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OAKLAND

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## AGENDA REPORT

**TO:** Sabrina B. Landreth  
City Administrator

**FROM:** William A. Gilchrist  
Director, PBD

**SUBJECT:** 1750 Broadway: Appeal by East Bay  
Residents for Responsible  
Development (EBRRD)

**DATE:** January 13, 2020

City Administrator Approval

Date:

1/14/2020

### RECOMMENDATION

**Staff Recommends That The City Council Conduct A Public Hearing And Upon Conclusion, Adopt A Resolution Denying The Appeal (APL19013) By East Bay Residents for Responsible Development (EBRRD) Led By Adams Broadwell Joseph & Cardozo And Upholding The Planning Commission's Environmental Determination And Approval Of A Major Conditional Use Permit For Building Construction Over 200,000 Square Feet And Regular Design Review For The Project Located At 1750 Broadway, Oakland CA (PLN18369).**

### EXECUTIVE SUMMARY

On March 20, 2019, the Oakland City Planning Commission approved application PLN18369 by a vote of 4-0 for a Conditional Use Permit (CUP) and Design Review (DR) Permit for a mixed-use residential and commercial 37-story building in the Downtown Central Business District located at 1750 Broadway (Project). The Project consists of 5,000 square feet of ground floor commercial space, 307 residential units, and a 170-space parking garage. The Planning Commission made a finding under the California Environmental Quality Act (CEQA) that the Project satisfied each of the following CEQA Guidelines: (a) 15183 - Projects Consistent with a Community Plan, General Plan, or Zoning; (b) 15183.3 - Streamlining for Infill Projects; and (c) 15332 - Urban Infill Development. The Planning Commission also made findings to support the CUP and DR approvals, as required by the Planning Code. The associated Planning Commission's staff report is attached (**Attachment A**).

Subsequent to the Planning Commission approval, an appeal was filed by the appellant, East Bay Residents for Responsible Development (EBRRD), led by Christina Caro of the law firm Adams Broadwell, Joseph & Cardozo challenging the CEQA findings, the approval of the Project, and the approval of a condition to consider the feasibility of adding a lightwell on the new building. The appellant provided a number of claims summarized by staff as follows: 1) the CEQA Analysis fails to disclose, analyze and mitigate the Project's new significant, and more severe impacts on air quality, public health, construction noise and public transit; 2) the Planning Commission's reliance on previously approved environmental analysis violated

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CEQA; and 3) the Planning Commission's reliance on a categorical exemption to approve the Project violated CEQA (**Attachment B**).

Based on the CUP, DR and CEQA findings supported by the Planning Commission as part of their decision to approve the application, staff recommends the City Council adopt a resolution denying the appeal and upholding the Planning Commission's approval of the Project located at 1750 Broadway.

## **BACKGROUND / LEGISLATIVE HISTORY**

On September 4, 2018, the project applicant, Rubicon Point Partners, filed a formal application with the Bureau of Planning of the Planning & Building Department (PBD) to construct a 37-story high-rise consisting of 307 residential units of approximately 499,676 square feet, ground-floor commercial space of 5,000 square feet and a 170-space parking garage. The property contains a three-story commercial building occupied with administrative offices and a rear surface parking lot accessed from 19<sup>th</sup> Street. The project site is located in the Uptown district, between 16<sup>th</sup> and 19<sup>th</sup> Streets and next to the 19<sup>th</sup> Street Bay Area Rapid Transit (BART) Station on Broadway.

On January 31, 2018, the Design Review Committee (DRC) of the Planning Commission reviewed the proposal and continued the application with the recommendation to the applicant to articulate the garage screen, refine the ground-floor façade, and keep visible the existing BART elevator. On November 28, 2018, the DRC supported the design revisions, and recommended the project move forward to the Planning Commission for final review.

On March 20, 2019, the application was presented to the Planning Commission and included project design revisions as suggested by the DRC. At this meeting, the Planning Commission considered the proposal and received public comments related to building demolition, construction and shadow impacts from the proposed project (**Attachment A**). Following the public hearing, and deliberation on the record, the Planning Commission approved the application by a vote of 4-0. A copy of the Planning Commission's decision letter is found in **Attachment C**.

On April 1, 2019, EBRRD, led by Adams Broadwell Joseph & Cardozo, filed a timely appeal (APL19013) of the Planning Commission's environmental determination and the approval of the Project.

## **ANALYSIS AND POLICY ALTERNATIVES**

The appellant raises issues that are identified and included in **Attachment B** of this report. In the appellant's submitted arguments letter, staff identified each argument raised by the appellant concerning the approval of the CUP, DR and CEQA findings. The following outlines the appellant's arguments (*italics*), and is followed by staff responses:



1. "...the...CEQA Analysis fails to disclose, analyze and mitigate the project's new significant, and more severe impacts on air quality, . . . construction noise and public transit..."

Staff Responses:

**Air Quality-** The 1750 Broadway CEQA document analyzed the Project's air emission levels by applying the City and Bay Area Air Quality Management District's (BAAQMD) standards to determine air impacts in comparison to project-level and cumulative-level thresholds. As required by the City's Standard Conditions of Approval (SCA) Air-3, the analysis also included a Health Risk Assessment (HRA) to determine potential air quality impacts of the development project. These would include the use of construction-related diesel equipment and heavy vehicles that emit Diesel Particulate Matter (DPM). Because the Project would use a temporary backup diesel generator (source of DPM) during construction, the HRA measured the emission levels of Toxic Air Contaminants (TAC) to determine project and cumulative level thresholds. The HRA also included existing permitted stationary sources (TAC contributors), and backup generators from proposed similar projects, located within 1,000 feet from the project site.

SCA Air-3 stipulates that if the Project's estimated health risks would exceed threshold levels, the HRA must include, and the Project would be required to implement, DPM reduction measures to reduce the health impacts to acceptable levels. If the risks cannot be reduced through measures required by the HRA, then the risk is considered significant under CEQA. In this case, the HRA found that uncontrolled emissions from the Project's construction would exceed the City's thresholds, but the use of construction equipment meeting Tier 4 Final standards would reduce the health risks significantly below the thresholds, for both existing sensitive receptors (1770 Broadway residents) and new receptors residing within the Project. SCA Air-3 requires that technical documents showing the proper Tier 4 equipment are submitted for City review prior to issuance of building permits. Tier 4 equipment is widely available and will be a condition on which building permits are issued, as described in the memorandum prepared by the City's environmental consultant (ESA), dated October 22, 2019 (**Attachment E**). The Planning Commission's finding that the Project would not result in new, significant, more severe, or peculiar air quality impacts with the implementation of the SCAs was supported by substantial evidence in the CEQA analysis and the HRA.

**Noise-** The 1750 Broadway CEQA document analyzed construction, operational and cumulative noise levels using the City's significant thresholds, and found the Project to provide less-than-significant noise impacts related to noise such that none of the exceptions to the CEQA exemptions applied. The analysis also found the Project met the City's Standard Conditions of Approval that would provide the mechanism to mitigate or reduce noise impact levels to below the City's adopted CEQA thresholds. The CEQA analysis also relied on other adopted program-level analysis such as the Land Use & Transportation Element (LUTE, Housing Element and Renewal Plan Amendment Environmental Impact Reports (EIRs))



and found nothing peculiar on this specific Project because the high-density residential project is the type of development expected in denser urban areas such as downtown.

In response to the appellant's arguments that the Project fails to address noise impacts, the Project applicant prepared a technical Construction Noise Compliance Plan (CNMP) to document how the Project meets the City's noise criteria. The acoustic analysis report dated October 11, 2019, and prepared by Charles M. Salter Associates, Inc., provided a further noise analysis, and included site specific noise-reduction measures for the Project applicant to apply prior to building permit submittal (**Attachment F**). The Salter's report also considered and included in its report the recommendations made by the noise consultant, Wilson Ihrig, who was hired by the residents of the adjacent 1770 Broadway property. This noise analysis and project-specific reduction measures would have been required prior to building permit issuance regardless of this appeal through the City's SCA. Planning Commission does not generally review and approve the CNMP, as that is approved prior to the building permit. Based on independent review that is supported by the ESA memorandum, staff believes that the specific noise measures that apply to the Project through the CNMP would provide the mitigations the appellants thought the Project lacked. These measures would be enforceable through the City's building permit review process.

Transit-

An increase in transit ridership from a development project is not considered an impact to the physical environment under CEQA. Since the City's objective is to increase transit ridership, consistent with the latest CEQA guidance from the Office of Planning and Research, the City does not consider transit ridership or load factors environmental impacts under CEQA. Nevertheless, the 1750 Broadway CEQA document included a non-CEQA Transportation Impact Review that provided trip generation for various travel modes, and a qualitative assessment of the transportation infrastructure around the Project site.

Although transit ridership is not considered an environmental impact under CEQA, the Project CEQA analysis included a Transportation and Parking Demand Management Plan (TDM) that listed transit improvements as a condition for the development Project. In response to this appeal, a Transit Ridership Analysis (TRA) was prepared by the City's project transportation consultant Fehr & Peers (**Attachment G**), which estimated transit trips generated and their potential effects on AC Transit and BART operations. The TRA indicated that estimated transit trips generated by the Project would not have a noticeable effect on BART and AC Transit line operations because new transit loads are not part of the permanent physical environment, and transit services change over time.



2. *"...the City's decision not to prepare a subsequent or supplemental EIR for the Project is not supported by substantial evidence . . . and the City also relies on streamlining provisions that are inapplicable or not supported by substantial evidence."*

Staff

Response: The 1750 Broadway CEQA document relied on previous City Council-adopted "Program EIRs" including the 1998 General Plan LUTE, 2007-2017 / 2015-2023 Housing Element, and 2011 Central District Urban Renewal Plan. The Planning Commission determined that none of the conditions requiring a subsequent or supplemental EIR under CEQA Guidelines section 15162 were present and so an addendum to the Program EIRs was appropriate for the Project. The CEQA addendum showed that the Project did not require major revisions to the previous Program EIRs because the Project did not propose any changes to the density, land use policies, or character of the Central Business District or increase the impacts analyzed and disclosed in the Program EIRs. The addendum showed that air quality, noise, and all other impacts would be less significant than those analyzed in the Program EIRs with the implementation of applicable mitigation measures found in the Program EIRs, and all applicable SCA. Based on the Project's CEQA addendum, the Planning Commission found that the Project would not have new significant effects on the environment or more severe impacts than those previously studied under the Program EIRs. Therefore, the Planning Commission did not err in approving a CEQA addendum rather than a subsequent or supplemental EIR for the Project.

