. The Annual Report shall summarize the project's implementation of GHG reduction measures over the preceding year, intended upcoming changes, compliance with the conditions of the Plan, and include a brief summary of the previous year's Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the baseline emissions reported in the GHG Plan. The GHG Reduction Plan shall be considered fully attained when project emissions are less than either applicable numeric BAAQMD CEQA Thresholds AND GHG emissions are 36 percent below the project's 2005 "business-as-usual" baseline GHG emissions, as confirmed by the City through an established monitoring program. Monitoring and reporting activities will continue at the City's discretion, as discussed below. **Corrective Procedure.** If the third Annual Report, or any report thereafter, indicates that, in spite of the implementation of the GHG Reduction Plan, the project is not achieving the GHG reduction goal, the project applicant shall prepare a report for City review and approval, which proposes additional or revised GHG measures to better achieve the GHG emissions reduction goals, including without limitation, a discussion on the feasibility and effectiveness of the menu of other additional measures ("Corrective GHG Action Plan"). The project applicant shall then implement the approved Corrective GHG Action Plan. If, one year after the Corrective GHG Action Plan is implemented, the required GHG emissions reduction target is still not being achieved, or if the project applicant fails to submit a report at the times described above, or if the reports do not meet City requirements outlined above, the City may, in addition to its other remedies, (a) assess the project applicant a financial penalty based upon actual percentage reduction in GHG emissions as compared to the percent reduction in GHG emissions established in the GHG Reduction Plan; or (b) refer the matter to the City Planning Commission for scheduling of a compliance hearing to determine whether the project's approvals should be revoked, altered or additional conditions of approval imposed. The penalty as described in (a) above shall be determined by the City Planning Director or his/her designee and be commensurate with the percentage GHG emissions reduction not achieved (compared to the applicable numeric significance thresholds) or required percentage reduction from the "adjusted" baseline. In determining whether a financial penalty or other remedy is appropriate, the City shall not impose a penalty if the project applicant has made a good faith effort to comply with the GHG Reduction Plan. The City would only have the ability to impose a monetary penalty after a reasonable cure period and in accordance with the enforcement process outlined in Planning Code Chapter 17.152. If a financial penalty is imposed, such penalty sums shall be used by the City solely toward the implementation of the GHG Reduction Plan. **Timeline Discretion and Summary.** The City shall have the discretion to reasonably modify the timing of reporting, with reasonable notice and opportunity to comment by the applicant, to coincide with other related monitoring and reporting required for the project.		
Also **SCA AES-3, Landscape Plan**. See *Aesthetics, Wind, and Shadow*, above.		
Also **SCAs AIR-1, Dust Controls – Construction Related.** See *Air Quality*, above.		
Also **SCAs AIR-2, Criteria Air Pollutant Controls - Construction Related.** See *Air Quality*, above.		
Also **SCAs AIR-3, Diesel Particulate Matter Controls - Construction Related.** See *Air Quality*, above.		
Also **SCA TRA-4, *Transportation and Parking Demand Management.*** See *Transportation and Circulation*, below.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Greenhouse Gases and Climate Change (cont.)		
Also **SCAs UTIL-1, Construction and Demolition Waste Reduction and Recycling**; **UTIL-2, Storm Drain System**; and **UTIL-4, Green Building Requirements**. See *Utilities and Service Systems*, below.		
Hazards and Hazardous Materials		
SCA HAZ-1 (Standard Condition of Approval 43) *Hazards Materials Related to Construction* Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b. Avoid overtopping construction equipment fuel gas tanks; c. During routine maintenance of construction equipment, properly contain and remove grease and oils; d. Properly dispose of discarded containers of fuels and other chemicals; e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f. 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 underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project 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 notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, 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.	During construction.	City of Oakland Bureau of Building
SCA HAZ-2 (Standard Condition of Approval 44) *Hazardous Building Materials and Site Contamination* ***a. Hazardous Building Materials Assessment*** Requirement: The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency. ***b. Environmental Site Assessment Required*** Requirement: The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.	a. Prior to approval of demolition, grading, or building permits b. Prior to approval of construction-related permit. c. Prior to approval of construction-related permit d. During construction.	a. City of Oakland Bureau of Building b. Applicable regulatory agency with jurisdiction c. City of Oakland Bureau of Building d. City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Hazards and Hazardous Materials (cont.)		
c. Health and Safety Plan Required Requirement: The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan. ***d. Best Management Practices (BMPs) Required for Contaminated Sites*** Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following: i. Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements. ii. Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.		
SCA HAZ-2 (Standard Condition of Approval 45): *Hazardous Materials Business Plan* Requirement: The project applicant shall submit a Hazardous Materials Business Plan for review and approval by the City, and shall implement the approved Plan. The approved Plan shall be kept on file with the City and the project applicant shall update the Plan as applicable. The purpose of the Hazardous Materials Business Plan is to ensure that employees are adequately trained to handle hazardous materials and provides information to the Fire Department should emergency response be required. Hazardous materials shall be handled in accordance with all applicable local, state, and federal requirements. The Hazardous Materials Business Plan shall include the following: a. The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids. b. The location of such hazardous materials. c. An emergency response plan including employee training information. d. A plan that describes the manner in which these materials are handled, transported, and disposed.	Prior to building permit final.	Oakland Fire Department
See **SCA AIR-6, Asbestos in Structures**. See *Air Quality*, above.		
See **SCA TRA-1, Construction Activity in the Public Right-of-Way**. See *Transportation and Traffic*, below.		
Hydrology and Water Quality		
SCA HYD-1 (Standard Condition of Approval 49) *Erosion and Sedimentation Control Plan for Construction* ***a. Erosion and Sedimentation Control Plan Required*** Requirement: The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. 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 and/or construction 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	a. Prior to approval of construction-related permit. b. During construction.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Hydrology and Water Quality (cont.)		
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 City. 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. ***b. Erosion and Sedimentation Control During Construction*** Requirement: The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.		
SCA HYD-2 (Standard Condition of Approval 54) *NPDES C.3 Stormwater Requirements for Regulated Projects* ***a. Post-Construction Stormwater Management Plan Required*** Requirement: The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. ***b. Maintenance Agreement Required*** Requirement: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project 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 maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.	a. Prior to approval of construction-related permit b. Prior to building permit final	a. City of Oakland Bureau of Planning and Bureau of Building b. City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Hydrology and Water Quality (cont.)		
Also **SCAs GEO-1, Construction-Related Permit(s)** and **GEO-2, Soils Report.** See *Geology, Soils, and Geohazards*, above.		
Also **SCA UTIL-6, Storm Drain System**. See *Utilities and Service Systems*, below.		
Noise		
SCA NOI-1 (Standard Condition of Approval 63) *Construction Days/Hours* Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours: a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling 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. b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday. c. No construction is allowed on Sunday or federal holidays. 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. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.	During construction.	City of Oakland Bureau of Building
SCA NOI-2: (Standard Condition of Approval 64) *Construction Noise* Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following: 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. **Except as provided herein, i**mpact 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**. b. Applicant shall use temporary power poles instead of generators where feasible.	During construction.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Noise (cont.)		
c. Stationary noise sources shall be located as far from adjacent properties 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 NOI-3 (Standard Condition of Approval 65) *Extreme Construction Noise* ***a. Construction Noise Management Plan Required*** Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures **include, but are not limited to, the following**: i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; ii. 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; iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; iv. 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 v. Monitor the effectiveness of noise attenuation measures by taking noise measurements. ***b. Public Notification Required*** Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.	a. Prior to approval of construction-related permit. b. During construction.	City of Oakland Bureau of Building
SCA NOI-4 (Standard Condition of Approval 67) *Construction Noise Complaints* Requirement: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include**:** a. Designation of an on-site construction complaint and enforcement manager for the project; b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit; c. Protocols for receiving, responding to, and tracking received complaints; and d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Noise (cont.)		
SCA NOI-6 (Standard Condition of Approval 68) *Exposure to Community Noise* Requirement: The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the following: a. 45 dBA: Residential activities, civic activities, hotels b. 50 dBA: Administrative offices; group assembly activities c. 55 dBA: Commercial activities d. 65 dBA: Industrial activities	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building
SCA NOI-7 (Standard Condition of Approval 69) *Operational Noise* Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 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 City.	Ongoing.	City of Oakland Bureau of Building
SCA NOI-8 (Standard Condition of Approval 71) *Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities* Requirement: The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located 1770 Broadway abutting the Project site to the north. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.	Prior to construction.	City of Oakland Bureau of Building
Population and Housing		
SCA POP-1 (Standard Condition of Approval 72) *Jobs/Housing Impact Fee* Requirement: The project applicant shall comply with the requirements of the City of Oakland Jobs/Housing Impact Fee Ordinance (chapter 15.68 of the Oakland Municipal Code).	Prior to issuance of building permit; subsequent milestones pursuant to ordinance.	City of Oakland Bureau of Building
SCA POP-2 (Standard Condition of Approval 73) *Affordable Housing Impact Fee* Requirement: The project applicant shall comply with the requirements of the City of Oakland Affordable Housing Impact Fee Ordinance (chapter 15.72 of the Oakland Municipal Code).	Prior to issuance of building permit; subsequent milestones pursuant to ordinance.	City of Oakland Bureau of Building
Public Services		
SCA PUB-1 (Standard Condition of Approval 75) *Capital Improvements Impact Fee* Requirement: The project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).	Prior to issuance of building permit.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation		
SCA TRA-1 (Standard Condition of Approval 77) *Construction Activity in the Public Right-of-Way* ***a. Obstruction Permit Required*** Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops. ***b. Traffic Control Plan Required*** Requirement: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or Detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved Plan during construction. ***c. Repair of City Streets*** Requirement: The project applicant shall repair any damage to the public right-of way, including streets and sidewalks caused by project construction at his/her 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 approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.	a. Prior to approval of construction-related permit. b. Prior to approval of construction-related permit. c. Prior to building permit final.	a. City of Oakland Department of Transportation b. City of Oakland Department of Transportation c. City of Oakland Department of Transportation
SCA TRA-2 (Standard Condition of Approval 78) *Bicycle Parking* Requirement: The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building
SCA TRA-3 (Standard Condition of Approval 79) *Transportation Improvements* Requirement: The project applicant shall implement the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Review for the project (e.g., signal timing adjustments, restriping, signalization, traffic control devices, roadway reconfigurations, transportation demand management measures, and transit, pedestrian, and bicyclist amenities). The project applicant is responsible for funding and installing the improvements, and shall obtain all necessary permits and approvals from the City and/or other applicable regulatory agencies such as, but not limited to, Caltrans (for improvements related to Caltrans facilities) and the California Public Utilities Commission (for improvements related to railroad crossings), prior to installing the improvements. To implement this measure for intersection modifications, the project applicant shall submit Plans, Specifications, and Estimates (PS&E) to the City for review and approval. All elements shall be designed to applicable City standards in effect at the time of construction and all new or upgraded signals shall include these enhancements as required by the City. All other facilities supporting vehicle travel and alternative modes through the intersection shall be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for, among other items, the elements listed below: a. 2070L Type Controller with cabinet accessory b. GPS communication (clock) c. Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile) d. Countdown pedestrian head module switch out e. City Standard ADA wheelchair ramps	Prior to building permit final or as otherwise specified.	City of Oakland Bureau of Building and Department of Transportation

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		
f. Video detection on existing (or new, if required) g. Mast arm poles, full activation (where applicable) h. Polara Push buttons (full activation) i. Bicycle detection (full activation) j. Pull boxes k. Signal interconnect and communication with trenching (where applicable), or through existing conduit (where applicable), 600 feet maximum l. Conduit replacement contingency m. Fiber switch n. PTZ camera (where applicable) o. Transit Signal Priority (TSP) equipment consistent with other signals along corridor p. Signal timing plans for the signals in the coordination group q. Bi- directional curb ramps (where feasible, and if project is on a street corner) r. Upgrade ramps on receiving curb (where feasible, and if project is on a street corner)		
SCA TRA-4 (Standard Condition of Approval 80) Transportation and Parking Demand Management ***a. Transportation and Parking Demand Management (TDM) Plan Required*** Requirement: The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City. i. The goals of the TDM Plan shall be the following: • Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable. • Achieve the following project vehicle trip reductions (VTR): – Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR – Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR • Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate. • Enhance the City's transportation system, consistent with City policies and programs. ii. The TDM Plan should include the following: • Baseline existing conditions of parking and curbside regulations within the surrounding neighborhood that could affect the effectiveness of TDM strategies, including inventory of parking spaces and occupancy if applicable. • Proposed TDM strategies to achieve VTR goals (see below). iii. For employers with 100 or more employees at the subject site, the TDM Plan shall also comply with the requirements of Oakland Municipal Code Chapter 10.68 Employer-Based Trip Reduction Program. iv. The following TDM strategies **must** be incorporated into a TDM Plan based on a project location or other characteristics. When required, these mandatory strategies should be identified as a credit toward a project's VTR.	a. Prior approval of planning application. b. Prior to building permit final c. Ongoing	a. City of Oakland Bureau of Planning b. City of Oakland Bureau of Building c. City of Oakland Department of Transportation

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		

Improvement	Required by code or when…
Bus boarding bulbs or islands	• A bus boarding bulb or island does not already exist and a bus stop is located along the project frontage; and/or • A bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb
Bus shelter	• A stop with no shelter is located within the project frontage, or • The project is located within 0.10 miles of a flag stop with 25 or more boardings per day
Concrete bus pad	• A bus stop is located along the project frontage and a concrete bus pad does not already exist
Curb extensions or bulb-outs	• Identified as an improvement within site analysis
Implementation of a corridor-level bikeway improvement	• A buffered Class II or Class IV bikeway facility is in a local or county adopted plan within 0.10 miles of the project location; and • The project would generate 500 or more daily bicycle trips
Implementation of a corridor-level transit capital improvement	• A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and • The project would generate 400 or more peak period transit trips
Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.	• Always required
Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.)	• When improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection
In-street bicycle corral	• A project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and on-street vehicle parking is provided along the project frontages.
Intersection improvements[2]	• Identified as an improvement within site analysis

[2] Including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines.

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Transportation and Circulation (cont.)		
New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards	• Always required	
No monthly permits and establish minimum price floor for public parking[3]	• If proposed parking ratio exceeds 1:1000 sf. (commercial)	
Parking garage is designed with retrofit capability	• Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf. (commercial)	
Parking space reserved for car share	• If a project is providing parking and a project is located within downtown. One car share space reserved for buildings between 50 – 200 units, then one car share space per 200 units.	
Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section	• Typically required	
Pedestrian crossing improvements	• Identified as an improvement within site analysis	
Pedestrian-supportive signal changes[4]	• Identified as an improvement within operations analysis	
Real-time transit information system	• A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better	
Relocating bus stops to far side	• A project is located within 0.10 mile of any active bus stop that is currently near-side	
Signal upgrades[5]	• Project size exceeds 100 residential units, 80,000 sf. of retail, or 100,000 sf. of commercial; and • Project frontage abuts an intersection with signal infrastructure older than 15 years	
Transit queue jumps	• Identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better	
Trenching and placement of conduit for providing traffic signal interconnect	• Project size exceeds 100 units, 80,000 sf. of retail, or 100,000 sf. of commercial; and • Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and • A major transit improvement is identified within operations analysis requiring traffic signal interconnect	
Unbundled parking	• If proposed parking ratio exceeds 1:1.25 (residential)	

[3] May also provide a cash incentive or transit pass alternative to a free parking space in commercial properties.
[4] Including but not limited to reducing signal cycle lengths to less than 90 seconds to avoid pedestrian crossings against the signal, providing a leading pedestrian interval, provide a "scramble" signal phase where appropriate.
[5] Including typical traffic lights, pedestrian signals, bike actuated signals, transit-only signals

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Transportation and Circulation (cont.)		
iii. Other TDM strategies to consider include, but are not limited to, the following: • 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 the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement. • Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping. • Installation of safety elements per the Pedestrian Master Plan (such as crosswalk 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. • Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan, the Master Street Tree List and Tree Planting Guidelines (which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively) and any applicable streetscape plan. • Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements. • 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). • Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes. • Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3). • Guaranteed ride home program for employees, either through 511.org or through separate program. • Pre-tax commuter benefits (commuter checks) for employees. • 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. • On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools. • Distribution of information concerning alternative transportation options. • 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. • Parking management strategies including attendant/valet parking and shared parking spaces. • Requiring tenants to provide opportunities and the ability to work off-site. • 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). • 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.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		
The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. 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. When Required: Prior to approval of construction-related permit Initial Approval: Bureau of Planning Monitoring/Inspection: N/A ***b. TDM Implementation – Physical Improvements*** Requirement: For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project. When Required: Prior to building permit final Initial Approval: Bureau of Building Monitoring/Inspection: Bureau of Building ***c. TDM Implementation – Operational Strategies*** Requirement: For projects that generate 100 or more net new a.m. or p.m. 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 achieved by the project during operation. 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. **NOTE: This measure has been implemented by the project applicant and no further action is required.**		
SCA TRA-4 (Standard Condition of Approval 81) *Transportation Impact Fee* Requirement: The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).	Prior to issuance of building permit.	City of Oakland Bureau of Building
Utilities and Service Systems		
SCA UTIL-1 (Standard Condition of Approval 85) *Construction and Demolition Waste Reduction and Recycling* Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in	Prior to approval of construction-related permit	City of Oakland Public Works Department, Environmental Services Division

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Utilities and Service Systems (cont.)		
accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.		
SCA UTIL-2 (Standard Condition of Approval 86) *Underground Utilities* Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.	During construction.	City of Oakland Bureau of Building
SCA UTIL-3 (Standard Condition of Approval 87) *Recycling Collection and Storage Space* Requirement: The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two (2) cubic feet of storage and collection space per residential unit is required, with a minimum of ten (10) cubic feet. For nonresidential projects, at least two (2) cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten (10) cubic feet.	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building
SCA UTIL-4 (Standard Condition of Approval 88) *Green Building Requirements* ***a. Compliance with Green Building Requirements During Plan-Check*** Requirement: The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code). i. The following information shall be submitted to the City for review and approval with the application for a building permit: • Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. • Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. • Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit. • Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below. • 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. • 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. • Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. ii. The set of plans in subsection (i) shall demonstrate compliance with the following: • CALGreen mandatory measures.	a. Prior to approval of construction-related permit. b. During construction. c. Prior to final approval.	a. City of Oakland Bureau of Building Inspections b. City of Oakland Bureau of Building c. City of Oakland Bureau of Planning and Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Utilities and Service Systems (cont.)		
• All pre-requisites per the green building 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. • Compliance with the appropriate and applicable checklist approved during the Planning entitlement process. • All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted. • The required green building point minimums in the appropriate credit categories.		
b. Compliance with Green Building Requirements During Construction Requirement: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. The following information shall be submitted to the City 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. ***c. Compliance with Green Building Requirements After Construction*** Requirement: Within sixty (60) days of the final inspection of the building permit for the project, the Green Building Certifier shall submit the appropriate documentation to Build It Green or Green Building Certification Institute and attain the minimum required certification/point level. Within one year of the final inspection of the building permit for the project, the applicant shall submit to the Bureau of Planning the Certificate from the organization listed above demonstrating certification and compliance with the minimum point/certification level noted above.		
SCA UTIL-5 (Standard Condition of Approval 90) *Sanitary Sewer System* Requirement: The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.	Prior to approval of construction-related permit.	City of Oakland Public Works Department, Department of Engineering and Construction
SCA UTIL-6 (Standard Condition of Approval 91) *Storm Drain System* Requirement: The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
Utilities and Service Systems (cont.)		
SCA UTIL-7 (Standard Condition of Approval 92) *Recycled Water* Requirement: Pursuant to section 16.08.030 of the Oakland Municipal Code, the project applicant shall provide for the use of recycled water in the project for landscape irrigation purposes unless the City determines that there is a higher and better use for the recycled water, the use of recycled water is not economically justified for the project, or the use of recycled water is not	Prior to approval of construction-related permit.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
financially or technically feasible for the project. The project applicant shall contact the New Business Office of the East Bay Municipal Utility District (EBMUD) for a recycled water feasibility assessment by the Office of Water Recycling. If recycled water is to be provided in the project, the project drawings submitted for construction-related permits shall include the proposed recycled water system and the project applicant shall install the recycled water system during construction.		
Also **SCAs HYD-1, Erosion and Sedimentation Control Plan for Construction,** and **HYD-2, NPDES C.3 Stormwater Requirements for Regulated Projects**. See *Hydrology and Water Quality*, above.		

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APPENDIX A

Transportation and Parking Demand Management Plan

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FEHR PEERS

MEMORANDUM

Date: May 1, 2018

To: Elizabeth Kanner, ESA

From: Jordan Brooks and Francisco Martin, Fehr & Peers

Subject: 1900 Broadway – Transportation and Parking Demand Management Plan

OK18-0243

The proposed 1900 Broadway Project is required to prepare a Transportation and Parking Demand Management (TDM) Plan per the *City of Oakland's Transportation Impact Review Guidelines* and the City's Standard Conditions of Approval. Since the Project would generate more than 100 net new peak hour trips, the goal of the TDM Plan is to achieve a 20 percent vehicle trip reduction (VTR). This memorandum describes the Project and its setting, lists the mandatory TDM strategies that the Project shall implement to achieve the 20 percent VTR, provides the additional strategies that should be considered if the 20 percent VTR is not achieved, and describes the monitoring, evaluation, and enforcement of the TDM Plan.

PROJECT DESCRIPTION

The proposed Project would be located at the northeast corner of the Broadway/19th Street intersection in the Uptown District of Oakland. The proposed building would consist of the following:

- Up to 452 multi-family dwelling units
- Up to 85,000 square feet of office space
- Up to 20,000 square feet of restaurant space
- Up to 5,000 square feet of ground-level retail

The existing site contains a mostly-vacant commercial building. Access to the Project's parking garage is proposed via a driveway on 19th Street. The Project proposes 171 off-street parking spaces within the garage.

PROJECT LOCATION

The Project is located in Downtown Oakland, a dense, pedestrian-friendly, urban area. The location of the Project is within a dense employment area and is within walking distance of a variety of neighborhood-serving retail, restaurant, and entertainment (such as bars and theaters) uses.

The Project is adjacent to the 19th Street BART station and multiple bus stops with frequent bus service along Broadway (AC Transit Routes 6 and 51A with 10-minute headways, the "Free B" downtown shuttle with 11-minute headways, and Routes 18, 33, and 72 with 15-minute peak headways) and within 0.1 miles of the Route 72R stop (12-minute peak headways) on Thomas L Berkeley Way. Several other local, night, and Transbay buses also operate in the vicinity of the Project.

In addition, AC Transit is currently constructing the East Bay Bus Rapid Transit (BRT) Project, which would replace Routes 1 and 6 along Broadway in the Project vicinity and provide service between Downtown Oakland and San Leandro. BRT buses would operate in mixed-flow lanes on Broadway, and the Project would be adjacent to the planned stops on Broadway between 19th and 20th Streets.

The Project's proximity to regional transit, employment centers, and other neighborhood amenities is likely to result in relatively high rates of walking, bicycling, and transit use by residents and visitors. This is evidenced in part by the travel patterns of the area's existing residents. Based on US Census data, **Table 1** summarizes vehicle ownership for households with employed residents in the Project's census tract, and **Table 2** summarizes the commute mode split for residents in the Project's census tract. As shown in Table 1, less than half of households (47 percent) with at least one employed resident keep a vehicle at home. As shown in Table 2, only 34 percent of employed residents drive to work, while 46 percent take public transit, and 20 percent either walk or bike to work.

TABLE 1
VEHICLE OWNERSHIP FOR EMPLOYED RESIDENTS

Vehicles Available	Percent of Households with Employed Residents
No vehicle available	53%
1 vehicle available	30%
2 vehicles available	15%
3 or more vehicles available	2%
Total	**100%**

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Census Tract 4029, B08203.

TABLE 2
JOURNEY TO WORK FOR EMPLOYED RESIDENTS

Transportation Mode	Percent of Households with Employed Residents
Automobile	34%
Public Transit	46%
Bicycle	4%
Walking	16%
Total	**100%**

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Census Tract 4029, B08006.

The Project automobile trips generation is estimated to be slightly more than half of trips generated by a typical suburban residential development as summarized in **Table 3.** Similarly, the Project is also expected to generate a vehicle miles traveled (VMT) per resident that is about 70 percent lower than the regional average (the Project VMT per capita is 4.5, compared to the regional VMT of 15.0) and a VMT per worker that is about 42 percent lower than the regional average (the Project VMT per capita is 12.7, compared to the regional VMT of 21.8).

TABLE 3
1900 BROADWAY PROJECT AUTOMBILE TRIP GENERATION

Land Use	ITE Code	Size[1]	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential[2]	220	452 DU	3,010	46	185	231	183	98	281
Office[3]	710	85 KSF	970	117	16	133	22	105	127
Retail[4]	820	5 KSF	220	3	2	5	9	10	19
Restaurant[5]	932	20 KSF	2,550	119	98	217	118	79	197
		Subtotal	6,750	285	301	586	332	292	624
Non-Auto Reduction[6]			*-3,160*	*-134*	*-140*	*-274*	*-155*	*-138*	*-293*
Pass-By Reduction[7]			*-250*	*0*	*0*	*0*	*-23*	*-16*	*-39*
Adjusted Total Project Trips			**3,340**	**151**	**161**	**312**	**154**	**138**	**292**

Notes:

1. DU = Dwelling Units, KSF = 1,000 square feet.
2. ITE *Trip Generation (9th Edition)* land use category 220 (Apartment):
   Daily: T = 6.65 * X
   AM Peak Hour: T = 0.51* X (20% in, 80% out)
   PM Peak Hour: T = 0.62 * X (65% in, 35% out)
3. ITE *Trip Generation (9th Edition)* land use category 710 (Office Building):
   Daily: T = 11.3 * X
   AM Peak Hour: T = 1.56 * X (88% in, 12% out)
   PM Peak Hour: T = 1.49 * X (17% in, 83% out)
4. ITE *Trip Generation (9th Edition)* land use category 820 (Shopping Center):
   Daily: T = 42.7 * X
   AM Peak Hour: T = 0.96 * X (62% in, 38% out)
   PM Peak Hour: T = 3.71 * X (48% in, 52% out)
5. ITE *Trip Generation (9th Edition)* land use category 932 (High-Turnover Sit-Down Restaurant):
   Daily: T = 127.15 * X
   AM Peak Hour: T = 10.81 * X (55% in, 45% out)
   PM Peak Hour: T = 9.85 * X (60% in, 40% out)
6. Reduction of 46.9% assumed, based on City of Oakland *Transportation Impact Review Guidelines* using Census data for urban environments within 0.5 miles of a BART Station.
7. Based on ITE Trip Generation Handbook (2nd Edition), the average PM peak hour pass-by rates for land use categories 820, and 932 is 34%, and 43%, respectively. A 34% PM peak hour pass-by rate and 17% daily pass-by rate is applied to commercial uses (retail and restaurant) to present a more conservative analysis. This reduction was applied to trips after the non-auto reduction.

Source: Fehr & Peers, 2018.

MANDATORY TDM STRATEGIES

This section describes the mandatory strategies that shall be implemented at the Project. Some of these strategies shall be directly implemented by the building management and others shall be implemented by individual tenants. **Table 4** lists these mandatory TDM strategies, the responsible party for implementation, as well as the effectiveness of each strategy based on research compiled in Quantifying Greenhouse Gas Mitigation Measures (California Air Pollution Control Officers Association (CAPCOA), August 2010). The CAPCOA report is a resource for local agencies to quantify the benefit, in terms of reduced travel demand, of implementing various TDM strategies.

The mandatory strategies in Table 4 are generally targeted at Project residents and employees. While some of the mandatory strategies would also affect the travel behavior of retail customers and residential and office visitors, these groups are not directly targeted with TDM programs. The retail component of the Project is rather small. In addition, the majority of the customers would likely be local residents and workers who would walk or bike to the site. Most residential and office visitors would visit the Project too infrequently to be aware of the TDM benefits or to make them cost effective.

The VTR estimates in Table 4 represent conservative assumptions about potential trip reduction at the low end of the range. Due to the Project's location in an area with very good transit, bicycle, and pedestrian access, it is expected that the high end of the VTR range would be achieved with this TDM program.

The TDM strategies include both one-time physical improvements and on-going operational strategies. Physical improvements will be constructed as part of the Project and are therefore anticipated to have a one-time capital cost. Some level of ongoing maintenance cost may also be required for certain improvements. Operational strategies provide on-going incentives and support for the use of non-auto transportation modes. These TDM measures have monthly or annual costs and will require on-going management.

TABLE 4
MANDATORY TDM PROGRAM COMPONENTS

TDM Strategy	Responsible Party	Estimated Vehicle Trip Reduction[1]	
		Residents	Workers
Limited Residential Parking Supply	Project Applicant	10 – 15%	N/A
Unbundled Parking	Building Management		
No Parking for Office/Commercial Uses	Building Management	N/A	5 – 10%
Infrastructure Improvements	Project Applicant	N/A[2]	N/A[2]
Carshare Parking Spaces	Building Management	<1%	<1%
Guaranteed Ride Home	Building Management and Office/Commercial Tenants	N/A[2]	N/A[2]
TDM Coordinator	Building Management and Office/Commercial tenants	N/A[2]	1%
TDM Marketing and Tenant/Employee Education	Building Management		
Bicycle Parking Supply and Monitoring	Building Management	<1%	<1%
Transit Incentives	Building Management and Office/Commercial Tenants	5 – 10%	10 – 20%[3]
Pre-tax Commuter Benefit	Office/Commercial Tenants	N/A[2]	N/A[2]
Estimated Vehicle Trip Reduction		15 – 25%	16 – 31%
Percent of Total Peak Hour Trip Generation		66%	34%
Total Estimated Project Vehicle Trip Reduction		**15 – 27%**	

Notes:

1. The focus of the CAPCOA document is reductions to VMT but the research used to generate the reductions also indicates vehicle trip reductions are applicable as well. For the purposes of this analysis the VTR is assumed to equal the VMT reduction. See the cited CAPCOA research for more information and related information on page 8 of the BAAQMD *Transportation Demand Management Tool User's Guide* (June 2012).

2. The effectiveness of this strategy cannot be quantified at this time. This does not necessarily imply that the strategy is ineffective. It only demonstrates that at the time of the CAPCOA report development, existing literature did not provide a robust methodology for calculating its effectiveness. In addition, many strategies are complementary to each other and isolating their specific effectiveness may not be feasible.
3. Assuming a subsidy of $3.00 per employee per day (value to employee) available to 100 percent of building employees.

Sources: Fehr & Peers, 2018.

A more detailed description of the TDM measures that comprise the mandatory TDM program is provided below:

- *Limited Residential Parking Supply* – The Project would provide 171 automobile parking spaces for the residential component, corresponding to about 0.38 spaces per unit. This is less than the current average auto ownership in the project area.
- *Unbundle Parking* – Unbundle parking costs from housing costs (as required by Oakland Municipal Code, Section 17.116.310). This would result in residents paying one price for the residential unit and a separate price for parking, should they opt for a space. The price of a parking space can be adjusted so that resident parking demand matches the building's parking supply.
- *No Parking for Office/Commercial Uses* – The Project shall not provide any automobile parking for the office/commercial component.
- *Infrastructure Improvements* – the following infrastructure improvements in the vicinity of the project would improve the bicycling, walking, and transit systems in the area and further encourage the use of these modes:
    - Explore the feasibility and, if feasible, install directional curb ramps at all corners of the Broadway/19th Street intersection that the East Bay BRT Project would not upgrade. Due to fire hydrants, signal poles, light poles, and/or storm drain inlets, construction of curb extensions (bulb-outs) may also be required.
    - Provide short-term bicycle parking (bicycle racks) for at least 38 bicycles along the Project frontages on Broadway and/or 19th Street.
- *Carshare Parking Spaces* – Dedicate for free at least three on-site parking spaces available for carsharing (required by Oakland Municipal Code, Section 17.116.105). Monitor the usage of the carsharing spaces and adjust if necessary.
- *Guaranteed Ride Home* – Encourage project commercial tenants to register their employees and promote the Alameda County Transportation Commission Guaranteed Ride Home (GRH) program. GRH programs encourage the use of alternative modes of transportation by offering free rides home if an illness or crisis occurs, if the employee is required to work unscheduled overtime, if a carpool or vanpool is unexpectedly unavailable, or if a bicycle

problem arises. The Alameda County Transportation Commission offers their GRH service for all registered permanent employees who are employed within Alameda County, live within 100 miles of their worksite, and do not drive alone to work. The GRH program is offered at no cost to the employer, and employers are not required to register in order for their employees to enroll and use the program. The GRH program can also apply to future employed residents of the Project.

- *TDM Coordinator* – Building management shall designate a TDM coordinator for the building who will provide tenants and employees information about transportation options in the project area and the TDM strategies provided by the building. In addition, each commercial tenant shall designate a staff person as their TDM coordinator to coordinate, monitor and publicize TDM activities.

- *TDM Marketing and Tenant/Employee Education*- Building management shall provide tenants and employees information about various transportation options in the project area and the TDM strategies provided by the building. This information would also be posted at central location(s) and be provided to each building tenant. The information shall be updated as necessary. Marketing strategies can promote alternative trips by making commuters aware of the options and incentives of using non-automobile transportation. Implementing commute trip reduction strategies with a complementary marketing strategy can increase the overall effectiveness of the program. This information shall include:

    - *Commuter Benefits Program* – Provide information on the Bay Area Commuter Benefits Program (Air District Regulation 14, Rule 1). Employers with 50 or more full-time employees within the Bay Area Air Quality Management District (Air District) geographic boundaries are required to register and offer one of four commuter benefits to their employees: a pre-tax benefit, an employer-provided subsidy, employer-provided transit, or an alternative commute benefit. (Information about Commute Benefits Program is at 511.org/employers/commuter/overview.)

    - *Transit Routes* – Promote the use of transit by providing user-focused maps. These maps provide residents with wayfinding to nearby transit stops and transit-accessible destinations, and are particularly useful for those without access to portable mapping applications. The Project should consider installing TransitScreen real-time transit information in a visible location in the building lobby to provide residents with up-to-date transit arrival and departure times.

    - *Transit Fare Discounts* – Provide information about local discounted fare options offered by BART and AC Transit, including discounts for youth, elderly, persons with disabilities, and Medicare cardholders.

  - *Car Sharing* – Promote accessible car sharing programs, such as Zipcar , and Getaround by informing residents and employees of on-site and nearby car sharing locations and applicable membership information.
  - *Ridesharing* – Provide residents and employees with phone numbers and contact information for ride sharing options including Uber, Lyft, and Oakland taxi cab services.
  - *Carpooling* – Provide residents and employees with phone numbers and contact information for carpool matching services such as the Metropolitan Transportation Commission's 511 RideMatching.
  - *Walking and Biking Events* – Provide information about local biking and walking events, such as Oaklavia, as events are planned.
  - *Bikeshare* – Educate residents and employees about nearby bike sharing station locations and membership information.

- *Bicycle Parking Supply and Monitoring* – The Project would include long-term on-site parking for 237 bicycles and short-term parking in the form of bike racks along the Project frontage for 38 bicycles. The Project would meet the City's minimum requirements for bicycle parking. Building management shall monitor the usage of these facilities and provide additional bicycle parking, if necessary.
- *Transit Fare Subsidy (Residents)* – Provide a monthly transit benefit to each dwelling unit in an amount equal to either one-half the price of an Adult 31-Day AC Transit Pass or an AC Transit EasyPass (required by Oakland Municipal Code, Section 17.116.105).
- *Pre-tax Commuter Benefits* – Encourage Project tenants to enroll in WageWorks or other service to help with pre-tax commuter savings. This strategy allows employees to deduct monthly transit passes or other amount using pre-tax dollars. This can help to lower payroll taxes and allows employees to save on transit.
- *Transit Fare Subsidy (Workers)* – Building management shall either provide or require project tenants to provide free or reduced cost transit in order to increase transit mode share. Options include:
  - Employers can offer a monthly commuter check (or alternatively Clipper Card, which is accepted by BART, AC Transit, and other major transit providers in the Bay Area) to employees to use public transit. Note that as of 2018, IRS allows up to $260 per employee per month.
  - Employers can participate in AC Transit's EasyPass program, which enables employers to purchase annual bus passes for their employees in bulk at a deep discount. The

passes allow unlimited rides on all AC Transit buses for all employees. For more information, see www.actransit.org/rider-info/easypass.

ADDITIONAL OPERATIONAL STRATEGIES

If the mandatory measures do not meet the required goal of 20 percent VTR, and additional vehicle trip reduction is needed, the Project shall consider the implementation of some or all of the following additional strategies to limit automobile use and encourage non-automotive travel.

- *Residential Parking Management* – Restrict parking to one parking space per unit or less, thereby discouraging multiple car ownership and/or use. Exceptions will only be made for residents with management approved Reasonable Accommodation Requests. A Reasonable Accommodation Request shall need to demonstrate a hardship wherein a household requires more than one vehicle per unit. Examples could include households with multiple disabled residents requiring vehicles or households with multiple residents with places of work inaccessible via transit.
- *Bikeshare Membership* – Provide tenants and residents a subsidy to offset the cost of bikeshare membership and encourage the use of non-automobile modes. The nearest Ford GoBike station is on Broadway south of 20th Street, less than 100 feet from the Project site.
- *Carshare Memberships* – Provide residents with free or discounted carshare membership to offset the cost of car sharing programs and reduce the demand for private vehicle ownership.

MONITORING, EVALUATION AND ENFORCEMENT

Consistent with the requirements of the City's Standard Conditions of Approval, this TDM program requires regular periodic evaluation to determine if the program goal of reducing automobile trips has been satisfied and to assess the effectiveness of the implemented strategies. Beginning the first year after the development and occupancy of the Project, building management must prepare an annual TDM monitoring report consisting of the following:

- Summary of implemented TDM measures and their effectiveness (e.g. bicycle parking occupancy, number of transit passes issued, etc.)
- Results of project resident and employee transportation surveys to monitor the vehicle trip generation and mode share for project residents and employees
- Weekday AM and PM peak period and daily traffic volume counts at the site garage driveway on 19th Street to verify vehicle trip generation for the residential component

The first monitoring report must be prepared six months after full occupancy of the Project, and subsequent monitoring reports must be prepared annually. If the Project's TDM goals are not satisfied in two consecutive years, building management must prepare and submit for City approval a Corrective Action Plan detailing additional TDM measures to be implemented and their expected automobile trip reductions.