The CEQA document also relied on streamlining provisions available to projects that are consistent with zoning or are qualified infill projects. As discussed above, this Project is fully consistent with all City land use policies and qualifies as an infill development in the Central Business District. The CEQA document analyzed potential air quality and noise impacts and found that there were no peculiar impacts more severe than previously analyzed such that would prevent the application of these streamlining provisions. As discussed above, potential impacts to transit ridership is not considered an environmental impact or new information that requires the preparation of an EIR or disqualifies an infill project from CEQA streamlining.

3. *"The City's reliance on the Class 32 Infill Exemption is unsupported . . .".*

Staff

Response: The Planning Commission determined that the Project was exempt from CEQA under the Class 32 Infill Exemption, and that none of the exceptions to the exemption applied. The Class 32 exemption is available to infill development that does not create significant impacts to traffic, noise, air quality, or water quality. The Project is an infill development because it is on a parcel less than five acres, is consistent with the density, policies, and character of the Central Business District and applicable General Plan policies, and can be adequately served by existing utilities. As discussed above, the CEQA document analyzed potential



significant impacts from traffic, noise, air quality, and water quality, and found that with the application of SCA, the City's CEQA thresholds would not be exceeded for these or other impacts. Therefore, the Planning Commission did not err in relying on the Class 32 Categorical Exemption for the Project.

### ***Policy Alternatives***

The following options are available to the City Council:

1. Deny the appeal, uphold the Planning Commission's decision, and allow the Project to proceed as approved by the Planning Commission; or provided the City Council can make the appropriate findings;
2. Direct staff to prepare a Resolution for future City Council consideration to deny the appeal with additional Conditions of Approval solely related to the appellant issues submitted on April 1, 2019; or
3. Provided City Council can make the appropriate findings, direct staff to prepare a Resolution for future City Council consideration to uphold the appeal, reverse the Planning Commission's decision, and thereby deny the Project. Under this option, the applicant would have the option of not pursuing the Project or of submitting a new application to the Bureau of Planning.

In selecting an option, the City Council is acting as an appellate body to determine if the Planning Commission's CEQA determination or approval of the Project was in error or an "abuse of discretion," or was not supported by substantial evidence in the record. As articulated above, staff believes that the Planning Commission did not commit an error or abuse its discretion in making the CEQA determination and required findings under Sections 17.134.050 and 17.136.050 of the Planning Code and in approving the Project, in consideration of the entire record. Staff believes that there is substantial evidence in the record, including the Project documents, the CEQA Analysis, and all public comments and testimony, including this appeal, to support the Planning Commission's decisions.

### **FISCAL IMPACT**

The Project involves a private residential and commercial development and will not require or result in direct costs to the City. If constructed, the Project would provide a positive fiscal impact by contributing to the funding for construction of affordable housing and capital improvements through the City's development impact fees, increased property taxes, sales taxes, utility user taxes and business license taxes, while at the same time increasing the level of municipal services that must be provided.



## **PUBLIC OUTREACH / INTEREST**

The Project was publicly noticed for a Planning Commission meeting on March 6, 2019, but per the applicant's request the Commission did not discuss the application and continued the item to the following March 20, 2019 public meeting. As required by the Planning Code, Public Notices were sent to all property owners within a 300-foot radius from the property and to interested parties. The two additional DRC hearings were noticed similarly, and public notice signs were posted on the site in three different meeting dates and at least 17 days prior to each meeting. This appeal was duly noticed by the City Clerk's Office 10 days prior to the City Council meeting, and the Bureau of Planning mailed and/or emailed public notices of the Project appeal to the appellant, applicant and interested parties at least 17 days prior to this meeting. The associated public notice is attached (**Attachment D**).

### ***Rubicon Point Partners (Applicant) & Community Meeting***

On February 26, 2019, the applicant held a community meeting to discuss the Project, and the overall concerns raised by the residents of the 1770 Broadway property regarding the following:

- Loss of sunlight from the existing south facing building light-well windows
- Lack of demolition and construction details, and safety for the residents
- Length of construction activity, and potential impacts from noise and dust
- Location of new screened mechanical equipment near existing resident's windows

### ***Project Applicant's Response to Appeals***

On November 15, 2019 the project sponsor's attorney, Pelosi Law Group submitted a letter in regards of the two appeals filed, and requested that this letter is attached to the Agenda Report (**Attachment H**).

## **COORDINATION**

This staff report and legislation was reviewed by PBD's Bureau of Planning, the City Attorney's Office, and the Budget Office.

## **SUSTAINABLE OPPORTUNITIES**

**Economic:** The development of the Project would raise the property tax for the site due to the new 5,000 square foot commercial space, and 307 new residential units. The Project would also provide temporary construction jobs, and support the local retail uses in downtown. The project would provide housing opportunities to Oakland residents by using collected fees from the City's Affordable Housing Development Impact Fees.



***Environmental:*** The Project is in an urbanized area of Downtown and reduces pressure to build on undeveloped lands. The Project is near mass transit (BART and AC Transit) that enables residents to reduce dependency on vehicles. The Project enhances the urban setting because the site is located in the Central Business District and on Broadway, a major thoroughfare with good access to public transportation for the benefit of local and regional ridership.

***Race & Equity:*** The Project would contribute to a new supply of much-needed residential units, and also provide housing opportunities to local residents through the use of collected fees from the City's Affordable Development Impact Fees.

### **CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**

The California Environmental Quality Act (CEQA) of 1970, as prescribed by the City of Oakland's environmental review requirements, has been satisfied pursuant to CEQA Guidelines Sections 15183 - Projects Consistent with a Community Plan, General Plan, or Zoning; 15183.3 - Streamlining for Infill Projects; and 15332 - Urban Infill Development.



**ACTION REQUESTED OF THE CITY COUNCIL**

Staff Recommends That The Oakland City Council Conduct A Public Hearing And, Upon Conclusion, Adopt A Resolution Denying The Appeal (APL19013) By East Bay Residents for Responsible Development Led By Adams Broadwell Joseph & Cardozo And Upholding The Planning Commission's Environmental Determination And Approval Of A Major Conditional Use Permit For Building Construction Over 200,000 Square Feet And Regular Design Review For The Project Located At 1750 Broadway, Oakland CA (PLN18369).

For questions regarding this staff report, please contact Mike Rivera, Project Case Planner, at (510) 238-6417.

Respectfully submitted,



WILLIAM A. GILCHRIST  
Director, Department of Planning and Building

Reviewed by:  
Ed Manasse, Deputy Director/City Planner  
Bureau of Planning

Prepared by:  
Mike Rivera, Planner II  
Bureau of Planning/ Development Projects

Attachments (8):

- A: March 20, 2019 Planning Commission Staff Report
- B: April 1, 2019 Appeal by EBRRD
- C: Planning Commission Decision Letter
- D: Public Notice for the February 4, 2020 City Council Meeting
- E: ESA Memorandum-Responses, dated October 22, 2019
- F: Charles Salter Associates, Inc., October 22, 2019
- G: Fehr & Peers-Transit Ridership Memo, May 30, 2019
- H: Pelosi Law Group, letter received on November 15, 2019

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# **ATTACHMENT A**

*March 20, 2019 Planning Commission Staff Report*



<b>Project Location:</b>	1750 Broadway. The property is located between 17 <sup>th</sup> and 19 <sup>th</sup> Streets.
<b>Assessor's Parcel No:</b>	008 062301300
<b>Development Proposal:</b>	To construct a 37-story building consisting of 307 market-rate residential units, approximately 5,000 square feet of retail space, and a five-level parking garage for 170 parking spaces to be accessed from 19 <sup>th</sup> Street.
<b>Project Applicant / Phone Number:</b>	Rubicon Point Partners, Chris Relf / (415) 500-6410
<b>Property Owner:</b>	1750 Broadway LLC
<b>Case File Number:</b>	PLN18369
<b>Planning Permits Required:</b>	Major Conditional Use Permit for development over 200,000 square feet in floor area in the Central Business District; and Regular Design Review for new building construction.
<b>General Plan:</b>	Central Business District
<b>Zoning District:</b>	CBD-P & CBD-C (Central Business District Pedestrian & Commercial)
<b>Environmental Determination:</b>	<p>A detailed CEQA (California Environmental Quality Act) Analysis was prepared for this project which concludes that the proposed development satisfies each of the following CEQA Guidelines: (A) 15183 - Projects Consistent with a Community Plan, General Plan, or Zoning; (B) 15183.3 - Streamlining for Infill Projects; and (C) 15332-Urban Infill Development. Each of the foregoing provides a separate and independent basis for CEQA compliance.</p> <p>The CEQA Analysis document may be reviewed at the Bureau of Planning offices, located at 250 Frank Ogawa Plaza, 2nd Floor or online at <a href="http://www2.oaklandnet.com/government/o/PBN/OurServices/Application/DOWD009157">http://www2.oaklandnet.com/government/o/PBN/OurServices/Application/DOWD009157</a> (1750 Broadway CEQA Analysis Item # 82)</p> <p>The CEQA analysis relied upon in making the Environmental Determination and incorporated by reference within the CEQA Analysis document includes the LUTE (Land Use Transportation Element) EIR which can be viewed here: <a href="http://www2.oaklandnet.com/government/o/PBN/OurServices/Application/DOWD009158">http://www2.oaklandnet.com/government/o/PBN/OurServices/Application/DOWD009158</a> (LUTE / Item #1)</p>
<b>Historic Status:</b>	Non-Historic Property
<b>City Council District:</b>	3- McElhaney
<b>Date Filed:</b>	09/06/18
<b>Action to be Taken:</b>	Decision based on staff report
<b>For Further Information:</b>	Contact Project Case Planner, Mike Rivera at (510) 238-6417 or by email at <a href="mailto:mriviera@oaklandnet.com">mriviera@oaklandnet.com</a>

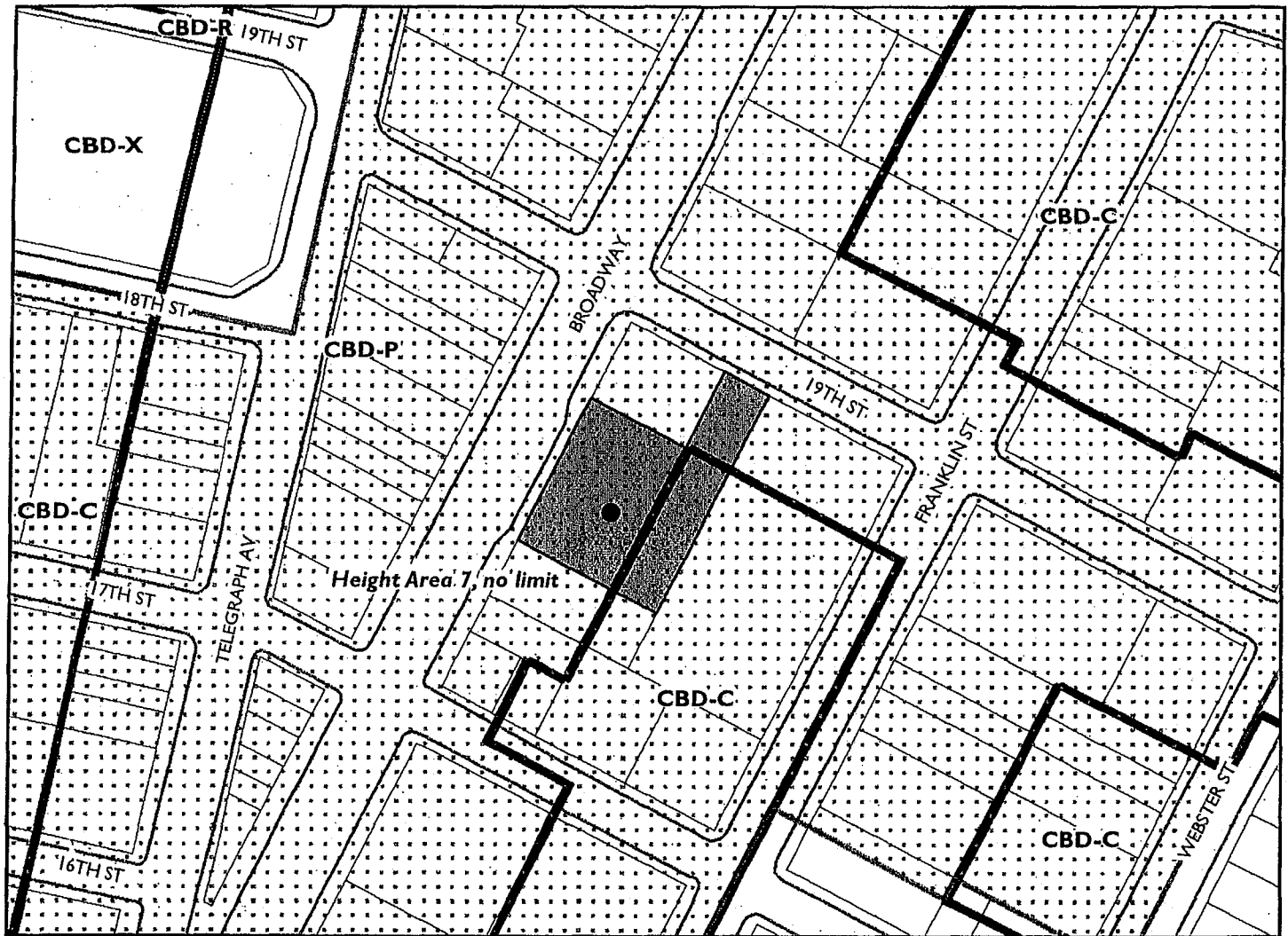
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## SUMMARY

The development proposal is for the construction of a mixed-use project that consists of an approximately 423-foot high, 37-story residential building with retail space, and a five-level parking garage above. The property is located in the Uptown district, and is surrounded by a mix of commercial, civic and residential properties. The project is also located adjacent to the 19<sup>th</sup> Street BART Station and entertainment venues. The property contains a three-story commercial building with a rear parking lot that would be removed. The application requires two Planning permits, a Major Conditional Use Permit for new development



# CITY OF OAKLAND PLANNING COMMISSION



0 100 200 400 600 800 Feet



Case File: PLN18369  
Applicant: Rubicon Point Partners, Chris Relf  
Address: 1750 Broadway  
Zones: CBD-P & CBD-C  
Height Area: 7, no limit



over 200,000 square foot in area, and Regular Design Review for new construction. The proposal requires a determination by the Planning Commission.

For the reasons set forth in this report, staff recommends that the Planning Commission (1) affirm staff's Environmental Determination and adopt the attached CEQA Findings; and (2) approve the project, including Major Conditional Use Permit, and Regular Design Review, subject to the attached findings and conditions (including the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program / SCAMMRP) contained in this report and related project documents.

## **PROJECT SITE AND SURROUNDINGS**

The site consists of a 27,600 square feet parcel that has two separate frontages, the main frontage on Broadway and the second one on 19<sup>th</sup> Street. The property contains a three-story commercial building that operates as an office with a rear parking lot that will be replaced by the new mixed use development. The proposed development abuts to the north a five-story commercial and residential building, to the east a three-story parking garage and south a three-story commercial buildings. The immediate properties across Broadway and 19<sup>th</sup> Street are a mix of commercial and residential facilities that contain two-and five-story buildings. Other facilities in the surrounding area are offices, schools, restaurant/bars, entertainment venues, and new commercial and residential buildings under construction. The property is in the Uptown district, the streets are a mix of four-lane (Broadway) and two-lane (19<sup>th</sup> St.) roads, and is adjacent to the 19<sup>th</sup> Street BART Stations, AC transit bus lines, and the free "B" shuttle bus.

## **PROJECT DESCRIPTION**

The property is located east of Broadway, between 17<sup>th</sup> and 19 Streets in the Uptown district. The development proposal is to construct a 37-story building with ground-floor containing two lobby lounges, commercial / retail space, mail room, service rooms, residential loading docks and a front transformer utility room. The existing service elevator for the 19<sup>th</sup> Street BART Station, located on Broadway, will be replaced as part of the project and remain. The main pedestrian entry to the project would be on Broadway and the parking garage would be accessed from 19<sup>th</sup> Street. A second access to the residential lobby and garage will be from 19<sup>th</sup> through a recessed an articulated metal and glass door and a decorative driveway with a perforated metal garage door. The proposed underground basement contains additional utility rooms and tenant storage.

The five-story parking garage (levels 2-6) whose access is from 19<sup>th</sup> Street provides 170 parking spaces for the project residents and includes a laundry service, dog run park/ dog wash room and additional bicycle parking storage (levels 2 & 3). The building provides an amenity floor area (level 7) that contains fitness/gym, showers/ sauna, lounge, children's play area, lounge/terrace, raised planters and an outdoor lap pool / hot tub (east side).

The 307 residential units (levels 8-35) include a mix of studios, one-bedroom, two-bedroom and three-bedroom units. The project also contains a second residents' amenity floor area (level 36) that includes residents' lounge/dining, game room, library, screening room, bathrooms/showers, solarium and an outdoor terrace / pool (south west of the building). The project includes three new street trees along Broadway.



## **BUILDING DESIGN**

The proposal contains a building footprint that covers the entire parcel area, and tower that covers approximately 85 percent on the parcel area. The building mass of the 37-story tower is broken-up with inward angled facades, recessed wall planes, courtyard terraces and angular glass balconies to provide an interesting visual façade and help define the urban corridor. The building also provides different window size pattern with tall glazing windows on the building northwest corner and on the top of the tower. Some other windows are semi- recessed from the building façade and some contain small viewing balconies. The tower includes vertical and horizontal metal panel siding materials, angled metal screens for the garage façade (curtain wall) colored vent louvers, glazed storefront and dark cladding for the transformer room facing Broadway. The variation of techniques, materials and colors help to manage mass and scale that resulting in a coherent design that creates a distinctive building that adds visual interest to the character of the area and to the skyline of the City.

## **GENERAL PLAN ANALYSIS**

The development proposal is located in the “Central Business District” General Plan Use Classification. The intent of the Central Business District is to encourage, support, and enhance areas as a high density mixed-use urban center of regional importance and a hub for business, communications, office, government, high technology, retail, entertainment and transportation. The desired character and uses include a mix of large-scale offices, commercial, urban high-rise residential, cultural, educational, arts, services, community facilities and visitor uses.

The Central Business District also sets the goals and vision to enhance the identity of Downtown and its distinctive districts by setting policies that are related to specific project developments. The following are the General Plan Policies applicable to the proposal and the project development should be consistent when a future determination is made by the decision body, the Planning Commission. These are:

**Policy D1.1:** Enhance the visual quality of downtown by preserving and improving existing housing stock and encouraging new, high quality design. New housing development in downtown will provide urban dwellers with expanded options for living in a revitalized inner city, near major transportation lines, employment centers.

*The proposal would provide a mix of type and size of new residential units in an attractive contemporary building that fits with the downtown setting, is adjacent to BART and AC Transit lines, and is within walking distance to the Central Business District.*

**Policy D2.1:** Downtown development should be visually interesting, harmonize with its surrounding, respect and enhance important views in and of the downtown, respect the character and pedestrian orientation of the downtown, and contribute to an attractive skyline.

*The proposal is a high-rise that is set back approximately 15 feet from the road, contains angled facades, floor-to-ceiling glass windows, metal/stainless steel cladding and architectural features that provide visual interest to the city's skyline.*

**Policy D5.1:** Encouraging twenty-four hour activities and amenities that encourage pedestrian traffic during the work week as well as evenings and weekends should be promoted.



*The proposal will create 307 new residential units and ground floor commercial area that would contribute to the increase of foot traffic in the immediate area, and thus serve existing and new commercial and entertainment venues in downtown.*

**Policy D9.1:** Concentrating commercial development in the corridor around Broadway that encourage a pedestrian-friendly environment.

*The proposal includes the development of an approximately 5,000 square foot ground-floor retail space, located in the uptown district, on Broadway and in between 17<sup>th</sup> and 19<sup>th</sup> Streets. The commercial facility is also adjacent to the 19<sup>th</sup> Street BART Station that makes it convenient and pedestrian-friendly to the general public.*

**Policy D10.1:** Housing in the downtown should be encouraged as a vital component of a 24-hour community presence.

*The proposal creates high density residential development that will contribute to the urban setting by adding new residents, thus supporting the downtown functions that are vital components to the operation for a successful 24-hour community presence.*

**Policy D10.2:** Housing location in downtown should be encouraged in identifiable districts, within walking distance of the 12<sup>th</sup> Street, 19<sup>th</sup> Street, City Center and the Lake Merritt BART stations to encourage transit use and in other locations where compatible with surrounding uses.