The City may elect to have a peer review consultant, paid for by the Project applicant, review the annual reports. If reports are not submitted in a timely manner, 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. The project will not be considered in violation of the Conditions of Approval if the project has made a good faith effort to implement the TDM Plan, regardless of achieving the VTR goal.

If, one year after the Corrective Action Plan is implemented, the required automobile mode share reduction target is still not being achieved, or if site management fails to submit a report as described above, or if the reports do not meet City requirements outlined above, the City may, in addition to its other remedies, (a) assess the project a financial penalty based on the observed reduction in the automobile trip generation compared to the target; or (b) refer the matter to the City Planning Commission for scheduling of a compliance hearing to determine whether the project's approvals should be revoked, altered or additional conditions of approval imposed.

Once the Project is found to meet the stated TDM goal for five consecutive years, additional surveys and monitoring can be suspended unless and until the City determines they are needed.

Please contact Francisco with questions or comments.

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APPENDIX B
1900 Broadway Project (2018 Project) Construction Health Risk Assessment

The Health Risk Assessment (HRA) presented below includes a detailed assessment of the health risks from construction of the 1900 Broadway Project (2018 Project).[1]

The HRA consists of three principal components:

1. Estimation of Toxic Air Contaminants (TAC) emissions from project construction,
2. Estimation of TAC concentrations at the nearest existing sensitive receptors from the project's construction emissions using refined air dispersion modeling, and
3. Estimation of health risks from construction using the modeled concentrations at receptors and exposure parameters and comparison to significance thresholds developed by the BAAQMD and adopted by the City of Oakland.

The HRA was conducted in accordance with technical guidelines developed by federal, state, and regional agencies, including United States. Environmental Protection Agency (USEPA), California Environmental Protection Agency (CalEPA), California Office of Environmental Health Hazard Assessment (OEHHA) *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,*[2] and the Bay Area Air Quality Management District (BAAQMD) *Air Toxics New Source Review (NSR) Program Health Risk Assessment Guidelines*.[3]

1. Estimation of TAC Emissions from Project Construction

The primary TAC of concern emitted during project construction is Diesel Particulate Matter (DPM), a primary component of diesel exhaust from construction equipment and heavy duty trucks transporting materials to and from the project site. In August 1998, the CARB identified DPM as a TAC. DPM is a complex mixture of numerous individual gaseous and particulate compounds emitted from diesel-fueled combustion engines and contains at least 40 different TACs. DPM is formed primarily through the incomplete combustion of diesel fuel. DPM is removed from the atmosphere through physical processes including atmospheric fall-out and

[1] Note the Air Quality analysis, including the Construction HRA, evaluated a previous and slightly smaller version of the 2018 Project. It differed only in the square footage of residential use (361,993 versus 381,480), number of stories (36 + rooftop amenity versus 38 + rooftop amenity), and height (376 feet to the upper roof versus 395 to the upper roof). Information provided by the applicant indicates an additional 16 days of construction would be required during the building construction phase. Project impacts are well below the respective thresholds, therefore, these changes would not make a meaningful difference with respect to the air quality evaluation and results and thus do not trigger a need to revise the modeling or analysis herein.

[2] Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

[3] BAAQMD, BAAQMD Air Toxics New Source Review (NSR) Program Health Risk Assessment Guidelines, January 2016.

washout by rain. Humans can be exposed to airborne DPM by deposition on water, soil, and vegetation; although the main pathway of exposure is inhalation. Studies indicate that DPM poses the greatest health risk among airborne TACs. For purposes of this assessment, consistent with OEHHA guidelines, exhaust emissions of PM_{10} are represented as DPM.

The 2018 Project consists of the construction of a tower and renovation of the existing Tapscott building. Emissions were estimated separately for the tower construction and the Tapscott building renovation. Exhaust PM_{10} emissions from construction and renovation activities were derived from CalEEMod (Version 2016.3.2) using the following assumptions:

- Construction of 452 units of residential units, 85,000 square feet of office space, 20,000 square feet of restaurant space, and 5,000 square feet of retail use along with approximately 35,070 square feet of parking facilities;
- Construction was assumed to begin in December 2018 and last for a period of 31 months;
- The duration of the various construction phases (e.g., demolition, grading, building construction, etc.) were provided by the applicant (shown in **Table HRA-1**);
- The number and types of construction equipment used, their size and activity level during each phase were provided by the applicant (shown in **Table HRA-2**);
- The numbers of construction related worker, vendor and hauling trips during each construction phase were also provided by the applicant (shown in **Table HRA-3**)
- Demolition of 16,575 square feet of existing structures
- In-fill of 5,000 cubic yards and off-haul of 33,000 cubic yards of material during the grading phase of tower construction.
- Off-haul of 8,000 cubic yards of renovation debris from the Tapscott building.

TABLE HRA-1
2018 PROJECT CONSTRUCTION SCHEDULE[a]

TOWER CONSTRUCTION		
Construction Phase	**Duration**	**Number of Workdays**[b]
Demolition	12/27/2018 – 3/17/2019	57
Site Preparation	3/17/2019 – 4/17/2019	23
Grading	4/24/2019 – 7/10/2019	56
Building Construction	7/11/2019 – 7/11/2021	522
Total number of workdays over the construction duration		658
TAPSCOTT BUILDING RENOVATION		
Construction Phase	**Duration**	**Number of Workdays**[b]
Demolition	12/27/2018 – 3/17/2019	57
Building Construction	7/11/2019 – 10/11/2020	327
Total number of workdays over the construction duration		384

NOTES:
[a] Provided by applicant.
[b] Number of workdays are calculated assuming Monday – Friday construction. No construction on weekends is assumed.

TABLE HRA-2
2018 PROJECT CONSTRUCTION EQUIPMENT USED BY PHASE[a]

TOWER CONSTRUCTION			
Equipment	**Number**	**No. of days Used**	**No. of Hours/Day Used**
Demolition			
Concrete/Industrial Saws	1	1	8
Aerial Lifts	1	4	8
Excavators	2	45	8
Skid Steer Loaders	1	45	8
Generator Sets	1	45	8
Site Preparation			
Air Compressors	2	20	8
Cranes	1	14	8
Bore/Drill Rigs	1	20	8
Dumpers/Tenders	1	10	8
Skid Steer Loaders	2	20	8
Pumps	1	20	8
Rough Terrain Forklifts	1	20	8
Grading			
Pumps	1	50	8
Cement & Mortar Mixers	2	20	8
Dumpers/Tenders	1	10	8
Excavators	2	50	8
Generator Sets	2	50	8
Graders	1	10	8
Rough Terrain Forklifts	1	50	8
Building Construction			
Forklifts	2	528	8
Rough Terrain Forklifts	2	528	8
TAPSCOTT BUILDING RENOVATION			
Equipment	**Number**	**No. of days Used**	**No. of Hours/Day Used**
Demolition			
Generator Sets	1	57	8
Building Construction			
Forklifts	1	285	8
Rough Terrain Forklifts	1	183	8
Generator Sets	1	89	8

NOTES:
[a] Provided by applicant.

TABLE HRA-3
VEHICLE TRIPS BY 2018 PROJECT CONSTRUCTION PHASE[a]

TOWER CONSTRUCTION			
Construction Phase	**Worker Commute Trips/Day**	**Vendor Trips/Day**	**Total Number of Hauling Trips**
Demolition	20	5	285
Site Preparation	20	5	0
Grading	20	5	4,750
Building Construction	150	5	2,610
TAPSCOTT BUILDING RENOVATION			
Construction Phase	**Worker Commute Trips/Day**	**Vendor Trips/Day**	**Total Number of Hauling Trips**
Demolition	5	5	1000
Building Construction	8	1	327

NOTES:
[a] Provided by applicant.

Exhaust PM_{10} emissions from on-site construction equipment and off-site vendor and hauling truck trips during the different phases were extracted from the CalEEMod outputs and are presented in **Table HRA-4** for both the uncontrolled and the mitigated (controlled) scenarios. The mitigated scenario assumes use of Tier 4 engines as the best available control technology for all construction equipment as specified in SCA AIR-3(a)(ii). As required by the BAAQMD Guidelines, fugitive emissions are not included in this assessment and are addressed separately through dust control measures implemented as part of SCA AIR-1.

TABLE HRA-4
TOTAL PM_{10} EXHAUST EMISSIONS FROM 2018 PROJECT CONSTRUCTION

TOWER CONSTRUCTION		
	Uncontrolled Scenario	**Mitigated Scenario**
On-Site DPM (as PM_{10} Exhaust) (tons)	0.14	0.007
Off-Site DPM (as PM_{10} Exhaust) (tons)	0.005	0.005
Total DPM (as PM_{10} Exhaust) (tons)	0.145	0.012
Number of construction workdays	658	658
Emission Rate (grams/second) [a, b]	0.0067	0.00035
TAPSCOTT BUILDING RENOVATION		
	Uncontrolled Scenario	**Mitigated Scenario**
On-Site DPM (as PM_{10} Exhaust) (tons)	0.037	0.0015
Off-Site DPM (as PM_{10} Exhaust) (tons)	0.0009	0.0009
Total DPM (as PM_{10} Exhaust) (tons)	0.04	0.003
Number of construction workdays	384	384
Emission Rate (grams/second) [a, b]	0.003	0.00013

NOTES:
[a] Emission rate calculated assuming 8 hours of construction per day, Monday to Friday.
[b] Emission rate calculated assuming only 10 percent of off-site emissions as contributing to concentrations in the project vicinity.

2. Estimation of Ambient Concentrations at Existing Sensitive Receptors

Dispersion is the process by which atmospheric pollutants disseminate due to wind and vertical stability. The results of a dispersion analysis are used to assess pollutant concentrations at or near an emission source. The results of such an analysis allow predicted concentrations of pollutants to be compared directly to air quality standards and other criteria such as health risks based on modeled concentrations.

An air dispersion model is a mathematical formulation that is used to estimate the air quality concentrations at specific locations (receptors) surrounding a source of emissions given the rate of emissions, topography and prevailing meteorological conditions. The air dispersion model used in this assessment was the USEPA AERMOD air dispersion model that is approved by the BAAQMD for air pollutant dispersion assessments. Specifically, the AERMOD model was used to estimate concentrations of DPM emissions at sensitive receptor locations using the 2018 Project's emission rate shown in **Table HRA-5**.

TABLE HRA-5
EXPOSURE PARAMETERS USED

Receptor Age	Exposure Duration (ED)[a] (years)	Age Sensitivity Factors (ASF)	Fraction of time at Home (TAH) (%)	Daily Breathing Rate (DBR)[b] (L/kg-day)
Residential Receptor - Infant				
3rd trimester	0.25	10	0.85	361
0 – 2 years	2	10	0.85	1090
2 – 9 years	1	3	0.72	631
Residential Receptor - Child				
2 – 9 years	3	3	0.72	631
Residential Receptor - Adult				
>16 years	3	1	0.73	261

NOTES:
[a] Per BAAQMD guidance, a minimum 3-year exposure duration is assumed to estimate risks from project construction.
[b] BAAQMD Air Toxics New Source Review Program HRA Guidelines recommend using the 95th percentile rate for age groups less than 2 years old and the 80th percentile rate for age groups that are greater than or equal to 2 years old.

Exhaust PM_{10} emissions from the tower construction and Tapscott building renovation were modeled as two separate area sources with distinct project site boundaries. For each area source, both on-site emissions from construction equipment and off-site emissions from heavy duty trucks were modeled together. Only 10 percent of off-site emissions were considered in the modeling effort as contributing to concentrations in the project vicinity. The release height for the source was specified as 5 meters above ground to account for the top of the equipment exhaust stack where the emissions are released to the atmosphere and the increase in the height of the emissions due to its heated exhaust. A variable emissions rate was used to represent project construction activity that is expected to take place only on weekdays for 8 hours per day between 8 a.m. and 4 p.m. Five years of meteorological data from the Metropolitan Oakland International Airport was used to represent

wind conditions at the project site. Concentrations were modeled at the closest sensitive receptors are located at 1770 Broadway south of the project site across 19th Street.

The results of the dispersion modeling showed a maximum annual concentration of 0.019 micrograms per cubic meter ($\mu g/m^{3)}$ for the uncontrolled scenario at closest receptors to the south at 1770 Broadway. This would be considered the Maximum Exposed Individual Receptor (MEIR). With the use of Tier 4 construction equipment as specified in SCA AIR-3 (a)(ii), annual concentration at the MEIR would reduce to 0.001 $\mu g/m^3$.

3. Assessment of Health Risks from 2018 Project Construction to Existing Receptors

Assessment of health risks from project construction was conducted following methodologies and exposure parameters recommended in OEHHA's Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.[4] OEHHA's 2015 revisions to its Guidance Manual are primarily designed to ensure that the greater sensitivity of children to cancer and other health risks is reflected in HRAs. For example, OEHHA now recommends that risks be analyzed separately for multiple age groups, focusing especially on young children and teenagers, rather than the past practice of analyzing risks to the general population, without distinction by age. OEHHA also now recommends that statistical "age sensitivity factors" be incorporated into a HRA, and that children's relatively high breathing rates be accounted for. On the other hand, the Guidance Manual revisions also include some changes that would reduce calculated health risks. For example, under the former guidance, OEHHA recommended that residential cancer risks be assessed by assuming 70 years of exposure at a residential receptor; under the revised Guidance Manual, this assumption is lessened to 30 years. This is based on studies showing that 30 years is a reasonable estimate of the 90th to 95th percentile of residency duration in the population. For short term projects such as construction activities, OEHHA recommends using the actual project duration. To ensure that short-term projects do not result in unanticipated higher cancer impacts due to short duration high-exposure rates, the BAAQMD recommends that the cancer risk be evaluated assuming that the average daily dose for short-term exposure lasts a minimum of three years for projects (e.g. project construction) lasting three years or less.

Based on OEHHA recommendations, the cancer risk to residential receptors assumes that exposure occurs 24 hours per day for 350 days per year while accounting for a percentage of time at home. OEHHA evaluated information from activity pattern databases to estimate the fraction of time at home (FAH) during the day. This information was used to adjust exposure duration and cancer risk based on the assumption that a person is not present at home continuously for 24 hours and therefore exposure to emissions is not occurring when a person is away from their home.

Cancer risk at the MEIR was estimated using the OEHHA recommended method shown in the following equations and the cancer risk exposure parameters shown in Table HRA-5. Estimates were made using the mandatory minimum pathways, which for DPM is only through inhalation.

[4] Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

$$Risk_{inh\text{-}res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

$Risk_{inh\text{-}res}$ = Residential inhalation cancer risk
$DOSE_{air}$ = Daily Inhalation Dose
CPF = Cancer Potency Factor for DPM = 1.1
ASF = Age Sensitivity Factors
ED = Exposure Duration in each age group (years)
AT = Averaging Time over lifetime cancer risk (years) = 70 years
FAH = Fraction of Time at Home (%)

$$DOSE_{air} = C_{air} \times DBR \times A \times EF \times 10^{-6}$$

C_{air} = Concentration of TAC in air ($\mu g/m^3$)
DBR = Daily Breathing Rate
A = Inhalation Absorption factor = 1.0 for DPM
EF = Exposure Frequency = 350/365 = 0.96

Chronic (long-term) adverse health impacts unrelated to cancer are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental DPM exposure concentration from the proposed project to a reference exposure level (REL) that could cause adverse health effects. The RELs are published by OEHHA based on epidemiological research. The chronic reference exposure level for DPM was established by the California OEHHA as 5 $\mu g/m^3$.[5]

Estimated health risks and maximum $PM_{2.5}$ concentrations to receptors of different age groups at the MEIR are shown in **Table HRA-6** below and compared to the BAAQMD project-level thresholds that have been adopted by the City of Oakland.

TABLE HRA-6
MAXIMUM HEALTH RISKS FROM 2018 PROJECT CONSTRUCTION

Health Risk at MEIR	Maximum Cancer Risk (in a million)	Chronic Risk (Hazard Index)	Maximum $PM_{2.5}$ concentration
Uncontrolled Scenario			
Residential Receptor - Infant	5.9	0.004	0.02
Residential Receptor - Child	1.2	0.004	0.02
Residential Receptor - Adult	0.2	0.004	0.02
Mitigated Scenario (With Tier 4 Equipment)			
Residential Receptor - Infant	0.3	0.0002	0.001
Residential Receptor - Child	0.1	0.0002	0.001
Residential Receptor - Adult	0.01	0.0002	0.001
Project-level Threshold	10	1.0	0.3
Significant?	**No**	**No**	**No**

[5] California Office of Environmental Health Hazards Assessment - Acute, 8-hour, and Chronic Reference Exposure Levels, June 2014, http://www.oehha.ca.gov/air/allrels.html

As shown in the table, health risks (cancer and chronic) to receptors of all age groups and $PM_{2.5}$ concentrations resulting from project construction would be less than the applicable significance thresholds for both the uncontrolled scenario and mitigated scenario (with the use of Tier 4 equipment) for construction. Therefore, the TAC impact of project construction on existing receptors would be less than significant.

1900 Broadway - Tower construction - Alameda County, Annual

1900 Broadway - Tower construction

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	58.00	1000sqft	0.00	58,000.00	0
Enclosed Parking with Elevator	33.07	1000sqft	0.00	33,070.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.00	5,000.00	0
Apartments High Rise	452.00	Dwelling Unit	0.73	361,993.00	850
Regional Shopping Center	2.50	1000sqft	0.00	2,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2021
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 - Project data

Construction Phase - Project data

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Trips and VMT - Data from project applicant

Demolition -

Grading - Project data from applicant

Architectural Coating - Pre-fab panels to be used for exterior finishing

Vehicle Trips - Adjusted based on project traffic report

Woodstoves - No woodstoves assumed
CalEEMod default number of fireplaces assumed - all gas fired

Area Coating - Pre-fab panels used for exterior finishing

Water And Wastewater - 20% reduction in indoor water use assumed in compliance with CalGreen code
100% aerobic treatment of wastewater assumed
Construction Off-road Equipment Mitigation - Tier 4 Final equipment assument in compliance with BACT requirements of SCA-19(w)

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,750.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	244,345.00	0.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	57.00
tblConstructionPhase	NumDays	1.00	23.00
tblConstructionPhase	NumDays	2.00	56.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	100.00	522.00
tblConstructionPhase	PhaseEndDate	1/9/2019	3/17/2019
tblConstructionPhase	PhaseEndDate	1/10/2019	4/17/2019
tblConstructionPhase	PhaseEndDate	1/14/2019	7/10/2019
tblConstructionPhase	PhaseEndDate	6/10/2019	6/3/2019
tblConstructionPhase	PhaseEndDate	6/17/2019	6/10/2019
tblConstructionPhase	PhaseEndDate	6/3/2019	7/11/2021
tblConstructionPhase	PhaseStartDate	1/10/2019	3/17/2019

tblConstructionPhase	PhaseStartDate	1/11/2019	4/24/2019
tblConstructionPhase	PhaseStartDate	1/15/2019	7/11/2019
tblGrading	AcresOfGrading	4.90	0.73
tblGrading	AcresOfGrading	0.00	0.73
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialImported	0.00	5,000.00
tblLandUse	LandUseSquareFeet	452,000.00	361,993.00
tblLandUse	LotAcreage	1.33	0.00
tblLandUse	LotAcreage	0.76	0.00
tblLandUse	LotAcreage	0.11	0.00
tblLandUse	LotAcreage	7.29	0.73
tblLandUse	LotAcreage	0.06	0.00
tblLandUse	Population	1,293.00	850.00
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cranes

tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.14

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.10
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	75.00	285.00
tblTripsAndVMT	HaulingTripNumber	0.00	2,610.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	64.00	5.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	23.00	20.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblTripsAndVMT	WorkerTripNumber	361.00	150.00

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					
2018	1.6500e-003	0.0174	0.0157	3.0000e-005	2.5500e-003	7.7000e-004	3.3200e-003	6.0000e-004	7.3000e-004	1.3300e-003	0.0000	3.0566	3.0566	5.2000e-004	0.0000	3.0697
2019	0.2056	2.3403	1.8631	5.5800e-003	0.1594	0.0779	0.2373	0.0414	0.0741	0.1155	0.0000	514.0453	514.0453	0.0614	0.0000	515.5791
2020	0.1498	1.1236	1.4898	3.5500e-003	0.1790	0.0470	0.2260	0.0477	0.0433	0.0909	0.0000	321.9122	321.9122	0.0447	0.0000	323.0299
2021	0.0712	0.5368	0.7461	1.8100e-003	0.1009	0.0211	0.1219	0.0267	0.0194	0.0461	0.0000	164.2113	164.2113	0.0230	0.0000	164.7850
Maximum	**0.2056**	**2.3403**	**1.8631**	**5.5800e-003**	**0.1790**	**0.0779**	**0.2373**	**0.0477**	**0.0741**	**0.1155**	**0.0000**	**514.0453**	**514.0453**	**0.0614**	**0.0000**	**515.5791**

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					
2018	5.3000e-004	6.0300e-003	0.0179	3.0000e-005	2.5500e-003	5.0000e-005	2.6000e-003	6.0000e-004	5.0000e-005	6.5000e-004	0.0000	3.0566	3.0566	5.2000e-004	0.0000	3.0697
2019	0.0960	1.1471	2.0323	5.5800e-003	0.1594	7.7700e-003	0.1671	0.0414	7.5600e-003	0.0490	0.0000	514.0451	514.0451	0.0614	0.0000	515.5789
2020	0.0923	0.3887	1.5684	3.5500e-003	0.1790	4.2200e-003	0.1832	0.0477	4.0900e-003	0.0517	0.0000	321.9120	321.9120	0.0447	0.0000	323.0298
2021	0.0448	0.1879	0.7890	1.8100e-003	0.1009	2.0200e-003	0.1029	0.0267	1.9700e-003	0.0287	0.0000	164.2112	164.2112	0.0230	0.0000	164.7849
Maximum	**0.0960**	**1.1471**	**2.0323**	**5.5800e-003**	**0.1790**	**7.7700e-003**	**0.1832**	**0.0477**	**7.5600e-003**	**0.0517**	**0.0000**	**514.0451**	**514.0451**	**0.0614**	**0.0000**	**515.5789**

	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	**45.47**	**56.95**	**-7.12**	**0.00**	**0.00**	**90.42**	**22.54**	**0.00**	**90.06**	**48.77**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**12-27-2018**	**3-26-2019**	0.4099	0.1398

2	**3-27-2019**	**6-26-2019**	1.2476	0.7032
3	**6-27-2019**	**9-26-2019**	0.5286	0.2537
4	**9-27-2019**	**12-26-2019**	0.3456	0.1308
5	**12-27-2019**	**3-26-2020**	0.3205	0.1229
6	**3-27-2020**	**6-26-2020**	0.3180	0.1192
7	**6-27-2020**	**9-26-2020**	0.3177	0.1190
8	**9-27-2020**	**12-26-2020**	0.3188	0.1222
9	**12-27-2020**	**3-26-2021**	0.2916	0.1132
10	**3-27-2021**	**6-26-2021**	0.2926	0.1112
11	**6-27-2021**	**9-26-2021**	0.0477	0.0181
		Highest	1.2476	0.7032

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	12/27/2018	3/17/2019	5	57	
2	Site Preparation	Site Preparation	3/17/2019	4/17/2019	5	23	
3	Grading	Grading	4/24/2019	7/10/2019	5	56	
4	Building Construction	Building Construction	7/11/2019	7/11/2021	5	522	
5	Paving	Paving	6/4/2019	6/3/2019	5	0	
6	Architectural Coating	Architectural Coating	6/11/2019	6/10/2019	5	0	

Acres of Grading (Site Preparation Phase): 0.73

Acres of Grading (Grading Phase): 0.73

Acres of Paving: 0

Residential Indoor: 733,036; Residential Outdoor: 0; Non-Residential Indoor: 98,250; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.14	81	0.73
Demolition	Aerial Lifts	1	0.56	63	0.31
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation	Graders	0	0.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading	Concrete/Industrial Saws	0	0.00	81	0.73
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	2	8.10	89	0.20
Demolition	Excavators	2	6.32	158	0.38
Demolition	Skid Steer Loaders	1	6.32	65	0.37
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Paving	Pavers	0	0.00	130	0.42
Paving	Rollers	0	0.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48
Demolition	Generator Sets	1	6.32	84	0.74
Site Preparation	Air Compressors	2	7.00	78	0.48
Site Preparation	Cranes	1	4.90	231	0.29
Site Preparation	Bore/Drill Rigs	1	7.00	221	0.50
Site Preparation	Dumpers/Tenders	1	3.50	16	0.38
Site Preparation	Skid Steer Loaders	2	7.00	65	0.37
Site Preparation	Pumps	1	7.00	84	0.74
Site Preparation	Rough Terrain Forklifts	1	7.00	100	0.40
Grading	Pumps	1	7.10	84	0.74
Grading	Cement and Mortar Mixers	2	2.90	9	0.56
Grading	Dumpers/Tenders	1	1.40	16	0.38

Grading	Excavators	2	7.10	158	0.38
Grading	Generator Sets	2	7.10	84	0.74
Grading	Graders	1	1.40	187	0.41
Grading	Rough Terrain Forklifts	1	7.10	100	0.40
Building Construction	Rough Terrain Forklifts	2	8.10	100	0.40

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	6	20.00	5.00	285.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	9	20.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	20.00	5.00	4,750.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	150.00	5.00	2,610.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	72.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2018

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					4.3000e-004	0.0000	4.3000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4100e-003	0.0139	0.0141	2.0000e-005		7.5000e-004	7.5000e-004		7.1000e-004	7.1000e-004	0.0000	2.0452	2.0452	4.7000e-004	0.0000	2.0570
Total	**1.4100e-003**	**0.0139**	**0.0141**	**2.0000e-005**	**4.3000e-004**	**7.5000e-004**	**1.1800e-003**	**7.0000e-005**	**7.1000e-004**	**7.8000e-004**	**0.0000**	**2.0452**	**2.0452**	**4.7000e-004**	**0.0000**	**2.0570**

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	7.0000e-005	2.4500e-003	4.1000e-004	1.0000e-005	1.8300e-003	1.0000e-005	1.8400e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	0.5862	0.5862	3.0000e-005	0.0000	0.5869
Vendor	4.0000e-005	1.0100e-003	2.3000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2012	0.2012	1.0000e-005	0.0000	0.2015
Worker	1.3000e-004	1.0000e-004	9.9000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2241	0.2241	1.0000e-005	0.0000	0.2243
Total	**2.4000e-004**	**3.5600e-003**	**1.6300e-003**	**1.0000e-005**	**2.1200e-003**	**2.0000e-005**	**2.1400e-003**	**5.2000e-004**	**2.0000e-005**	**5.4000e-004**	**0.0000**	**1.0115**	**1.0115**	**5.0000e-005**	**0.0000**	**1.0127**

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					4.3000e-004	0.0000	4.3000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	2.4700e-003	0.0162	2.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.0452	2.0452	4.7000e-004	0.0000	2.0570
Total	**3.0000e-004**	**2.4700e-003**	**0.0162**	**2.0000e-005**	**4.3000e-004**	**4.0000e-005**	**4.7000e-004**	**7.0000e-005**	**4.0000e-005**	**1.1000e-004**	**0.0000**	**2.0452**	**2.0452**	**4.7000e-004**	**0.0000**	**2.0570**

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	7.0000e-005	2.4500e-003	4.1000e-004	1.0000e-005	1.8300e-003	1.0000e-005	1.8400e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	0.5862	0.5862	3.0000e-005	0.0000	0.5869
Vendor	4.0000e-005	1.0100e-003	2.3000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2012	0.2012	1.0000e-005	0.0000	0.2015
Worker	1.3000e-004	1.0000e-004	9.9000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2241	0.2241	1.0000e-005	0.0000	0.2243

Total	**2.4000e-004**	**3.5600e-003**	**1.6300e-003**	**1.0000e-005**	**2.1200e-003**	**2.0000e-005**	**2.1400e-003**	**5.2000e-004**	**2.0000e-005**	**5.4000e-004**	**0.0000**	**1.0115**	**1.0115**	**5.0000e-005**	**0.0000**	**1.0127**

3.2 Demolition - 2019

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					7.7300e-003	0.0000	7.7300e-003	1.1700e-003	0.0000	1.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0227	0.2225	0.2527	4.1000e-004		0.0116	0.0116		0.0111	0.0111	0.0000	36.4163	36.4163	8.4100e-003	0.0000	36.6265
Total	**0.0227**	**0.2225**	**0.2527**	**4.1000e-004**	**7.7300e-003**	**0.0116**	**0.0193**	**1.1700e-003**	**0.0111**	**0.0122**	**0.0000**	**36.4163**	**36.4163**	**8.4100e-003**	**0.0000**	**36.6265**

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	1.2300e-003	0.0420	7.1600e-003	1.1000e-004	2.3800e-003	1.5000e-004	2.5300e-003	6.5000e-004	1.5000e-004	8.0000e-004	0.0000	10.4465	10.4465	5.4000e-004	0.0000	10.4601
Vendor	6.1000e-004	0.0173	3.8200e-003	4.0000e-005	8.9000e-004	1.1000e-004	1.0000e-003	2.6000e-004	1.1000e-004	3.6000e-004	0.0000	3.5961	3.5961	2.2000e-004	0.0000	3.6016
Worker	2.0400e-003	1.5600e-003	0.0158	4.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.9166	3.9166	1.1000e-004	0.0000	3.9194
Total	**3.8800e-003**	**0.0608**	**0.0267**	**1.9000e-004**	**7.5400e-003**	**2.9000e-004**	**7.8300e-003**	**2.0500e-003**	**2.9000e-004**	**2.3200e-003**	**0.0000**	**17.9592**	**17.9592**	**8.7000e-004**	**0.0000**	**17.9811**

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					7.7300e-003	0.0000	7.7300e-003	1.1700e-003	0.0000	1.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	5.3200e-003	0.0445	0.2921	4.1000e-004		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	36.4162	36.4162	8.4100e-003	0.0000	36.6264
Total	**5.3200e-003**	**0.0445**	**0.2921**	**4.1000e-004**	**7.7300e-003**	**6.3000e-004**	**8.3600e-003**	**1.1700e-003**	**6.3000e-004**	**1.8000e-003**	**0.0000**	**36.4162**	**36.4162**	**8.4100e-003**	**0.0000**	**36.6264**

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	1.2300e-003	0.0420	7.1600e-003	1.1000e-004	2.3800e-003	1.5000e-004	2.5300e-003	6.5000e-004	1.5000e-004	8.0000e-004	0.0000	10.4465	10.4465	5.4000e-004	0.0000	10.4601
Vendor	6.1000e-004	0.0173	3.8200e-003	4.0000e-005	8.9000e-004	1.1000e-004	1.0000e-003	2.6000e-004	1.1000e-004	3.6000e-004	0.0000	3.5961	3.5961	2.2000e-004	0.0000	3.6016
Worker	2.0400e-003	1.5600e-003	0.0158	4.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.9166	3.9166	1.1000e-004	0.0000	3.9194
Total	**3.8800e-003**	**0.0608**	**0.0267**	**1.9000e-004**	**7.5400e-003**	**2.9000e-004**	**7.8300e-003**	**2.0500e-003**	**2.9000e-004**	**2.3200e-003**	**0.0000**	**17.9592**	**17.9592**	**8.7000e-004**	**0.0000**	**17.9811**

3.3 Site Preparation - 2019

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					3.9000e-004	0.0000	3.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2108	0.1768	3.6000e-004		0.0107	0.0107		0.0103	0.0103	0.0000	31.7983	31.7983	6.9900e-003	0.0000	31.9732
Total	**0.0217**	**0.2108**	**0.1768**	**3.6000e-004**	**3.9000e-004**	**0.0107**	**0.0110**	**4.0000e-005**	**0.0103**	**0.0103**	**0.0000**	**31.7983**	**31.7983**	**6.9900e-003**	**0.0000**	**31.9732**

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	2.6000e-004	7.3500e-003	1.6300e-003	2.0000e-005	3.8000e-004	5.0000e-005	4.2000e-004	1.1000e-004	4.0000e-005	1.5000e-004	0.0000	1.5317	1.5317	9.0000e-005	0.0000	1.5340
Worker	8.7000e-004	6.6000e-004	6.7100e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.6682	1.6682	5.0000e-005	0.0000	1.6694
Total	**1.1300e-003**	**8.0100e-003**	**8.3400e-003**	**4.0000e-005**	**2.2000e-003**	**6.0000e-005**	**2.2500e-003**	**5.9000e-004**	**5.0000e-005**	**6.5000e-004**	**0.0000**	**3.1998**	**3.1998**	**1.4000e-004**	**0.0000**	**3.2034**

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					3.9000e-004	0.0000	3.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5900e-003	0.0388	0.2094	3.6000e-004		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	31.7983	31.7983	6.9900e-003	0.0000	31.9731
Total	**4.5900e-003**	**0.0388**	**0.2094**	**3.6000e-004**	**3.9000e-004**	**5.4000e-004**	**9.3000e-004**	**4.0000e-005**	**5.4000e-004**	**5.8000e-004**	**0.0000**	**31.7983**	**31.7983**	**6.9900e-003**	**0.0000**	**31.9731**

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	2.6000e-004	7.3500e-003	1.6300e-003	2.0000e-005	3.8000e-004	5.0000e-005	4.2000e-004	1.1000e-004	4.0000e-005	1.5000e-004	0.0000	1.5317	1.5317	9.0000e-005	0.0000	1.5340
Worker	8.7000e-004	6.6000e-004	6.7100e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.6682	1.6682	5.0000e-005	0.0000	1.6694
Total	**1.1300e-003**	**8.0100e-003**	**8.3400e-003**	**4.0000e-005**	**2.2000e-003**	**6.0000e-005**	**2.2500e-003**	**5.9000e-004**	**5.0000e-005**	**6.5000e-004**	**0.0000**	**3.1998**	**3.1998**	**1.4000e-004**	**0.0000**	**3.2034**

3.4 Grading - 2019

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					2.5400e-003	0.0000	2.5400e-003	3.7000e-004	0.0000	3.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0543	0.5051	0.5159	8.8000e-004		0.0271	0.0271		0.0263	0.0263	0.0000	77.1368	77.1368	0.0135	0.0000	77.4753
Total	**0.0543**	**0.5051**	**0.5159**	**8.8000e-004**	**2.5400e-003**	**0.0271**	**0.0296**	**3.7000e-004**	**0.0263**	**0.0267**	**0.0000**	**77.1368**	**77.1368**	**0.0135**	**0.0000**	**77.4753**

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	0.0217	0.7381	0.1260	1.9100e-003	0.0402	2.6700e-003	0.0429	0.0111	2.5600e-003	0.0136	0.0000	183.7818	183.7818	9.5600e-003	0.0000	184.0209
Vendor	6.3000e-004	0.0179	3.9600e-003	4.0000e-005	9.2000e-004	1.1000e-004	1.0300e-003	2.7000e-004	1.1000e-004	3.8000e-004	0.0000	3.7293	3.7293	2.3000e-004	0.0000	3.7350
Worker	2.1200e-003	1.6200e-003	0.0163	4.0000e-005	4.4300e-003	3.0000e-005	4.4600e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	4.0616	4.0616	1.2000e-004	0.0000	4.0645
Total	**0.0244**	**0.7576**	**0.1463**	**1.9900e-003**	**0.0456**	**2.8100e-003**	**0.0484**	**0.0125**	**2.7000e-003**	**0.0152**	**0.0000**	**191.5727**	**191.5727**	**9.9100e-003**	**0.0000**	**191.8204**

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					2.5400e-003	0.0000	2.5400e-003	3.7000e-004	0.0000	3.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5300e-003	0.0413	0.5778	8.8000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003	0.0000	77.1367	77.1367	0.0135	0.0000	77.4752
Total	**9.5300e-003**	**0.0413**	**0.5778**	**8.8000e-004**	**2.5400e-003**	**1.2700e-003**	**3.8100e-003**	**3.7000e-004**	**1.2700e-003**	**1.6400e-003**	**0.0000**	**77.1367**	**77.1367**	**0.0135**	**0.0000**	**77.4752**

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	0.0217	0.7381	0.1260	1.9100e-003	0.0402	2.6700e-003	0.0429	0.0111	2.5600e-003	0.0136	0.0000	183.7818	183.7818	9.5600e-003	0.0000	184.0209
Vendor	6.3000e-004	0.0179	3.9600e-003	4.0000e-005	9.2000e-004	1.1000e-004	1.0300e-003	2.7000e-004	1.1000e-004	3.8000e-004	0.0000	3.7293	3.7293	2.3000e-004	0.0000	3.7350
Worker	2.1200e-003	1.6200e-003	0.0163	4.0000e-005	4.4300e-003	3.0000e-005	4.4600e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	4.0616	4.0616	1.2000e-004	0.0000	4.0645
Total	**0.0244**	**0.7576**	**0.1463**	**1.9900e-003**	**0.0456**	**2.8100e-003**	**0.0484**	**0.0125**	**2.7000e-003**	**0.0152**	**0.0000**	**191.5727**	**191.5727**	**9.9100e-003**	**0.0000**	**191.8204**

3.5 Building Construction - 2019

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	0.0381	0.4127	0.4400	6.3000e-004		0.0243	0.0243		0.0224	0.0224	0.0000	56.2641	56.2641	0.0178	0.0000	56.7091
Total	**0.0381**	**0.4127**	**0.4400**	**6.3000e-004**		**0.0243**	**0.0243**		**0.0224**	**0.0224**	**0.0000**	**56.2641**	**56.2641**	**0.0178**	**0.0000**	**56.7091**

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	2.8300e-003	0.0963	0.0165	2.5000e-004	0.0178	3.5000e-004	0.0182	4.5300e-003	3.3000e-004	4.8700e-003	0.0000	23.9884	23.9884	1.2500e-003	0.0000	24.0196
Vendor	1.4000e-003	0.0397	8.7700e-003	9.0000e-005	2.0400e-003	2.5000e-004	2.2900e-003	5.9000e-004	2.4000e-004	8.3000e-004	0.0000	8.2576	8.2576	5.1000e-004	0.0000	8.2703
Worker	0.0352	0.0269	0.2712	7.5000e-004	0.0735	5.2000e-004	0.0741	0.0196	4.8000e-004	0.0200	0.0000	67.4522	67.4522	1.9200e-003	0.0000	67.5002
Total	**0.0394**	**0.1628**	**0.2965**	**1.0900e-003**	**0.0934**	**1.1200e-003**	**0.0945**	**0.0247**	**1.0500e-003**	**0.0257**	**0.0000**	**99.6981**	**99.6981**	**3.6800e-003**	**0.0000**	**99.7901**