*The 307-residential unit proposal is located in downtown, in the uptown neighborhood, and in the Central Business District. The project is adjacent to the 19<sup>th</sup> Street BART station and within two blocks from the City Center BART Station, which will encourage new project residents to use this transit system.*

**Policy D10.3:** Downtown residential areas should generally be within the urban density residential and Central Business District. The height and bulk should reflect existing and desired district character, the overall city skyline.

*The proposal is located in downtown, in the uptown neighborhood, and in the Central Business District. The project is surrounded by existing medium-density, new high-density residential buildings under construction and other recently approved high-density buildings. The proposals' building height and bulk reflect some of the new buildings in the area with a contemporary design that contributes to the urban setting of the City's skyline.*

**Policy D10.5:** Housing in the downtown should be safe and attractive and of high quality design and respect the downtown distinctive neighborhoods and its history.

*The proposal is a high-rise residential development that will meet required Building codes for safety. The building has interesting design features and uses quality materials to create an attractive and distinctive design, while respecting the character of nearby buildings.*

## **ZONING ANALYSIS**

The development site is located in the Central Business District Pedestrian, CBD-P (about ¾ of the property) and Commercial, CBD-C (towards the rear and about ¼ of the property) Zones. The purpose 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, and for upper stories to be available for a wide range of office and residential uses. The purpose of the CBD-C 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 as determined by the designated zone.

The proposal is located in the core of the City's Downtown (Uptown District) where high density and intensity uses are essential and vital to the success of the existing commercial area and contribute to the support of local and regional transportation infrastructure, communication networks, and service and entertainment establishments. The project proposal is a permitted use because the residential units are located on upper levels, and the retail space is located on the ground-floor of the building.

The project proposal requires two Planning permits, a Major Conditional Use Permit for new buildings containing a floor area over 200,000 square feet, and Regular Design Review for new building construction in the Central Business District. A separate Tree Permit is also required to remove three street trees, located in front of the site along Broadway. The tree permit will be determined by the City's Public Works Tree Division. The following table provides a summary of the applicable standards:

Development Standards	Requirements	Proposed	Comments
Minimum Lot Area	4,000/7,500-sf	27,600-sf	Meets Plan
Minimum Lot Width Mean	25/50-ft	156/50-ft	Meets Plan
Minimum Frontage	25/50-ft	156/50-ft	Meets Plan
Minimum Front Setback	0-ft	3-ft	Meets Plan
Maximum Front / Front Street Side Setbacks for the First Story	5-ft	3/5-ft	Meets Plan
Maximum Front & Street Side Setbacks for the Second and Third Stories or 35 ft. whatever is lower	5-ft	3-ft	Meets Plan
Minimum Interior Side	0-ft	1.5/3-ft	Meets Plan
Minimum Rear	0-ft	1-ft	Meets Plan
Maximum Residential Density	307 units	307 units	Meets Plan
Maximum Floor Area Ratio	20.0	13.0	Meets Plan
Maximum Building Height	No Height Limit	418-ft	Meets Plan
Minimum Residential Parking Spaces	Not Required	210 spaces	Meets Plan
Maximum Residential Parking Spaces	Not Required	210 spaces	Meets Plan



Development Standards	Requirements	Proposed	Comments
Minimum Retail Parking Spaces	Not Required	0 parking spaces	Meets Plan
Minimum Bicycle Spaces (short term)	2 spaces	24 spaces	Meets Plan
Minimum Bicycle Spaces (long term)	2 spaces	200 spaces	
Minimum Residential Loading Berths	1 Space	2 Spaces	Meets Plan

## PROJECT BACKGROUND

### Design Review Committee / Public Comments

The Design Review Committee of the Planning Commission reviewed preliminary design plans for the proposed project. At its January 31, 2018 Design Review Committee (DRC) meeting, the DRC reviewed the proposal, and recommended the applicant do the following:

- a) Articulate the garage screen wall;
- b) Refine the ground floor façade; and
- c) Keep the existing BART elevator visible to public view.

In addition, at this public meeting, the DRC heard public comments from commercial tenants leasing space at 1750 Broadway, and also received comments from an adjacent residential tenant at 1770 Broadway. The commercial tenant Transdev is a paratransit organization that provides transit program assistance to BART and AC Transit. Transdev expressed concerns to the applicant regarding the leasing terms and relocation of their offices. Furthermore, the adjacent residential tenant expressed concerns regarding shadow casting and length of construction activity from the project. (See Attachment E)

At its scheduled February 28, 2018 Design Review Committee (DRC) meeting, the project applicant requested the DRC continue the application to a later date.

At its November 28, 2018 Design Review Committee (DRC) meeting, the DRC received revisions to the project design and supported the changes recommended in the January 31, 2018 meeting. The DRC also received a letter from the applicant stating that meetings have occurred with the commercial tenant, Transdev to discuss the terms of the tenant's leasing space. The applicant, however, indicated that no formal agreements have been reached with the commercial tenants, but that they will continue to assist in the relocation of tenant offices.

The applicant also indicated that meetings were held with BART officials to discuss ways to maintain the operation of the 19<sup>th</sup> Street BART Station elevator during the construction of the new project. The applicant intends to keep the elevator, and is planned to be part of the proposed project as shown on the latest design plans submitted for Planning Commission review.



## **PROJECT KEY ISSUES**

### **Building Design**

The proposed building footprint would cover most of the entire parcel area, however, the tower which is nearly 80 feet away from 17<sup>th</sup> Street would cover approximately 70 percent on the parcel area. The mass of the 37-story tower is broken-up with inward angled facades, recessed wall planes, courtyard terraces, angular glass balconies, and include various material textures to provide a slender design that promotes and defines the context of the urban corridor. The building also provides different window size pattern with tall glazing windows on the building northwest corner and on the top of the tower. Other windows are semi-recessed from the building façade and some contain small viewing balconies. The tower includes vertical and horizontal metal panel siding materials, angled metal screens for the garage façade, colored vent louvers, glazing storefront and dark cladding for the transformer room facing Broadway. The project manages mass and scale that results with a compatible design to create a distinctive building that would add visual interest to the character of downtown and to the skyline of the City.

### **California Environmental Quality Act**

A Californian Environmental Quality Act Analysis (CEQA) was prepared for this project which concludes that the proposed project satisfies each of the following CEQA Guidelines: (i) 15183 - Projects Consistent with a Community Plan, General Plan, or Zoning; (ii) 15183.3 - Streamlining for Infill Projects; and (C) 15332- Urban Infill Development. Each of the foregoing provides a separate and independent basis for CEQA compliance. The CEQA Analysis document was published and made publicly available on Friday, February 15, 2019 and separately provided to the Planning Commission. The CEQA Analysis document for 1750 Broadway Project can be reviewed at the Bureau of Planning offices, located at 250 Frank Ogawa Plaza, 2nd Floor or online at the following link here:

<http://www2.oaklandnet.com/government/o/PBN/OurServices/Application/DOWD009157>  
(Current Environmental Review Documents #82)

The CEQA analysis also relies upon the LUTE (Land Use Transportation Element), EIR which can be viewed at the following links here:

<http://www2.oaklandnet.com/government/o/PBN/OurServices/Application/DOWD009158>  
(LUTE / Item #1)

## **CONCLUSION**

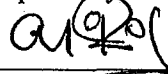
The development proposal would provide new residential and retail facilities that are outright permitted in the Central Business District zone. The project also meets the goals and policies of the General Plan by providing new high density housing, ground-floor commercial uses and an attractive building design that are the setting of an urban character and critical to the success of the Downtown District. The requested Planning permits are warranted and are not anticipated to create adverse impacts.



**RECOMMENDATIONS**

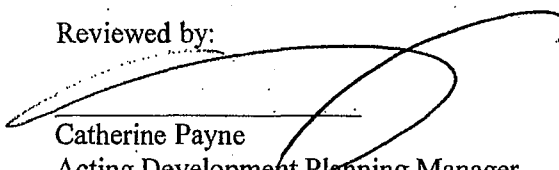
1. Affirm staff's Environmental Determination and adopt the attached CEQA Findings; and
2. Approve the Project, including Conditional Use Permit and Regular Design Review, subject to the attached findings and conditions (including the SCAMMRP).

Prepared by:



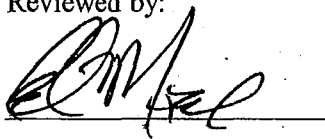
Mike Rivera  
Planner II, Development Planning  
Bureau of Planning

Reviewed by:



Catherine Payne  
Acting Development Planning Manager  
Bureau of Planning

Reviewed by:



Ed Manasse, Interim Deputy Director  
Bureau of Planning

**ATTACHMENTS**

- A. Project Findings and CEQA Findings
- B. Conditions of Approval
- C. Standard Conditions of Approval Mitigation Monitoring & Reporting Program (SCAMMRP)
- D. Revised Design Plans, dated March 13, 2019
- E. Public Comments

The CEQA document is provided under a separate cover, and online at or online at  
<http://www2.oaklandnet.com/government/o/PBN/OurServices/Application/DOWD009157>  
(The 1750 Broadway CEQA Analysis / Item # 82)



## ATTACHMENT A

### Findings for Approval

The findings required for granting approval for this application for Conditional Use Permit, and Regular Design Review are shown in normal type, and the reasons for satisfying these findings are shown in **bold**.

(Note: The Project's conformance with the following findings is not limited to the discussion below, but is also included in all discussions in this report and elsewhere in the record):

#### **SECTION 17.134.050- GENERAL CONDITIONAL USE PERMIT (CUP)**

Major CUP for buildings over 200,000 square feet of new floor area in the CBD Zone

- 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.

**The development proposal for a residential and commercial-retail mixed use project over 200,000 square foot is conditionally permitted in the downtown district. The size of the approximately 499,676 square foot building and design are in scale with the mix of high-rise buildings under construction in the surrounding area. While the building base covers most of the site, the location and shape of the tower will reduce bulk to allow outdoor areas and views to the project residents. The transportation analysis prepared for this project shows no significant traffic or transportation-related impacts in the surrounding area.**

- 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 proposal is located in the uptown area of the Central Business District, near transit system and entertainment areas. The building design will provide functional living and working environment to the residents with amenities such as outdoor recreational areas and fitness center. The project includes a retail facility that can also be used by other commercial uses and serve the general public.**

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

**The proposal for a high-rise building with 307 residential units and ground-floor retail space will increase activity in the surrounding area and increase the patronizing of existing and future commercial development. The project will also encourage the use and support public transportation such as BART, AC Transit, Bike-Share and the free "B" shuttle bus that runs within the downtown area.**



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

**The proposal for the residential and commercial development meets the Design Review Findings listed below in this report.**

- 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 proposal conforms to the policies of the General Plan by providing residential and commercial development in high-density areas and along commercial corridors in the Central Business District. As described within this report, the project also conforms to the applicable design review criteria.**

**SECTION 17.136.050 (B) - DESIGN REVIEW CRITERIA / Non-Residential Facilities**

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 proposal will create a storefront with approximately 18-foot high glazing surfaces with dark aluminum framing and granite cladding finish (transformer room) along Broadway. The storefront is set back approximately five feet from street line; and the residential entry has a suspended canopy with decorative landscaping on the side wall to create a visual interest and façade articulation. Furthermore, the bronze color perforated aluminum screens with vertical light color aluminum bands on the parking podium (curtain wall) façade results with a design technique that creates interest and provides transition to the tower when seen from different street views, and provides a design rhythm with the adjacent building. The perforated screen panels will be folded and mounted at an angle in seven vertical sections to reduce mass, create depth and visual appeal. The garage screens will also have a backdrop LED lighting for accent.**

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 ground-floor commercial space has interesting design and high quality materials that create character and harmony with surrounding retail/commercial uses and development. The development proposal protects and increases the value of private and public investment in the Uptown district by creating a high-quality residential building with active ground floor uses.**

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.



As discussed earlier in this report, the design proposal conforms to the General Plan by creating an attractive commercial space in downtown and conforms to the design review criteria discussed in the applicable design review findings.

**SECTION 17.136.050- 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 proposal has a 29-story residential tower over the five-level parking garage and ground-floor commercial area that relates to and is compatible in scale to the site and surrounding high-rise buildings. The residential tower has a slender design to manage building mass to create a compatible scale of development that relates to the mix of new residential high-rise buildings that are under construction in downtown. The tower has inward wall planes, segmented and articulated windows frames with floor to ceiling windows, bronze window mullions, glass railing balconies, metal and stainless steel cladding with reveal-joints, and a mix of colored materials all of which create an interesting design that relates to the style and texture of the surrounding area.

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

The residential tower with its contemporary architecture will enhance the streetscape of downtown by creating a transparent storefront with tall ceilings and prominent entries. The facade articulation and mix of materials and colors of the residential tower will encourage the development of high quality design, thus promoting desirable future neighborhood characteristics. The project has an approximately 15-foot tall wall that runs on the westerly side of the property line (next to the entry lobby on 17<sup>th</sup> Street). The wall is also adjacent to the neighboring apartment building at 1770 Broadway. To enhance desirable neighborhood characteristics, staff recommends a Condition that the proposed wall has a finish texture. See Condition of Approval # 15

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

The property has a three-story commercial building and paved surface parking lot that would be removed and developed with the proposed building. There are three street trees along Broadway that would be removed and will require a separate tree permit. The applicant proposes to install new street trees on Broadway. Staff recommends a Condition that at least three new 36-inch box size London Plane street trees are installed in front of the property. See Condition of Approval # 16

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 or on a hillside property.



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.

**As discussed earlier in this report, the proposal conforms to the related policies of the General Plan by providing residential and commercial uses in high-density areas and along major corridors in the Central Business District. The project also conforms to the applicable design review criteria as discussed in the findings sections within this report.**

## **CEQA COMPLIANCE FINDINGS**

- I. Introduction: These findings are made pursuant to the California Environmental Quality Act (Public Resources Code section 21000 et seq.; "CEQA") and the CEQA Guidelines (Cal. Code Regulations title 14, section 15000 et seq.; "CEQA Guidelines") by the Planning Commission in connection with the environmental analysis of the effects of implementation of the 1750 Broadway-Mixed Use project, as more fully described elsewhere in this Staff Report and in the City of Oakland ("City") CEQA Analysis document entitled "1750 Broadway CEQA Analysis" dated February 2019 ("CEQA Analysis") (the "Project"). The City is the lead agency for purposes of compliance with the requirements of CEQA. These CEQA findings are attached and incorporated by reference into each and every decision associated with approval of the Project and are based on substantial evidence in the entire administrative record.
- II. Applicability/Adoption of Previous CEQA Documents
  - A. Adoption of General Plan Land Use and Transportation Element (LUTE) and Certification of the 1998 LUTE EIR: The City finds and determines that (a) the Oakland City Council on March 24, 1998 adopted Resolution No. 74129 C.M.S. which adopted the General Plan Land Use and Transportation Element, made appropriate CEQA findings, including certification of the 1998 LUTE Environmental Impact Report ("EIR"); and (b) the LUTE satisfies the description of "Community Plan" set out in Public Resources Code section 21083.3(e) and in CEQA Guidelines section 15183, as well the description of "Planning Level Document" set out in Public Resources Code section 21094.5 and in CEQA Guidelines section 15183.3. The City Council, in adopting the LUTE following a public hearing, approved applicable mitigation measures which are largely the same as those identified in the other Program EIRs prepared after the 1998 LUTE EIR, either as mitigation measures or as a part of newer Standard Conditions of Approval ("SCAs") which constitute uniformly applied development policies or standards (together with other City development regulations) and determined that the mitigation measures set out in the 1998 LUTE EIR, would substantially mitigate the impacts of the LUTE and future projects thereunder. While approved after certification of the 1998 LUTE EIR, growth and potential effects of the development of the Project would have been considered in the cumulative growth projections factored into the LUTE EIR analysis.
- III. CEQA Analysis Document: The CEQA Analysis and all of its findings, determinations and information is hereby incorporated by reference as if fully set forth herein. The CEQA Analysis concluded that the Project satisfies each of the following CEQA provisions, qualifying the Project for three separate CEQA exemptions as summarized below and provides substantial evidence to support the following findings.



The City hereby finds that, as set forth below and as part of the CEQA Analysis, the Project is exempt from any additional CEQA Analysis under Public Resources Code section 21083.3 (CEQA Guidelines § 15183) for Projects Consistent with a Community Plan, General Plan, or Zoning and/or under Public Resources section 21094.5 (CEQA Guidelines § 15183.3) for Qualified Infill Projects, thus no additional environmental analysis beyond the CEQA Analysis is necessary. As a separate and independent basis, the Project meets the conditions for a categorical exemption under CEQA Guidelines § 15332 (In-Fill Development Projects) and no exceptions to the CEQA categorical exemptions under CEQA Guidelines § 15300.2 apply. The specific statutory exemptions and the categorical exemption are discussed below in more detail.

- A. Projects Consistent with a Community Plan, General Plan, or Zoning: Public Resources Code Section 21083.3 (CEQA Guidelines § 15183): The City finds and determines that, for the reasons set out below and in the CEQA Analysis, streamlining under CEQA Guidelines § 15183 applies to the Project. No further environmental analysis is required because the Project is consistent with the development density and land use characteristics established by existing zoning and General Plan policies for which an EIR was certified, and all of the Project's effects on the environment were adequately analyzed and mitigation measures provided in the 1998 LUTE EIR for the overall project (collectively called "Previous CEQA Documents"); there are no significant effects on the environment which are peculiar to the Project or to the parcel upon which it is located not addressed and mitigated in the Previous CEQA Documents; and there is no new information showing that any of the effects shall be more significant than described in the Previous CEQA Documents.

As set out in detail in the attached CEQA Analysis, the City finds that, pursuant to CEQA Guidelines section 15183 and Public Resources Code section 21083.3, the Project is consistent with the development density analyzed in the Previous CEQA Documents and that there are no environmental effects of the Project peculiar to the Project or the Project Site which were not analyzed as significant effects in the Previous CEQA Documents or that will not be substantially mitigated by the imposition of the City's SCAs, nor are there potentially significant off-site impacts and cumulative impacts not discussed in the Previous CEQA Documents or that will not be substantially mitigated by the imposition of the City's SCAs; nor are any of the previously identified significant effects which, as a result of substantial information not known at the time of certification of the Previous CEQA Documents, are now determined to present a more severe adverse impact than discussed in the Previous CEQA Documents. As such, no further analysis of the environmental effects of the Project is required.

- B. Streamlining for In-Fill Projects: Public Resources Code Section 21094.5 (CEQA Guidelines § 15183.3): The City finds and determines that, for the reasons set forth below and in the CEQA Analysis, Streamlining for In-Fill Projects applies to the Project and no further environmental analysis is required since the Project meets the criteria under CEQA Guidelines § 15183.3, and all the Project's effects on the environment were adequately analyzed and mitigation measures provided in the Previous CEQA Documents; the Project will cause no new specific effects not addressed in the Previous CEQA Documents that are specific to the Project or the Project Site; and there is no substantial new information showing that the adverse environmental effects of the Project are more significant than described in the Previous CEQA Documents.

The City finds that, pursuant to CEQA Guidelines section 15183.3, the CEQA Analysis contains in Attachment A, a written analysis consistent with Appendix M to the CEQA Guidelines examining whether the Project will cause any effects that require additional review under CEQA. The contents of Attachment A documents that the Project is located in an urban area satisfying



the requirements of CEQA Guidelines §15183.3(a), satisfies the applicable performance standards set forth in Appendix M to the CEQA Guidelines, and is consistent with the General Plan land use designation, density, building intensity and applicable policies satisfying the requirements of CEQA Guidelines §15183.3(c). It also explains how the effects of the Project were analyzed in the Previous CEQA Documents; and indicates that the Project incorporates all applicable mitigation measures and SCAs from the Previous CEQA Documents. Attachment A also determines that the Project will cause no new specific effects not analyzed in the Previous CEQA Documents; determines that there is no substantial new information showing that the adverse environmental effects of the Project are more significant than described in the Previous CEQA Documents, determines that the Project will not cause new specific effects or more significant effects, and documents how uniformly applicable development policies or standards (including, without limitation, the SCAs) will mitigate environmental effects of the Project. Based upon the CEQA Analysis and other substantial evidence in the record, the City finds and determines that no further environmental analysis of the effects of the Project is required.

C. Infill Exemption under Public Resources Section 21084 (CEQA Guidelines §15332):

The City finds and determines that for the reasons set forth in the CEQA Analysis, that the Project is consistent with CEQA Guidelines section 15332 and that no exceptions apply to the Project (per CEQA Guidelines Section 15300.2). Specifically, the Project (a) is consistent with applicable general plan policies and zoning designations; (b) occurs within a project site smaller than five acres and is substantially surrounded by urban uses; (c) has no value as habitat for endangered, rare or threatened species; (d) would not result in any significant effects relating to traffic, noise, air quality, or water quality; and (e) is located on a site that can be adequately served by all required utilities and public services. In addition, none of the specific exceptions to CEQA categorical exemptions (CEQA Guidelines Section 15300.2) are applicable to the Project.