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	7.7100e-003	0.0334	0.4752	6.3000e-004		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	56.2640	56.2640	0.0178	0.0000	56.7091
Total	**7.7100e-003**	**0.0334**	**0.4752**	**6.3000e-004**		**1.0300e-003**	**1.0300e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**56.2640**	**56.2640**	**0.0178**	**0.0000**	**56.7091**

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	2.8300e-003	0.0963	0.0165	2.5000e-004	0.0178	3.5000e-004	0.0182	4.5300e-003	3.3000e-004	4.8700e-003	0.0000	23.9884	23.9884	1.2500e-003	0.0000	24.0196
Vendor	1.4000e-003	0.0397	8.7700e-003	9.0000e-005	2.0400e-003	2.5000e-004	2.2900e-003	5.9000e-004	2.4000e-004	8.3000e-004	0.0000	8.2576	8.2576	5.1000e-004	0.0000	8.2703
Worker	0.0352	0.0269	0.2712	7.5000e-004	0.0735	5.2000e-004	0.0741	0.0196	4.8000e-004	0.0200	0.0000	67.4522	67.4522	1.9200e-003	0.0000	67.5002
Total	**0.0394**	**0.1628**	**0.2965**	**1.0900e-003**	**0.0934**	**1.1200e-003**	**0.0945**	**0.0247**	**1.0500e-003**	**0.0257**	**0.0000**	**99.6981**	**99.6981**	**3.6800e-003**	**0.0000**	**99.7901**

3.5 Building Construction - 2020

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	0.0738	0.8054	0.9254	1.3200e-003		0.0449	0.0449		0.0413	0.0413	0.0000	116.3270	116.3270	0.0376	0.0000	117.2676
Total	**0.0738**	**0.8054**	**0.9254**	**1.3200e-003**		**0.0449**	**0.0449**		**0.0413**	**0.0413**	**0.0000**	**116.3270**	**116.3270**	**0.0376**	**0.0000**	**117.2676**

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	5.5500e-003	0.1910	0.0336	5.2000e-004	0.0193	6.1000e-004	0.0199	5.0700e-003	5.8000e-004	5.6500e-003	0.0000	50.1487	50.1487	2.5300e-003	0.0000	50.2118

Vendor	2.4600e-003	0.0770	0.0166	1.8000e-004	4.3000e-003	3.6000e-004	4.6600e-003	1.2400e-003	3.4000e-004	1.5900e-003	0.0000	17.3254	17.3254	1.0000e-003	0.0000	17.3503
Worker	0.0680	0.0501	0.5141	1.5300e-003	0.1554	1.0800e-003	0.1564	0.0413	9.9000e-004	0.0423	0.0000	138.1111	138.1111	3.5700e-003	0.0000	138.2002
Total	**0.0760**	**0.3181**	**0.5643**	**2.2300e-003**	**0.1790**	**2.0500e-003**	**0.1810**	**0.0476**	**1.9100e-003**	**0.0496**	**0.0000**	**205.5852**	**205.5852**	**7.1000e-003**	**0.0000**	**205.7624**

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	0.0163	0.0706	1.0040	1.3200e-003		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003	0.0000	116.3269	116.3269	0.0376	0.0000	117.2674
Total	**0.0163**	**0.0706**	**1.0040**	**1.3200e-003**		**2.1700e-003**	**2.1700e-003**		**2.1700e-003**	**2.1700e-003**	**0.0000**	**116.3269**	**116.3269**	**0.0376**	**0.0000**	**117.2674**

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	5.5500e-003	0.1910	0.0336	5.2000e-004	0.0193	6.1000e-004	0.0199	5.0700e-003	5.8000e-004	5.6500e-003	0.0000	50.1487	50.1487	2.5300e-003	0.0000	50.2118
Vendor	2.4600e-003	0.0770	0.0166	1.8000e-004	4.3000e-003	3.6000e-004	4.6600e-003	1.2400e-003	3.4000e-004	1.5900e-003	0.0000	17.3254	17.3254	1.0000e-003	0.0000	17.3503
Worker	0.0680	0.0501	0.5141	1.5300e-003	0.1554	1.0800e-003	0.1564	0.0413	9.9000e-004	0.0423	0.0000	138.1111	138.1111	3.5700e-003	0.0000	138.2002
Total	**0.0760**	**0.3181**	**0.5643**	**2.2300e-003**	**0.1790**	**2.0500e-003**	**0.1810**	**0.0476**	**1.9100e-003**	**0.0496**	**0.0000**	**205.5852**	**205.5852**	**7.1000e-003**	**0.0000**	**205.7624**

3.5 Building Construction - 2021

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	0.0349	0.3855	0.4783	6.9000e-004		0.0202	0.0202		0.0186	0.0186	0.0000	60.3946	60.3946	0.0195	0.0000	60.8829

Total	**0.0349**	**0.3855**	**0.4783**	**6.9000e-004**		**0.0202**	**0.0202**		**0.0186**	**0.0186**	**0.0000**	**60.3946**	**60.3946**	**0.0195**	**0.0000**	**60.8829**

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	2.7200e-003	0.0917	0.0170	2.7000e-004	0.0180	2.8000e-004	0.0183	4.5800e-003	2.7000e-004	4.8500e-003	0.0000	25.7054	25.7054	1.2700e-003	0.0000	25.7373
Vendor	1.0500e-003	0.0364	7.7000e-003	9.0000e-005	2.2300e-003	8.0000e-005	2.3100e-003	6.5000e-004	7.0000e-005	7.2000e-004	0.0000	8.9070	8.9070	4.9000e-004	0.0000	8.9192
Worker	0.0326	0.0232	0.2431	7.7000e-004	0.0807	5.4000e-004	0.0812	0.0215	5.0000e-004	0.0220	0.0000	69.2042	69.2042	1.6500e-003	0.0000	69.2456
Total	**0.0363**	**0.1513**	**0.2678**	**1.1300e-003**	**0.1009**	**9.0000e-004**	**0.1018**	**0.0267**	**8.4000e-004**	**0.0275**	**0.0000**	**103.8166**	**103.8166**	**3.4100e-003**	**0.0000**	**103.9021**

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	8.4500e-003	0.0366	0.5212	6.9000e-004		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	60.3946	60.3946	0.0195	0.0000	60.8829
Total	**8.4500e-003**	**0.0366**	**0.5212**	**6.9000e-004**		**1.1300e-003**	**1.1300e-003**		**1.1300e-003**	**1.1300e-003**	**0.0000**	**60.3946**	**60.3946**	**0.0195**	**0.0000**	**60.8829**

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	2.7200e-003	0.0917	0.0170	2.7000e-004	0.0180	2.8000e-004	0.0183	4.5800e-003	2.7000e-004	4.8500e-003	0.0000	25.7054	25.7054	1.2700e-003	0.0000	25.7373
Vendor	1.0500e-003	0.0364	7.7000e-003	9.0000e-005	2.2300e-003	8.0000e-005	2.3100e-003	6.5000e-004	7.0000e-005	7.2000e-004	0.0000	8.9070	8.9070	4.9000e-004	0.0000	8.9192
Worker	0.0326	0.0232	0.2431	7.7000e-004	0.0807	5.4000e-004	0.0812	0.0215	5.0000e-004	0.0220	0.0000	69.2042	69.2042	1.6500e-003	0.0000	69.2456

Total	**0.0363**	**0.1513**	**0.2678**	**1.1300e-003**	**0.1009**	**9.0000e-004**	**0.1018**	**0.0267**	**8.4000e-004**	**0.0275**	**0.0000**	**103.8166**	**103.8166**	**3.4100e-003**	**0.0000**	**103.9021**

1900 Broadway - Tapscott renovation

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	27.00	1000sqft	0.21	27,000.00	0
Enclosed Parking with Elevator	2.00	1000sqft	0.00	2,000.00	0
High Turnover (Sit Down Restaurant)	15.00	1000sqft	0.00	15,000.00	0
Apartments High Rise	0.00	Dwelling Unit	0.00	361,993.00	814
Regional Shopping Center	2.50	1000sqft	0.00	2,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2021
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 - Project data

Construction Phase - Project data

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Trips and VMT - Data from project applicant

Demolition -

Grading - Project data from applicant

Architectural Coating - Pre-fab panels to be used for exterior finishing

Vehicle Trips - Adjusted based on project traffic report

Woodstoves - No woodstoves assumed
CalEEMod default number of fireplaces assumed - all gas fired

Area Coating - Pre-fab panels used for exterior finishing

Water And Wastewater - 20% reduction in indoor water use assumed in compliance with CalGreen code
100% aerobic treatment of wastewater assumed

Construction Off-road Equipment Mitigation - Tier 4 Final equipment assument in compliance with BACT requirements of SCA-19(w)

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	22,250.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	244,345.00	0.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	57.00
tblConstructionPhase	NumDays	1.00	0.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	5.00	0.00

tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	100.00	327.00
tblConstructionPhase	PhaseEndDate	1/9/2019	3/17/2019
tblConstructionPhase	PhaseEndDate	1/10/2019	1/9/2019
tblConstructionPhase	PhaseEndDate	1/14/2019	1/10/2019
tblConstructionPhase	PhaseEndDate	6/10/2019	6/3/2019
tblConstructionPhase	PhaseEndDate	6/17/2019	6/10/2019
tblConstructionPhase	PhaseEndDate	6/3/2019	10/11/2020
tblConstructionPhase	PhaseStartDate	1/15/2019	7/11/2019
tblLandUse	LandUseSquareFeet	0.00	361,993.00
tblLandUse	LotAcreage	0.62	0.21
tblLandUse	LotAcreage	0.05	0.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	0.06	0.00
tblLandUse	Population	0.00	814.00
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
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tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	327.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	8.00	1.00
tblTripsAndVMT	WorkerTripNumber	3.00	5.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	17.00	8.00

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					
2018	1.0800e-003	0.0158	7.5200e-003	3.0000e-005	6.5500e-003	4.3000e-004	6.9800e-003	1.6200e-003	4.3000e-004	2.0500e-003	0.0000	3.1617	3.1617	1.8000e-004	0.0000	3.1663
2019	0.0414	0.5022	0.3618	1.0300e-003	0.0170	0.0196	0.0366	4.5900e-003	0.0189	0.0235	0.0000	94.4624	94.4624	9.9700e-003	0.0000	94.7118
2020	0.0356	0.3552	0.3691	6.9000e-004	9.5900e-003	0.0184	0.0280	2.5700e-003	0.0174	0.0200	0.0000	61.2355	61.2355	0.0111	0.0000	61.5119
Maximum	**0.0414**	**0.5022**	**0.3691**	**1.0300e-003**	**0.0170**	**0.0196**	**0.0366**	**4.5900e-003**	**0.0189**	**0.0235**	**0.0000**	**94.4624**	**94.4624**	**0.0111**	**0.0000**	**94.7118**

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					
2018	4.2000e-004	0.0101	7.9900e-003	3.0000e-005	6.5500e-003	5.0000e-005	6.6000e-003	1.6200e-003	5.0000e-005	1.6800e-003	0.0000	3.1617	3.1617	1.8000e-004	0.0000	3.1663
2019	0.0136	0.2169	0.3856	1.0300e-003	0.0170	1.5200e-003	0.0185	4.5900e-003	1.4800e-003	6.0800e-003	0.0000	94.4624	94.4624	9.9700e-003	0.0000	94.7117
2020	9.9900e-003	0.0693	0.3952	6.9000e-004	9.5900e-003	9.9000e-004	0.0106	2.5700e-003	9.8000e-004	3.5400e-003	0.0000	61.2354	61.2354	0.0111	0.0000	61.5118
Maximum	**0.0136**	**0.2169**	**0.3952**	**1.0300e-003**	**0.0170**	**1.5200e-003**	**0.0185**	**4.5900e-003**	**1.4800e-003**	**6.0800e-003**	**0.0000**	**94.4624**	**94.4624**	**0.0111**	**0.0000**	**94.7117**

	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	**69.31**	**66.07**	**-6.83**	**0.00**	**0.00**	**93.35**	**50.17**	**0.00**	**93.16**	**75.16**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	12-27-2018	3-26-2019	0.3066	0.1940
3	6-27-2019	9-26-2019	0.1163	0.0225
4	9-27-2019	12-26-2019	0.1361	0.0268
5	12-27-2019	3-26-2020	0.1259	0.0257

6	**3-27-2020**	**6-26-2020**	0.1263	0.0254
7	**6-27-2020**	**9-26-2020**	0.1263	0.0254
8	**9-27-2020**	**9-30-2020**	0.0055	0.0011
		Highest	0.3066	0.1940

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	12/27/2018	3/17/2019	5	57	
2	Site Preparation	Site Preparation	1/10/2019	1/9/2019	5	0	
3	Grading	Grading	1/11/2019	1/10/2019	5	0	
4	Building Construction	Building Construction	7/11/2019	10/11/2020	5	327	
5	Paving	Paving	6/4/2019	6/3/2019	5	0	
6	Architectural Coating	Architectural Coating	6/11/2019	6/10/2019	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 733,036; Residential Outdoor: 0; Non-Residential Indoor: 66,750; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Generator Sets	1	8.00	84	0.74
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Building Construction	Rough Terrain Forklifts	1	4.50	100	0.40
Building Construction	Generator Sets	1	2.20	84	0.74
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation	Graders	0	0.00	187	0.41

Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading	Concrete/Industrial Saws	0	0.00	81	0.73
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Paving	Pavers	0	0.00	130	0.42
Paving	Rollers	0	0.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	1	7.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37

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	1	5.00	5.00	1,000.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	8.00	1.00	327.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2018

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6000e-004	6.1700e-003	5.6200e-003	1.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	0.8478	0.8478	6.0000e-005	0.0000	0.8493
Total	**7.6000e-004**	**6.1700e-003**	**5.6200e-003**	**1.0000e-005**	**0.0000**	**3.9000e-004**	**3.9000e-004**	**0.0000**	**3.9000e-004**	**3.9000e-004**	**0.0000**	**0.8478**	**0.8478**	**6.0000e-005**	**0.0000**	**0.8493**

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	2.5000e-004	8.6000e-003	1.4200e-003	2.0000e-005	6.4400e-003	3.0000e-005	6.4700e-003	1.5900e-003	3.0000e-005	1.6200e-003	0.0000	2.0567	2.0567	1.1000e-004	0.0000	2.0594
Vendor	4.0000e-005	1.0100e-003	2.3000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2012	0.2012	1.0000e-005	0.0000	0.2015
Worker	3.0000e-005	2.0000e-005	2.5000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0560	0.0560	0.0000	0.0000	0.0561
Total	**3.2000e-004**	**9.6300e-003**	**1.9000e-003**	**2.0000e-005**	**6.5500e-003**	**4.0000e-005**	**6.5900e-003**	**1.6200e-003**	**4.0000e-005**	**1.6600e-003**	**0.0000**	**2.3139**	**2.3139**	**1.2000e-004**	**0.0000**	**2.3170**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-004	4.3000e-004	6.0800e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.8478	0.8478	6.0000e-005	0.0000	0.8493
Total	**1.0000e-004**	**4.3000e-004**	**6.0800e-003**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.8478**	**0.8478**	**6.0000e-005**	**0.0000**	**0.8493**

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	2.5000e-004	8.6000e-003	1.4200e-003	2.0000e-005	6.4400e-003	3.0000e-005	6.4700e-003	1.5900e-003	3.0000e-005	1.6200e-003	0.0000	2.0567	2.0567	1.1000e-004	0.0000	2.0594
Vendor	4.0000e-005	1.0100e-003	2.3000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2012	0.2012	1.0000e-005	0.0000	0.2015
Worker	3.0000e-005	2.0000e-005	2.5000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0560	0.0560	0.0000	0.0000	0.0561
Total	**3.2000e-004**	**9.6300e-003**	**1.9000e-003**	**2.0000e-005**	**6.5500e-003**	**4.0000e-005**	**6.5900e-003**	**1.6200e-003**	**4.0000e-005**	**1.6600e-003**	**0.0000**	**2.3139**	**2.3139**	**1.2000e-004**	**0.0000**	**2.3170**

3.2 Demolition - 2019

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.1020	0.1005	1.8000e-004		6.1000e-003	6.1000e-003		6.1000e-003	6.1000e-003	0.0000	15.2606	15.2606	9.7000e-004	0.0000	15.2848
Total	**0.0120**	**0.1020**	**0.1005**	**1.8000e-004**	**0.0000**	**6.1000e-003**	**6.1000e-003**	**0.0000**	**6.1000e-003**	**6.1000e-003**	**0.0000**	**15.2606**	**15.2606**	**9.7000e-004**	**0.0000**	**15.2848**

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	4.3200e-003	0.1472	0.0251	3.8000e-004	8.3600e-003	5.3000e-004	8.8900e-003	2.2900e-003	5.1000e-004	2.8000e-003	0.0000	36.6545	36.6545	1.9100e-003	0.0000	36.7022
Vendor	6.1000e-004	0.0173	3.8200e-003	4.0000e-005	8.9000e-004	1.1000e-004	1.0000e-003	2.6000e-004	1.1000e-004	3.6000e-004	0.0000	3.5961	3.5961	2.2000e-004	0.0000	3.6016
Worker	5.1000e-004	3.9000e-004	3.9400e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9791	0.9791	3.0000e-005	0.0000	0.9798
Total	**5.4400e-003**	**0.1649**	**0.0329**	**4.3000e-004**	**0.0103**	**6.5000e-004**	**0.0110**	**2.8300e-003**	**6.3000e-004**	**3.4500e-003**	**0.0000**	**41.2297**	**41.2297**	**2.1600e-003**	**0.0000**	**41.2837**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7800e-003	7.7000e-003	0.1095	1.8000e-004		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	15.2606	15.2606	9.7000e-004	0.0000	15.2848
Total	**1.7800e-003**	**7.7000e-003**	**0.1095**	**1.8000e-004**	**0.0000**	**2.4000e-004**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**2.4000e-004**	**0.0000**	**15.2606**	**15.2606**	**9.7000e-004**	**0.0000**	**15.2848**

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	4.3200e-003	0.1472	0.0251	3.8000e-004	8.3600e-003	5.3000e-004	8.8900e-003	2.2900e-003	5.1000e-004	2.8000e-003	0.0000	36.6545	36.6545	1.9100e-003	0.0000	36.7022
Vendor	6.1000e-004	0.0173	3.8200e-003	4.0000e-005	8.9000e-004	1.1000e-004	1.0000e-003	2.6000e-004	1.1000e-004	3.6000e-004	0.0000	3.5961	3.5961	2.2000e-004	0.0000	3.6016
Worker	5.1000e-004	3.9000e-004	3.9400e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9791	0.9791	3.0000e-005	0.0000	0.9798
Total	**5.4400e-003**	**0.1649**	**0.0329**	**4.3000e-004**	**0.0103**	**6.5000e-004**	**0.0110**	**2.8300e-003**	**6.3000e-004**	**3.4500e-003**	**0.0000**	**41.2297**	**41.2297**	**2.1600e-003**	**0.0000**	**41.2837**

3.5 Building Construction - 2019

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	0.0212	0.2067	0.2088	3.2000e-004		0.0127	0.0127		0.0120	0.0120	0.0000	27.9254	27.9254	6.4000e-003	0.0000	28.0853
Total	**0.0212**	**0.2067**	**0.2088**	**3.2000e-004**		**0.0127**	**0.0127**		**0.0120**	**0.0120**	**0.0000**	**27.9254**	**27.9254**	**6.4000e-003**	**0.0000**	**28.0853**

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	5.7000e-004	0.0193	3.2900e-003	5.0000e-005	2.3300e-003	7.0000e-005	2.4000e-003	6.0000e-004	7.0000e-005	6.7000e-004	0.0000	4.7977	4.7977	2.5000e-004	0.0000	4.8039
Vendor	2.8000e-004	7.9300e-003	1.7500e-003	2.0000e-005	4.1000e-004	5.0000e-005	4.6000e-004	1.2000e-004	5.0000e-005	1.7000e-004	0.0000	1.6515	1.6515	1.0000e-004	0.0000	1.6541
Worker	1.8800e-003	1.4300e-003	0.0145	4.0000e-005	3.9200e-003	3.0000e-005	3.9500e-003	1.0400e-003	3.0000e-005	1.0700e-003	0.0000	3.5975	3.5975	1.0000e-004	0.0000	3.6000
Total	**2.7300e-003**	**0.0286**	**0.0195**	**1.1000e-004**	**6.6600e-003**	**1.5000e-004**	**6.8100e-003**	**1.7600e-003**	**1.5000e-004**	**1.9100e-003**	**0.0000**	**10.0466**	**10.0466**	**4.5000e-004**	**0.0000**	**10.0580**

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	3.6300e-003	0.0157	0.2237	3.2000e-004		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	27.9254	27.9254	6.4000e-003	0.0000	28.0853
Total	**3.6300e-003**	**0.0157**	**0.2237**	**3.2000e-004**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**	**0.0000**	**27.9254**	**27.9254**	**6.4000e-003**	**0.0000**	**28.0853**

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	5.7000e-004	0.0193	3.2900e-003	5.0000e-005	2.3300e-003	7.0000e-005	2.4000e-003	6.0000e-004	7.0000e-005	6.7000e-004	0.0000	4.7977	4.7977	2.5000e-004	0.0000	4.8039
Vendor	2.8000e-004	7.9300e-003	1.7500e-003	2.0000e-005	4.1000e-004	5.0000e-005	4.6000e-004	1.2000e-004	5.0000e-005	1.7000e-004	0.0000	1.6515	1.6515	1.0000e-004	0.0000	1.6541
Worker	1.8800e-003	1.4300e-003	0.0145	4.0000e-005	3.9200e-003	3.0000e-005	3.9500e-003	1.0400e-003	3.0000e-005	1.0700e-003	0.0000	3.5975	3.5975	1.0000e-004	0.0000	3.6000
Total	**2.7300e-003**	**0.0286**	**0.0195**	**1.1000e-004**	**6.6600e-003**	**1.5000e-004**	**6.8100e-003**	**1.7600e-003**	**1.5000e-004**	**1.9100e-003**	**0.0000**	**10.0466**	**10.0466**	**4.5000e-004**	**0.0000**	**10.0580**

3.5 Building Construction - 2020

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	0.0316	0.3116	0.3401	5.2000e-004		0.0182	0.0182		0.0172	0.0172	0.0000	45.0724	45.0724	0.0104	0.0000	45.3314
Total	**0.0316**	**0.3116**	**0.3401**	**5.2000e-004**		**0.0182**	**0.0182**		**0.0172**	**0.0172**	**0.0000**	**45.0724**	**45.0724**	**0.0104**	**0.0000**	**45.3314**

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	8.6000e-004	0.0296	5.2100e-003	8.0000e-005	2.5000e-003	9.0000e-005	2.6000e-003	6.7000e-004	9.0000e-005	7.6000e-004	0.0000	7.7711	7.7711	3.9000e-004	0.0000	7.7809
Vendor	3.8000e-004	0.0119	2.5700e-003	3.0000e-005	6.7000e-004	6.0000e-005	7.2000e-004	1.9000e-004	5.0000e-005	2.5000e-004	0.0000	2.6848	2.6848	1.5000e-004	0.0000	2.6886
Worker	2.8100e-003	2.0700e-003	0.0213	6.0000e-005	6.4200e-003	4.0000e-005	6.4600e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	5.7072	5.7072	1.5000e-004	0.0000	5.7109
Total	**4.0500e-003**	**0.0436**	**0.0290**	**1.7000e-004**	**9.5900e-003**	**1.9000e-004**	**9.7800e-003**	**2.5700e-003**	**1.8000e-004**	**2.7600e-003**	**0.0000**	**16.1631**	**16.1631**	**6.9000e-004**	**0.0000**	**16.1804**

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	5.9400e-003	0.0257	0.3662	5.2000e-004		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	45.0723	45.0723	0.0104	0.0000	45.3314
Total	**5.9400e-003**	**0.0257**	**0.3662**	**5.2000e-004**		**7.9000e-004**	**7.9000e-004**		**7.9000e-004**	**7.9000e-004**	**0.0000**	**45.0723**	**45.0723**	**0.0104**	**0.0000**	**45.3314**

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	8.6000e-004	0.0296	5.2100e-003	8.0000e-005	2.5000e-003	9.0000e-005	2.6000e-003	6.7000e-004	9.0000e-005	7.6000e-004	0.0000	7.7711	7.7711	3.9000e-004	0.0000	7.7809

Vendor	3.8000e-004	0.0119	2.5700e-003	3.0000e-005	6.7000e-004	6.0000e-005	7.2000e-004	1.9000e-004	5.0000e-005	2.5000e-004	0.0000	2.6848	2.6848	1.5000e-004	0.0000	2.6886
Worker	2.8100e-003	2.0700e-003	0.0213	6.0000e-005	6.4200e-003	4.0000e-005	6.4600e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	5.7072	5.7072	1.5000e-004	0.0000	5.7109
Total	**4.0500e-003**	**0.0436**	**0.0290**	**1.7000e-004**	**9.5900e-003**	**1.9000e-004**	**9.7800e-003**	**2.5700e-003**	**1.8000e-004**	**2.7600e-003**	**0.0000**	**16.1631**	**16.1631**	**6.9000e-004**	**0.0000**	**16.1804**

1900 Broadway - Uncontrolled Scenario

```
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.5.0
** Lakes Environmental Software Inc.
** Date: 5/14/2018
** File: C:\Lakes\AERMOD View\1900 Broadway\1900 Broadway.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
  TITLEONE C:\Lakes\AERMOD View\1900 Broadway\1900 Broadway.isc
  MODELOPT DFAULT CONC
  AVERTIME ANNUAL
  POLLUTID PM_10
  RUNORNOT RUN
  ERRORFIL "1900 Broadway.err"
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION PAREA1      AREAPOLY   564403.127  4184827.447       6.540
** DESCRSRC Tower Construction emissions
  LOCATION PAREA2      AREAPOLY   564377.247  4184771.373       7.340
** DESCRSRC Tapscott Renovation emissions
** Source Parameters **
  SRCPARAM PAREA1      4.0343E-06     5.000        4
  AREAVERT PAREA1      564403.127 4184827.447 564377.966 4184773.530
  AREAVERT PAREA1      564403.846 4184762.028 564428.289 4184814.507
  SRCPARAM PAREA2      2.1337E-06     5.000        5
  AREAVERT PAREA2      564377.247 4184771.373 564364.307 4184741.180
  AREAVERT PAREA2      564403.846 4184721.770 564416.067 4184749.088
  AREAVERT PAREA2      564416.786 4184751.244

** Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"
** Variable Emission Scenario: "Scenario 1"
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
```

```
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  SRCGROUP ALL
SO FINISHED
**
*****************************************
** AERMOD Receptor Pathway
*****************************************
**
**
RE STARTING
  INCLUDED "1900 Broadway.rou"
RE FINISHED
**
*****************************************
** AERMOD Meteorology Pathway
*****************************************
```

```
**
**
ME STARTING
  SURFFILE "C:\Users\jni\Desktop\1900 Broadway\HRA\724930\724930.SFC"
  PROFFILE "C:\Users\jni\Desktop\1900 Broadway\HRA\724930\724930.PFL"
  SURFDATA 23230 2009 OAKLAND/WSO_AP
  UAIRDATA 23230 2009 OAKLAND/WSO_AP
  PROFBASE 10.0 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
  PLOTFILE ANNUAL ALL "1900 BROADWAY.AD\AN00GALL.PLT" 31
  SUMMFILE "1900 Broadway.sum"
OU FINISHED

 ************************************
 *** SETUP Finishes Successfully ***
 ************************************

 *** AERMOD - VERSION 16216r ***   *** C:\Lakes\AERMOD View\1900 Broadway\1900 Broadway.isc
***       05/14/18
 *** AERMET - VERSION  14134 ***   ***                                          ***       13:35:36
                                                                      PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL

                           ***    MODEL SETUP OPTIONS SUMMARY      ***
 ------------------------------------------------------------------------------

 **Model Is Setup For Calculation of Average CONCentration Values.

  --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses RURAL Dispersion Only.

 **Model Uses Regulatory DEFAULT Options:
       1. Stack-tip Downwash.
       2. Model Accounts for ELEVated Terrain Effects.
       3. Use Calms Processing Routine.
       4. Use Missing Data Processing Routine.
       5. No Exponential Decay.

 **Other Options Specified:
       CCVR_Sub - Meteorological data includes CCVR substitutions
       TEMP_Sub - Meteorological data includes TEMP substitutions
```

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM_10

**Model Calculates ANNUAL Averages Only

**This Run Includes: 2 Source(s); 1 Source Group(s); and 2 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 2 AREA type source(s)
and: 0 LINE source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE 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: Base Elev. for Pot. Temp. Profile (m MSL) = 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 = 3.5 MB of RAM.

**Detailed Error/Message File: 1900 Broadway.err
**File for Summary of Results: 1900 Broadway.sum
*** AERMOD - VERSION 16216r *** *** C:\Lakes\AERMOD View\1900 Broadway\1900 Broadway.isc *** 05/14/18
*** AERMET - VERSION 14134 *** *** *** 13:35:36

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	SCALAR VARY BY

- -

PAREA1 0 0.40343E-05 564403.1 4184827.4 6.5 5.00 4 0.00 NO HRDOW7
PAREA2 0 0.21337E-05 564377.2 4184771.4 7.3 5.00 5 0.00 NO HRDOW7

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs
---------- ----------

ALL PAREA1 , PAREA2 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = PAREA1 ; SOURCE TYPE = AREAPOLY :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- -
DAY OF WEEK = MONDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = TUESDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = WEDNESDY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = THURSDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8

.0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = FRIDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = PAREA2 ; SOURCE TYPE = AREAPOLY :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- -
DAY OF WEEK = MONDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = TUESDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = WEDNESDY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = THURSDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = FRIDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(564345.6, 4184554.1, 10.0, 10.0, 0.0); (564359.4, 4184710.7, 8.0, 8.0, 0.0);

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1

09 01 01 1 17 -37.0 0.486 -9.000 -9.000 -999. 846.   280.6 0.22 0.86 0.56   4.86 291. 10.0 281.4   2.0
09 01 01 1 18 -52.2 0.480 -9.000 -9.000 -999. 799.   191.9 0.52 0.86 1.00   3.86 307. 10.0 280.9   2.0
09 01 01 1 19 -25.6 0.224 -9.000 -9.000 -999. 327.   39.8 0.52 0.86 1.00   2.36 334. 10.0 280.4   2.0
09 01 01 1 20 -11.1 0.119 -9.000 -9.000 -999. 115.   13.8 0.52 0.86 1.00   1.76 317. 10.0 280.4   2.0
09 01 01 1 21 -10.3 0.119 -9.000 -9.000 -999.   98.   14.7 0.52 0.86 1.00   1.76 320. 10.0 280.4   2.0
09 01 01 1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.45 0.86 1.00   0.00   0. 10.0 280.9   2.0
09 01 01 1 23 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.45 0.86 1.00   0.00   0. 10.0 281.4   2.0
09 01 01 1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.45 0.86 1.00   0.00   0. 10.0 281.4   2.0

First hour of profile data
YR MO DY HR HEIGHT F WDIR   WSPD AMB_TMP sigmaA sigmaW sigmaV
09 01 01 01   10.0 1   81.   2.36   282.6   99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   5 YEARS FOR SOURCE GROUP: ALL   ***
                    INCLUDING SOURCE(S):   PAREA1   , PAREA2   ,

                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                        ** CONC OF PM_10   IN MICROGRAMS/M**3   **

    X-COORD (M)   Y-COORD (M)   CONC   X-COORD (M)   Y-COORD (M)   CONC
- -
      564345.63   4184554.07   0.00124   564359.43   4184710.69   0.01897

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

                    *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER   5 YEARS ***

                    ** CONC OF PM_10   IN MICROGRAMS/M**3   **

                                                                                NETWORK
GROUP ID   AVERAGE CONC   RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
- -

ALL   1ST HIGHEST VALUE IS   0.01897 AT (564359.43, 4184710.69,   8.00,   8.00,   0.00) DC
         2ND HIGHEST VALUE IS   0.00124 AT (564345.63, 4184554.07,   10.00,   10.00,   0.00) DC
         3RD HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)
         4TH HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)
         5TH HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)

6TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
7TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
8TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
9TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
10TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
*** AERMOD - VERSION 16216r *** *** C:\Lakes\AERMOD View\1900 Broadway\1900 Broadway.isc
*** 05/14/18
*** AERMET - VERSION 14134 *** *** *** 13:35:36

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 1 Warning Message(s)
A Total of 7953 Informational Message(s)

A Total of 43872 Hours Were Processed

A Total of 7152 Calm Hours Identified

A Total of 801 Missing Hours Identified (1.83 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
MX W481 43873 MAIN: Data Remaining After End of Year. Number of Hours= 48

****
*** AERMOD Finishes Successfully ***
****

1900 Broadway - Scenario using Tier 4 Construction Equipment

```
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.5.0
** Lakes Environmental Software Inc.
** Date: 5/14/2018
** File: C:\Lakes\AERMOD View\1900 Broadway\1900 Broadway.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
  TITLEONE C:\Lakes\AERMOD View\1900 Broadway\1900 Broadway.isc
  MODELOPT DFAULT CONC
  AVERTIME ANNUAL
  POLLUTID PM_10
  RUNORNOT RUN
  ERRORFIL "1900 Broadway.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION PAREA1      AREAPOLY   564403.127  4184827.447       6.540
** DESCRSRC Tower Construction emissions
  LOCATION PAREA2      AREAPOLY   564377.247  4184771.373       7.340
** DESCRSRC Tapscott Renovation emissions
** Source Parameters **
  SRCPARAM PAREA1      2.1075E-07     5.000        4
  AREAVERT PAREA1      564403.127 4184827.447 564377.966 4184773.530
  AREAVERT PAREA1      564403.846 4184762.028 564428.289 4184814.507
  SRCPARAM PAREA2      9.0353E-08     5.000        5
  AREAVERT PAREA2      564377.247 4184771.373 564364.307 4184741.180
  AREAVERT PAREA2      564403.846 4184721.770 564416.067 4184749.088
  AREAVERT PAREA2      564416.786 4184751.244

** Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"
** Variable Emission Scenario: "Scenario 1"
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
```

```
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA2      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
  SRCGROUP ALL
SO FINISHED
**
*****************************************
** AERMOD Receptor Pathway
*****************************************
**
**
RE STARTING
  INCLUDED "1900 Broadway.rou"
RE FINISHED
**
*****************************************
** AERMOD Meteorology Pathway
*****************************************
```

```
**
**
ME STARTING
  SURFFILE "C:\Users\jni\Desktop\1900 Broadway\HRA\724930\724930.SFC"
  PROFFILE "C:\Users\jni\Desktop\1900 Broadway\HRA\724930\724930.PFL"
  SURFDATA 23230 2009 OAKLAND/WSO_AP
  UAIRDATA 23230 2009 OAKLAND/WSO_AP
  PROFBASE 10.0 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
  PLOTFILE ANNUAL ALL "1900 BROADWAY.AD\AN00GALL.PLT" 31
  SUMMFILE "1900 Broadway.sum"
OU FINISHED

 ************************************
 *** SETUP Finishes Successfully ***
 ************************************

 *** AERMOD - VERSION 16216r ***   *** C:\Lakes\AERMOD View\1900 Broadway\1900 Broadway.isc
***       05/14/18
 *** AERMET - VERSION  14134 ***   ***                                          ***       13:32:34
                                                                      PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL

                           ***    MODEL SETUP OPTIONS SUMMARY      ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

  --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses RURAL Dispersion Only.

 **Model Uses Regulatory DEFAULT Options:
       1. Stack-tip Downwash.
       2. Model Accounts for ELEVated Terrain Effects.
       3. Use Calms Processing Routine.
       4. Use Missing Data Processing Routine.
       5. No Exponential Decay.

 **Other Options Specified:
       CCVR_Sub - Meteorological data includes CCVR substitutions
       TEMP_Sub - Meteorological data includes TEMP substitutions
```

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM_10

**Model Calculates ANNUAL Averages Only

**This Run Includes: 2 Source(s); 1 Source Group(s); and 2 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 2 AREA type source(s)
and: 0 LINE source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE 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: Base Elev. for Pot. Temp. Profile (m MSL) = 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 = 3.5 MB of RAM.