IV. Severability: The City finds that all three CEQA provisions discussed and determined to be applicable in Section III above are separately and independently applicable to the consideration of the Project and should any of the three be determined not to be so applicable, such determinations shall have no effect on the validity of these findings and the approval of the 1750 Broadway Project on any of the other grounds.

V. Incorporation by Reference of Statement of Overriding Considerations: Each of the Previous CEQA Documents identified significant and unavoidable impacts.<sup>1</sup> The 1998 LUTE EIR identified six areas of environmental effects of the LUTE that presented significant and unavoidable impacts. Because the Project may contribute to some significant and unavoidable impacts identified in the Previous CEQA Documents identified above, but a Subsequent and/or Supplemental EIR is not required in accordance with CEQA Guidelines sections 15162, 15163, 15164, 15168, 15180, 15183 and 15183.3, a Statement of Overriding Considerations is not legally required. Nevertheless, in the interest of being conservative, the Statements of Overriding Consideration for the 1998 LUTE EIR, adopted by the City Council on March 24, 1998, via Resolution No. 74129 C.M.S are all hereby incorporated by reference as if fully set forth herein.

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<sup>1</sup> If these or any other findings inaccurately identify or fail to list a significant and unavoidable impact identified in the analysis, findings and conclusions of the 1988 LUTE EIR or their administrative records as a whole, the identification of that impact and any mitigation measure or SCA required to be implemented as part of the Project is not affected.



## ATTACHMENT B

### CONDITIONS OF APPROVAL

#### **1. Approved Use**

The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, and staff report dated, March 20, 2019, and the approved design plans, dated received March 13, 2019, 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 two years 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.

**14. Standard Conditions of Approval / Mitigation Monitoring and Reporting Program (SCAMMRP)**

- a. All mitigation measures identified in the 801 Pine Street CEQA Analysis are included in the Standard Condition of Approval / Mitigation Monitoring and Reporting Program (SCAMMRP) which is included in these Conditions of Approval and are incorporated herein by reference, as Attachment C as Conditions of Approval of the project. The Standard Conditions of Approval identified in the 801 Pine Street CEQA Analysis document are also included in the SCAMMRP, and are, therefore, incorporated into these Conditions by reference but are not repeated in these Conditions. To the extent that there is any inconsistency between the SCAMMRP and these Conditions, the more restrictive Conditions shall govern. In the event a Standard Condition of Approval or mitigation measure recommended in the 801 Pine Street CEQA Analysis document has been inadvertently omitted from the SCAMMRP, that Standard Condition of Approval or mitigation measure is adopted and incorporated from the 801 Pine Street CEQA Analysis document into the SCAMMRP by reference, and adopted as a Condition of Approval. The project applicant and property owner shall be responsible for compliance with the requirements of any submitted and approved technical reports, all applicable mitigation measures adopted, and with all Conditions of Approval set forth herein at his/her sole cost and expense, unless otherwise expressly provided in a specific mitigation measure or Condition of Approval, and subject to the review and approval by the City of Oakland. The SCAMMRP identifies the timeframe and responsible party for implementation and monitoring for each Standard Condition of Approval and mitigation measure. Unless otherwise specified, monitoring of compliance with the Standard Conditions of Approval and mitigation measures will be the responsibility of the Bureau of Planning, with overall authority concerning compliance residing with the Environmental Review Officer. Adoption of the SCAMMRP will constitute fulfillment of the CEQA monitoring and/or reporting requirement set forth in section 21081.6 of CEQA.
- b. Prior to the issuance of the first construction-related permit, the project applicant shall pay the applicable mitigation and monitoring fee to the City in accordance with the City's Master Fee Schedule.



**PROJECT SPECIFIC CONDITIONS**

**15. Building Wall Finish Along Property Line**

***Prior to issuance of a demolition, grading, or building permit to construct / Ongoing***

The applicant shall include on final construction plans that the new wall along the property line and adjacent to the building at 1770 Broadway has a finish texture material.

**16. New Street Trees in Front of the Property**

***Prior to issuance of a demolition, grading, or building permit to construct / Ongoing***

Subject to City review and approval, the applicant shall install at least three (3) new city street trees on Broadway in front of the property. The plans shall indicate at least 36-box size trees and include tree metal grates. Said trees shall also meet the City's standard specifications for tree planting of the Public Works/Tree Division. In case that the street trees and wells cannot be installed, the applicant shall consult with the City to install instead large trees with decorative vase planters above the sidewalk, subject to any required permits.

**17. Improvements-Ongoing**

The approval of this development application does not constitute approval of public improvements. It is the applicant's responsibility to seek and service any required permits from the appropriate departments or agencies.

**18. Storefront Windows and Doors**

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

The applicant shall submit construction plans, for City review and approval that provide details for the new storefront windows and doors. All of the windows and door glass shall be clear. The applicant shall keep all of the façade windows and doors clear of visual obstruction including window/door coverage materials; except for the submittal of any future proposal of new business signage that meets Section 17.104.020 (k) of the Oakland Planning Code.

**19. New Business Signage**

***Ongoing***

Any new business signage on the property shall require a separate small project design review application and permit by the Planning and Building Service Divisions. All future proposed business and residential signage shall be designed to be compatible to the building design. New signs are not allowed to be above the storefront awning and/or block the curtain wall of the garage.

**20. Garage and Utility Doors**

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

The applicant shall submit for staff review and approval plans that show design details for the garage, and utility doors. The doors shall be designed to be inconspicuous and blend in with the building design.

**21. Screening of PG&E Transformers, Utility Meters, HVAC and other Equipment**

***Prior to issuance of a demolition, grading or building permit/Ongoing***

The applicant shall submit plans for City review and approval that show within the property and not within the public right-of-way the placement and details for screening from public view all exterior PG&E transformers, utility meters, HVAC and related equipment.



**22. Trash and Recyclable Containers Odor Control/Loading Area**

***Ongoing***

The trash and recycling containers shall be kept and maintained and placed away from public view, except for during regular service pick up dates. The applicant shall sweep around these containers and the loading commercial area daily, and use power-generated steam equipment in this area once weekly or as often as required.

**23. Recommendations by Project Transportation Consultant. Incorporated as Conditions of Approval / Ongoing. Subject to City review and approval**

**Recommendation 1:**

- Install mirrors on all curved ramps in the garage to ensure that motorists can see on-coming vehicles.
- Designate one parking space near the residential lobby on 19th Street for passenger pick-up/drop off.
- Convert one of the no parking zones in the Broadway pull-out to either a metered parking space or passenger pick-up/drop off.

**Recommendation 2:**

- Explore the feasibility of and, only if feasible, install directional curb ramps at all four corners of the Broadway/19th Street, Franklin Street/19th Street, and Broadway/17th Street intersections that the East Bay BRT Project would not upgrade. Considering that fire hydrants, signal poles, light poles, and/or storm drain inlets may be present at these locations, construction of curb extensions (bulbouts) may also be required at some locations to accommodate the directional curb ramps.
- Explore the feasibility and only if feasible, install the City of Oakland *2017 Pedestrian Plan Update* recommendations at the Broadway/17th Street and Broadway/19th Street intersections, **which consist of converting signal operations to fixed pedestrian recall, reducing signal cycle lengths, and implementing Leading Pedestrian Interval.**
- Explore the feasibility and only if feasible, install the City of Oakland *2017 Pedestrian Plan Update* recommendations at the Broadway/17th Street and Broadway/19th Street intersections, which consist of converting signal operations to fixed pedestrian recall, reducing signal cycle lengths, and implementing Leading Pedestrian Interval.

**Recommendation 3:**

- Coordinate with City of Oakland and AC Transit to explore the feasibility and if feasible, install bus stop amenities such as shelter, bench, and trash receptacle at the bus stops on northbound Broadway just north of 17th Street and on southbound Broadway just north of 19th Streets and midblock between 15th and 17th Streets.



**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.

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**Name of Project Applicant**



## ATTACHMENT C

### STANDARD CONDITIONS OF APPROVAL AND MITIGATION MONITORING AND REPORTING PROGRAM

This standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCA/MMRP) is based on CEQA Analysis prepared for the **1750 Broadway Project**.

These SCAs are incorporated into projects as conditions of approval, regardless of the determination of a project's environmental impacts. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City, and are designed to, and will, avoid or substantially reduce a project's environmental effects.

In reviewing project applications, the City determines which SCAs apply based upon the zoning district, community plan, and the type of permits/approvals required for the project. Depending on the specific characteristics of the project type and/or project site, the City will determine which SCAs apply to a specific project. Because these SCAs are mandatory City requirements imposed on a city-wide basis, environmental analyses assume that these SCAs will be imposed and implemented by the project, and are not imposed as mitigation measures under CEQA.

All SCAs identified in the CEQA Analysis—which is consistent with the measures and conditions presented in the City of Oakland General Plan, Land Use and Transportation EIR (LUTE EIR, 1998)—are included herein. To the extent that any SCA identified in the CEQA Analysis was inadvertently omitted, it is automatically incorporated herein by reference.

- The first column identifies the SCA applicable to that topic in the CEQA Analysis.
- The second column identifies the monitoring schedule or timing applicable to the project.
- The third column names the party responsible for monitoring the required action for the project.

In addition to the SCAs identified and discussed in the CEQA Analysis, other SCAs that are applicable to the project are included herein.

The project sponsor is responsible for compliance with any recommendations in approved technical reports and with all SCAs set forth herein at its sole cost and expense, unless otherwise expressly provided in a specific SCA, 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 Planning and Zoning Division. Prior to the issuance of a demolition, grading, and/or construction permit, the project sponsor shall pay the applicable mitigation and monitoring fee to the City in accordance with the City's Master Fee Schedule.



Note that the SCAs included in this document are referred to using an abbreviation for the environmental topic area and are numbered sequentially for each topic area—i.e., SCA-AIR-1, SCA-AIR-2, etc. The SCA title and the SCA number that corresponds to the City's Master SCA list are also provided—i.e., SCA-AIR-1: Construction-Related Air Pollution (Dust and/or Equipment Emissions) (#21).