**Detailed Error/Message File: 1900 Broadway.err
**File for Summary of Results: 1900 Broadway.sum
*** AERMOD - VERSION 16216r *** *** C:\Lakes\AERMOD View\1900 Broadway\1900 Broadway.isc *** 05/14/18
*** AERMET - VERSION 14134 *** *** *** 13:32:34

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY

- -

PAREA1 0 0.21075E-06 564403.1 4184827.4 6.5 5.00 4 0.00 NO HRDOW7
PAREA2 0 0.90353E-07 564377.2 4184771.4 7.3 5.00 5 0.00 NO HRDOW7

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs
---------- ----------

ALL PAREA1 , PAREA2 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = PAREA1 ; SOURCE TYPE = AREAPOLY :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- -
DAY OF WEEK = MONDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = TUESDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = WEDNESDY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = THURSDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8

.0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = FRIDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = PAREA2 ; SOURCE TYPE = AREAPOLY :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- -
DAY OF WEEK = MONDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = TUESDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = WEDNESDY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = THURSDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = FRIDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(564345.6, 4184554.1, 10.0, 10.0, 0.0); (564359.4, 4184710.7, 8.0, 8.0, 0.0);

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1

09 01 01 1 17 -37.0 0.486 -9.000 -9.000 -999. 846.   280.6 0.22 0.86 0.56   4.86 291. 10.0 281.4   2.0
09 01 01 1 18 -52.2 0.480 -9.000 -9.000 -999. 799.   191.9 0.52 0.86 1.00   3.86 307. 10.0 280.9   2.0
09 01 01 1 19 -25.6 0.224 -9.000 -9.000 -999. 327.   39.8 0.52 0.86 1.00   2.36 334. 10.0 280.4   2.0
09 01 01 1 20 -11.1 0.119 -9.000 -9.000 -999. 115.   13.8 0.52 0.86 1.00   1.76 317. 10.0 280.4   2.0
09 01 01 1 21 -10.3 0.119 -9.000 -9.000 -999.   98.   14.7 0.52 0.86 1.00   1.76 320. 10.0 280.4   2.0
09 01 01 1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.45 0.86 1.00   0.00   0. 10.0 280.9   2.0
09 01 01 1 23 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.45 0.86 1.00   0.00   0. 10.0 281.4   2.0
09 01 01 1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.45 0.86 1.00   0.00   0. 10.0 281.4   2.0

First hour of profile data
YR MO DY HR HEIGHT F WDIR   WSPD AMB_TMP sigmaA sigmaW sigmaV
09 01 01 01   10.0 1   81.   2.36   282.6   99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
                    INCLUDING SOURCE(S):   PAREA1   , PAREA2   ,

                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                        ** CONC OF PM_10   IN MICROGRAMS/M**3   **

    X-COORD (M)   Y-COORD (M)   CONC   X-COORD (M)   Y-COORD (M)   CONC
- -
     564345.63   4184554.07   0.00006   564359.43   4184710.69   0.00087

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

                    *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

                    ** CONC OF PM_10   IN MICROGRAMS/M**3   **

                                                                    NETWORK
GROUP ID   AVERAGE CONC   RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
- -

ALL   1ST HIGHEST VALUE IS   0.00087 AT (564359.43, 4184710.69,   8.00,   8.00,   0.00) DC
         2ND HIGHEST VALUE IS   0.00006 AT (564345.63, 4184554.07,   10.00,   10.00,   0.00) DC
         3RD HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)
         4TH HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)
         5TH HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)

6TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
7TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
8TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
9TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
10TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
*** AERMOD - VERSION 16216r *** *** C:\Lakes\AERMOD View\1900 Broadway\1900 Broadway.isc
*** 05/14/18
*** AERMET - VERSION 14134 *** *** *** 13:32:34

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 1 Warning Message(s)
A Total of 7953 Informational Message(s)

A Total of 43872 Hours Were Processed

A Total of 7152 Calm Hours Identified

A Total of 801 Missing Hours Identified (1.83 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
MX W481 43873 MAIN: Data Remaining After End of Year. Number of Hours= 48

****
*** AERMOD Finishes Successfully ***
****

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APPENDIX C

Wind Technical Memo

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600 Southgate Drive
Guelph ON Canada
N1G 4P6

Tel: +1.519.823.1311
Fax: +1.519.823.1316

May 23, 2018

Elizabeth Kanner
Senior Managing Associate
ESA | Community Development
180 Grand Avenue, Suite 1050
Oakland, CA 94612
510.839.5066 main | 510.740.1718 direct
ekanner@esassoc.com

Re: Design Changes
1900 Broadway – Oakland CA
RWDI Reference No. 1300689

Dear Elizabeth,

RWDI was retained to consult on the pedestrian wind conditions for the proposed 1900 Broadway development located in Oakland, CA. Wind tunnel tests were conducted for the existing and proposed configurations, and our main findings were summarized in a final report dated February 2, 2015 (original 1900 Broadway Report), which is attached at the end of this memo.

According to the design drawings received by RWDI on March 27, 2018, the proposed building has been modified since the last wind tunnel test and the following changes have been made:

- The upper roof height is now 394'-6", increased from the tested height of 339' and the 2016 approved 368';
- The floor plan of the proposed tower is reduced, with the maximum length and diagonal being 185'-4" and 192'-7", respectively, compared to the initial 194' and 207'-7";
- The podium is reduced to 3 levels from the original 5 levels plus a mezzanine;
- The pocket park on the south side of the tower is wider and deeper than the previous dimensions, with the southwest corner of the tower now being slightly recessed; and,
- The new design also adds a continuous terrace at Level 2 and large communal terraces overlooking Broadway and other articulations throughout the height of the proposed tower- see images below.

The prevailing winds in the area are from the westerly directions. These winds would be intercepted by the proposed tower and redirected down to the street level and they are the main reason for potentially increased wind activity at entrances, sidewalks and other pedestrian areas on the ground, as indicated in the attached report. However, no wind hazard exceedance was detected for either the Existing or the Existing + Project configuration.

CANADA'S BEST MANAGED COMPANIES Platinum member

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Previously Approved Entitled **Current Proposal**[1]

A taller tower would increase the exposure of the tower to the prevailing winds and result in slightly increased downwashing flows. However, the narrower west façade, the lower podium, the continuous terrace at Level 2, the large communal terraces along Broadway and added articulation to the building façade would disrupt any downwashing winds off of the tower, reducing the wind speeds at grade.

Overall, it is RWDI's opinion that the proposed changes would have no wind impact and the results presented in our original 1900 Broadway Report remain valid.

The original 1900 Broadway test program did not include a cumulative test configuration as there were not any approved developments of significant size in close proximity, nor was the City adopting the practice of testing/reviewing cumulative wind effects at the time of testing. In 2017 a cumulative configuration was tested for a project approximately 260' from the 1900 Broadway project site (1750 Broadway, RWDI Project # 1702965, dated November 21, 2017, also attached for reference). The initial 1900 Broadway tower was used in the wind tunnel test for the Cumulative configuration together with another eight future buildings in the surrounding area. Again, no wind hazard exceedance was reported around the 1750 Broadway or 1900 Broadway developments for the Existing, Existing + Project or Project + Cumulative configuration.

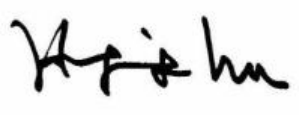
[1] Note the figure depicts a previous and slightly smaller version of the 2018 Project. It differed only in the square footage of residential use (361,993 versus 381,480), number of stories (36 + rooftop amenity versus 38 + rooftop amenity), and height (375'-6" feet to the upper roof versus 394'-6" to the upper roof). However, for the purposes of a conservative analysis, the 2018 Project assessed in this memo is the taller, 394'-6" proposed tower.

The 1900 Broadway tower would be located to the north of the 1750 Development. Based on the above conclusion of no wind impact caused by the proposed design changes to 1900 Broadway, RWDI are of an opinion that no additional wind impact is anticipated to be caused by these design changes on the wind conditions on and around the proposed 1750 or 1900 Broadway developments for the Cumulative configuration and our results in the 1750 Broadway Report remain valid. Further, the cumulative results obtained for the 1750 Broadway project are also applicable to the 1900 Broadway project, as many measurement locations are identical between these two projects.

We trust the above meets your needs and if you have any questions or require anything further, please do not hesitate to contact us.

Yours truly,

RWDI



Hanqing Wu, Ph.D.,P.Eng.
Senior Technical Director / Principal



Dan Bacon
Senior Project Manager / Associate

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Tel: 519.823.1311
Fax: 519.823.1316

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West
Guelph, Ontario, Canada
N1K 1B8

1900 Broadway

Oakland, CA

Final Report

Pedestrian Wind Conditions Consultation
Wind Tunnel Tests

RWDI # 1300689
February 12, 2015

SUBMITTED TO

Seth Hamalian
Managing Principal
19th and Bway Associates, LLC
410 China basin Street
San Francisco, CA
USA 94158
SHamalian@mbaydevelopment.com

SUBMITTED BY

Nishat Nourin, M.Eng., EIT
Technical Coordinator
Nishat.Nourin@rwdi.com

Dan Bacon
Senior Project Manager / Associate
Dan.Bacon@rwdi.com

Frank Kriksic, BES, CET, LEED AP
Senior Project Manager / Principal
Frank.Kriksic@rwdi.com

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5. APPLICABILITY OF RESULTS 3

Tables

Table 1: Wind Comfort Results
Table 2: Wind Hazard Results

Figures

Figure 1a: Wind Tunnel Study Model – Existing Configuration
Figure 1b: Wind Tunnel Study Model – Existing + Project Configuration
Figure 2: Directional Distribution of Winds – Metropolitan Oakland International Airport
Figure 3: Sensor Plan

Appendices

Appendix A: Drawing List for Model Construction

1. INTRODUCTION

Rowan Williams Davies & Irwin Inc. (RWDI) was retained by 19th and Bway Associates, LLC. to conduct a Pedestrian Wind Study for the proposed 1900 Broadway in Oakland, California. The purpose of the study was to assess the wind environment around the development in terms of pedestrian comfort and hazard relative to wind metrics specified in the City of Oakland Significant Wind Impact Criterion. The study objective was achieved through wind tunnel testing of a 1:400 (1" = 33') scale model for the following two development configurations:

A – Existing: all existing buildings on-site and in the surroundings; and,

B – Existing plus Project: proposed 1900 Broadway project present with existing surrounding buildings.

The development site is located in the City of Oakland's downtown core, at the intersection of Broadway and 19th Street. The proposed tower is approximately 340 feet tall. The test model was constructed using the design information and drawings listed in Appendix A.

This report summarizes the methodology of the wind tunnel studies for pedestrian wind conditions, describes the wind comfort and wind hazard criteria, and presents the test results.

The placement for wind measurement locations was based on our experience and understanding of pedestrian usage for this site, and was reviewed by 19th and Bway Associates, LLC. prior to the wind tunnel test.

2. PRINCIPLE RESULTS

The results of the tests are discussed in detail in Section 5 of this report and may be summarized as follows:

- Wind speeds on the Existing project site are currently low with a few of the test locations exceeding the comfort criterion with no hazard exceedances.
- Wind comfort conditions for the Existing plus Project configuration generally remained the same when compared to the Existing conditions. The number of comfort criterion exceedances is expected to increase with the addition of the proposed development, but the number of hazard exceedance locations remained at zero.

3. METHODOLOGY

3.1 Wind Tunnel Testing

As shown in Figures 1a and 1b, the wind tunnel model included the project site and all relevant surrounding buildings and topography within a 1500 foot radius of the study site. The mean speed profile and turbulence of the natural wind approaching the modelled area were simulated in RWDI's boundary-layer wind tunnel. The model was instrumented with 36 wind speed sensors to measure mean and gust wind speeds at a full-scale height of approximately 5 ft. These measurements were recorded for 36 equally incremented wind directions.

3.2 Local Climate

Wind statistics recorded at the Metropolitan Oakland International Airport between 1982 and 2012 were analyzed for annual wind conditions. Figure 2 graphically depicts the directional distributions of annual wind frequencies and speeds. Winds are frequent from the northwest through west-southwest directions throughout the year, as indicated by the wind rose. Strong winds of a mean speed greater than 20 mph measured at the airport (at an anemometer height of 33ft) occur 2.6% of the time annually.

Wind statistics from the Metropolitan Oakland International Airport were combined with the wind tunnel data in order to predict the frequency of occurrence of full-scale wind speeds. The full-scale wind predictions were then compared with the City of Oakland Significant Wind Impact Criterion for pedestrian comfort and safety.

3.3 Planning Code Requirements

For the purposes of this study, the City of Oakland considers a significant wind impact to occur if a project were to “Create winds exceeding 36 mph for more than one hour during daylight hours during the year”. A wind analysis only need to be done if the project’s height is 100 feet or greater (Measured to the roof) and one of the following conditions exists: (a) the project is located adjacent to a substantial water body (i.e. Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown. Since the proposed project exceeds 100 feet in height and is located in Downtown, it is subject to the thresholds of significance.

The equivalent wind speeds were calculated according to the specifications in the City of Oakland Significant Wind Impact Criterion, whereby the mean hourly wind speed is increased when the turbulence intensity is greater than 15% according to the following formula:

$$\boldsymbol{EWS = V_m \times (2 \times TI + 0.7)}$$

Where $\boldsymbol{EWS}$ = equivalent wind speed
$\boldsymbol{V_m}$ = mean pedestrian-level wind speed
$\boldsymbol{TI}$ = turbulence intensity

4. TEST RESULTS

Wind speed measurements were taken at 36 locations at grade level for the two configurations. Table 1, located in the tables section of this report, presents the wind comfort results for the two configurations tested. For each measurement point, the measured 10% exceeded (90th percentile) equivalent wind speed and the percentage of time that the wind speed exceeds 11 mph are shown for areas considered to be used primarily for walking.

Table 2 presents the wind hazard results, and lists the predicted wind speed to be exceeded one hour per year. The predicted number of hours per year that the City of Oakland Significant Wind Impact Criterion (one minute wind speed of 36 mph) is exceeded is also provided.

4.1 Wind Comfort Conditions

For the Existing Configuration in the vicinity of the project site, wind speeds were generally low with wind speeds averaging 10.2 mph for the measurement locations. The highest wind speeds occurred along the sidewalks of Broadway and Franklin Street (Location 8, 17 and 19 in Figure 3 and Table 1). The higher than desired wind speeds in this area are due to the exposure to the prevailing westerly winds. In the Existing Configuration, wind speeds at most of the test locations are below 11 mph. For the Existing plus Project Configuration, wind speeds generally remained similar with the average wind speed for all test locations being slightly increased to from 10.2 mph to 11.1 mph. The highest wind speed (15 mph) was noted at the intersection of Broadway and 20th Street (Location 11). The 11 mph criterion was exceeded 11.4% of the time, a minor increase when compared to existing conditions on and around the project site.

4.2 Wind Hazard Conditions

Of the 36 locations tested for the Existing Configuration, none currently exceed the hazard criterion (presented in Table 2). In the Existing plus Project Configuration, the number of hazard exceedances remained at zero.

5. APPLICABILITY OF RESULTS

The results presented in this report pertain to the model of the proposed 1900 Broadway constructed using the architectural design drawings listed in Appendix A. Should there be design changes that deviate from this list of drawings, the results presented may change. Therefore, if substantial changes in the design are made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

TABLES

Table 1: Wind Comfort Results

References	Existing			Existing + Project			
Location Number	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Exceeds	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Speed Change Relative to Existing	Exceeds
1	10	7		13	19	3	e
2	7	1		13	18	6	e
3	7	1		13	20	6	e
4	7	0		6	0	-1	
5	8	2		10	8	2	
6	11	10		9	4	-2	
7	10	6		8	1	-2	
8	13	18	e	10	5	-3	
9	11	10		13	20	2	e
10	8	1		12	14	4	e
11	11	10		15	30	4	e
12	12	13	e	14	19	2	e
13	11	10		11	10	0	
14	10	8		9	3	-1	
15	17	36	e	14	23	-3	e
16	9	5		12	13	3	e
17	13	18	e	12	15	-1	e
18	8	2		10	8	2	
19	13	18	e	14	22	1	e
20	10	4		10	6	0	
21	8	2		10	5	2	
22	11	10		12	14	1	e
23	10	5		10	7	0	
24	11	10		12	16	1	e
25	12	12	e	12	13	0	e
26	10	7		10	5	0	
27	11	10		11	10	0	
28	7	0		8	1	1	
29	10	6		6	1	-4	
30	8	2		9	3	1	
31	10	6		10	5	0	
32	10	6		12	12	2	e
33	9	3		12	15	3	e
34	11	10		12	12	1	e
35	12	15	e	14	21	2	e

Table 1: Wind Comfort Results

References	Existing			Existing + Project			
Location Number	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Exceeds	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Speed Change Relative to Existing	Exceeds
36	10	7		12	13	2	e
Average mph, Average % and Total exceedances	10.2	8.1	6	11.1	11.4	0.9	19

Table 2: Wind Hazard Results

References	Existing			Existing + Project			
Location Number	Wind Speed Exceeded 1hr/year (mph)	Hours per Year Wind Speeds Exceed Hazard Criteria	Exceeds	Wind Speed Exceeded 1 hour/year (mph)	Hours per Year Wind Speeds Exceed Hazard Criteria	Hours Change Relative to Existing	Exceeds
1	22	0		32	0	0	
2	16	0		28	0	0	
3	18	0		28	0	0	
4	16	0		14	0	0	
5	18	0		27	0	0	
6	22	0		23	0	0	
7	23	0		19	0	0	
8	27	0		20	0	0	
9	25	0		26	0	0	
10	20	0		25	0	0	
11	25	0		35	0	0	
12	28	0		36	0	0	
13	25	0		23	0	0	
14	23	0		21	0	0	
15	35	0		28	0	0	
16	24	0		25	0	0	
17	31	0		27	0	0	
18	18	0		23	0	0	
19	30	0		29	0	0	
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27	26	0		25	0	0	
28	15	0		18	0	0	
29	20	0		17	0	0	
30	20	0		21	0	0	
31	22	0		20	0	0	
32	25	0		25	0	0	
33	26	0		27	0	0	
34	26	0		25	0	0	
35	28	0		30	0	0	

Table 2: Wind Hazard Results

References	Existing			Existing + Project			
Location Number	Wind Speed Exceeded 1hr/year (mph)	Hours per Year Wind Speeds Exceed Hazard Criteria	Exceeds	Wind Speed Exceeded 1 hour/year (mph)	Hours per Year Wind Speeds Exceed Hazard Criteria	Hours Change Relative to Existing	Exceeds
36	28	0		27	0	0	
Average mph, Average % and Total exceedances	23.2	0	0	24.8	0	0	0

FIGURES



Wind Tunnel Study Model
Existing Configuration

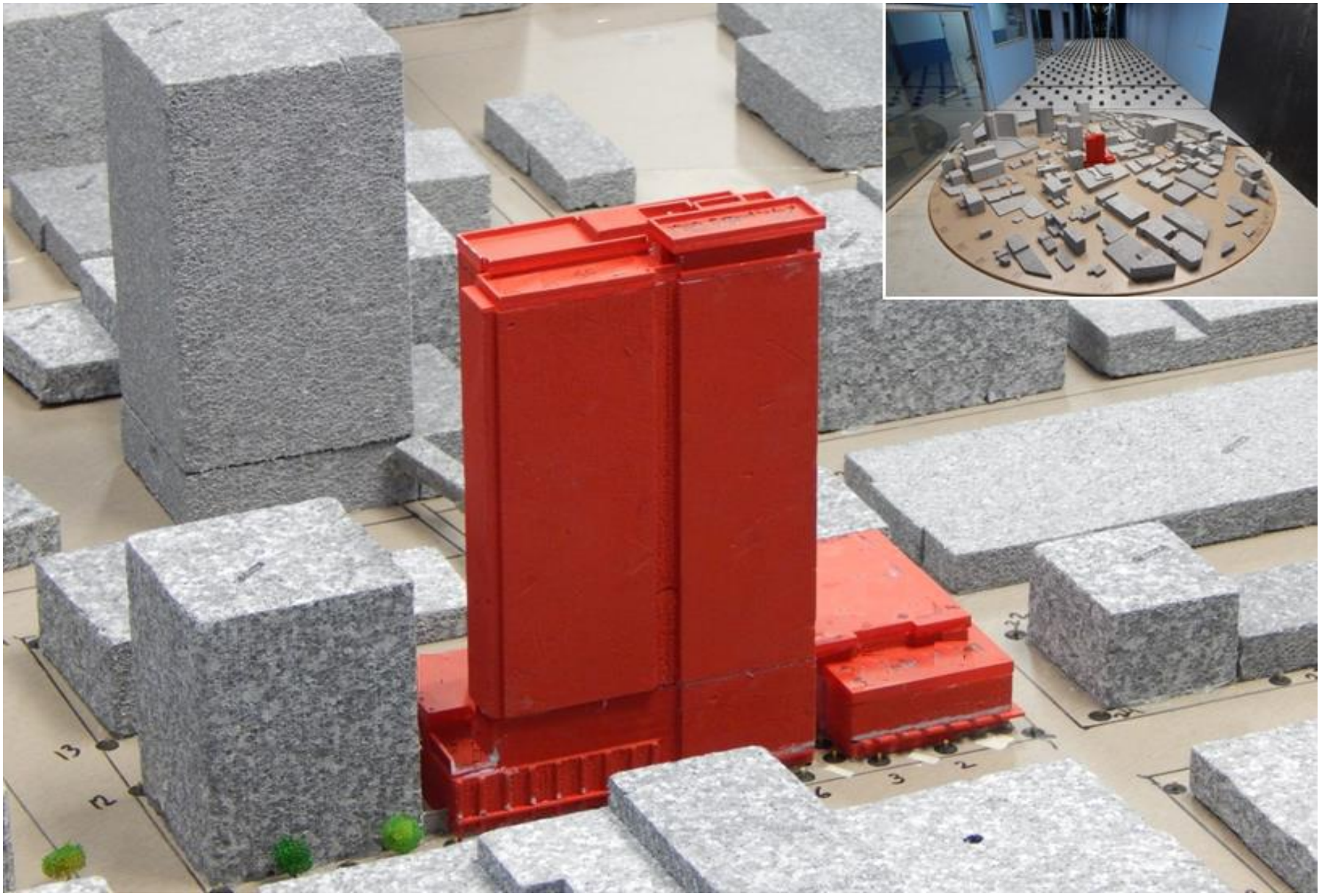
1900 Broadway – Oakland, CA

Project #1300689

Figure No. 1a

Date: February 12, 2015

RWDI



Wind Tunnel Study Model
Proposed Configuration

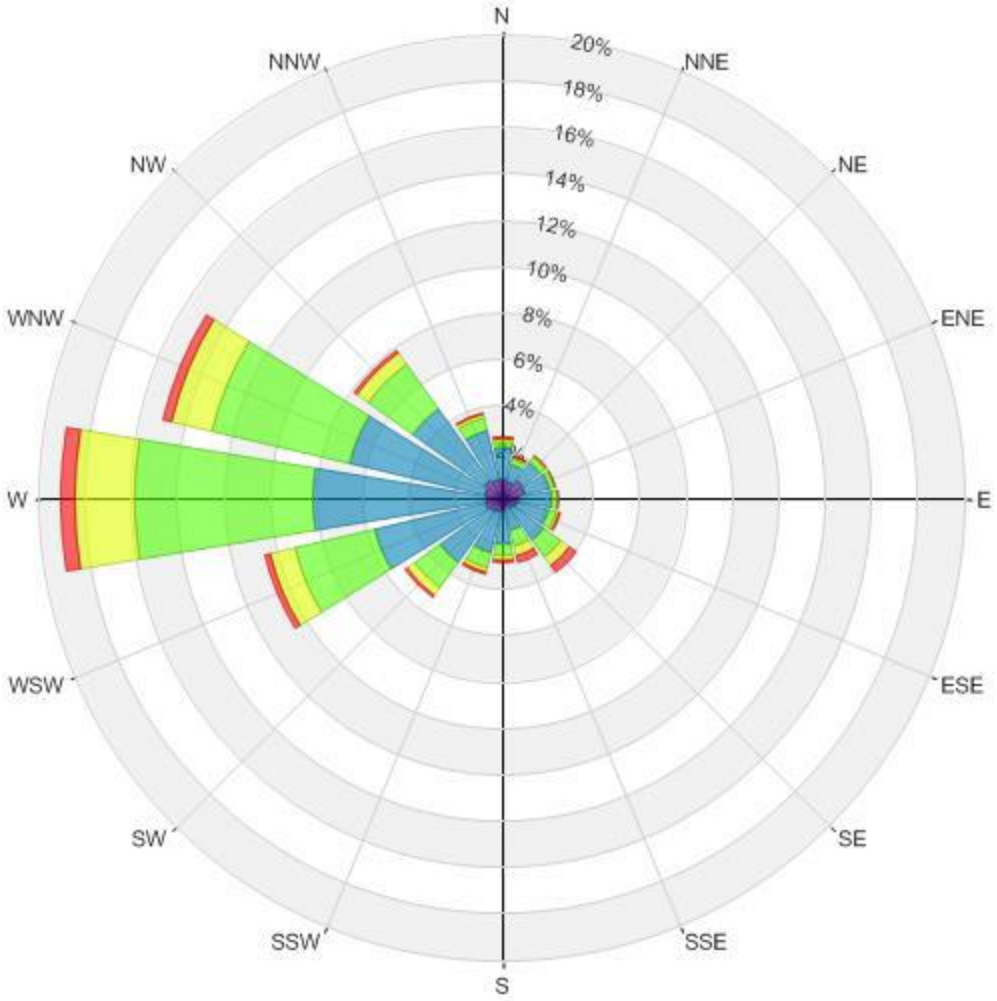
1900 Broadway – Oakland, CA

Project #1300689

Figure No. 1b

Date: February 12, 2015

RWDI



Annual Winds

Wind Speed (mph)	Probability (%)
Calm	11.3
1-5	11.7
6-10	40.0
11-15	26.0
16-20	8.4
>20	2.6

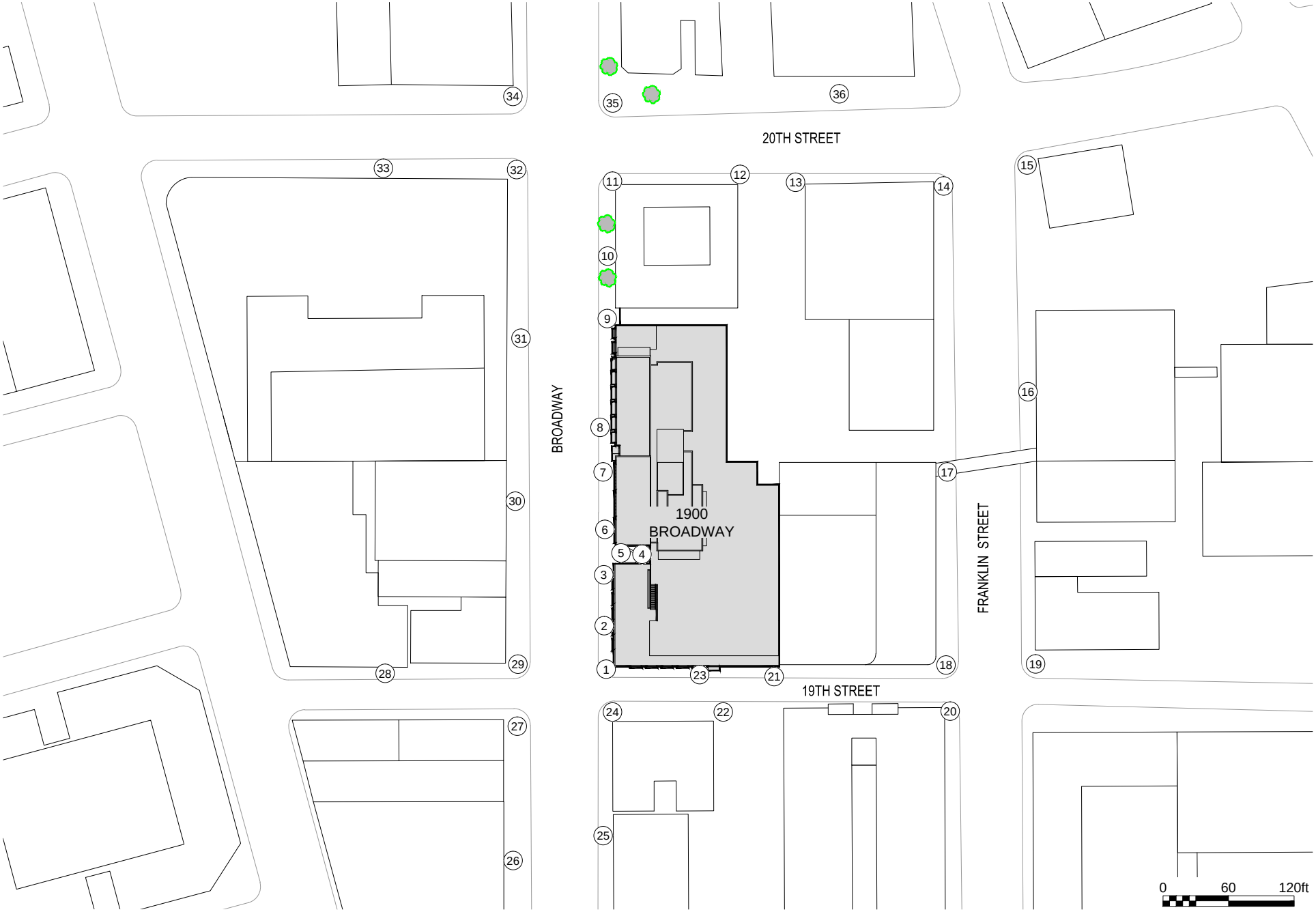
Directional Distribution (%) of Winds (Blowing From)
Metropolitan Oakland International Airport (1982 - 2012)

1900 Broadway – Oakland, CA

Project #1300689

Figure No. 2

Date: February 10, 2015



LEGEND:

SENSOR LOCATION:

Grade Level

Sensor Plan

True North

1900 Broadway - Oakland, CA

Project #1300689

Drawn by:	ARM	Figure:	3
Approx. Scale:			1"=120'
Date Revised:			Feb 3, 2015

RWDI

APPENDIX A

APPENDIX A: DRAWING LIST FOR MODEL CONSTRUCTION

The drawings and information listed below were received from 19th and Bway Associates, LLC. and were used to construct the scale model of the proposed 1900 Broadway. Should there be any design changes that deviate from this list of drawings, the results may change. Therefore, if changes in the design area made, it is recommended that RWDI be contacted and requested to review their potential effects on the pedestrian wind conditions presented in this report.

File Name	File Type	Date Received (dd/mm/yyyy)
12-041_1900 Broadway_14.10.rvt	Revit	21/11/2014
12-041_1900 Broadway_14.11.06	Adobe Portable Document Format	21/11/2014
1900 broadway wind mitigation sketch	Adobe Portable Document Format	08/12/2014

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CONSULTING ENGINEERS & SCIENTISTS

Tel: 519.823.1311
Fax: 519.823.1316

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West
Guelph, Ontario, Canada
N1K 1B8

December 9, 2015

Seth Hamalian
Managing Principal
19th and Bway Associates, LLC
410 China basin Street
San Francisco, CA
USA 94158
SHamalian@mbaydevelopment.com

Re: Design Changes
1900 Broadway – Oakland CA
RWDI Reference No. 1300689

To Whom it May Concern,

RWDI was retained by 19th and Bway Associates, LLC to consult on the pedestrian wind conditions for the proposed 1900 Broadway development located in Oakland, CA. Wind tunnel tests were conducted for the existing and proposed configurations, and our main findings were summarized in a final report dated February 2, 2015.

According to the design drawings received by RWDI on November 12, 2015, the proposed building has been modified since our testing and the following changes have been made:

- Added 3 floors or 29 ft to the tower (from 33 to 36 stories)
- Extended the floor plate by 7 ft at the NE corner (leeward side and recessed area)
- Removed stair and elevator to the roof deck and reduced footprint of roof deck

Following a review of the updated drawings, it is RWDI's opinion that the changes will have no impact and the results presented in our original report remain valid. (RWDI Report #1300689 dated February 2, 2015).

If you have any questions or require anything further, please do not hesitate to contact us.

Yours sincerely,

ROWAN WILLIAMS DAVIES & IRWIN Inc.

Hanqing Wu, Ph.D.,P.Eng.
Technical Director / Principal

Dan Bacon
Senior Project Manager/Associate

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1750 BROADWAY

OAKLAND, CA

PEDESTRIAN WIND STUDY
RWDI #1702965
November 21, 2017

SUBMITTED TO

Elizabeth Kanner
Senior Managing Associate
ekanner@esassoc.com

ESA | Community Development
350 Frank H. Ogawa Plaza, Suite 300
Oakland, CA 94612
T: 510.839-5066
F: 510.839-5825

SUBMITTED BY

Raisa Lalui, M. Eng.
Technical Coordinator
Raisa.Lalui@rwdi.com

Dan Bacon
Senior Project Manager, Associate
Dan.Bacon@rwdi.com

Rowan Williams Davies & Irwin Inc.
600 Southgate Drive,
Guelph, Canada, N1G 4P6
T: 519.823.1311
F: 519.823.1316

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EXECUTIVE SUMMARY

The wind conditions around the proposed 1750 Broadway development are discussed in detail within the content of this report and are summarized as follows:

- Wind speeds at all grade level locations are predicted to meet the wind hazard criterion in all three tested configurations.
- In the Existing configuration, the majority of the locations tested passed the 11 mph criterion. Wind speeds slightly increase with the addition of the “project” however are lowered again with the addition of the future buildings.

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2.1 Wind Tunnel Study Model 2
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Figure 1a: Wind Hazard Conditions – Existing
Figure 1b: Wind Hazard Conditions – Existing + Project
Figure 1c: Wind Hazard Conditions – Project + Cumulative

Figure 2a: Wind Comfort Conditions – Existing
Figure 2b: Wind Comfort Conditions – Existing + Project
Figure 2c: Wind Comfort Conditions – Project + Cumulative

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Table 1: Pedestrian Wind Hazard Results
Table 2: Pedestrian Wind Comfort Results

LIST OF APPENDICES

Appendix A: Drawings List for Model Construction

1 INTRODUCTION

Rowan Williams Davies & Irwin Inc. (RWDI) was retained by ESA to assess and consult on the pedestrian wind conditions on and around the proposed 1750 Broadway (Project) in Oakland, California. The Project site, as shown in Image 1, is bound between 19th Street to the north, Franklin Street to the east, 17th Street to the south and Broadway to the west.

The purpose of the study is to assess the wind environment around the Project in terms of pedestrian comfort and safety. The quantitative assessment was based on wind speed measurements on a scale model of the project and its surroundings in a boundary-layer wind tunnel.

This report summarizes the methodology of wind tunnel studies for pedestrian wind conditions, describes the Oakland wind criteria and presents the local wind conditions and their effects on pedestrians.



Image 1: Site Plan – Aerial View of Site and Surroundings (Google™ Earth)

2 METHODOLOGY

2.1 Wind Tunnel Study Model

To assess the wind environment around the proposed Project, a 1:400 (1" = 33') scale model of the project site and surroundings was constructed for the wind tunnel tests and the following configurations were tested:

A – Existing: Existing site with existing surroundings, including buildings that are approved/under-construction (Image 2a);

B – Existing + Project: Proposed 1750 Broadway development present with existing and approved/under construction surrounding buildings, (Image 2b); and,

C – Project + Cumulative: Proposed 1750 Broadway development present with existing and approved/under-construction surrounding buildings as well as anticipated future buildings (Image 2c).

The scale model of the proposed Project (as shown in Images 2b and 2c) was constructed using the design information and drawings listed in Appendix A. The wind tunnel model included all relevant surrounding buildings and topography within an approximately 1600ft radius of the study site. The boundary-layer wind conditions beyond the modelled area were also simulated in RWDI's wind tunnel. The wind tunnel model was instrumented with up to 39 wind speed sensors to measure mean and gust wind speeds at a full-scale height of 5 ft. The placement of wind measurement locations was based on our experience and understanding of the pedestrian usage for this site, and reviewed by ESA. These measurements were recorded for 36 equally incremented wind directions.





Image 2a: Wind Tunnel Study Model - Existing

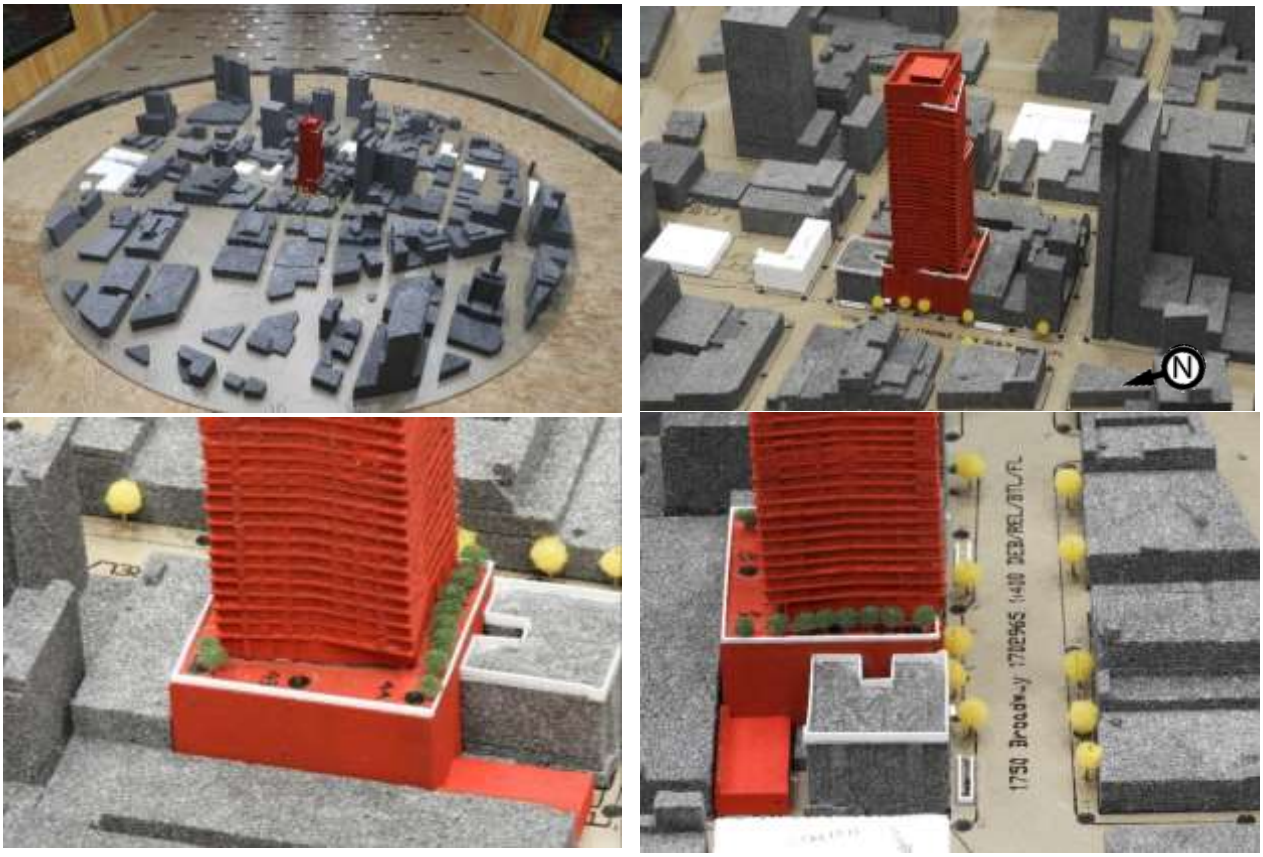


Image 2b: Wind Tunnel Study Model –Existing + Project



Image 2c: Wind Tunnel Study Model – Project + Cumulative

2.2 Meteorological Data

Wind statistics recorded at the Metropolitan Oakland International Airport between 1984 and 2014 were analyzed for annual wind conditions. Image 3 graphically depicts the directional distributions of annual wind frequencies and speeds. Winds are frequent from the northwest through west-southwest directions throughout the year, as indicated by the wind rose. Strong winds of a mean speed greater than 20 mph measured at the airport (at an anemometer height of 33 feet) occur 3.0% of the time annually.

Wind statistics from the Metropolitan Oakland International Airport were combined with the wind tunnel data in order to predict the frequency of occurrence of full-scale wind speeds. The full-scale wind predictions were then compared with the City of Oakland Significant Wind Impact Criterion.

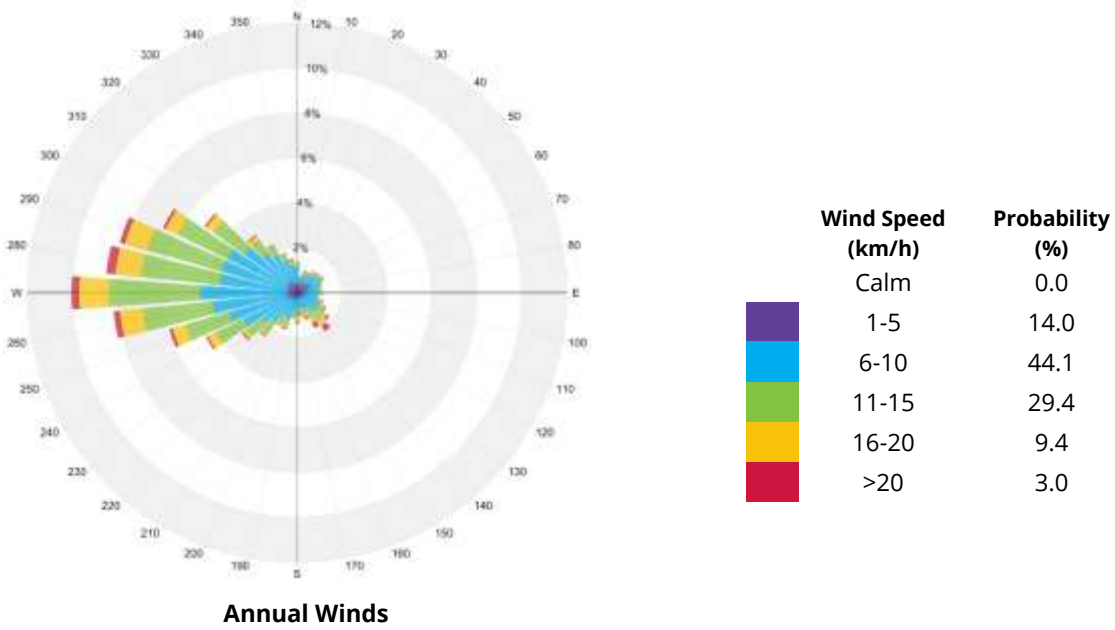


Image 3: Directional distribution of winds approaching Metropolitan Oakland International Airport from 1984 to 2014

2.3 Planning Code Requirements

A wind analysis needs to be done if the height of the project is 100 feet or greater (measured to the roof) and one of the following conditions exists: (a) the project is located adjacent to a substantial water body (i.e. Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located Downtown. Since the proposed project (approximately 430 feet tall) exceeds 100 feet in height and is located Downtown, it is subject to the thresholds of significance.

For the purposes of this study, the City of Oakland considers a significant wind impact to occur if a project were to "Create winds exceeding 36 mph for more than one hour during daylight hours during the year". The Planning Code defines these wind speeds in terms of equivalent wind speeds, and average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence. Equivalent wind speeds were calculated according to

the specifications in the City of Oakland Significant Wind Impact Criterion, whereby the mean hourly wind speed is increased when the turbulence intensity is greater than 15% according to the following formula:

$$\boldsymbol{EWS = V_m \times (2 \times TI + 0.7)}$$

where $\boldsymbol{EWS}$ = equivalent wind speed

$\boldsymbol{V_m}$ = mean pedestrian-level wind speed

$\boldsymbol{TI}$ = turbulence intensity

2.4 Pedestrian Comfort

Although not applicable towards Significant Wind Impacts as defined by the City of Oakland, wind comfort speeds have been calculated for informational purposes. The comfort criteria are that wind speeds do not exceed 11 mph for more than 10% of the time during the year, when calculated for daylight hours, in substantial pedestrian use areas. A lower wind speed threshold of 7 mph may be considered for public seating areas where calmer wind conditions are ideal.

2.5 In-Construction and Cumulative Buildings

Anticipated future buildings were included in the Project plus Cumulative configurations. These sites are shown in Image 4 and listed in the table below.

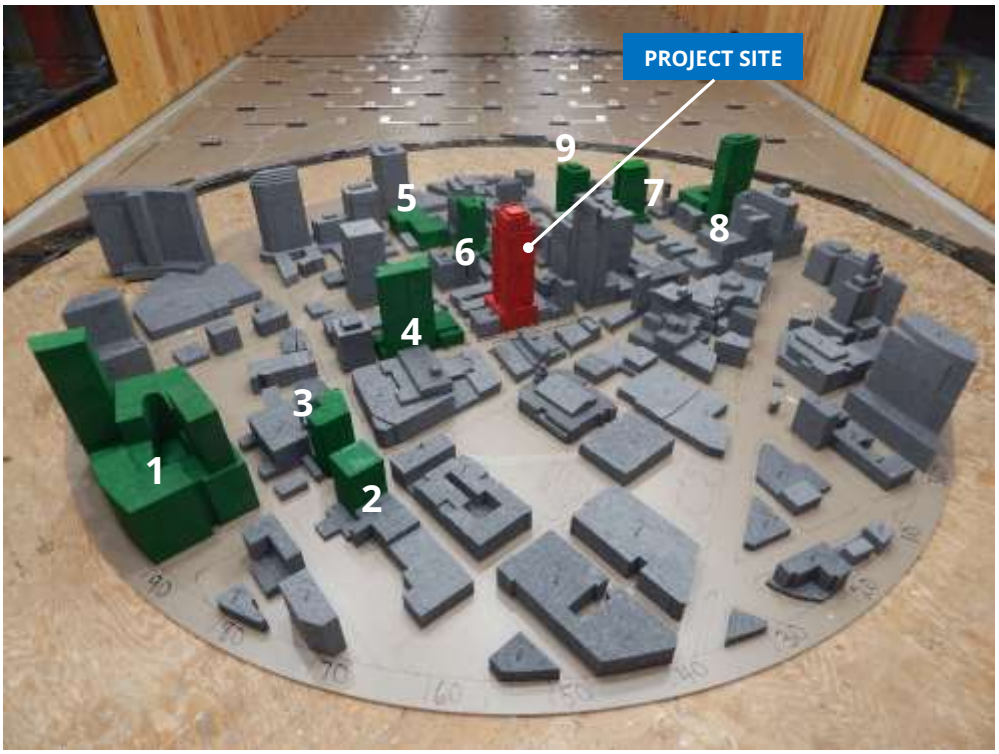


Image 4: Cumulative buildings

CUMULATIVE BUILDING LIST			
1	2100 Telegraph	**6**	1721 Webster
2	2015 Telegraph	**7**	1433 Webster
3	2016 Telegraph	**8**	1314 Franklin
4	1900 Broadway	**9**	1510 Webster
5	301 19th Street		

3 PREDICTED WIND CONDITIONS

This section presents the results of the wind tunnel measurements analyzed in terms of equivalent wind speeds as defined by the equation in Section 2.3. The text in the report simply refers to the data as wind speeds.

Table 1 presents the wind hazard results for the three configurations tested, and lists the wind speed predicted to be exceeded one hour per year at each measurement point. The predicted number of hours per year that the City of Oakland Significant Wind Impact Criterion (one-minute wind speed of 36 mph) is exceeded is also provided. A letter "e" in the last column of each configuration indicates an exceedance of the wind hazard.

Also included in Table 1, are the wind comfort results for the five configurations tested. For each measurement point, the measured 10% exceeded (90th percentile) equivalent wind speed and the percentage of time that the wind speed exceeds 11 mph are shown for areas considered to be used primarily for walking. A letter "e" in the last column of each configuration indicates a wind comfort exceedance above 11 mph.

3.1 Wind Hazard Conditions

3.1.1 Configuration A – Existing

All of the 39 grade level locations tested for the Existing configuration pass the hazard criterion and wind speeds average 24 mph (Figure 1a and Table 1).

3.1.2 Configuration B – Existing + Project

The Existing + Project Configuration was tested with existing street trees along Broadway. Again, all 39 grade level locations are expected to pass the wind safety criterion. (Figure 1b and Table 1). Compared to the Existing Configuration, the average wind speed is predicted to increase slightly to 27 mph.

3.1.3 Configuration C – Project + Cumulative

In the Project + Cumulative Configuration, wind speeds are again not expected to increase and cause any hazard conditions at any of the tested locations. (Figure 1c and Table 1). Wind speeds are expected to reduce with the inclusion of the future buildings with the average wind speed predicted to be 25 mph.

3.2 Wind Comfort Conditions

In the Existing configuration, the wind speeds in the vicinity of the project site are predicted to be moderate, with those at the majority of locations meeting the 11 mph criterion (Figure 2a and Table 2). Wind speeds higher than the 11 mph criterion are expected to the south at the intersection of Broadway and 17th and to the east along Franklin (Figure 2a). Of the 39 tested locations, 11 go over the 11 mph criterion with wind speeds averaging 10 mph.

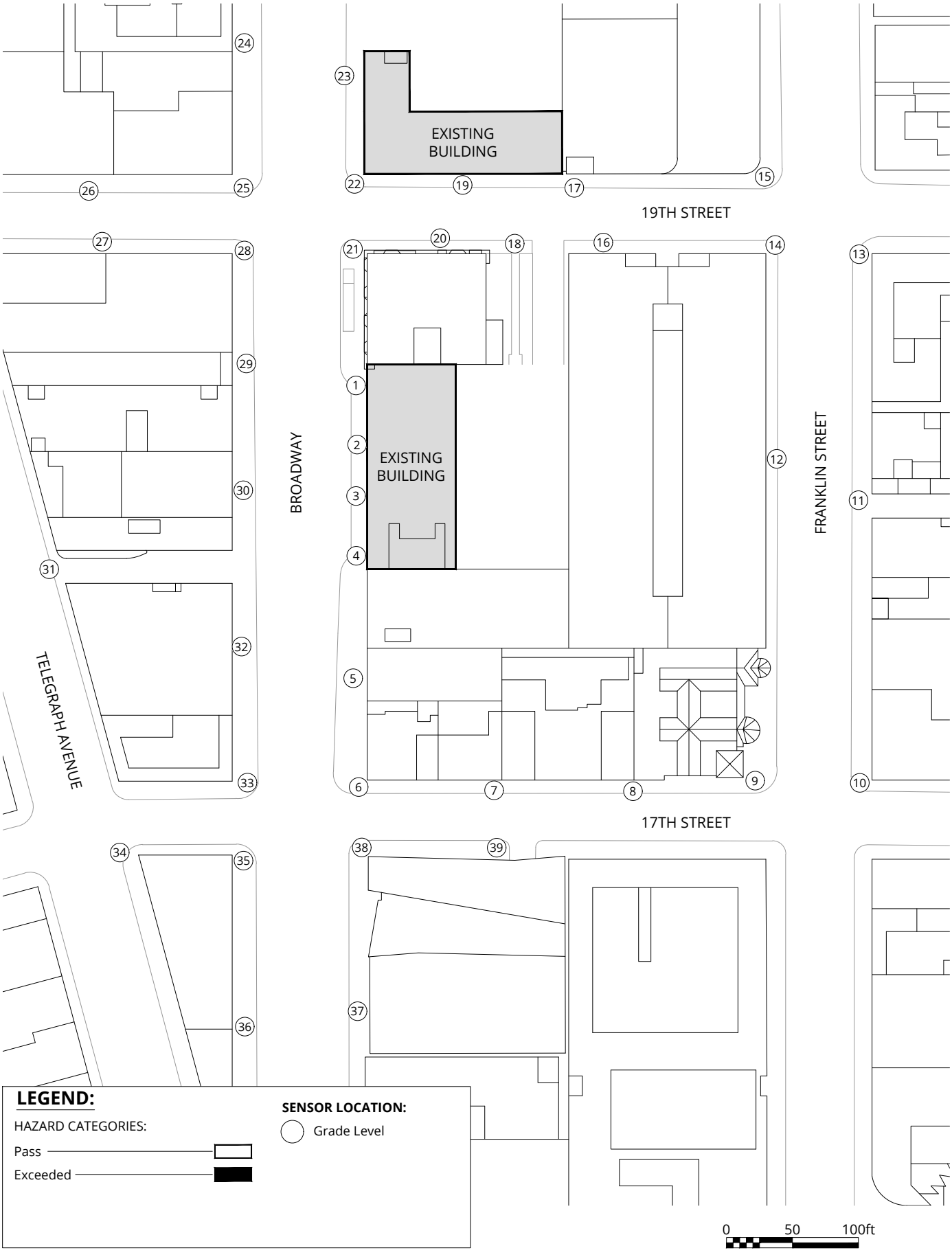
With the addition of the proposed project, wind activity in the areas surrounding the project are predicted to increase in general. The resulting wind speeds are expected to be higher than the 11 mph criterion at additional locations around the project (Figures 2b). The number of locations expected to be higher than the criterion increase to 22 with wind speeds averaging 11 mph.

The future buildings improve the wind conditions compared the Existing plus Project Configuration (Figure 2c) and reduce the number of exceedances to 17 locations, wind speeds remain averaging 11 mph.

4 APPLICABILITY

The wind conditions presented in this report pertain to the proposed 1750 Broadway development as detailed in the architectural design drawings listed in Appendix A. Should there be any design changes that deviate from this list of drawings, the wind condition predictions presented may change. Therefore, if changes in the design are made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

FIGURES



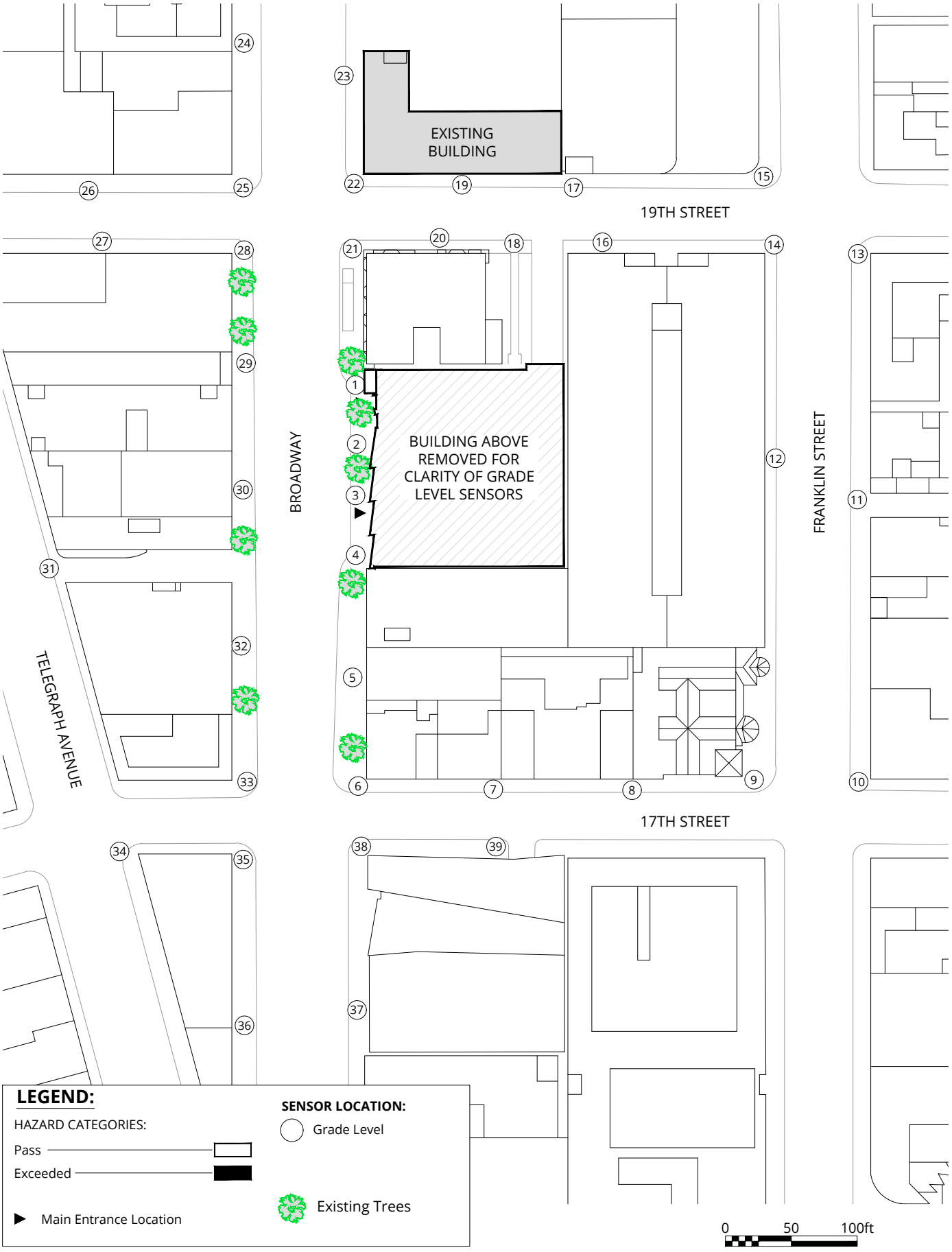
Pedestrian Wind Hazard Conditions
Existing
Annual (January to December)

1750 Broadway - Oakland, CA

Project #1702965

True North

Drawn by:	ck	Figure:	1a
Approx. Scale:	1"=100'		
Date Revised:	Sept. 26, 2017		



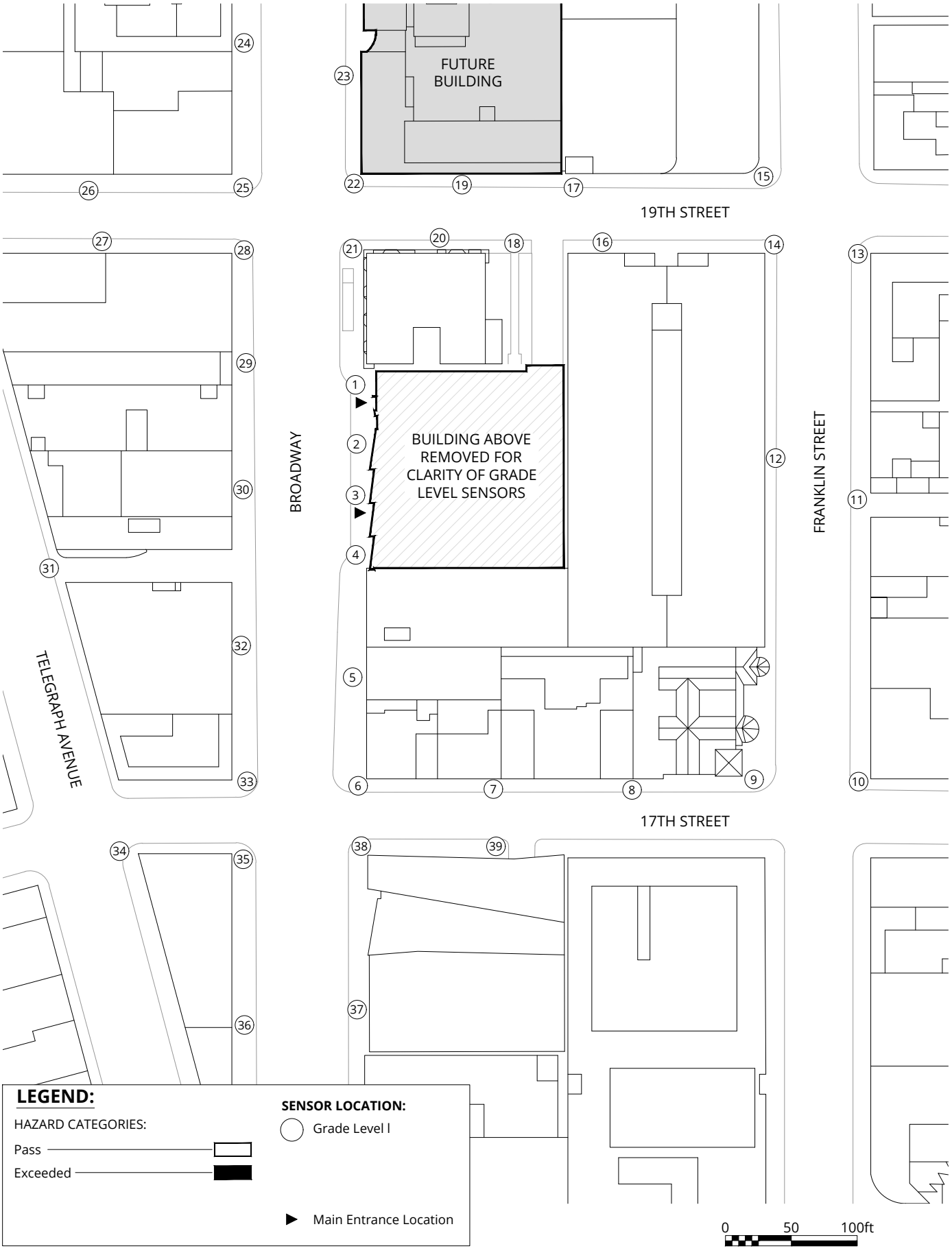
Pedestrian Wind Hazard Conditions
Existing + Project
Annual (January to December)

1750 Broadway - Oakland, CA

Project #1702965

True North

Drawn by:	ck	Figure:	1b
Approx. Scale:	1"=100'		
Date Revised:	Nov. 20, 2017		



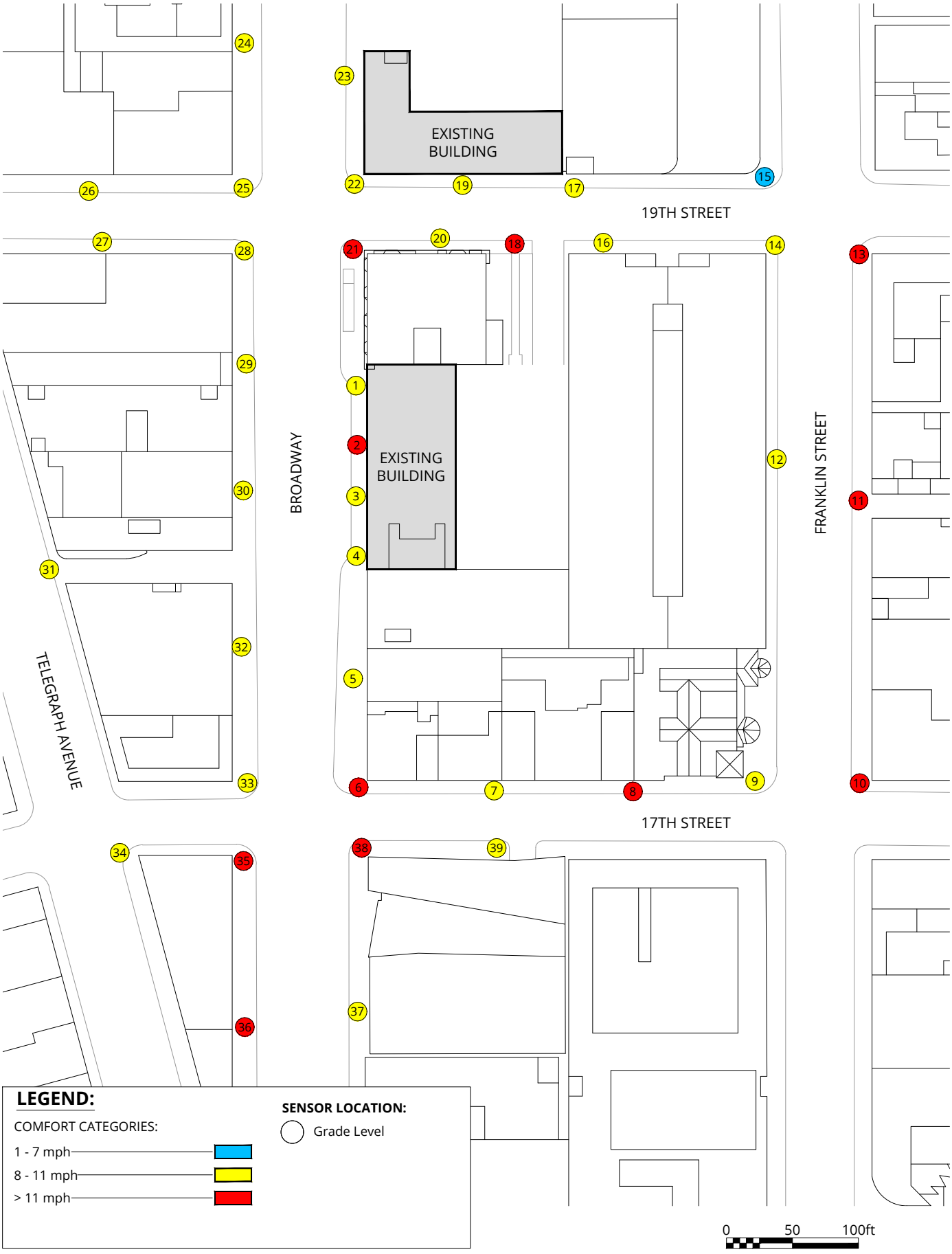
Pedestrian Wind Hazard Conditions
Project + Cumulative
Annual (January to December)

1750 Broadway - Oakland, CA

Project #1702965

True North

Drawn by:	ck	Figure:	1c
Approx. Scale:	1"=100'		
Date Revised:	Nov. 20, 2017		



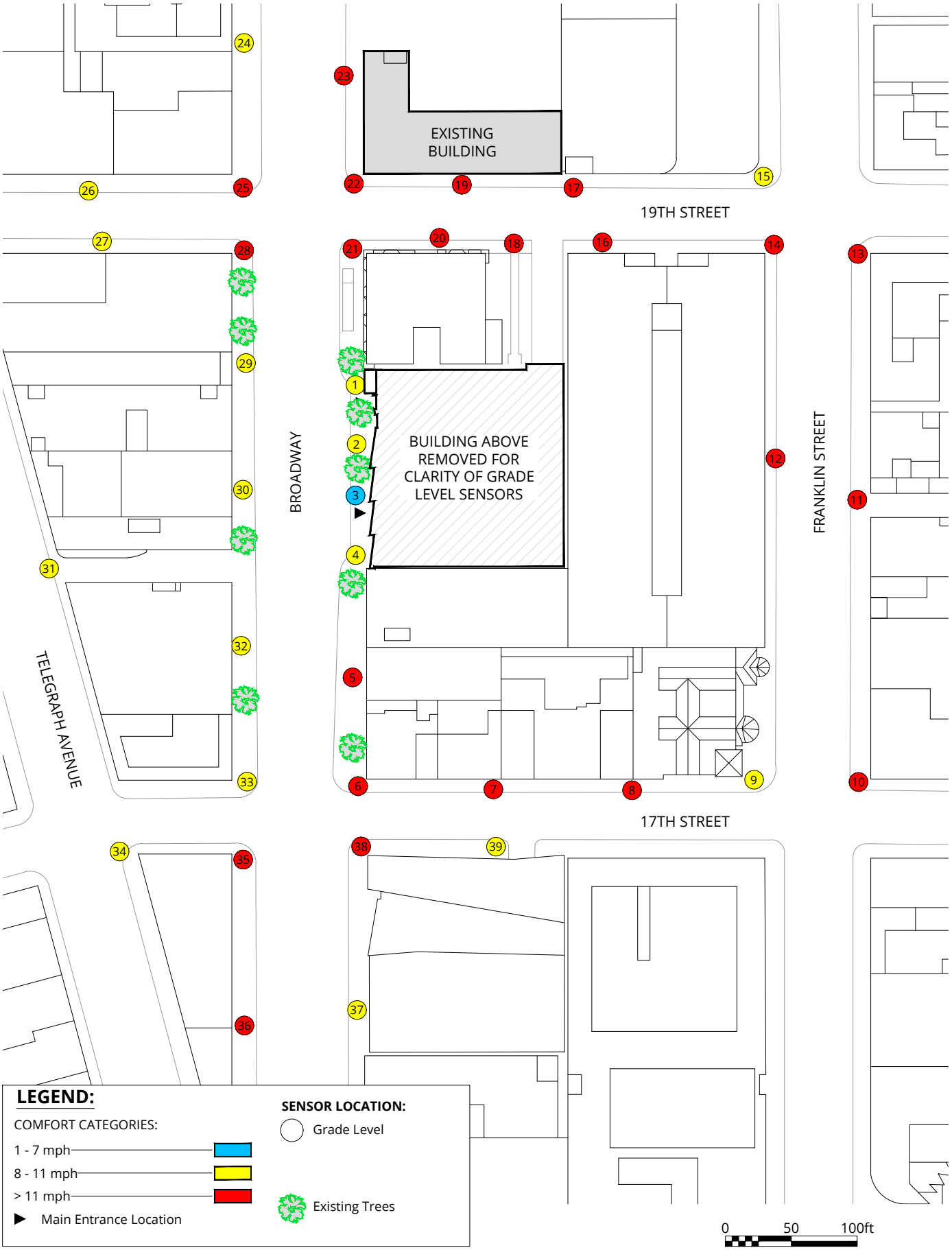
Pedestrian Wind Comfort Conditions
Existing
Annual (January to December)

1750 Broadway - Oakland, CA

Project #1702965

True North

Drawn by:	ck	Figure:	2a
Approx. Scale:	1"=100'		
Date Revised:	Sept. 26, 2017		



Pedestrian Wind Comfort Conditions

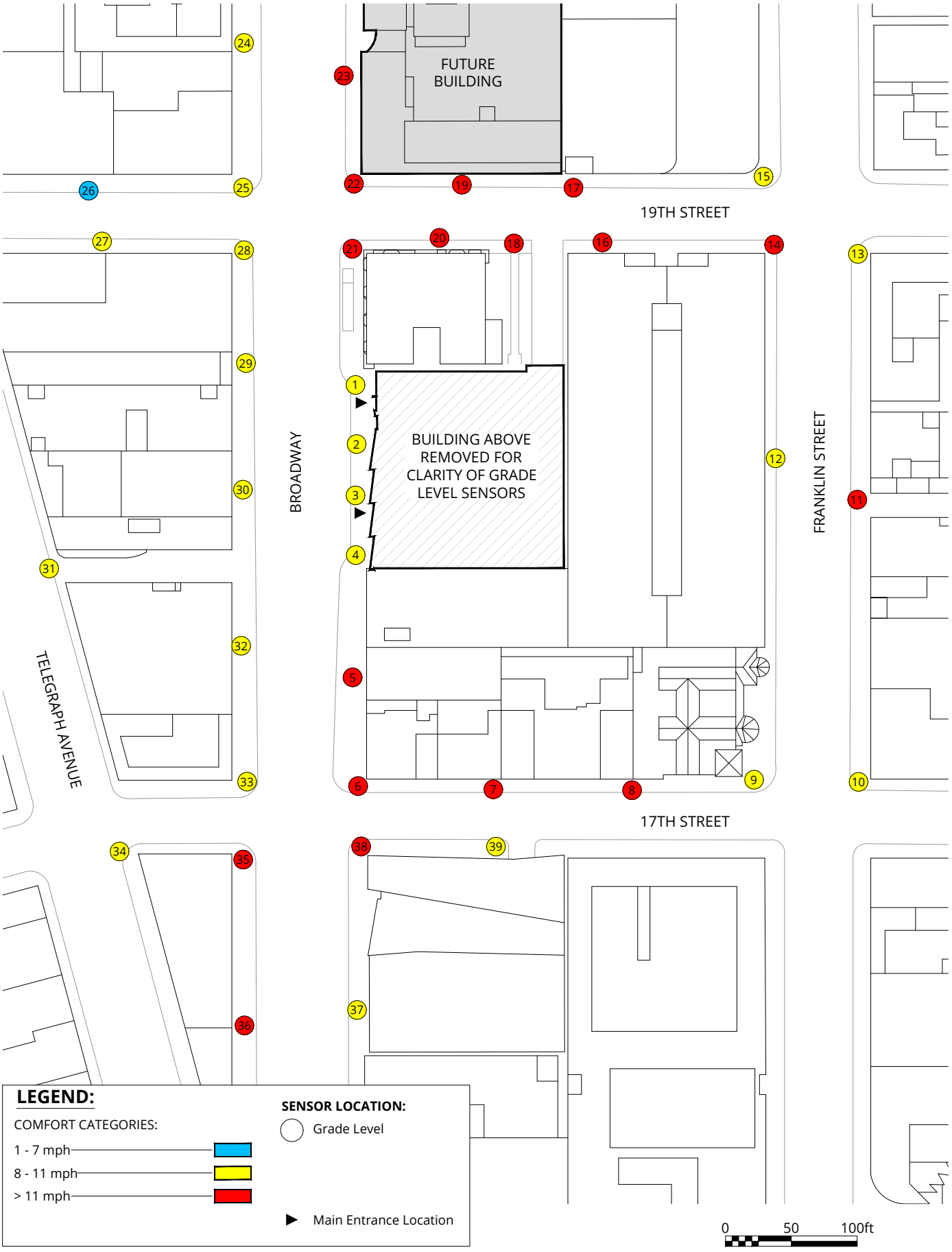
Existing + Project
Annual (January to December)

1750 Broadway - Oakland, CA

Project #1702965

True North

Drawn by: ck	Figure: 2b
Approx. Scale:	1"=100'
Date Revised:	Nov. 20, 2017



Pedestrian Wind Comfort Conditions
Project + Cumulative
Annual (January to December)

1750 Broadway - Oakland, CA

Project #1702965

True North

Drawn by: ck	Figure: 2c
Approx. Scale:	1"=100'
Date Revised:	Nov. 20, 2017

TABLES

TABLE 1: WIND HAZARD RESULTS
HAZARD CRITERION SPEED = 36 MPH
GRADE LEVEL LOCATIONS

References	A Existing			B Existing + Project				C Project + Cumulative			
Location Number	Wind Speed Exceeded 1hr/year (mph)	Hours/ Year Wind Speeds Exceed Hazard Criterion	Exceeds	Wind Speed Exceeded 1hr/year (mph)	Hours/ Year Wind Speeds Exceed Hazard Criterio	Hours Change Relative to Existing	Exceeds	Wind Speed Exceeded 1 hr/year (mph)	Hours/ Year Wind Speeds Exceed Hazard Criterio	Hours Change Relative to Existing	Exceeds
1	25	0		19	0	0		20	0	0	
2	26	0		22	0	0		20	0	0	
3	24	0		21	0	0		20	0	0	
4	23	0		21	0	0		21	0	0	
5	23	0		25	0	0		27	0	0	
6	30	0		30	0	0		29	0	0	
7	26	0		27	0	0		25	0	0	
8	31	0		31	0	0		27	0	0	
9	31	0		30	0	0		27	0	0	
10	29	0		32	0	0		28	0	0	
11	26	0		33	0	0		27	0	0	
12	26	0		28	0	0		26	0	0	
13	25	0		28	0	0		23	0	0	
14	21	0		28	0	0		26	0	0	
15	20	0		20	0	0		23	0	0	
16	19	0		26	0	0		26	0	0	
17	22	0		24	0	0		25	0	0	
18	25	0		28	0	0		30	0	0	
19	22	0		32	0	0		32	0	0	
20	24	0		32	0	0		30	0	0	
21	25	0		31	0	0		35	0	0	
22	23	0		34	0	0		31	0	0	
23	22	0		28	0	0		26	0	0	
24	20	0		25	0	0		25	0	0	
25	21	0		25	0	0		25	0	0	
26	19	0		24	0	0		16	0	0	
27	24	0		21	0	0		20	0	0	
28	23	0		27	0	0		23	0	0	
29	19	0		19	0	0		26	0	0	
30	20	0		28	0	0		27	0	0	
31	21	0		21	0	0		17	0	0	

TABLE 1: WIND HAZARD RESULTS
HAZARD CRITERION SPEED = 36 MPH
GRADE LEVEL LOCATIONS

References	A Existing			B Existing + Project				C Project + Cumulative			
Location Number	Wind Speed Exceeded 1hr/year (mph)	Hours/ Year Wind Speeds Exceed Hazard Criterion	Exceeds	Wind Speed Exceeded 1hr/year (mph)	Hours/ Year Wind Speeds Exceed Hazard Criterio	Hours Change Relative to Existing	Exceeds	Wind Speed Exceeded 1 hr/year (mph)	Hours/ Year Wind Speeds Exceed Hazard Criterio	Hours Change Relative to Existing	Exceeds
32	22	0		24	0	0		22	0	0	
33	26	0		26	0	0		25	0	0	
34	26	0		26	0	0		21	0	0	
35	28	0		30	0	0		27	0	0	
36	32	0		32	0	0		31	0	0	
37	27	0		27	0	0		25	0	0	
38	31	0		35	0	0		31	0	0	
39	27	0		28	0	0		25	0	0	
Average speed, Total hours, Total exceedances	**24 mph**	**0 hrs**	**0 of 39**	**27 mph**	**0 hrs**	**0 hrs**	**0 of 39**	**25 mph**	**0 hrs**	**0 hrs**	**0 of 39**

TABLE 2: WIND COMFORT RESULTS
COMFORT CRITERION SPEED = 11 MPH
GRADE LEVEL LOCATIONS

References	A Existing			B Existing + Project				C Project + Cumulative			
Location Number	Wind Speed Exceeded 10% of the time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Exceeds	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Speed Change Relative to Existing	Exceeds	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Speed Change Relative to Existing	Exceeds
1	11	10		9	2	-2		10	5	-1	
2	12	14	e	10	7	-2		8	2	-4	
3	11	10		7	2	-4		8	2	-3	
4	11	10		9	4	-2		10	5	-1	
5	10	7		12	13	2	e	13	19	3	e
6	12	16	e	14	21	2	e	13	20	1	e
7	11	10		12	13	1	e	12	12	1	e
8	12	15	e	12	15	0	e	12	12	0	e
9	9	5		9	5	0		9	3	0	
10	12	16	e	14	21	2	e	11	10	-1	
11	13	17	e	15	23	2	e	12	15	-1	e
12	11	10		12	16	1	e	11	10	0	
13	12	14	e	13	17	1	e	11	10	-1	
14	9	4		13	18	4	e	12	16	3	e
15	7	1		8	2	1		11	10	4	
16	9	3		12	15	3	e	12	16	3	e
17	8	2		12	13	4	e	12	14	4	e
18	12	14	e	13	20	1	e	15	28	3	e
19	10	7		15	30	5	e	15	28	5	e
20	11	10		15	27	4	e	14	25	3	e
21	12	12	e	15	28	3	e	17	36	5	e
22	10	7		15	28	5	e	15	27	5	e
23	10	6		13	19	3	e	12	13	2	e
24	8	2		11	10	3		11	10	3	
25	10	6		12	15	2	e	10	6	0	
26	8	2		8	3	0		7	1	-1	
27	10	8		9	5	-1		9	4	-1	
28	10	8		12	14	2	e	11	10	1	
29	8	3		9	3	1		10	7	2	
30	9	2		10	6	1		10	7	1	

TABLE 2: WIND COMFORT RESULTS
COMFORT CRITERION SPEED = 11 MPH
GRADE LEVEL LOCATIONS

References	A Existing			B Existing + Project				C Project + Cumulative			
Location Number	Wind Speed Exceeded 10% of the time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Exceeds	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Speed Change Relative to Existing	Exceeds	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Speed Change Relative to Existing	Exceeds
31	9	4		9	3	0		8	1	-1	
32	9	3		11	10	2		10	7	1	
33	10	7		11	10	1		10	7	0	
34	9	4		10	8	1		9	5	0	
35	12	15	e	12	13	0	e	12	12	0	e
36	12	12	e	12	15	0	e	12	14	0	e
37	11	10		11	10	0		11	10	0	
38	13	18	e	13	21	0	e	13	20	0	e
39	11	10		11	10	0		11	10	0	
Average speed, Average % of time, Total exceedances	**10 mph**	**9%**	**11 of 39**	**11 mph**	**13%**	**1 mph**	**22 of 39**	**11 mph**	**12%**	**1 mph**	**17 of 39**

APPENDIX A

Drawing List for Model Construction

The drawings and information listed below were received from ESA and were used to construct the scale model of the proposed 2100 Telegraph Avenue. Should there be any design changes that deviate from this list of drawings, the results may change. Therefore, if changes in the design are made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

File Name	File Type	Date Received (dd/mm/yyyy)
A108-1	dwg	01/11/2017
20171024_1750 Broadway_2017-detached	Rvt	24/102017
20170830-1750 Broadway	dwg	01/09/2017

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APPENDIX D
Greenhouse Gas Reduction Plan

1. Introduction

This Greenhouse Gas (GHG) Reduction Plan (GHG Plan) has been prepared to comply with the City of Oakland Standard Condition of Approval (City SCA-42) "Greenhouse Gas Reduction Plan", herein referred to as SCA GHG-1, as identified in the *1900 Broadway CEQA Update Memorandum* to which this GHG Plan is incorporated as an appendix.