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<b>General</b>		
<p>a. SCA GEN-1 (Standard Condition of Approval 15) <i>Regulatory Permits and Authorizations from Other Agencies</i></p> <p><u>Requirement:</u> 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.</p>	Prior to activity requiring permit/authorization from regulatory agency.	City of Oakland Bureau of Planning and applicable regulatory agency with jurisdiction
<b>Aesthetics, Shadow, and Wind</b>		
<p>SCA AES-1 (Standard Condition of Approval 16) <i>Trash and Blight Removal</i></p> <p><u>Requirement:</u> 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.</p>	Ongoing.	City of Oakland Bureau of Building
<p>SCA AES-2 (Standard Condition of Approval 17) <i>Graffiti Control</i></p> <p><u>Requirement:</u></p> <p>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:</p> <ol style="list-style-type: none"> <li>Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.</li> <li>Installation and maintenance of lighting to protect likely graffiti-attracting surfaces.</li> <li>Use of paint with anti-graffiti coating.</li> <li>Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).</li> <li>Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.</li> </ol> <p>b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:</p> <ol style="list-style-type: none"> <li>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.</li> <li>Covering with new paint to match the color of the surrounding surface.</li> </ol>	Ongoing.	City of Oakland Bureau of Building



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
iii. Replacing with new surfacing (with City permits if required).		
<b>Aesthetics, Shadow, and Wind (cont.)</b>		
<p><b>SCA AES-3 (Standard Condition of Approval 18) Landscape Plan</b></p> <p><b>a. Landscape Plan Required</b></p> <p>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 <a href="http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf">http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf</a> and <a href="http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf">http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf</a>, respectively), and with any applicable streetscape plan.</p> <p><b>b. Landscape Installation</b></p> <p>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.</p> <p><b>c. Landscape Maintenance</b></p> <p>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.</p>	<p>a. Prior to approval of construction-related permit.</p> <p>b. Prior to building permit final.</p> <p>c. Ongoing</p>	<p>a. City of Oakland Bureau of Planning</p> <p>b. City of Oakland Bureau of Building</p> <p>c. City of Oakland Bureau of Building</p>
<p><b>SCA AES-4 (Standard Condition of Approval 19): Lighting</b></p> <p><u>Requirement:</u> 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.</p>	Prior to building permit final.	City of Oakland Bureau of Building
<p><b>SCA AES-5 (Standard Condition of Approval 20) Public Art for Private Development</b></p> <p><u>Requirement:</u> 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.</p> <p>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.</p> <p>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.</p>	<p>Payment of in-lieu fees and/or plans showing fulfillment of public art requirement – Prior to Issuance of Building permit</p> <p>Installation of art/cultural space – Prior to Issuance of a Certificate of Occupancy.</p>	City of Oakland Bureau of Planning and Bureau of Building.



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Also SCA UTIL-2, Underground Utilities. See <i>Utilities and Service Systems</i> , below.		
<b>Air Quality</b>		
<p><b>SCA AIR-1 (Standard Condition of Approval 21) Dust Controls – Construction Related</b></p> <p><u>Requirement:</u> The project applicant shall implement all of the following applicable dust control measures during construction of the project:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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).</li> <li>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.</li> <li>Limit vehicle speeds on unpaved roads to 15 miles per hour.</li> <li>All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.</li> <li>All trucks and equipment, including tires, shall be washed off prior to leaving the site.</li> <li>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.</li> <li>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.).</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ol>	During construction.	City of Oakland Bureau of Building
<p><b>SCA AIR-2 (Standard Condition of Approval 22) Criteria Air Pollutant Controls – Construction Related</b></p> <p><u>Requirement:</u> The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable:</p> <ol style="list-style-type: none"> <li>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.</li> </ol>	During construction.	City of Oakland Bureau of Building



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<b>Air Quality (cont.)</b>		
<p>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").</p> <p>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.</p> <p>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.</p> <p>e. Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings.</p> <p>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.</p>		
<p><b>SCA AIR-3 (Standard Condition of Approval 23) <u>Diesel Particulate Matter Controls-Construction Related</u></b></p> <p>a. <b><u>Diesel Particulate Matter Reduction Measures</u></b>  <u>Requirement:</u> 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:</p> <p>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.</p> <p>- or -</p> <p>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.</p>	<p>a. Prior to issuance of a construction related permit (i), during construction (ii).</p> <p>b. Prior to issuance of a construction related permit.</p>	<p>a. City of Oakland Bureau of Planning and Bureau of Building.</p> <p>b. City of Oakland Bureau of Planning and Bureau of Building.</p>



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<b>Air Quality (cont.)</b>		
<p><b>b. Construction Emissions Minimization Plan (if required by a above)</b></p> <p><u>Requirement:</u> 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:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> </ol>		
<p><b>SCA AIR-4 (Standard Condition of Approval 24) Exposure to Air Pollution (Toxic Air Contaminants)</b></p> <p><b>a. Health Risk Reduction Measures</b></p> <p><u>Requirement:</u> 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 <u>one</u> of the following methods:</p> <ol style="list-style-type: none"> <li>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, 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.</li> </ol> <p>- or -</p> <ol style="list-style-type: none"> <li>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: <ul style="list-style-type: none"> <li>Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.</li> <li>Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph).</li> <li>Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.</li> <li>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</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>Prior to issuance of a construction related permit.</li> <li>Ongoing.</li> </ol>	<ol style="list-style-type: none"> <li>City of Oakland Bureau of Planning and Bureau of Building</li> <li>City of Oakland Bureau of Building</li> </ol>



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<p>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.</p> <ul style="list-style-type: none"> <li>Sensitive receptors shall be located on the upper floors of buildings, if feasible.</li> </ul>		
<b>Air Quality (cont.)</b>		
<p>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 (<i>Pinus nigra</i> var. <i>maritima</i>), Cypress (<i>X Cupressocyparis leylandii</i>), Hybrid poplar (<i>Populus deltoids X trichocarpa</i>), and Redwood (<i>Sequoia sempervirens</i>).</p> <ul style="list-style-type: none"> <li>Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.</li> <li>Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.</li> <li>Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible: <ul style="list-style-type: none"> <li>Installing electrical hook-ups for diesel trucks at loading docks.</li> <li>Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.</li> <li>Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.</li> <li>Prohibiting trucks from idling for more than two minutes.</li> <li>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.</li> </ul> </li> </ul> <p>b. <b>Maintenance of Health Risk Reduction Measures</b>  <u>Requirement:</u> 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.</p> <p><b>NOTE:</b> This Standard Condition of Approval has been implemented by the project applicant and no further action is required. An HRA for the Proposed Project was prepared and presented in the 1750 Broadway Project CEQA Checklist/Exemption Report, Consistent with Measure SCA AIR-3.a.i, no health risk reduction measures are required.</p>		
<p><b>SCA AIR-5 (Standard Condition of Approval 25) Stationary Sources of Air Pollution (Toxic Air Contaminants)</b>  <u>Requirement:</u> 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:</p> <p>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</p>	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<p>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.</p> <p>- or -</p> <p>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:</p>		
<b>Air Quality (cont.)</b>		
<p>i. Installation of non-diesel fueled generators, if feasible, or;</p> <p>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.</p>		
<p><b>SCA AIR-6 (Standard Condition of Approval 27) Asbestos in Structures</b></p> <p><u>Requirement:</u> 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.</p>	Prior to approval of construction-related permit	Applicable regulatory agency with jurisdiction
See SCA TRA-4, Transportation and Parking Demand Management Plan. See <i>Transportation and Circulation</i> , below.		
<b>Biological Resources</b>		
<p><b>SCA BIO-1 (Standard Condition of Approval 30) Tree Removal During Bird Breeding Season</b></p> <p><u>Requirement:</u> 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.</p>	Prior to removal of trees	City of Oakland Bureau of Planning and Bureau of Building
<p><b>SCA BIO-2 (Standard Condition of Approval 31) Tree Permit</b></p> <p>a. <b>Tree Permit Required</b></p> <p><u>Requirement:</u> 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.</p>	<p>a. Prior to approval of construction-related permit</p> <p>b. During construction.</p>	<p>a. City of Oakland Public Works Department, Tree Division and Bureau of Building</p>



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<p><b>b. Tree Protection During Construction</b></p> <p><u>Requirement:</u> 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:</p> <p>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.</p>	<p>c. Prior to building permit final</p>	<p>b. City of Oakland Public Works Department; Tree Division and Bureau of Building</p> <p>c. City of Oakland Public Works Department and Tree Division; Bureau of Building</p>



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<b>Biological Resources (cont.)</b>		
<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>c. <b>Tree Replacement Plantings</b>  <u>Requirement:</u> 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:</p> <p>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.</p> <p>ii. Replacement tree species shall consist of <i>Sequoia sempervirens</i> (Coast Redwood), <i>Quercus agrifolia</i> (Coast Live Oak), <i>Arbutus menziesii</i> (Madrone), <i>Aesculus californica</i> (California Buckeye), <i>Umbellularia californica</i> (California Bay Laurel), or other tree species acceptable to the Tree Division.</p> <p>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.</p>		



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<b>Biological Resources (cont.)</b>		
<p>iv. Minimum planting areas must be available on site as follows:</p> <ul style="list-style-type: none"> <li>For Sequoia sempervirens, three hundred fifteen (315) square feet per tree;</li> <li>For other species listed, seven hundred (700) square feet per tree.</li> </ul> <p>v. 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.</p> <p>vi. 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.</p>		
<b>Cultural Resources</b>		
<p>SCA CUL-1 (Standard Condition of Approval 33) <i>Archaeological and Paleontological Resources – Discovery During Construction</i></p> <p><u>Requirement:</u> 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.</p> <p>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.</p> <p>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.</p> <p>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</p>	During construction.	City of Oakland Bureau of Building



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
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.		