2. Project Description

The 1900 Broadway Project (2018 Project) would construct a 38-story mixed-use building on two parcels north of an existing vacant office building at the northeast corner of 19th Street and Broadway in Downtown Oakland. The 2018 Project would demolish existing structures and construct a tower with residential, office, retail and restaurant uses. The 2018 Project would also renovate the existing, historic Tapscott Building that occupies the southern portion of the 0.93-acre project site.

The project applicant intends to meet the required 23 points for Greenpoint rating through adherence to California Green Building Standards (CalGreen) and Title 24 Building Energy Efficiency Standards (Energy Standards). Additional project-specific Green Building features could further reduce emissions beyond what is estimated in this analysis.

A 31-month construction period for the 2018 Project is projected to begin in December 2018, while the 2018 Project's first operational year is expected to be 2021. **Table GHG-1** shows the type and size of proposed land uses.

TABLE GHG-1
PROJECT LAND USES

Land Use	Size	Units	Service Population[a,b]
Multifamily Residential	452	Dwelling units	814
Office	85,000	Square feet	280
Restaurant	20,000	Square feet	40
Retail	5,000	Square feet	10
Parking	35,070	Square feet	0

[a] Service population is the sum of a project's residents and employees.
[b] Assumes a residential density of 1.8 residents per unit, 3.3 employees per 1,000 square feet of general office space, and 2 employees per 1,000 square feet of non-office commercial space, as established in the certified Broadway Valdez District Specific Plan EIR—a recent EIR with a Plan Area boundary approximately four blocks south of the project site.

3. City of Oakland Standard Conditions of Approval (SCAs)

SCA GHG-1 applies to any project that meets **one or more** of the following three scenarios and has a net increase in GHG emissions:

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 GHG emissions screening criteria contained in the BAAQMD CEQA Guidelines, AND

(c) after a GHG analysis is prepared, would exceed both of the City's applicable thresholds of significance (1,100 metric tons of carbon dioxide equivalents [CO2e] annually and 4.6 metric tons of CO_2e per service population annually).

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 City's applicable thresholds of significance (1,100 metric tons of CO2e annually or 4.6 metric tons of CO_2e per service population annually), AND

(d) are considered to be "Very Large Projects."[1]

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 exceed the City's applicable threshold of significance (10,000 metric tons of CO_2e annually).

This 2018 Project is required to prepare a GHG Plan as it satisfies all the criteria under Scenario B. The 2018 Project includes a mix of land uses that exceed the GHG screening criteria in Table 3-1 of the BAAQMD's 2017 *CEQA Air Quality Guidelines.* Project GHG emissions also exceed the 1,100 metric tons of CO_2e per year threshold AND meet the City's definition of a "Very Large Project." See Table V.5-3 of this document.

[1] A "Very Large Project" is defined as any of the following:

A Residential development of more than 500 dwelling units;
B Shopping center or business establishment employing more than 1,000 persons or encompassing more than 500,000 square feet of floor space;
C Commercial office building employing more than 1,000 persons or encompassing more than 250,000 square feet of floor space;
D Hotel/motel development of more than 500 rooms;
E Industrial, manufacturing, processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or encompassing more than 650,000 square feet of floor area; or
F Any combination of smaller versions of the above that when combined result in equivalent annual GHG emissions as the above.

SCA GHG-1: Greenhouse Gas Reduction Plan

SCA GHG-1 requires that project applicants retain a qualified air quality consultant to develop a GHG Plan for City review and approval and shall implement the approved GHG Plan. The goal of the GHG Plan is to increase energy efficiency and reduce GHG emissions to below at least one of the Bay Area Quality Management District's (BAAQMD's) CEQA Thresholds of Significance (1,100 metric tons of CO_2e per year or 4.6 metric tons of CO_2e per year per service population) AND to reduce GHG emissions by 36 percent below the project's 2005 "business-as-usual" (BAU) baseline GHG emissions to help implement the City's Energy and Climate Action Plan (ECAP) adopted in 2012, which calls for reducing GHG emissions by 36 percent below 2005 levels.

The GHG Plan is to include, at a minimum, (a) a detailed GHG emissions inventory for the project under a "business-as-usual" scenario with no consideration of project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the project (including the City's SCAs, proposed mitigation measures, project design features, and other City requirements), and additional GHG reduction measures available to further reduce GHG emissions, and (c) requirements for ongoing monitoring.

The GHG Plan shall be implemented beginning with 2018 Project construction; for instance, construction of physical GHG reduction measures are to be incorporated into the design of the 2018 Project. During and after construction, the applicant is committed to ongoing monitoring and reporting to ensure that GHG reduction measures are being implemented.

The GHG Plan shall be considered fully attained when project emissions are less than either of the two potentially applicable numeric BAAQMD CEQA Thresholds, as confirmed by the City through an established monitoring program AND a minimum 36 percent reduction in emissions from the 2018 Project's 2005 BAU emissions is achieved.

4. Overview of GHG Emissions Inventories

Methodology and Assumptions

As part of this GHG Plan, ESA prepared a detailed GHG emissions inventory for the 2018 Project under a 2005 "business-as-usual" (BAU) scenario (hereafter called the "2005 BAU Project") without considering any of the regulatory standards adopted thereafter designed to reduce GHG emissions or other energy efficiencies. This 2005 BAU Project inventory is compared to a Project Buildout (2021) scenario (hereafter called the "2018 Project Buildout scenario"), taking into consideration energy efficiencies included as part of the 2018 Project (including the City's SCAs, project design features, other City requirements, and federal, state and other local regulatory standards enacted since 2005). Year 2005 is the baseline year because the City's GHG emissions reduction goal specified in its ECAP is based on what GHG emissions were in 2005. Year 2021 is the buildout year when construction of the 2018 Project is anticipated to be complete. Consistent with the methodology used in the Oakland ECAP, ESA analyzed the 2005 BAU Project as if it was operating in 2005 and consistent with the California Emissions

Estimator Model (CalEEMod), version 2016.3.2.[2] As discussed under the Operational GHG Emissions *in Section 5. Greenhouse Gases*, of this document, the 2018 Project qualifies as a Transit Priority Project (TPP); therefore, emissions for mobile sources are not considered in the inventories for both scenarios.

GHG emissions for both scenarios were estimated using CalEEMod version 2016.3.2. Assumptions for the emissions inventories were based on a combination of 2018 Project-specific information provided to the City and ESA by the project applicant for the CEQA Analysis and default assumptions of the model such as emission factors.

Emission Sources

GHG emission sources associated with the Project include both direct and indirect sources. Direct emissions include emissions from off-road construction equipment, on-road vehicles, area sources such as hearths and landscape equipment, stationary sources such as emergency generators, and emissions from solid waste disposal. GHG emissions from purchased electricity, including electricity needed for the conveyance and treatment of water and wastewater, are indirect sources.

As discussed earlier, GHG emissions from mobile sources are not included in the comparison of the emission inventories for the two scenarios. However, mobile emissions are presented under both scenarios for informational purposes. Per BAAQMD, GHG emissions from permitted stationary source equipment are not to be assessed as part of the operational emissions of a land development project, but are instead to be directly compared to BAAQMD's 10,000 metric ton per year threshold for such equipment for the purposes of impact assessment relative to CEQA. The 2018 Project would include a backup diesel generator that would be a permitted stationary source. The estimated emissions from the generator are disclosed in the GHG section of the *1900 Broadway CEQA Update Memorandum* and compared to the stationary source significance threshold, but are not included in the emission inventories for either scenario below.

The following source categories are included in the GHG emissions inventories in this document:

- Construction[3]
- Area Sources
- Energy Use (Natural Gas)
- Energy Use (Grid Electricity)
- Water and Wastewater Conveyance & Treatment
- Solid Waste

[2] CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects.

[3] Note the GHG analysis evaluated a previous and slightly smaller version of the 2018 Project. It differed only in the square footage of residential use (361,993 versus 381,480), number of stories (36 + rooftop amenity versus 38 + rooftop amenity), and height (376 feet to the upper roof versus 395 to the upper roof). Information provided by the applicant indicates an additional 16 days of construction would be required during the building construction phase. Project impacts are well below the respective thresholds, therefore, these changes would not make a meaningful difference with respect to the GHG evaluation and results and thus do not trigger a need to revise the modeling or analysis herein.

Each source category is discussed individually below.

Construction

Estimated total construction emissions of the 2018 Project over the 31-month construction period, are 1,166 metric tons of CO_2e.[4] Construction emissions are annualized because the proposed operational GHG emissions thresholds are analyzed in terms of metric tons "per year." Therefore, assuming a 40-year development life (which is the common standard currently used in practice) of the 2018 Project until it is demolished or remodeled for energy efficiency, amortized annual construction emissions are estimated to be 29.1 metric tons of CO_2e per year.

The City's CEQA Thresholds do not include a specific threshold or methodology for assessing construction-related GHG emissions for the CEQA analysis. The City's methodology adds the 40-year amortized construction-related GHG emissions to the 2018 Project's total operational-related emissions, to assess construction-related GHG emissions against the thresholds. The same activity level and emission factors were used to estimate emissions in both the 2005 BAU Project and 2018 Project Buildout scenarios. This is a conservative approach as emission factors in 2005 would have been higher as they do not include characteristics that contribute to it being consistent with AB 32 GHG reduction goals during construction.

Area Sources

The 2018 Project includes area sources such as architectural coatings, consumer products use, hearths, and landscaping equipment. Architectural coatings and consumer products are not considered sources of GHG. Hearth emissions for the 2018 Project Buildout scenario were calculated using CalEEMod. BAAQMD Rule 6-3-306 does not allow wood stoves or wood-burning fireplaces in new building construction after November 1, 2016, so the percentage of dwelling units with wood stoves was assumed to be zero. The CalEEMod default number of dwelling units with fireplaces was maintained but all units were assumed to have natural gas fireplaces.

Hearth emissions for the 2005 BAU Project were calculated with CalEEMod, assuming the default mix of wood and natural gas hearths as the BAAQMD Rule 6-3-306 was still not in effect in 2005.

The 2018 Project land uses will employ gasoline and diesel landscaping equipment. Emissions from lawn and garden equipment are estimated using CalEEMod. CalEEMod's emissions estimates are based on emission factors for the landscaping equipment from the California Air Resources Board (CARB) OFFROAD2011 model.

[4] GHG emissions are often quantified and reported as CO_2-equivalent (CO_2e) emissions because GHGs have different global warming potentials (i.e., the amount of heat trapped in the atmosphere by a certain mass of the gas), and CO_2 is the most common reference gas for climate change. For any quantity and type of GHG, its CO_2e signifies the amount of CO_2 which would have the equivalent global warming impact.

Energy Use (Natural Gas)

The 2018 Project emits GHGs from on-site natural gas combustion for space and water heating. ESA estimated 2018 Project Buildout scenario emissions using CalEEMod based on the type and size of land uses associated with the 2018 Project. CalEEMod default values for natural gas usage for the 2018 Project take into account the 2016 Title 24 building energy efficiency standards, which apply to the 2018 Project. The 2005 BAU Project inventory relies on the historical energy consumption data in CalEEMod®, which is more representative of energy consumption in 2005.

Energy Use (Grid Electricity)

This includes GHG emissions from the generation of electricity that is used for on-site for lighting, heating, household electronics, electric vehicle charging, and other uses not associated with water and wastewater treatment and conveyance.

CalEEMod estimates emissions based on electricity use and carbon intensity of electricity. CalEEMod provides default electricity demand based on the type and size of land uses associated with the 2018 Project consistent with 2016 Title 24 building energy efficiency standards. The 2005 BAU Project inventory relies on the historical energy consumption data in CalEEMod, which is more representative of energy consumption in 2005.

For estimating GHG emissions from electricity use for the 2018 Project Buildout scenario, the Pacific Gas and Electric Company (PG&E) CO_2 intensity factor for 2020 was used in place of the default carbon intensity in CalEEMod.[5] This intensity factor takes into account the State's Renewable Portfolio Standard (RPS) that requires 33 percent of electricity to be from renewable sources in 2020. The 2005 BAU Project uses the default CalEEMod CO_2 intensity factor. The default carbon intensity is from PG&E's 2008 carbon intensity for electricity. This intensity takes into consideration some benefit of the 2010 RPS goals due to the ramp up of renewables, so is a conservative assumption for year 2005.

Water and Wastewater Conveyance & Treatment

Electricity is also required to treat and distribute water as well as treat and dispose wastewater generated by the 2018 Project, and as such water use is a source of GHG emissions. The water use estimate for the 2018 Project Buildout scenario is the CalEEMod default for the project land uses for Alameda County, minus a 20 percent reduction in indoor water consumption to comply with mandatory CalGreen requirements. Therefore, the indoor water demand is 20 percent higher for 2005 BAU Project than the 2018 Project Buildout scenario, while the outdoor water demand is the same for 2005 as for the 2018 Project Buildout scenario. Based on the design of the East Bay Municipal Utility District's wastewater treatment plant, emissions estimated from wastewater treatment assumed a process with 100 percent aerobic biodegradation and 100 percent anaerobic digestion.

[5] Pacific Gas and Electric Company (PG&E). Greenhouse Gas Emission Factors: Guidance for PG&E Customers. November 2015. Available online at: http://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf

As with GHG emissions from purchased electricity not related to water use, the PG&E CO_2 intensity factor for 2020 was used in place of the default carbon intensity to estimate 2018 Project Buildout scenario emissions in CalEEMod. The 2005 BAU Project uses the default CalEEMod CO_2 intensity factor.

Solid Waste

Waste generated by the 2005 BAU Project was also estimated using CalEEMod. The Oakland ECAP accounts for the City of Oakland Zero Waste goal, which reduces GHG emissions from waste by 89percent between 2005 and 2020. This reduction has been incorporated into the 2018 Project Buildout scenario as a calculation outside CalEEMod. Therefore, GHG emissions associated with waste disposal for the 2018 Project Buildout scenario are 11 percent of those estimated for the 2005 BAU Project using CalEEMod.

Current State and Local Requirements that Reduce GHG Emissions

The following state programs and existing City requirements will reduce GHG emissions from the 2005 BAU Project and are incorporated in the GHG inventory for the 2018 Project Buildout scenario:

- The City of Oakland's Zero Waste goal will reduce GHG emissions from waste by 89percent.
- The State of California Renewable Portfolio Standard will reduce GHG from PG&E electricity generation
- BAAQMD Rule 6-3 prohibits wood-fired hearths in new homes, thereby reducing GHG emissions per hearth
- Increased residential and nonresidential building energy efficiency due to 2016 Title 24 standards

As discussed earlier, mobile source emissions are not included in either the 2005 BAU Project or the 2018 Project Buildout scenario as the 2018 Project qualifies as a TPP. Nevertheless, the following requirements reduce emissions from mobile sources from the 2005 BAU Project:

- The Project Transportation Demand Management (TDM) program will reduce trips by 20percent, which reduces on-road mobile source emissions (see SCA TRA-4 below)
- The Pavley Act and Advanced Clean Cars (ACC) programs reduce on-road vehicle fleet emissions
- Increased penetration of electric vehicles will reduce GHG emissions from on-road mobile sources, even without assuming mandated changes to charging infrastructure

City of Oakland SCAs are incorporated and required as part of a proposed project and are adopted as conditions of approval. In addition to GHG-1, which is the subject of this GHG Plan, the following SCAs (which are also identified in Attachment A, SCAMMRP in this document) are

required as part of the 2018 Project resulting in a further reduction in project GHG emissions from the 2005 BAU Project:

- **SCA AES-3: Landscape Requirements and Tree Replacement.** Addresses landscape requirements for frontages of commercial buildings and replacement of trees removed as part of a project. This SCA that maintains and increases landscaping and trees effect cooler climate, reduce excessive solar gain, and absorb CO2e emissions.
- **SCA AIR-2: Criteria Air Pollutant Controls – Construction Related.** Includes many measures that will reduce or limit the amount of GHG emissions during construction, including limitations on vehicle idling, preference over electricity over petroleum-based combustion equipment, and accelerated use of off-road equipment with emissions control.
- **SCA TRA-4: Transportation and Parking Demand Management**. Requires the 2018 Project-specific TDM Plan containing strategies to reduce on-site parking demand and single occupancy vehicle (SOV) travel. GHG emissions reductions attributable to a TDM Plan assume 20 percent reduction in vehicle trip generation.
- **SCA UTIL-1: Construction and Demolition Waste Reduction and Recycling.** Requires a project-level Construction & Demolition Waste Reduction and Recycling Plan (WRRP) to reduce construction–related emissions from haul trips by reducing off-site disposal truck trips and/or trip lengths.
- **SCA UTIL-4: Green Building Requirements.** Requires 2018 Project compliance with the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance.
- **SCA UTIL-7: Recycled Water.** Requires the 2018 Project to provide for the use of recycled water for landscape irrigation purposes, as feasible, to reduce landscape water usage.

Implementation of City of Oakland Plans and Policies also reduce GHG emissions, and they are implemented through many of the mandated measures and SCAs listed above:

- **2012 Oakland ECAP.** Oakland developed its ECAP using a GHG reduction target equivalent to 36 percent below 2005 BAU GHG emissions by 2020 (City of Oakland, Resolution No. 82129 C.M.S., 2009). Certain development projects must meet this target (see SCA GHG-1, above).
- **City of Oakland Sustainability Programs**. The City has proactively adopted a number of sustainability programs in an effort to reduce the City's impact on climate change. Two main categories that address reducing GHG emissions from a development projects are renewable energy (for City facilities) and green building (see CalGreen/Green Building Requirements, above).

Comparison of 2005 BAU Project and 2018 Project Buildout Scenario Emissions

Table GHG-2 shows the 2005 BAU Project and 2018 Project Buildout scenario GHG inventories, as well as the percent reduction in emissions from the 2005 BAU Project inventory by source category.

TABLE GHG-2
COMPARISON OF ANNUAL GHG EMISSIONS – 2005 BAU PROJECT COMPARED TO 2018 PROJECT BUILDOUT SCENARIO

	2005 BAU Project[a] Metric tons of CO_2e per year	2018 Project Buildout[a,b] Metric tons of CO_2e per year	Reduction from 2005 BAU Scenario
Source Category			
Area Source Emissions (Hearths & Landscape Maintenance)	56.3	44.8	20.4%
Energy Emissions (Natural Gas and Grid Electricity)	1,636.2	986.6	39.7%
Solid Waste	266.6	29.3	89%
Water and Wastewater Conveyance & Treatment	141	67.5	52.1%
Annualized Construction Emissions (Over 40 Years)	29.1	29.1	No change
Total	**2,129.2**	**1,157.4**	**45.6%**
City of Oakland Threshold	1,100	1,000	---
Exceedance of Project Threshold?	**Yes**	**Yes**	**---**
Total Emissions per Service Population (814 residents and 330 employees)	1.9	1.0	---
City Emissions per Service Population Threshold	4.6	4.6	---
Exceedance of Service Population (Efficiency) Threshold?	No	No	---
Significant?	**No**	**No**	**---**
Mobile Emissions	3,404.6	2,986.2	12.3%

[a] Project operational emissions estimates were made using CalEEMod, version 2016.3.2.
[b] Assumes 2021 energy and utility assumptions factoring in 2016 Title 24 standards and CalGreen compliance, actual PG&E emission factors, and compliance with City's waste reduction goals.

SOURCE: ESA, 2018

Emissions from area sources (hearths and landscaping) under the 2018 Project Buildout scenario decrease by 20.4percent from the 2005 BAU Project scenario due to the replacement of wood-fired hearths with natural gas fireplaces, as required by BAAQMD Rule 6-3.

Emissions related to energy use (both electricity and natural gas) decrease by 39.7percent, due to the combined impacts of increased building energy efficiency and reductions in the carbon intensity of electricity provided by PG&E. These reductions are from the Title 24 building energy efficiency standards and the state Renewables Portfolio Standard.

Emissions related to water use, which are from wastewater treatment and the purchased electricity used to supply, distribute and treat the water, are reduced by 52.1percent, due to the state Renewables Portfolio Standard lowering the carbon intensity of purchased electricity between the 2005 BAU Project and 2018 Project Buildout scenarios.

Compared to the 2005 BAU Project, the 2018 Project Buildout scenario emissions from solid waste are reduce by 89percent taking into account implementation of Oakland's Zero Waste goal by 2020.

Though not included in the comparison, on-road mobile source emissions decrease by 12.3percent between the 2005 BAU Project scenario and the 2018 Project Buildout scenario. This is primarily due to the reduction in fleet average emission factors in CalEEMod as the vehicle fleet gets more efficient by 2021 (estimated buildout year) with the adoption of Pavley and ACC standards as well as an increased penetration of electric vehicles into the fleet.

Overall, at 2018 Project Buildout, the total annual GHG emissions generated by the 2018 Project (1,157 metric tons CO_2e per year) is approximately 972 metric tons CO_2e per year less than the 2018 Project's estimated 2005 BAU scenario emissions (2,129 metric tons CO_2e per year). This is a reduction of approximately 45.6 percent – greater than the 36 percent reduction from 2005 BAU required pursuant to the ECAP and SCA GHG-1.

As shown in the far right column of Table GHG-2, with the exclusion of mobile source emissions, the most substantial reductions achieved under the 2018 Project Buildout scenario are associated with energy use - primarily the 2018 Project's adherence to mandatory CalGreen/Green Building and 2016 Title 24 standards (in compliance with SCA UTIL-4) not assumed in the 2005 BAU Project scenario.

Conclusion

As presented in this GHG Plan and analyzed in the CEQA Analysis document for the 2018 Project, GHG emissions from the 2018 Project result in a less than significant CEQA impact. Pursuant to SCA GHG-1, ESA prepared this GHG Plan to demonstrate achievement of a minimum 36 percent reduction of GHG emissions compared to the 2005 BAU scenario, and compliance with the City ECAP.

Table GHG-2 of this GHG Plan shows that emissions estimated under the 2018 Project Buildout scenario are reduced **45.6 percent** from those estimated for the 2005 BAU Project scenario. Therefore, the 2018 Project would not conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions, in particular the City's ECAP (per SCA GHG-1). Pursuant to SCA GHG-1, the 2018 Project is not required to identify and quantify additional specific GHG reduction measures to reduce 2018 Project emissions for CEQA purposes; the 2018 Project's emissions are already below one of the CEQA thresholds and exceed the 36 percent reduction from the 2018 Project's 2005 BAU scenario. The 2018 Project has fully implemented SCA GHG-1, the GHG Plan, for CEQA purposes, as specified in SCA GHG-1.[6]

[6] "The GHG Reduction Plan shall be considered fully attained when project emissions are less than either applicable numeric BAAQMD CEQA Thresholds AND GHG emissions are 36 percent below the project's "2005 business-as-usual" baseline GHG emissions, as confirmed by the City through an established monitoring program."

1900 Broadway - 2005 BAU - Alameda County, Annual

1900 Broadway - 2005 BAU

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	85.00	1000sqft	0.00	85,000.00	0
Enclosed Parking with Elevator	35.07	1000sqft	0.00	35,070.00	0
High Turnover (Sit Down Restaurant)	20.00	1000sqft	0.00	20,000.00	0
Apartments High Rise	452.00	Dwelling Unit	0.93	361,993.00	814
Regional Shopping Center	5.00	1000sqft	0.00	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2005
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 - Project data

Construction Phase - Project data

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Trips and VMT - Data from project applicant

Demolition -

Grading - Project data from applicant

Architectural Coating - Pre-fab panels to be used for exterior finishing

Vehicle Trips - Adjusted based on project traffic report

Woodstoves -
CalEEMod default number of fireplaces assumed

Area Coating - Pre-fab panels used for exterior finishing

Energy Use - Historical data

Water And Wastewater - 20% reduction in indoor water use assumed in compliance with CalGreen code
100% aerobic treatment of wastewater assumed

Construction Off-road Equipment Mitigation - Tier 4 Final equipment assument in compliance with BACT requirements of SCA-19(w)

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	55000	0
tblAreaCoating	Area_Residential_Exterior	244345	0
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDays	2.00	4.00
tblConstructionPhase	NumDays	100.00	200.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	10.00
tblFireplaces	NumberGas	67.80	249.00
tblFireplaces	NumberNoFireplace	18.08	140.00
tblFireplaces	NumberWood	76.84	63.00
tblLandUse	LandUseSquareFeet	452,000.00	361,993.00

tblLandUse	LotAcreage	1.95	0.00
tblLandUse	LotAcreage	0.81	0.00
tblLandUse	LotAcreage	0.46	0.00
tblLandUse	LotAcreage	7.29	0.93
tblLandUse	LotAcreage	0.11	0.00
tblLandUse	Population	1,293.00	814.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	4.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	1.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	68.00	285.00
tblTripsAndVMT	HaulingTripNumber	0.00	4,750.00
tblTripsAndVMT	HaulingTripNumber	0.00	2,610.00
tblVehicleTrips	ST_TR	4.98	4.16
tblVehicleTrips	ST_TR	2.46	1.78
tblVehicleTrips	ST_TR	158.37	67.28
tblVehicleTrips	ST_TR	49.97	23.49
tblVehicleTrips	SU_TR	3.65	3.05
tblVehicleTrips	SU_TR	1.05	0.76
tblVehicleTrips	SU_TR	131.84	56.01
tblVehicleTrips	SU_TR	25.24	11.87

tblVehicleTrips	WD_TR	4.20	3.51
tblVehicleTrips	WD_TR	11.03	7.98
tblVehicleTrips	WD_TR	127.15	54.01
tblVehicleTrips	WD_TR	42.70	20.08
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	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

2.2 Overall Operational

Unmitigated 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	3.3992	0.0944	5.1385	2.8400e-003		0.1960	0.1960		0.1960	0.1960	18.1648	36.5698	54.7346	0.0423	1.5500e-003	56.2552
Energy	0.0523	0.4628	0.3077	2.8500e-003		0.0361	0.0361		0.0361	0.0361	0.0000	1,628.7691	1,628.7691	0.0602	0.0199	1,636.1985

Mobile	3.9408	16.0021	42.7508	0.1139	2.4045	0.3517	2.7562	0.6485	0.3350	0.9835	0.0000	3,391.8525	3,391.8525	0.5113	0.0000	3,404.6360
Stationary	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Waste						0.0000	0.0000		0.0000	0.0000	107.6299	0.0000	107.6299	6.3607	0.0000	266.6484
Water						0.0000	0.0000		0.0000	0.0000	18.0432	109.2343	127.2775	0.0670	0.0403	140.9510
Total	**7.4087**	**16.6052**	**48.2388**	**0.1197**	**2.4045**	**0.5862**	**2.9907**	**0.6485**	**0.5695**	**1.2180**	**143.8378**	**5,174.0417**	**5,317.8795**	**7.0427**	**0.0617**	**5,512.3318**

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	3.3992	0.0944	5.1385	2.8400e-003		0.1960	0.1960		0.1960	0.1960	18.1648	36.5698	54.7346	0.0423	1.5500e-003	56.2552
Energy	0.0523	0.4628	0.3077	2.8500e-003		0.0361	0.0361		0.0361	0.0361	0.0000	1,628.7691	1,628.7691	0.0602	0.0199	1,636.1985
Mobile	3.9408	16.0021	42.7508	0.1139	2.4045	0.3517	2.7562	0.6485	0.3350	0.9835	0.0000	3,391.8525	3,391.8525	0.5113	0.0000	3,404.6360
Stationary	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Waste						0.0000	0.0000		0.0000	0.0000	107.6299	0.0000	107.6299	6.3607	0.0000	266.6484
Water						0.0000	0.0000		0.0000	0.0000	18.0432	109.2343	127.2775	0.0670	0.0403	140.9510
Total	**7.4087**	**16.6052**	**48.2388**	**0.1197**	**2.4045**	**0.5862**	**2.9907**	**0.6485**	**0.5695**	**1.2180**	**143.8378**	**5,174.0417**	**5,317.8795**	**7.0427**	**0.0617**	**5,512.3318**

	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	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	3.9408	16.0021	42.7508	0.1139	2.4045	0.3517	2.7562	0.6485	0.3350	0.9835	0.0000	3,391.8525	3,391.8525	0.5113	0.0000	3,404.6360
Unmitigated	3.9408	16.0021	42.7508	0.1139	2.4045	0.3517	2.7562	0.6485	0.3350	0.9835	0.0000	3,391.8525	3,391.8525	0.5113	0.0000	3,404.6360

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	1,586.52	1,880.32	1378.60	3,692,574	3,692,574
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	678.30	151.30	64.60	1,231,542	1,231,542
High Turnover (Sit Down Restaurant)	1,080.20	1,345.60	1120.20	1,303,938	1,303,938
Regional Shopping Center	100.40	117.45	59.35	170,020	170,020
Total	3,445.42	3,494.67	2,622.75	6,398,075	6,398,075

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 High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.540639	0.064683	0.171972	0.117999	0.030504	0.004760	0.020161	0.036194	0.001764	0.004728	0.005037	0.000261	0.001298
Enclosed Parking with Elevator	0.540639	0.064683	0.171972	0.117999	0.030504	0.004760	0.020161	0.036194	0.001764	0.004728	0.005037	0.000261	0.001298
General Office Building	0.540639	0.064683	0.171972	0.117999	0.030504	0.004760	0.020161	0.036194	0.001764	0.004728	0.005037	0.000261	0.001298
High Turnover (Sit Down Restaurant)	0.540639	0.064683	0.171972	0.117999	0.030504	0.004760	0.020161	0.036194	0.001764	0.004728	0.005037	0.000261	0.001298
Regional Shopping Center	0.540639	0.064683	0.171972	0.117999	0.030504	0.004760	0.020161	0.036194	0.001764	0.004728	0.005037	0.000261	0.001298

5.0 Energy Detail

Historical Energy Use: Y

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	1,111.3334	1,111.3334	0.0503	0.0104	1,115.6879
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,111.3334	1,111.3334	0.0503	0.0104	1,115.6879
NaturalGas Mitigated	0.0523	0.4628	0.3077	2.8500e-003		0.0361	0.0361		0.0361	0.0361	0.0000	517.4357	517.4357	9.9200e-003	9.4900e-003	520.5105
NaturalGas Unmitigated	0.0523	0.4628	0.3077	2.8500e-003		0.0361	0.0361		0.0361	0.0361	0.0000	517.4357	517.4357	9.9200e-003	9.4900e-003	520.5105

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					
Apartments High Rise	4.24653e+006	0.0229	0.1957	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	226.6109	226.6109	4.3400e-003	4.1500e-003	227.9576
Enclosed Parking with Elevator	0	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
General Office Building	2.00515e+006	0.0108	0.0983	0.0826	5.9000e-004		7.4700e-003	7.4700e-003		7.4700e-003	7.4700e-003	0.0000	107.0024	107.0024	2.0500e-003	1.9600e-003	107.6383
High Turnover (Sit Down Restaurant)	3.4178e+006	0.0184	0.1675	0.1407	1.0100e-003		0.0127	0.0127		0.0127	0.0127	0.0000	182.3868	182.3868	3.5000e-003	3.3400e-003	183.4707
Regional Shopping Center	26900	1.5000e-004	1.3200e-003	1.1100e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4355	1.4355	3.0000e-005	3.0000e-005	1.4440
Total		**0.0523**	**0.4628**	**0.3077**	**2.8600e-003**		**0.0361**	**0.0361**		**0.0361**	**0.0361**	**0.0000**	**517.4357**	**517.4357**	**9.9200e-003**	**9.4800e-003**	**520.5105**

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					
Apartments High Rise	4.24653e+006	0.0229	0.1957	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158	0.0000	226.6109	226.6109	4.3400e-003	4.1500e-003	227.9576
Enclosed Parking with Elevator	0	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
General Office Building	2.00515e+006	0.0108	0.0983	0.0826	5.9000e-004		7.4700e-003	7.4700e-003		7.4700e-003	7.4700e-003	0.0000	107.0024	107.0024	2.0500e-003	1.9600e-003	107.6383
High Turnover (Sit Down Restaurant)	3.4178e+006	0.0184	0.1675	0.1407	1.0100e-003		0.0127	0.0127		0.0127	0.0127	0.0000	182.3868	182.3868	3.5000e-003	3.3400e-003	183.4707
Regional Shopping Center	26900	1.5000e-004	1.3200e-003	1.1100e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4355	1.4355	3.0000e-005	3.0000e-005	1.4440
Total		**0.0523**	**0.4628**	**0.3077**	**2.8600e-003**		**0.0361**	**0.0361**		**0.0361**	**0.0361**	**0.0000**	**517.4357**	**517.4357**	**9.9200e-003**	**9.4800e-003**	**520.5105**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.66874e+006	485.4560	0.0220	4.5400e-003	487.3582
Enclosed Parking with Elevator	236336	68.7528	3.1100e-003	6.4000e-004	69.0222
General Office Building	1.2376e+006	360.0320	0.0163	3.3700e-003	361.4427
High Turnover (Sit Down Restaurant)	616800	179.4342	8.1100e-003	1.6800e-003	180.1373
Regional Shopping Center	60700	17.6583	8.0000e-004	1.7000e-004	17.7275
Total		**1,111.3334**	**0.0503**	**0.0104**	**1,115.6879**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.66874e+006	485.4560	0.0220	4.5400e-003	487.3582

Enclosed Parking with Elevator	236336	68.7528	3.1100e-003	6.4000e-004	69.0222
General Office Building	1.2376e+006	360.0320	0.0163	3.3700e-003	361.4427
High Turnover (Sit Down Restaurant)	616800	179.4342	8.1100e-003	1.6800e-003	180.1373
Regional Shopping Center	60700	17.6583	8.0000e-004	1.7000e-004	17.7275
Total		**1,111.3334**	**0.0503**	**0.0104**	**1,115.6879**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	3.3992	0.0944	5.1385	2.8400e-003		0.1960	0.1960		0.1960	0.1960	18.1648	36.5698	54.7346	0.0423	1.5500e-003	56.2552
Unmitigated	3.3992	0.0944	5.1385	2.8400e-003		0.1960	0.1960		0.1960	0.1960	18.1648	36.5698	54.7346	0.0423	1.5500e-003	56.2552

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	0.5210					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.8456					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.8639	0.0415	1.2444	2.6700e-003		0.1795	0.1795		0.1795	0.1795	18.1648	31.0850	49.2498	0.0336	1.5500e-003	50.5506
Landscaping	0.1686	0.0529	3.8940	1.8000e-004		0.0164	0.0164		0.0164	0.0164	0.0000	5.4848	5.4848	8.7900e-003	0.0000	5.7046
Total	**3.3992**	**0.0944**	**5.1385**	**2.8500e-003**		**0.1959**	**0.1959**		**0.1959**	**0.1959**	**18.1648**	**36.5698**	**54.7346**	**0.0423**	**1.5500e-003**	**56.2552**

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	0.5210					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.8456					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.8639	0.0415	1.2444	2.6700e-003		0.1795	0.1795		0.1795	0.1795	18.1648	31.0850	49.2498	0.0336	1.5500e-003	50.5506
Landscaping	0.1686	0.0529	3.8940	1.8000e-004		0.0164	0.0164		0.0164	0.0164	0.0000	5.4848	5.4848	8.7900e-003	0.0000	5.7046
Total	**3.3992**	**0.0944**	**5.1385**	**2.8500e-003**		**0.1959**	**0.1959**		**0.1959**	**0.1959**	**18.1648**	**36.5698**	**54.7346**	**0.0423**	**1.5500e-003**	**56.2552**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	127.2775	0.0670	0.0403	140.9510
Unmitigated	127.2775	0.0670	0.0403	140.9510

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	29.4496 / 18.5661	75.6804	0.0388	0.0233	83.5849
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000

General Office Building	15.1074 / 9.25935	38.5536	0.0199	0.0119	42.6075
High Turnover (Sit Down Restaurant)	6.07067 / 0.38749	12.0983	7.8400e-003	4.7600e-003	13.7140
Regional Shopping Center	0.370363 / 0.226996	0.9452	4.9000e-004	2.9000e-004	1.0445
Total		**127.2775**	**0.0670**	**0.0403**	**140.9510**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	29.4496 / 18.5661	75.6804	0.0388	0.0233	83.5849
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	15.1074 / 9.25935	38.5536	0.0199	0.0119	42.6075
High Turnover (Sit Down Restaurant)	6.07067 / 0.38749	12.0983	7.8400e-003	4.7600e-003	13.7140
Regional Shopping Center	0.370363 / 0.226996	0.9452	4.9000e-004	2.9000e-004	1.0445
Total		**127.2775**	**0.0670**	**0.0403**	**140.9510**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	107.6299	6.3607	0.0000	266.6484
Unmitigated	107.6299	6.3607	0.0000	266.6484

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	207.92	42.2059	2.4943	0.0000	104.5633
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	79.05	16.0464	0.9483	0.0000	39.7544
High Turnover (Sit Down Restaurant)	238	48.3119	2.8552	0.0000	119.6906
Regional Shopping Center	5.25	1.0657	0.0630	0.0000	2.6402
Total		**107.6299**	**6.3608**	**0.0000**	**266.6484**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	207.92	42.2059	2.4943	0.0000	104.5633
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	79.05	16.0464	0.9483	0.0000	39.7544
High Turnover (Sit Down Restaurant)	238	48.3119	2.8552	0.0000	119.6906
Regional Shopping Center	5.25	1.0657	0.0630	0.0000	2.6402
Total		**107.6299**	**6.3608**	**0.0000**	**266.6484**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	400	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Total	**0.0164**	**0.0459**	**0.0418**	**8.0000e-005**		**2.4100e-003**	**2.4100e-003**		**2.4100e-003**	**2.4100e-003**	**0.0000**	**7.6159**	**7.6159**	**1.0700e-003**	**0.0000**	**7.6426**

11.0 Vegetation

1900 Broadway - Alameda County, Annual

1900 Broadway

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	85.00	1000sqft	0.00	85,000.00	0
Enclosed Parking with Elevator	35.07	1000sqft	0.00	35,070.00	0
High Turnover (Sit Down Restaurant)	20.00	1000sqft	0.00	20,000.00	0
Apartments High Rise	452.00	Dwelling Unit	0.93	361,993.00	814
Regional Shopping Center	5.00	1000sqft	0.00	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E emission factor for 2020

Land Use - Project data

Construction Phase - Project data

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Off-road Equipment - Project data from applicant

Trips and VMT - Data from project applicant

Demolition -

Grading - Project data from applicant

Architectural Coating - Pre-fab panels to be used for exterior finishing

Vehicle Trips - Adjusted based on project traffic report

Woodstoves - No woodstoves assumed
CalEEMod default number of fireplaces assumed - all gas fired

Area Coating - Pre-fab panels used for exterior finishing

Water And Wastewater - 20% reduction in indoor water use assumed in compliance with CalGreen code
100% aerobic treatment of wastewater assumed

Construction Off-road Equipment Mitigation - Tier 4 Final equipment assument in compliance with BACT requirements of SCA-19(w)

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	55,000.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	244,345.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	55000	0
tblAreaCoating	Area_Residential_Exterior	244345	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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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
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tblConstructionPhase	NumDays	100.00	522.00
tblConstructionPhase	NumDays	10.00	57.00
tblConstructionPhase	NumDays	2.00	56.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	1.00	23.00
tblFireplaces	NumberGas	67.80	312.00
tblFireplaces	NumberNoFireplace	18.08	140.00
tblFireplaces	NumberWood	76.84	0.00

tblGrading	AcresOfGrading	4.90	0.93
tblGrading	AcresOfGrading	0.00	0.93
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialImported	0.00	5,000.00
tblLandUse	LandUseSquareFeet	452,000.00	361,993.00
tblLandUse	LotAcreage	1.95	0.00
tblLandUse	LotAcreage	0.81	0.00
tblLandUse	LotAcreage	0.46	0.00
tblLandUse	LotAcreage	7.29	0.93
tblLandUse	LotAcreage	0.11	0.00
tblLandUse	Population	1,293.00	814.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
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tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00

tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
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tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripNumber	68.00	285.00
tblTripsAndVMT	HaulingTripNumber	0.00	2,610.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	73.00	15.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	23.00	20.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblTripsAndVMT	WorkerTripNumber	379.00	300.00
tblVehicleTrips	ST_TR	4.98	4.16
tblVehicleTrips	ST_TR	2.46	1.78
tblVehicleTrips	ST_TR	158.37	67.28
tblVehicleTrips	ST_TR	49.97	23.49
tblVehicleTrips	SU_TR	3.65	3.05
tblVehicleTrips	SU_TR	1.05	0.76
tblVehicleTrips	SU_TR	131.84	56.01
tblVehicleTrips	SU_TR	25.24	11.87
tblVehicleTrips	WD_TR	4.20	3.51
tblVehicleTrips	WD_TR	11.03	7.98
tblVehicleTrips	WD_TR	127.15	54.01

tblVehicleTrips	WD_TR	42.70	20.08
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	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	IndoorWaterUseRate	29,449,619.58	23,559,695.66
tblWater	IndoorWaterUseRate	15,107,368.58	12,085,894.86
tblWater	IndoorWaterUseRate	6,070,674.25	4,856,539.40
tblWater	IndoorWaterUseRate	370,362.61	296,290.09
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
tblWoodstoves	NumberCatalytic	9.04	0.00
tblWoodstoves	NumberNoncatalytic	9.04	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated 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	2.1605	0.0725	3.3791	3.9000e-004		0.0213	0.0213		0.0213	0.0213	0.0000	44.4347	44.4347	6.0700e-003	7.1000e-004	44.7991
Energy	0.0484	0.4281	0.2843	2.6400e-003		0.0334	0.0334		0.0334	0.0334	0.0000	979.4391	979.4391	0.0593	0.0191	986.6229
Mobile	0.9076	5.8193	9.3079	0.0324	2.3930	0.0321	2.4251	0.6433	0.0302	0.6735	0.0000	2,982.6429	2,982.6429	0.1413	0.0000	2,986.1757
Stationary	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Waste						0.0000	0.0000		0.0000	0.0000	107.6299	0.0000	107.6299	6.3607	0.0000	266.6484
Water						0.0000	0.0000		0.0000	0.0000	14.4345	42.1328	56.5674	0.0539	0.0323	67.5289
Total	**3.1329**	**6.3657**	**13.0131**	**0.0355**	**2.3930**	**0.0892**	**2.4822**	**0.6433**	**0.0873**	**0.7306**	**122.0644**	**4,056.2655**	**4,178.3299**	**6.6223**	**0.0521**	**4,359.4177**

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	2.1605	0.0725	3.3791	3.9000e-004		0.0213	0.0213		0.0213	0.0213	0.0000	44.4347	44.4347	6.0700e-003	7.1000e-004	44.7991
Energy	0.0484	0.4281	0.2843	2.6400e-003		0.0334	0.0334		0.0334	0.0334	0.0000	979.4391	979.4391	0.0593	0.0191	986.6229
Mobile	0.9076	5.8193	9.3079	0.0324	2.3930	0.0321	2.4251	0.6433	0.0302	0.6735	0.0000	2,982.6429	2,982.6429	0.1413	0.0000	2,986.1757
Stationary	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Waste						0.0000	0.0000		0.0000	0.0000	107.6299	0.0000	107.6299	6.3607	0.0000	266.6484
Water						0.0000	0.0000		0.0000	0.0000	14.4345	42.1328	56.5674	0.0539	0.0323	67.5289
Total	**3.1329**	**6.3657**	**13.0131**	**0.0355**	**2.3930**	**0.0892**	**2.4822**	**0.6433**	**0.0873**	**0.7306**	**122.0644**	**4,056.2655**	**4,178.3299**	**6.6223**	**0.0521**	**4,359.4177**

	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	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	0.9076	5.8193	9.3079	0.0324	2.3930	0.0321	2.4251	0.6433	0.0302	0.6735	0.0000	2,982.6429	2,982.6429	0.1413	0.0000	2,986.1757
Unmitigated	0.9076	5.8193	9.3079	0.0324	2.3930	0.0321	2.4251	0.6433	0.0302	0.6735	0.0000	2,982.6429	2,982.6429	0.1413	0.0000	2,986.1757

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	1,586.52	1,880.32	1378.60	3,692,574	3,692,574
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	678.30	151.30	64.60	1,231,542	1,231,542
High Turnover (Sit Down Restaurant)	1,080.20	1,345.60	1120.20	1,303,938	1,303,938
Regional Shopping Center	100.40	117.45	59.35	170,020	170,020
Total	3,445.42	3,494.67	2,622.75	6,398,075	6,398,075

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.559358	0.040058	0.190549	0.109335	0.016678	0.005213	0.023344	0.044042	0.002152	0.002669	0.005545	0.000316	0.000739
Enclosed Parking with Elevator	0.559358	0.040058	0.190549	0.109335	0.016678	0.005213	0.023344	0.044042	0.002152	0.002669	0.005545	0.000316	0.000739
General Office Building	0.559358	0.040058	0.190549	0.109335	0.016678	0.005213	0.023344	0.044042	0.002152	0.002669	0.005545	0.000316	0.000739
High Turnover (Sit Down Restaurant)	0.559358	0.040058	0.190549	0.109335	0.016678	0.005213	0.023344	0.044042	0.002152	0.002669	0.005545	0.000316	0.000739

Regional Shopping Center	0.559358	0.040058	0.190549	0.109335	0.016678	0.005213	0.023344	0.044042	0.002152	0.002669	0.005545	0.000316	0.000739

5.0 Energy Detail

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	500.7335	500.7335	0.0501	0.0104	505.0726
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	500.7335	500.7335	0.0501	0.0104	505.0726
NaturalGas Mitigated	0.0484	0.4281	0.2843	2.6400e-003		0.0334	0.0334		0.0334	0.0334	0.0000	478.7056	478.7056	9.1800e-003	8.7800e-003	481.5503
NaturalGas Unmitigated	0.0484	0.4281	0.2843	2.6400e-003		0.0334	0.0334		0.0334	0.0334	0.0000	478.7056	478.7056	9.1800e-003	8.7800e-003	481.5503

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					
Apartments High Rise	3.94615e+006	0.0213	0.1818	0.0774	1.1600e-003		0.0147	0.0147		0.0147	0.0147	0.0000	210.5818	210.5818	4.0400e-003	3.8600e-003	211.8332
Enclosed Parking with Elevator	0	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
General Office Building	1.64305e+006	8.8600e-003	0.0805	0.0677	4.8000e-004		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	87.6794	87.6794	1.6800e-003	1.6100e-003	88.2004
High Turnover (Sit Down Restaurant)	3.3584e+006	0.0181	0.1646	0.1383	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	179.2170	179.2170	3.4300e-003	3.2900e-003	180.2820
Regional Shopping Center	23000	1.2000e-004	1.1300e-003	9.5000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2274	1.2274	2.0000e-005	2.0000e-005	1.2347
Total		**0.0484**	**0.4281**	**0.2843**	**2.6400e-003**		**0.0334**	**0.0334**		**0.0334**	**0.0334**	**0.0000**	**478.7056**	**478.7056**	**9.1700e-003**	**8.7800e-003**	**481.5503**

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					
Apartments High Rise	3.94615e+006	0.0213	0.1818	0.0774	1.1600e-003		0.0147	0.0147		0.0147	0.0147	0.0000	210.5818	210.5818	4.0400e-003	3.8600e-003	211.8332
Enclosed Parking with Elevator	0	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
General Office Building	1.64305e+006	8.8600e-003	0.0805	0.0677	4.8000e-004		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	87.6794	87.6794	1.6800e-003	1.6100e-003	88.2004
High Turnover (Sit Down Restaurant)	3.3584e+006	0.0181	0.1646	0.1383	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	179.2170	179.2170	3.4300e-003	3.2900e-003	180.2820
Regional Shopping Center	23000	1.2000e-004	1.1300e-003	9.5000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2274	1.2274	2.0000e-005	2.0000e-005	1.2347
Total		**0.0484**	**0.4281**	**0.2843**	**2.6400e-003**		**0.0334**	**0.0334**		**0.0334**	**0.0334**	**0.0000**	**478.7056**	**478.7056**	**9.1700e-003**	**8.7800e-003**	**481.5503**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.90834e+006	251.0264	0.0251	5.1900e-003	253.2017
Enclosed Parking with Elevator	205510	27.0332	2.7000e-003	5.6000e-004	27.2674
General Office Building	1.0608e+006	139.5395	0.0140	2.8900e-003	140.7487
High Turnover (Sit Down Restaurant)	579600	76.2416	7.6200e-003	1.5800e-003	76.9023
Regional Shopping Center	52400	6.8928	6.9000e-004	1.4000e-004	6.9525
Total		**500.7335**	**0.0501**	**0.0104**	**505.0726**

Mitigated

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

Apartments High Rise	1.90834e+006	251.0264	0.0251	5.1900e-003	253.2017
Enclosed Parking with Elevator	205510	27.0332	2.7000e-003	5.6000e-004	27.2674
General Office Building	1.0608e+006	139.5395	0.0140	2.8900e-003	140.7487
High Turnover (Sit Down Restaurant)	579600	76.2416	7.6200e-003	1.5800e-003	76.9023
Regional Shopping Center	52400	6.8928	6.9000e-004	1.4000e-004	6.9525
Total		**500.7335**	**0.0501**	**0.0104**	**505.0726**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	2.1605	0.0725	3.3791	3.9000e-004		0.0213	0.0213		0.0213	0.0213	0.0000	44.4347	44.4347	6.0700e-003	7.1000e-004	44.7991
Unmitigated	2.1605	0.0725	3.3791	3.9000e-004		0.0213	0.0213		0.0213	0.0213	0.0000	44.4347	44.4347	6.0700e-003	7.1000e-004	44.7991

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	0.2089					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.8456					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.9400e-003	0.0336	0.0143	2.1000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003	0.0000	38.9499	38.9499	7.5000e-004	7.1000e-004	39.1813
Landscaping	0.1020	0.0388	3.3648	1.8000e-004		0.0186	0.0186		0.0186	0.0186	0.0000	5.4848	5.4848	5.3200e-003	0.0000	5.6178
Total	**2.1605**	**0.0725**	**3.3791**	**3.9000e-004**		**0.0213**	**0.0213**		**0.0213**	**0.0213**	**0.0000**	**44.4347**	**44.4347**	**6.0700e-003**	**7.1000e-004**	**44.7991**

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	0.2089					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.8456					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.9400e-003	0.0336	0.0143	2.1000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003	0.0000	38.9499	38.9499	7.5000e-004	7.1000e-004	39.1813
Landscaping	0.1020	0.0388	3.3648	1.8000e-004		0.0186	0.0186		0.0186	0.0186	0.0000	5.4848	5.4848	5.3200e-003	0.0000	5.6178
Total	**2.1605**	**0.0725**	**3.3791**	**3.9000e-004**		**0.0213**	**0.0213**		**0.0213**	**0.0213**	**0.0000**	**44.4347**	**44.4347**	**6.0700e-003**	**7.1000e-004**	**44.7991**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	56.5674	0.0539	0.0323	67.5289
Unmitigated	56.5674	0.0539	0.0323	67.5289

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	23.5597 / 18.5661	33.6524	0.0312	0.0187	39.9908
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000

General Office Building	12.0859 / 9.25935	17.1414	0.0160	9.5700e-003	20.3919
High Turnover (Sit Down Restaurant)	4.85654 / 0.38749	5.3534	6.2800e-003	3.8100e-003	6.6463
Regional Shopping Center	0.29629 / 0.226996	0.4202	3.9000e-004	2.3000e-004	0.4999
Total		**56.5674**	**0.0539**	**0.0323**	**67.5289**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	23.5597 / 18.5661	33.6524	0.0312	0.0187	39.9908
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	12.0859 / 9.25935	17.1414	0.0160	9.5700e-003	20.3919
High Turnover (Sit Down Restaurant)	4.85654 / 0.38749	5.3534	6.2800e-003	3.8100e-003	6.6463
Regional Shopping Center	0.29629 / 0.226996	0.4202	3.9000e-004	2.3000e-004	0.4999
Total		**56.5674**	**0.0539**	**0.0323**	**67.5289**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	107.6299	6.3607	0.0000	266.6484
Unmitigated	107.6299	6.3607	0.0000	266.6484

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	207.92	42.2059	2.4943	0.0000	104.5633
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	79.05	16.0464	0.9483	0.0000	39.7544
High Turnover (Sit Down Restaurant)	238	48.3119	2.8552	0.0000	119.6906
Regional Shopping Center	5.25	1.0657	0.0630	0.0000	2.6402
Total		**107.6299**	**6.3608**	**0.0000**	**266.6484**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	207.92	42.2059	2.4943	0.0000	104.5633
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	79.05	16.0464	0.9483	0.0000	39.7544
High Turnover (Sit Down Restaurant)	238	48.3119	2.8552	0.0000	119.6906
Regional Shopping Center	5.25	1.0657	0.0630	0.0000	2.6402
Total		**107.6299**	**6.3608**	**0.0000**	**266.6484**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	400	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Total	**0.0164**	**0.0459**	**0.0418**	**8.0000e-005**		**2.4100e-003**	**2.4100e-003**		**2.4100e-003**	**2.4100e-003**	**0.0000**	**7.6159**	**7.6159**	**1.0700e-003**	**0.0000**	**7.6426**

11.0 Vegetation

APPENDIX E

Shadow Study and Diagrams

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PREVISION DESIGN

REVISED DRAFT CEQA SHADOW SECTION: 1900 Broadway, Oakland

May 24, 2018

Shade and Shadow

Based on City of Oakland significance threshold criteria, potential adverse effects pertaining to shadow from new buildings within the downtown area of Oakland were considered as described below. Under City of Oakland thresholds of significance, a project would have a significant shadow impact if it would:

A. introduce landscape that would now or in the future cast substantial shadows on existing solar collectors;

B. cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors[1];

C. cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or

D. cast shadow on an historic resource[2] such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its designation as an historic resource.

A shadow analysis has been prepared for the project (Exhibits E.1-A1 to E.3-A3), which shows shadows that would be cast by the building at 9:00 a.m., 12:00 p.m., and 3:00 p.m. for the summer solstice (June 21st), spring/fall equinoxes (March 20th and September 22nd), and winter solstice (December 21st), based on City of Oakland significance threshold criteria.[3]

Additionally, graphics have been prepared showing the extents of net new shading that would be generated by future planned projects[4], the "cumulative condition", which are presented as Exhibits E.1-B1 to E.3-B3.

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[1] Solar collector locations determined by review of high-resolution Google Earth aerial photography, dated 10/7/2017.
[2] Local historic resources per city of Oakland Designated Landmarks webpage (http://www2.oaklandnet.com/government/o/PBN/OurServices/Historic/DOWD009012), and the Oakland Planning and Zoning Map, (http://oakgis.maps.arcgis.com/apps/webappviewer/index.html?id=3676148ea4924fc7b75e7350903c7224).
[3] Note the graphics presented herein relied on a previous and slightly smaller version of the 2018 Project. It differed only in the square footage of residential use (361,993 versus 381,480), number of stories (36 + rooftop amenity versus 38 + rooftop amenity), and height (376 feet to the upper roof versus 395 to the upper roof). However, these changes would not make a meaningful difference with respect to shadow impacts because, at the times depicted, no significant difference in shading cast on identified receptor sites would occur. The narrative description of shading effects reflects the current (taller) 2018 Project proposal.
[4] Cumulative condition projects based on Oakland Planning's Major Project's List, dated July 2017 (http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak065129.pdf).

Project Shading Effects:

The shadow analysis demonstrates that between the hours of 9am and 3pm, the project would cast net new shadow throughout the year westward across Rashida Muhammad Street between 19th and 20th streets, northwest across 22nd Street between San Pablo and Telegraph Avenues, northeast across the intersection of Franklin and 21st Streets, and eastward across 20th Street between Broadway and Franklin Street.

The project would not introduce any landscape elements that would affect solar collectors, however the building form would generate net new shadow that would affect public parks or open spaces, existing rooftop solar collectors and historic resources in the vicinity. The features and sites that are affected by net new shadow between the hours of 9am and 3pm are detailed below.

Public Parks or Open Spaces affected by net new shadow from the proposed project:

Henry J. Kaiser Memorial Park

Times of year new shading would occur:	Mid-February though late April and mid-August through late-October
Range of times affected throughout the year:	Between approximately 9am and 9:35am
Shading Effects during Summer Months:	In late August, small amounts of new shadow would fall in the southeastern corner of the park at 9am, but would be gone no later than 9:10am. The affected area includes a concrete sidewalk, a planting area and one fixed bench. The remainder of the summer would see no net new shadow from the project.
Shading Effects during Fall & Spring:	At 9am on the spring and fall equinoxes, new shadow would cover up to 80% of the park area, however this shadow would recede to the east and leave the park by approximately 9:35am. During the early spring and late fall the amount of park area affected by shade would fall to under 15% and the duration of new shadow would fall to 20 minutes or less.
Shading Effects during Winter Months:	No net new shadow.
Shading Significance:	The project's net new shadow would be present primarily during the spring and fall, affecting only a short duration in the morning. Although at certain times, the project's largest shadows would cover a large area of the park, the short duration of such coverage would not substantially impair the beneficial use of park, and as such would not be considered a significant impact.

No other known public open spaces in the vicinity would be affected by net new shadow from the proposed project.

Sites affected by net new shadow from the proposed project on solar collectors:

618 21st Street Rooftop Solar Panels

Times of year new shading would occur:	A few days around December 21st (winter solstice)
Range of times affected throughout the year:	Between 9am and approximately 9:05am
Shading Effects during Summer Months:	No net new shadow.
Shading Effects during Fall & Spring:	No net new shadow.
Shading Effects during Winter Months:	On the winter solstice, solar panels would be affected at 9am for a few minutes before shadows would move eastward off the panels. No new shadow would be cast other than a few dates around the solstice.
Shading Significance:	The project's net new shadow would affect existing solar panels for an extremely short duration for only a few days a year, and at times when solar panel efficiency would be lower than at other times of the day or year. The presence of new shading would not substantially impair the functioning of the solar panels and, therefore, the Project shading would not be considered a significant impact.

No other known solar collectors in the vicinity would be affected by net new shadow from the proposed project.

Historic resources affected by net new shadow from the proposed project:

641 22nd Street (#3)

Times of year shading would occur:	From approximately mid-December through early January
Range of times affected throughout the year:	Between 9am and approximately 9:10am
Shading Effects during Summer Months:	No net new shadow.
Shading Effects during Fall & Spring:	No net new shadow.
Shading Effects during Winter Months:	For approximately 4 weeks around the winter solstice, net new shadow would be cast over the rooftop at 9am on the winter solstice. Project shadow would move eastward off the building until no new shading would be present by around 9:10am.
Shading Significance	The presence of new shadow would not materially alter the physical characteristics of the resource that convey its historical significance, and therefore would not be considered a significant impact.

1807 Telegraph (Fox Theatre) (#5)

Times of year shading would occur:	From approximately early April through early September
Range of times affected throughout the year:	Between 9am and approximately 9:45am
Shading Effects during Summer Months:	New shadow would be cast over the northern portion of the eastern street facade at 9am on the summer solstice. Project shadow would move eastward off the building until no new shading would be present by around 9:30am. In the early and late summer, shading would be more concentrated on the northeast corner of the building and along the northern street façade, and on those dates, would recede more slowly and leave the northwest corner as late as 9:45.
Shading Effects during Fall & Spring:	A very small amount of new shadow would be cast along a portion of the building's northern street façade for a few minutes in the late spring and early fall. Other times during the fall and spring would be unaffected.
Shading Effects during Winter Months:	No net new shadow.

1807 Telegraph (Fox Theatre) (#5)

Shading Significance	The presence of new shadow would not materially alter the physical characteristics of the resource that convey its historical significance, and therefore would not be considered a significant impact.

518 20th Street (Great Western Power Company building) (#6)

Times of year shading would occur:	From approximately mid-October through mid-February
Range of times affected throughout the year:	Between 9am and approximately 10:30am
Shading Effects during Summer Months:	No net new shadow
Shading Effects during Fall & Spring:	No net new shadow
Shading Effects during Winter Months:	On the winter solstice, rooftop areas would be shaded at 9am with shadow moving off the rooftop by around 10am. In the early and late winter shadow would arrive on the building between 9:15 and 9:45am and move off the rooftop by approximately 10:30am.
Shading Significance	The presence of new shadow would not materially alter the physical characteristics of the resource that convey its historical significance, and therefore would not be considered a significant impact.

2101 Telegraph (Hamilton Apartments) (#7)

Times of year shading would occur:	From approximately late November through mid-January
Range of times affected throughout the year:	Between approximately 9:35am through 10:40am
Shading Effects during Summer Months:	No net new shadow
Shading Effects during Fall & Spring:	No net new shadow

2101 Telegraph (Hamilton Apartments) (#7)

Shading Effects during Winter Months:	On the winter solstice, portions of the southern facade would start being affected by shadow by around 9:35am with the shadow moving across the lower half of the façade eastward until moving off the building by around 10:40am. Shadow effects during early and late winter would occur over the roughly the same period, but affect a smaller, lower portion of the street facade.
Shading Significance	The presence of new shadow would not materially alter the physical characteristics of the resource that convey its historical significance, and therefore would not be considered a significant impact.

1910 Telegraph (Oakland Floral Depot Building) (#20)

Times of year shading would occur:	From approximately mid-March through early October
Range of times affected throughout the year:	Between 9am and approximately 10:40am
Shading Effects during Summer Months:	On the summer solstice, project shadow would cover the entire rooftop at 9am, then move eastward off the building and be gone by approximately 10:40 am. In the early and late summer shading patterns and timing would be similar, except that a portion of the southern edge of the roof would not be shaded.
Shading Effects during Fall & Spring:	On the equinoxes, a small amount of shadow would be present along the northern edge of the rooftop at 9am, moving off the building prior to 9:30am. Shading effects in the late spring and early fall would be similar to those in the early and late summer, and no net new shadow would be present in the late fall or early spring.
Shading Effects during Winter Months:	No net new shadow
Shading Significance	The presence of new shadow would not materially alter the physical characteristics of the resource that convey its historical significance, and therefore would not be considered a significant impact.

1935 Broadway (#11)

Times of year shading would occur:	Year-round
Range of times affected throughout the year:	Between 9am and approximately 12:10pm

1935 Broadway (#11)

Shading Effects during Summer Months:	On the summer solstice, the eastern street façade and the entire roof area would be shaded at 9am, with shadow beginning to move off the building by around 11am and gone by 12:10pm. In the early and late summer, the shading pattern would be similar, save for the shadow moving off the building starting around 10:30am.
Shading Effects during Fall & Spring:	On the equinoxes, the western portion of the roof area would receive net new shadow at 9am, with shadow growing to cover most of the rooftop and eastern street façade by around 9:45am. Between 9:45am and 11:45am the shadow would progressively move off the building to the north. In the early and late fall and spring, the northern half of the rooftop and eastern street façade would be affected at 9am, with shading moving off the building by around 11:45am.
Shading Effects during Winter Months:	On the winter solstice, a small rooftop area at the northeastern corner of the building would be shaded between 9am and approximately 9:40am. Shadow effects during early and late winter would be similar to shading cast in late fall and early spring.
Shading Significance	The presence of new shadow would not materially alter the physical characteristics of the resource that convey its historical significance, and therefore would not be considered a significant impact.

2025 Broadway (Broadway Theatre) (#12)

Times of year shading would occur:	From approximately late-October through mid-February
Range of times affected throughout the year:	Between 10:10am and approximately 1:40pm
Shading Effects during Summer Months:	No net new shadow.
Shading Effects during Fall & Spring:	No net new shadow.

2025 Broadway (Broadway Theatre) (#12)

Shading Effects during Winter Months:	On the winter solstice, the western portion of the southern side of the building would start being affected by shadow by around 10:20am and would increase in coverage and move eastward until approximately 11:30am when it would cover approximately half of the southern façade as well as roof area. Between 11:30pm and 1:15pm the net new shadow would continue to move eastward, affecting the eastern street façade between around 12:10pm through 1:15pm. Shadow effects during early and late winter would be similar however would affect a smaller portion of the rooftop, southern, and eastern facades.
Shading Significance	The presence of new shadow would not materially alter the physical characteristics of the resource that convey its historical significance, and therefore would not be considered a significant impact.

No other historic resources in the vicinity would be affected by net new shadow from the proposed project, including 2201 Telegraph (the Oakland Burmese Mission Baptist Church). The longest shadows cast by the proposed project in the direction of 2201 Telegraph would occur on 12/21 at approximately 11am, and would fall approximately 180' short of reaching the building.

Project + Cumulative Shading Effects:

The cumulative conditions analysis assesses the project's potential impacts along with other proposed projects in the vicinity that have the potential to cast shadow on sites affected by project shading. The following proposed projects were modeled and added to the analysis to identify possible shadow interaction between these projects and the proposed 1900 Broadway project:

1. 585 22nd Street
2. 2015 Telegraph Avenue
3. 2016 Telegraph Avenue
4. 2100 Telegraph (max envelope)
5. 2201 Valley Street
6. 1750 Broadway
7. 2044 Franklin
8. Kaiser Center
9. 2 Kaiser Plaza

At the times reviewed, many of these cumulative projects would generate net new shadow that would overlap with shadow cast by the project. Below is a discussion of how shading from these cumulative projects (if constructed) would affect the same receptor sites discussed in this section.

518 20th Street: At times where the proposed project casts net new shadow on this building, some of the same areas would be shaded by the cumulative project at 2015 Telegraph.

Broadway Theatre: Some winter midday shadow cast by 2016 Telegraph would overlap with shadow cast by the proposed project.

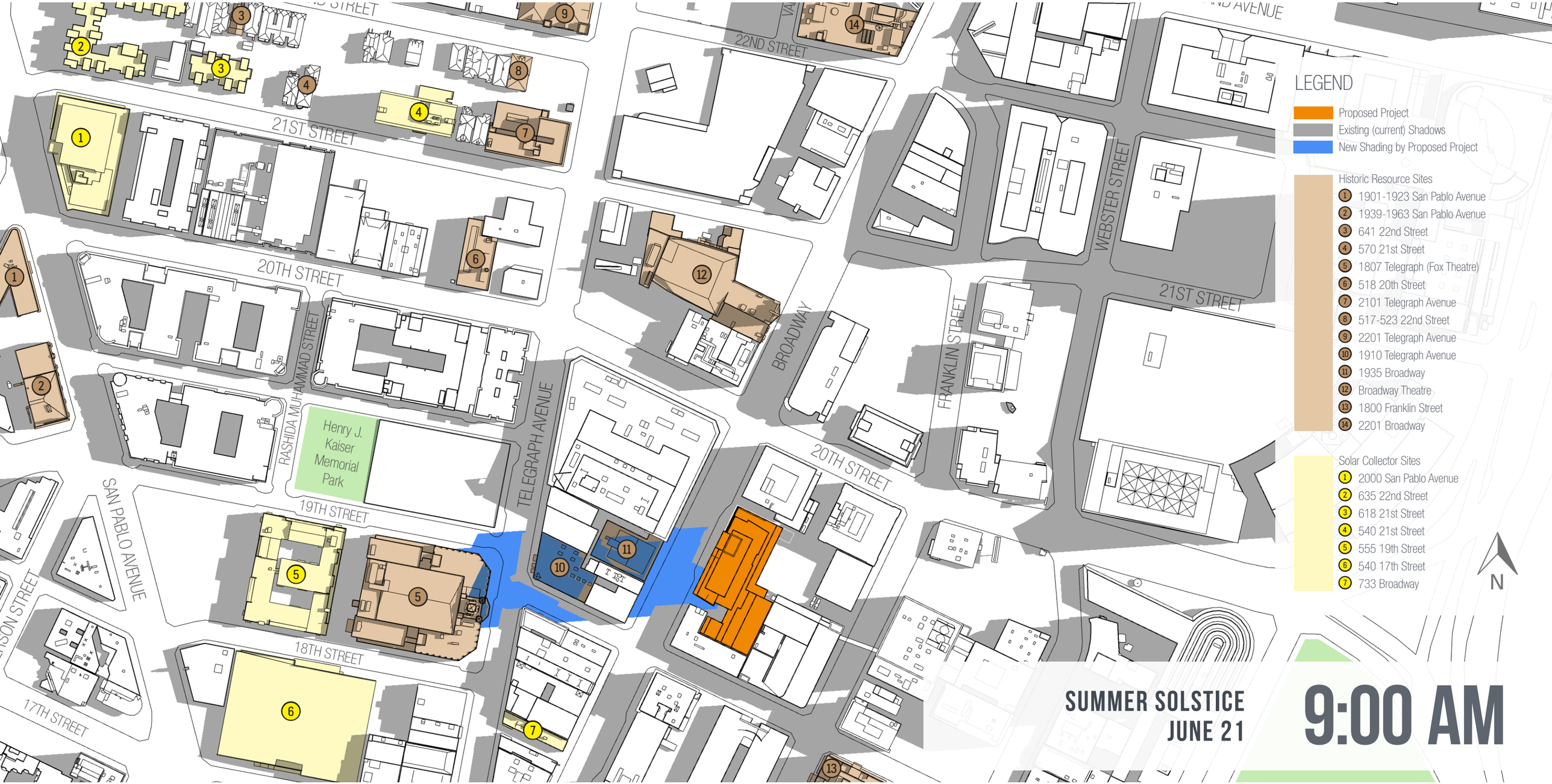
Conclusion:
Overall, based on the factors discussed in this section, shadow from the proposed project would not result in a significant impact.

PREVISION DESIGN

1900 BROADWAY

Shading diagrams on the Summer Solstice

E.1-A1



SUMMER SOLSTICE
JUNE 21

9:00 AM

PREVISION DESIGN

1900 BROADWAY + CUMULATIVE

Cumulative shading diagrams on the Summer Solstice

E.1-B1



SUMMER SOLSTICE
JUNE 21

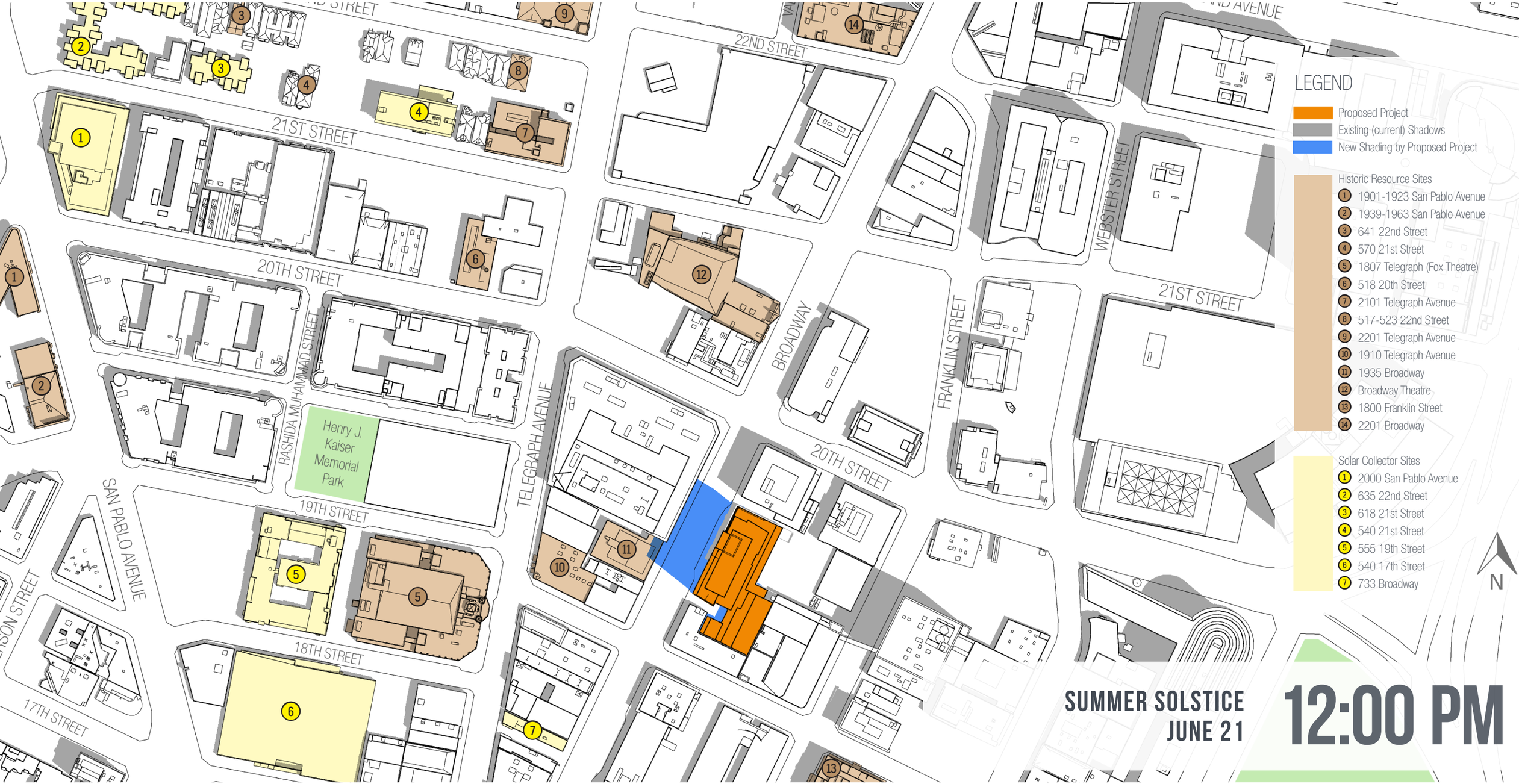
9:00 AM

PREVISION DESIGN

1900 BROADWAY

Shading diagrams on the Summer Solstice

E.1-A2



SUMMER SOLSTICE
JUNE 21

12:00 PM

PREVISION DESIGN

1900 BROADWAY + CUMULATIVE

Cumulative shading diagrams on the Summer Solstice

E.1-B2



SUMMER SOLSTICE
JUNE 21

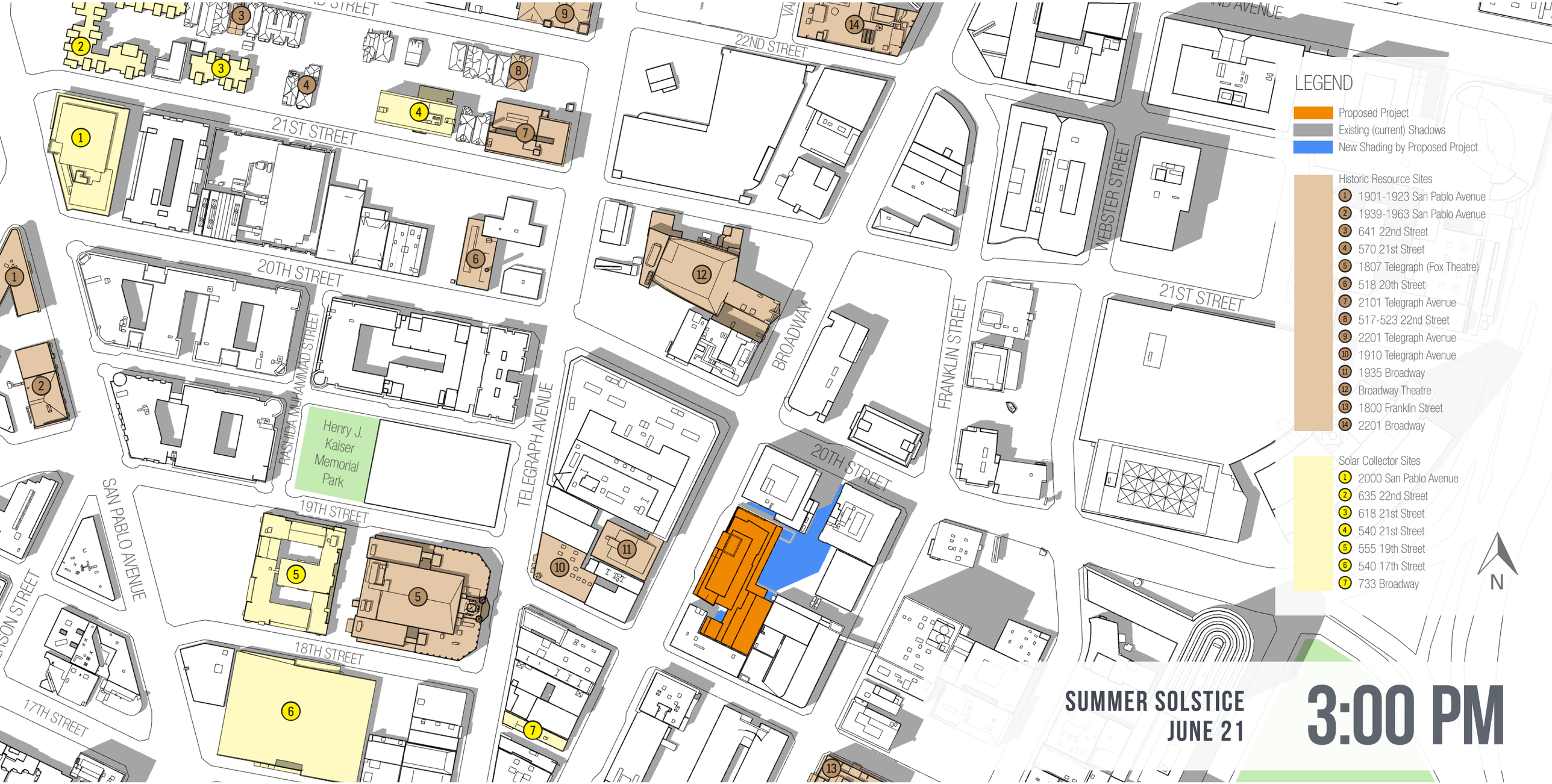
12:00 PM

PREVISION DESIGN

1900 BROADWAY

Shading diagrams on the Summer Solstice

E.1-A3



SUMMER SOLSTICE
JUNE 21

3:00 PM

PREVISION DESIGN

1900 BROADWAY + CUMULATIVE

Cumulative shading diagrams on the Summer Solstice

E.1-B3



Proposed Project

Existing (current) Shadows

New Shading by Proposed Project

New Shading from Cumulative Projects

Historic Resource Sites

1. 1901-1923 San Pablo Avenue
2. 1939-1963 San Pablo Avenue
3. 641 22nd Street
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6. 518 20th Street
7. 2101 Telegraph Avenue
8. 517-523 22nd Street
9. 2201 Telegraph Avenue
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11. 1935 Broadway
12. Broadway Theatre
13. 1800 Franklin Street
14. 2201 Broadway

Solar Collector Sites

1. 2000 San Pablo Avenue
2. 635 22nd Street
3. 618 21st Street
4. 540 21st Street
5. 555 19th Street
6. 540 17th Street
7. 733 Broadway

Cumulative Projects

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6. 1750 Broadway
7. 2044 Franklin
8. Kaiser Center
9. 2 Kaiser Plaza

N

SUMMER SOLSTICE
JUNE 21

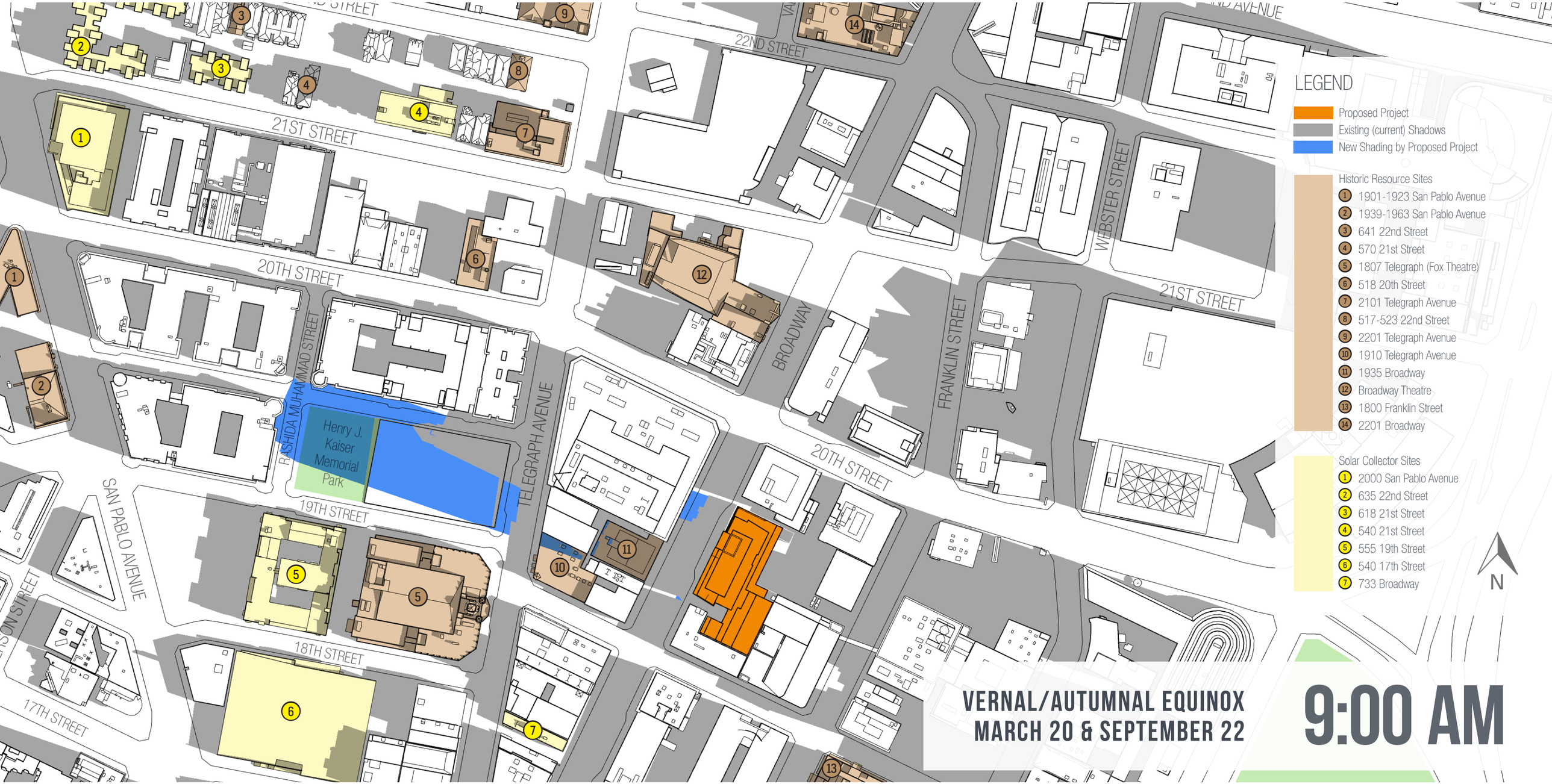
3:00 PM

PREVISION DESIGN

1900 BROADWAY

Shading diagrams on the Vernal/Autumnal Equinoxes

E.2-A1



VERNAL/AUTUMNAL EQUINOX
MARCH 20 & SEPTEMBER 22

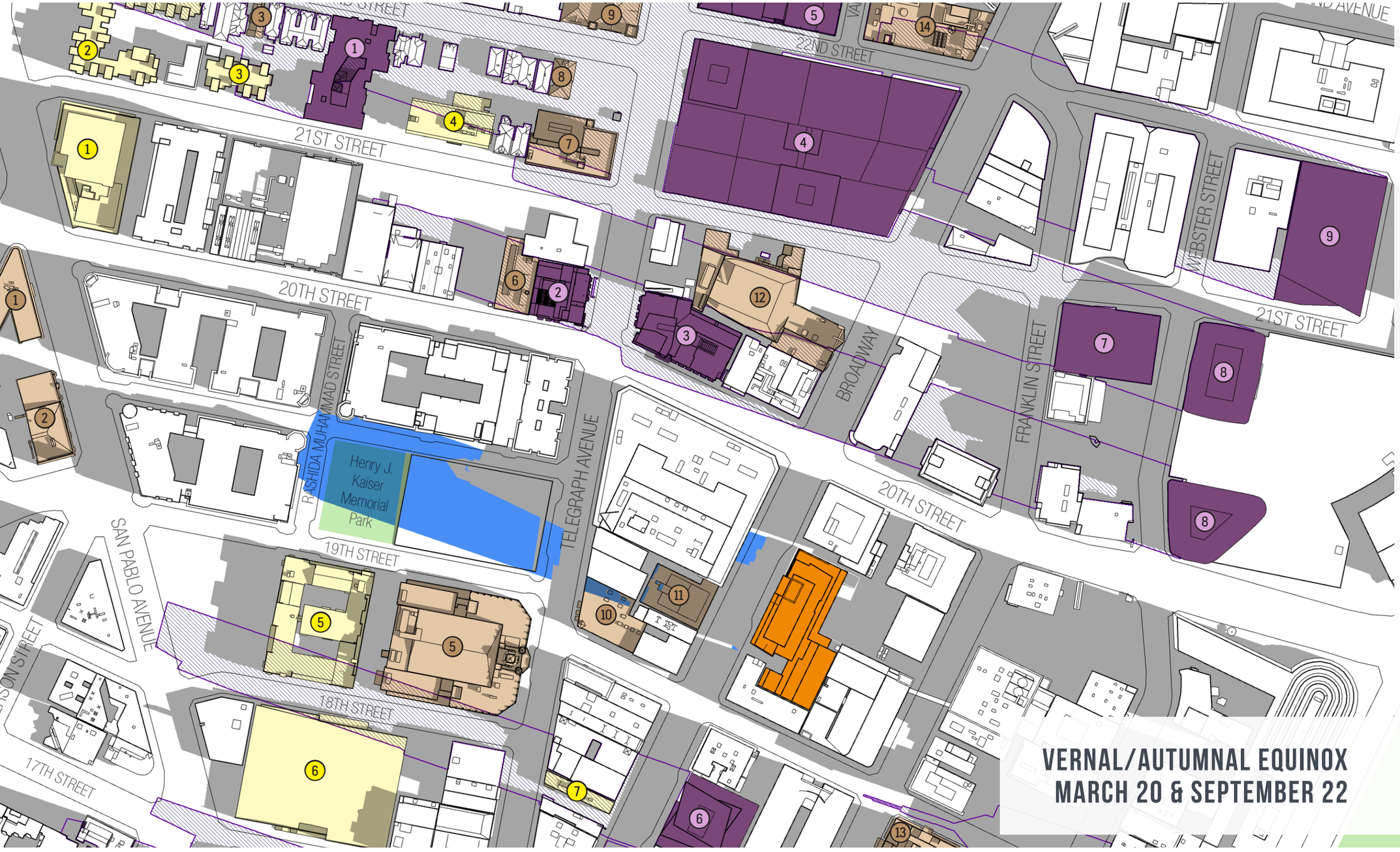
9:00 AM

PREVISION DESIGN

1900 BROADWAY + CUMULATIVE

Cumulative shading diagrams on the Vernal/Autumnal Equinoxes

E.2-B1



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VERNAL/AUTUMNAL EQUINOX
MARCH 20 & SEPTEMBER 22

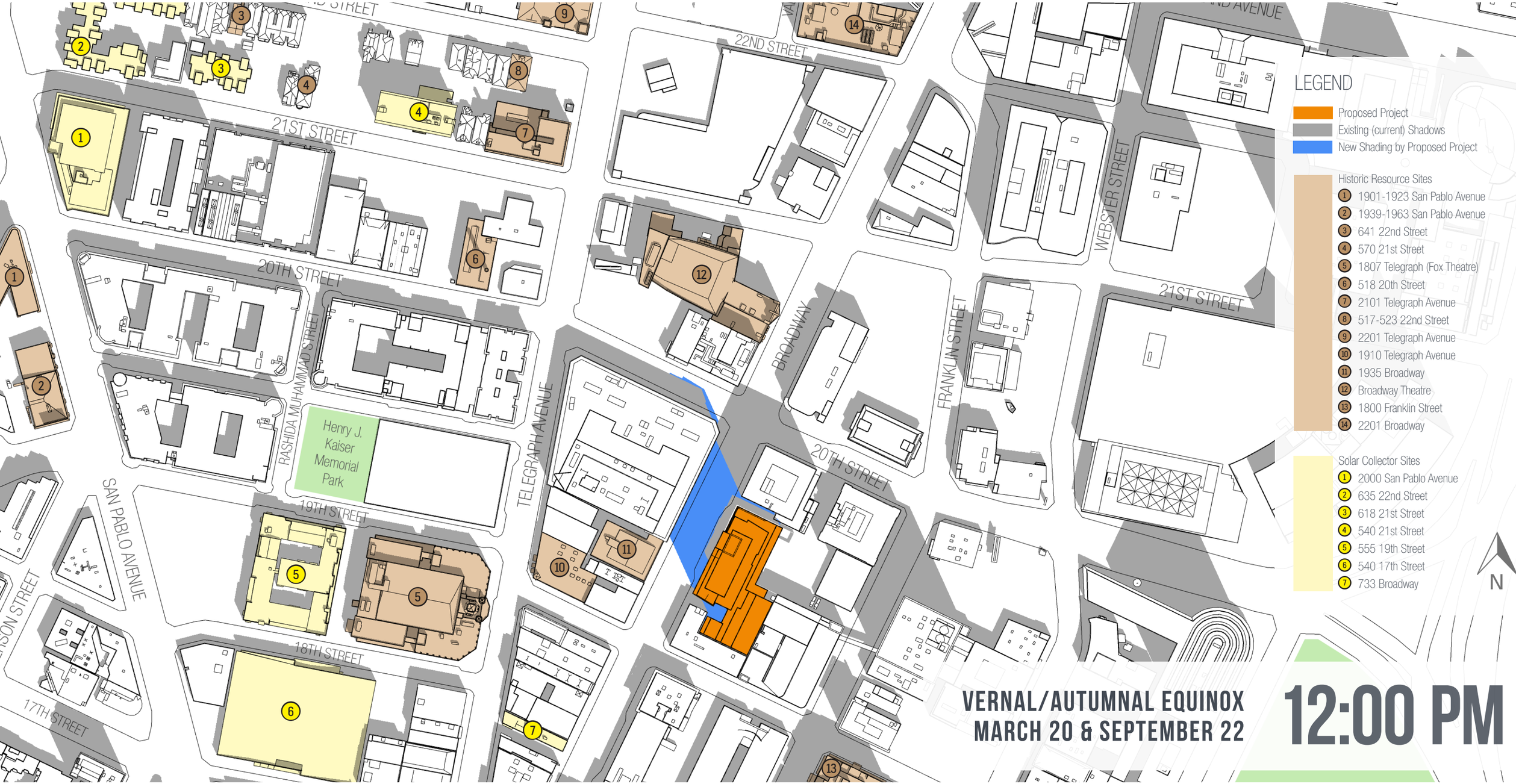
9:00 AM

PREVISION DESIGN

1900 BROADWAY

Shading diagrams on the Vernal/Autumnal Equinoxes

E.2-A2



VERNAL/AUTUMNAL EQUINOX
MARCH 20 & SEPTEMBER 22

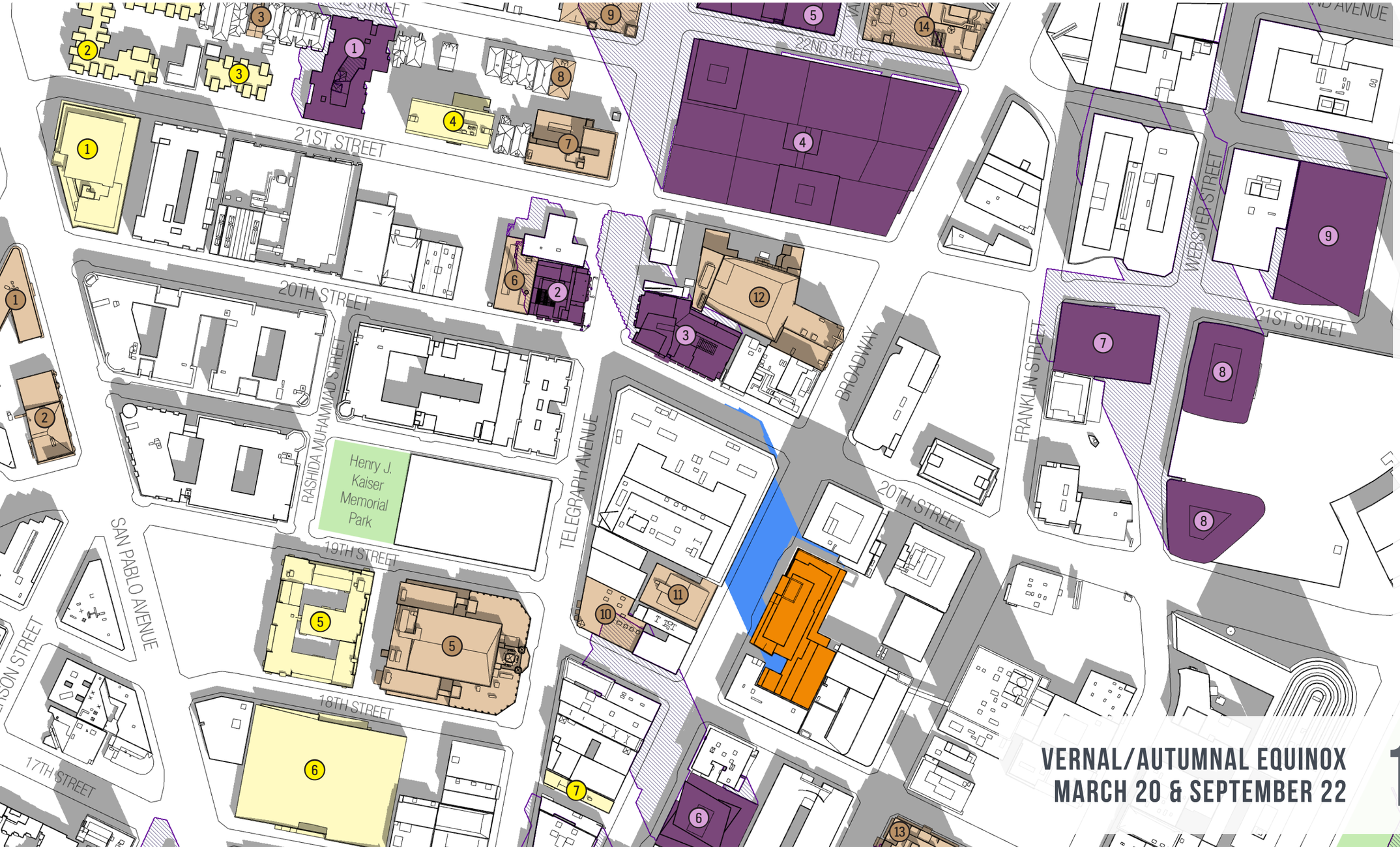
12:00 PM

PREVISION DESIGN

1900 BROADWAY + CUMULATIVE

Cumulative shading diagrams on the Vernal/Autumnal Equinoxes

E.2-B2



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VERNAL/AUTUMNAL EQUINOX
MARCH 20 & SEPTEMBER 22

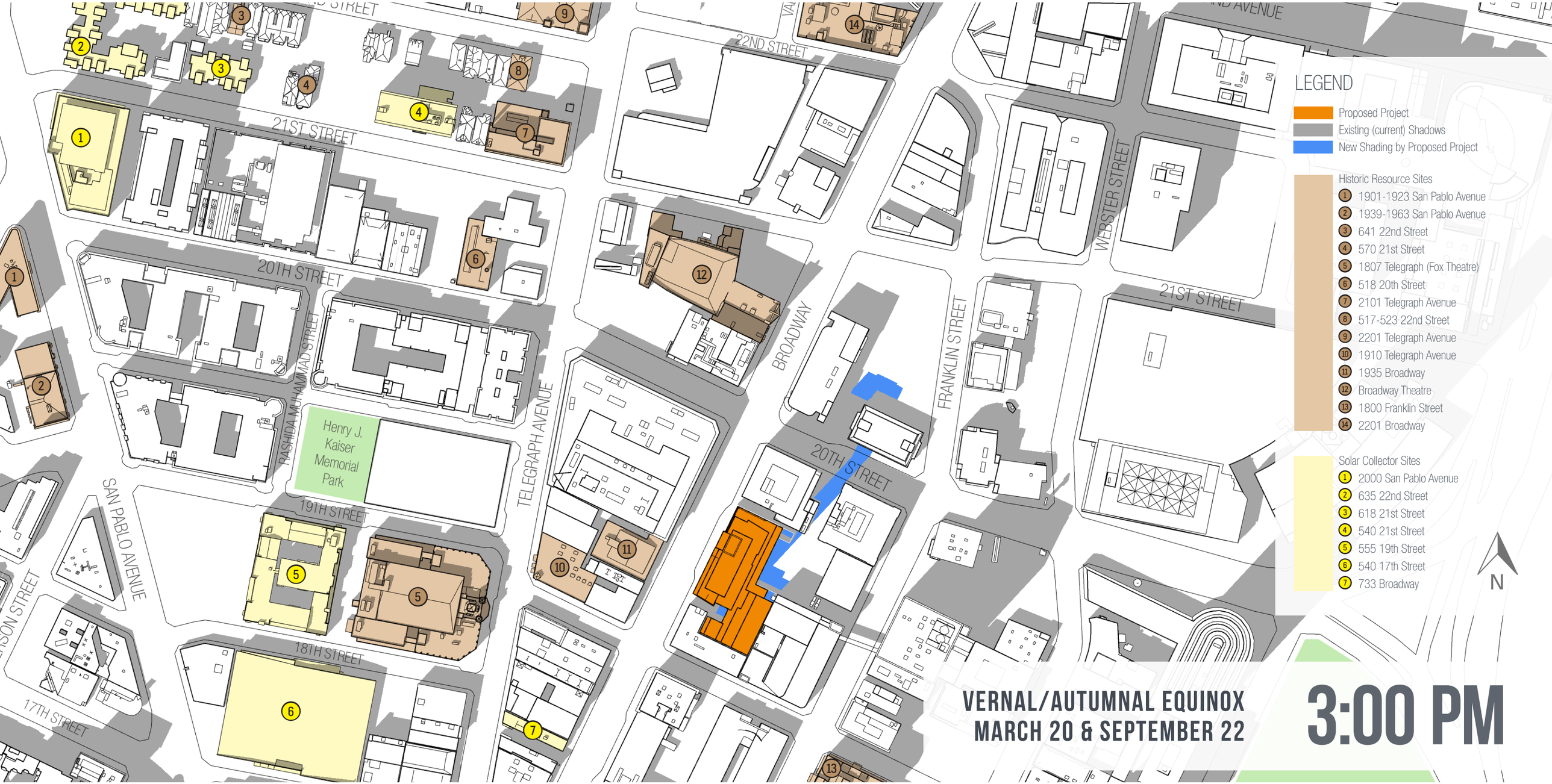
12:00 PM

PREVISION DESIGN

1900 BROADWAY

Shading diagrams on the Vernal/Autumnal Equinoxes

E.2-A3



VERNAL/AUTUMNAL EQUINOX
MARCH 20 & SEPTEMBER 22

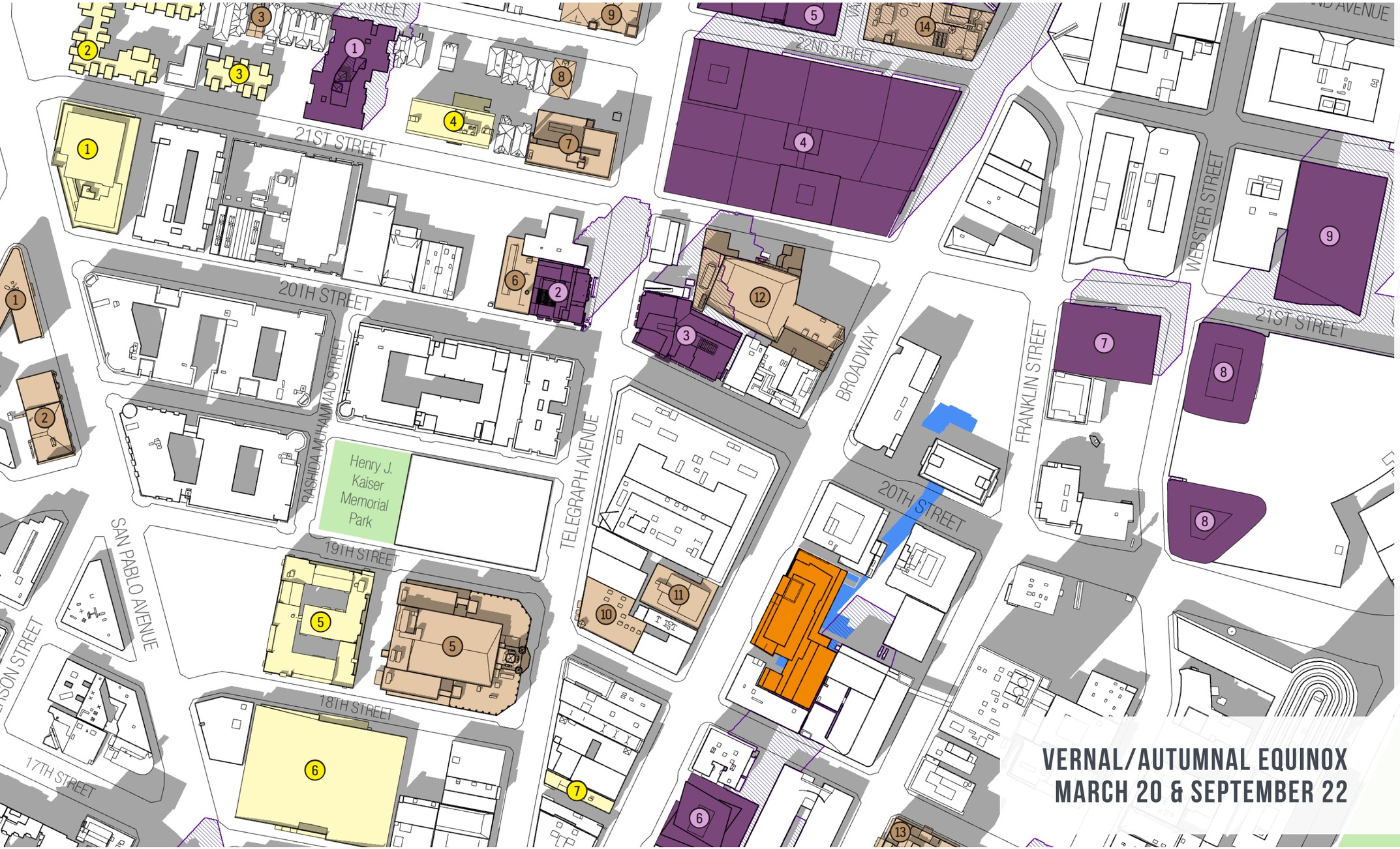
3:00 PM

PREVISION DESIGN

1900 BROADWAY + CUMULATIVE

Cumulative shading diagrams on the Vernal/Autumnal Equinoxes

E.2-B3



- Proposed Project
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VERNAL/AUTUMNAL EQUINOX
MARCH 20 & SEPTEMBER 22

3:00 PM

PREVISION DESIGN

1900 BROADWAY

Shading diagrams on the Winter Solstice

E.3-A1

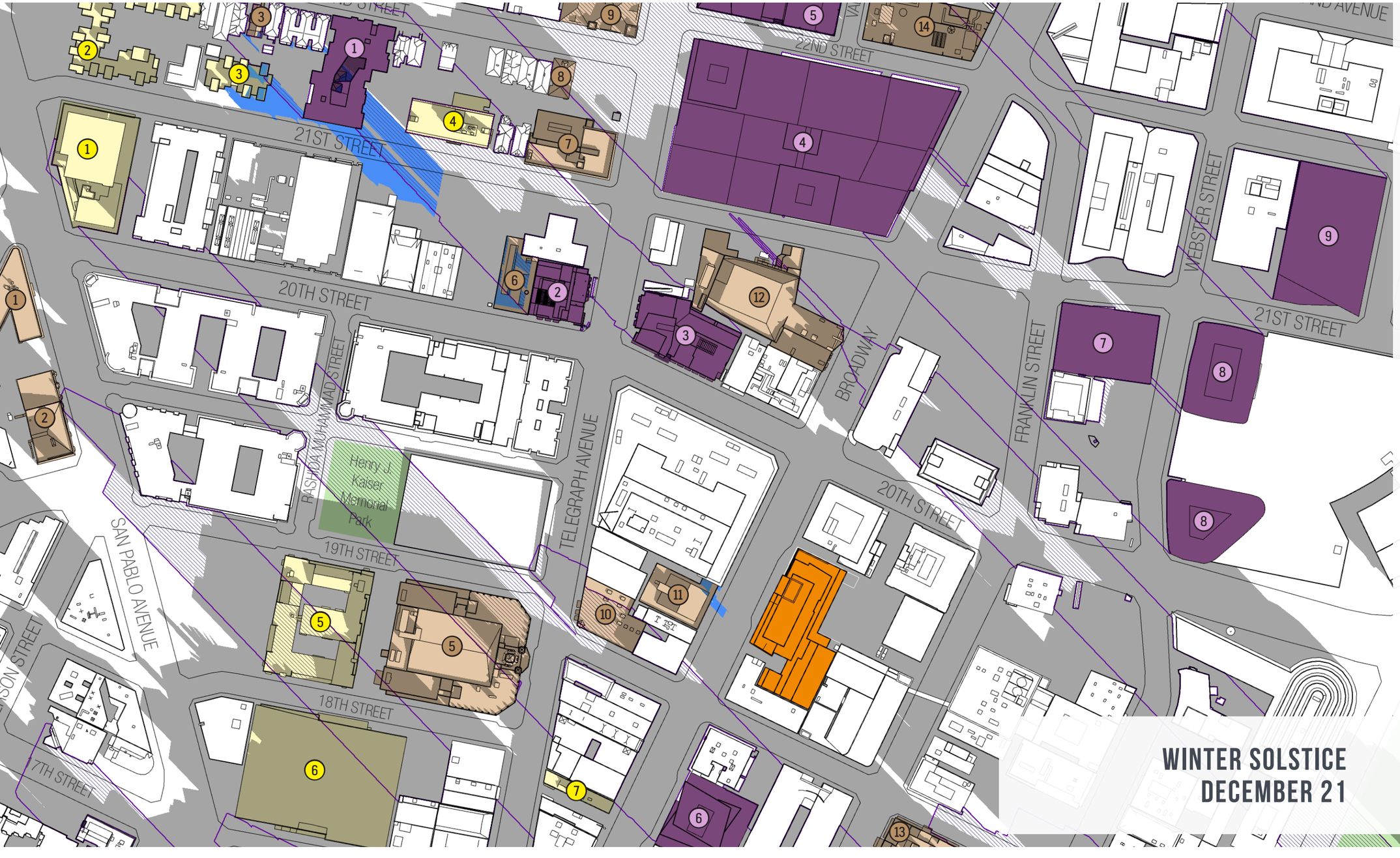


PREVISION DESIGN

1900 BROADWAY + CUMULATIVE

Cumulative shading diagrams on the Winter Solstice

E.3-B1



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WINTER SOLSTICE
DECEMBER 21

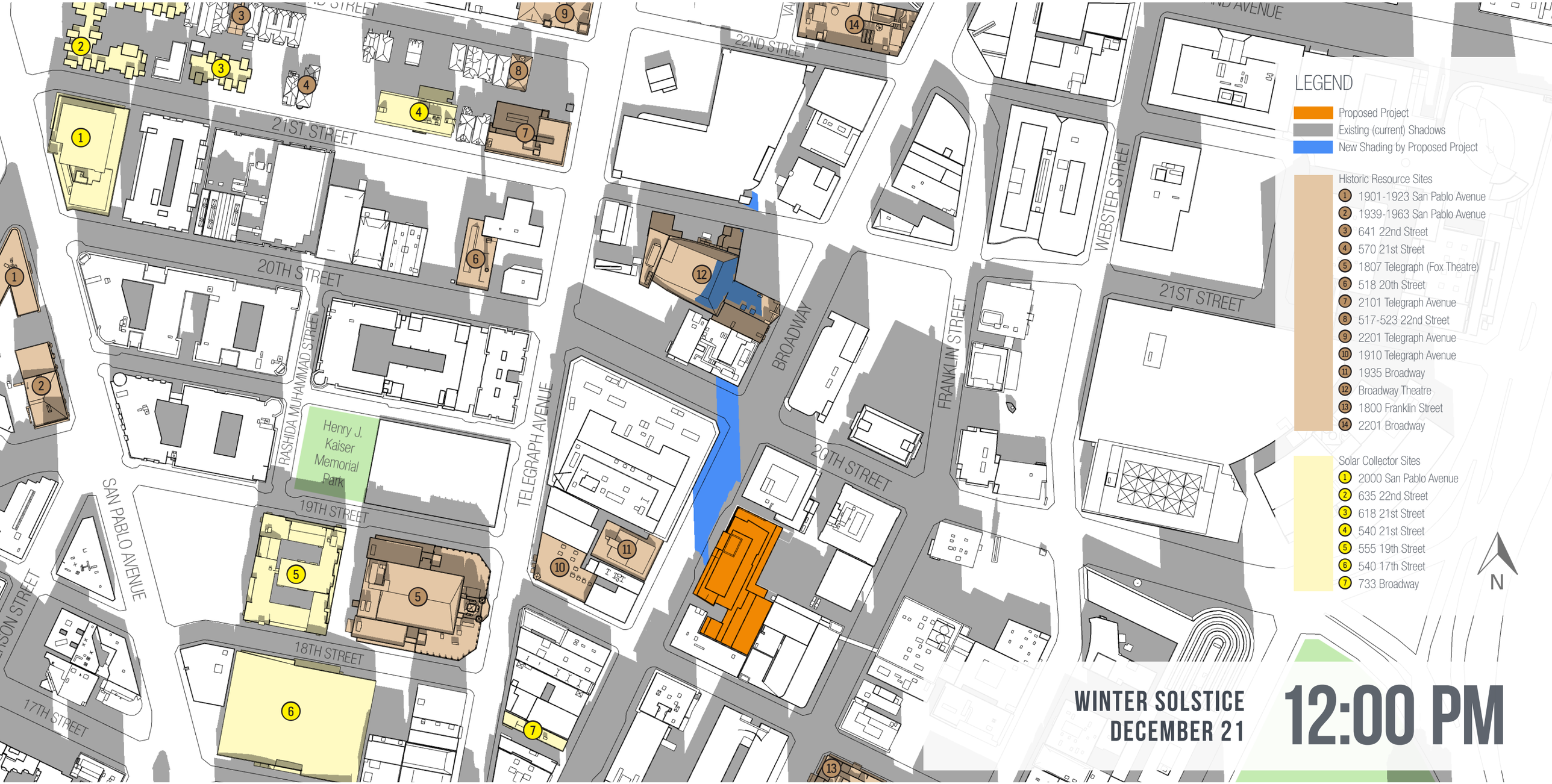
9:00 AM

PREVISION DESIGN

1900 BROADWAY

Shading diagrams on the Winter Solstice

E.3-A2



WINTER SOLSTICE
DECEMBER 21

12:00 PM

PREVISION DESIGN

1900 BROADWAY + CUMULATIVE

Cumulative shading diagrams on the Winter Solstice

E.3-B2



WINTER SOLSTICE
DECEMBER 21

12:00 PM

PREVISION DESIGN

1900 BROADWAY

Shading diagrams on the Winter Solstice

E.3-A3



WINTER SOLSTICE
DECEMBER 21

3:00 PM

PREVISION DESIGN

1900 BROADWAY + CUMULATIVE

Cumulative shading diagrams on the Winter Solstice

E.3-B3



Proposed Project

Existing (current) Shadows

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WINTER SOLSTICE
DECEMBER 21

3:00 PM