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Cultural Resources (cont)		



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<p><b>SCA CUL-2 (Standard Condition of Approval 34) Archaeologically Sensitive Areas – Pre-Construction Measures.</b></p> <p><b>Requirement:</b> The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources.</p> <p>a. <b>Provision A: Intensive Pre-Construction Study</b></p> <p>b. 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:</p> <p>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.</p> <p>b. A report disseminating the results of this research.</p> <p>c. Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources.</p> <p>c. 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.</p> <p>d. <b>Provision B: Construction ALERT Sheet</b></p> <p>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.</p> <p>e. 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.</p>	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
<b>Cultural Resources (cont)</b>		
<p><b>SCA CUL-3 (Standard Condition of Approval 35) Human Remains – Discovery During Construction</b></p> <p><u>Requirement:</u> 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.</p>	During construction.	City of Oakland Bureau of Building
Also SCA NOI-6, Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities. See <i>Noise</i> , below.		
<b>Geology, Soils, and Geohazards</b>		
<p><b>SCA GEO-1 (Standard Condition of Approval 37) Construction-Related Permit(s)</b></p> <p><u>Requirement:</u> 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.</p>	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
<p><b>SCA GEO-2 (Standard Condition of Approval 38) Soils Report</b></p> <p><u>Requirement:</u> 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.</p>	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
<p><b>SCA GEO-3 (Standard Condition of Approval 40) Seismic Hazards Zone (Landslide/Liquefaction)</b></p> <p><u>Requirement:</u> 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.</p>	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
<b>Greenhouse Gases and Climate Change</b>		
Also SCA AES-3, Landscape Plan. See <i>Aesthetics, Wind, and Shadow</i> , above.		
Also SCAs AIR-1, Dust Controls – Construction Related. See <i>Air Quality</i> , above.		
Also SCAs AIR-2, Criteria Air Pollutant Controls - Construction Related. See <i>Air Quality</i> , above.		
Also SCAs AIR-3, Diesel Particulate Matter Controls - Construction Related. See <i>Air Quality</i> , above.		



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Also SCA TRA-4, <i>Transportation and Parking Demand Management</i> . See <i>Transportation and Circulation</i> , below.		
Also SCAs UTIL-1, <i>Construction and Demolition Waste Reduction and Recycling</i> ; and UTIL-4, <i>Green Building Requirements</i> . See <i>Utilities and Service Systems</i> , below.		
<b>Hazards and Hazardous Materials</b>		
<p>SCA HAZ-1 (Standard Condition of Approval 43) <i>Hazards Materials Related to Construction</i></p> <p><u>Requirement:</u> 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:</p> <ol style="list-style-type: none"> <li>Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction;</li> <li>Avoid overtopping construction equipment fuel gas tanks;</li> <li>During routine maintenance of construction equipment, properly contain and remove grease and oils;</li> <li>Properly dispose of discarded containers of fuels and other chemicals;</li> <li>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</li> <li>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.</li> </ol>	During construction.	City of Oakland Bureau of Building
<p>SCA HAZ-2 (Standard Condition of Approval 45): <i>Hazardous Materials Business Plan</i></p> <p><u>Requirement:</u> 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:</p> <ol style="list-style-type: none"> <li>The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids.</li> <li>The location of such hazardous materials.</li> <li>An emergency response plan including employee training information.</li> <li>A plan that describes the manner in which these materials are handled, transported, and disposed.</li> </ol>	Prior to building permit final.	Oakland Fire Department
See SCA AIR-6, <i>Asbestos in Structures</i> . See <i>Air Quality</i> , above.		
See SCA TRA-1, <i>Construction Activity in the Public Right-of-Way</i> . See <i>Transportation and Traffic</i> , below.		



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<b>Hydrology and Water Quality</b>		
<p><b>SCA HYD-1 (Standard Condition of Approval 49) Erosion and Sedimentation Control Plan for Construction</b></p> <p><b>a. Erosion and Sedimentation Control Plan Required</b>  <u>Requirement:</u> 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 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.</p> <p><b>b. Erosion and Sedimentation Control During Construction</b>  <u>Requirement:</u> 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.</p>	<p>a. Prior to approval of construction-related permit</p> <p>b. During construction.</p>	<p>City of Oakland Bureau of Building</p>
<p><b>SCA HYD-2 (Standard Condition of Approval 54) NPDES C.3 Stormwater Requirements for Regulated Projects</b></p> <p><b>a. Post-Construction Stormwater Management Plan Required</b>  <u>Requirement:</u> 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:</p> <p>f. i. Location and size of new and replaced impervious surface;</p> <p>g. ii. Directional surface flow of stormwater runoff;</p> <p>h. iii. Location of proposed on-site storm drain lines;</p> <p>i. iv. Site design measures to reduce the amount of impervious surface area;</p> <p>j. v. Source control measures to limit stormwater pollution;</p> <p>k. vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and</p> <p>l. vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.</p>	<p>a. Prior to approval of construction-related permit</p> <p>b. Prior to building permit final</p>	<p>a. City of Oakland Bureau of Planning and Bureau of Building</p> <p>b. City of Oakland Bureau of Building</p>



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<b>Hydrology and Water Quality (cont.)</b>		
<p><b>b. Maintenance Agreement Required</b></p> <p><u>Requirement:</u> 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:</p> <p>m. 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</p> <p>n. 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.</p> <p>o. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.</p>		
Also SCAs GEO-1, Construction-Related Permit(s) and GEO-2, Soils Report. See <i>Geology, Soils, and Geohazards</i> , above.		
Also SCA UTIL-6, Storm Drain System. See <i>Utilities and Service Systems</i> , below.		
<b>Noise</b>		
<p>SCA NOI-1 (Standard Condition of Approval 62) <i>Construction Days/Hours</i></p> <p><u>Requirement:</u> The project applicant shall comply with the following restrictions concerning construction days and hours:</p> <p>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.</p> <p>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.</p> <p>c. No construction is allowed on Sunday or federal holidays.</p> <p>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.</p> <p>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.</p>	During construction.	City of Oakland Bureau of Building



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<b>Noise (cont.)</b>		
<p><b>SCA NOI-2: (Standard Condition of Approval 63) Construction Noise</b></p> <p><b>Requirement:</b> 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:</p> <ul style="list-style-type: none"> <li>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.</li> <li><u>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.</u></li> <li>b. Applicant shall use temporary power poles instead of generators where feasible.</li> <li>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</li> <li>d. <u>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.</u></li> </ul>	During construction.	City of Oakland Bureau of Building
<p><b>SCA NOI-3 (Standard Condition of Approval 64) Extreme Construction Noise</b></p> <p>a. <b>Construction Noise Management Plan Required</b></p> <p><b>Requirement:</b> 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 <u>include, but are not limited to, the following:</u></p> <ul style="list-style-type: none"> <li>i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;</li> <li>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;</li> <li>iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;</li> <li>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 <u>and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and</u></li> <li>v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.</li> </ul>	<ul style="list-style-type: none"> <li>a. Prior to approval of construction-related permit.</li> <li>b. During construction.</li> </ul>	City of Oakland Bureau of Building



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<b>Noise (cont.)</b>		
<p><b>b. Public Notification Required</b></p> <p><u>Requirement:</u> 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.</p>		
<p>• <b>SCA NOI-4 (Standard Condition of Approval 65) Project-Specific Construction Noise Reduction Measures</b></p> <p><u>Requirement:</u> 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 adjacent residences. The project applicant shall implement the approved Plan during construction.</p>	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
<p><b>SCA NOI-5 (Standard Condition of Approval 66) Construction Noise Complaints</b></p> <p><u>Requirement:</u> 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:</p> <ol style="list-style-type: none"> <li>Designation of an on-site construction complaint and enforcement manager for the project;</li> <li>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;</li> <li>Protocols for receiving, responding to, and tracking received complaints; and</li> <li>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.</li> </ol>	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
<p><b>SCA NOI-6 (Standard Condition of Approval 67) Exposure to Community Noise</b></p> <p><u>Requirement:</u> 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:</p> <ol style="list-style-type: none"> <li>45 dBA: Residential activities, civic activities, hotels</li> <li>50 dBA: Administrative offices; group assembly activities</li> <li>55 dBA: Commercial activities</li> <li>65 dBA: Industrial activities</li> </ol>	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building
<p><b>SCA NOI-7 (Standard Condition of Approval 68) Operational Noise</b></p> <p><u>Requirement:</u> 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.</p>	Ongoing.	City of Oakland Bureau of Building



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<b>Noise (cont.)</b>		
<p><b>SCA NOI-8 (Standard Condition of Approval 70) <i>Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities</i></b></p> <p><b>Requirement:</b> 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.</p>	Prior to construction.	City of Oakland Bureau of Building
<p><b>SCA NOI-9 (Standard Condition of Approval 69) <i>Exposure to Vibration</i></b></p> <p><b>Requirement:</b> 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:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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</li> </ol>	Prior approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building
<b>Population and Housing</b>		
<p><b>SCA POP-1 (Standard Condition of Approval 72) <i>Affordable Housing Impact Fee</i></b></p> <p><b>Requirement:</b> 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).</p>	Prior to issuance of building permit; subsequent milestones pursuant to ordinance.	City of Oakland Bureau of Building
<b>Public Services</b>		
<p><b>SCA PUB-1 (Standard Condition of Approval 74) <i>Capital Improvements Impact Fee</i></b></p> <p><b>Requirement:</b> 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).</p>	Prior to issuance of building permit.	City of Oakland Bureau of Building
<b>Transportation and Circulation</b>		
<p><b>SCA TRA-1 (Standard Condition of Approval 76) <i>Construction Activity in the Public Right-of-Way</i></b></p> <p><b>a. Obstruction Permit Required</b></p>	a. Prior to approval of construction-related permit.	a. City of Oakland Department of Transportation



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<u>Requirement:</u> 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>Transportation and Circulation (cont.)</b>		
<p><b>b. Traffic Control Plan Required</b></p> <p><u>Requirement:</u> 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.</p> <p><b>c. Repair of City Streets</b></p> <p><u>Requirement:</u> 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.</p>	<p>b. Prior to approval of construction-related permit.</p> <p>c. Prior to building permit final.</p>	<p>b. City of Oakland Department of Transportation</p> <p>c. City of Oakland Department of Transportation</p>
<p><b>SCA TRA-2 (Standard Condition of Approval 77) Bicycle Parking</b></p> <p><u>Requirement:</u> 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.</p>	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building
<p><b>SCA TRA-3 (Standard Condition of Approval 78) Transportation Improvements</b></p> <p><u>Requirement:</u> 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&amp;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:</p> <p>a. 2070L Type Controller with cabinet accessory</p> <p>b. GPS communication (clock)</p>	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
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 f. Video detection on existing (or new, if required)		
<b>Transportation and Circulation (cont.)</b>		
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)		
<b>SCA TRA-4 (Standard Condition of Approval 79) Transportation and Parking Demand Management</b> <b>a. Transportation and Parking Demand Management (TDM) Plan Required</b> <u>Requirement:</u> The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City. p. i. The goals of the TDM Plan shall be the following: <ul style="list-style-type: none"> <li>• Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable.</li> <li>• Achieve the following project vehicle trip reductions (VTR):               <ul style="list-style-type: none"> <li>– Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR</li> <li>– Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR</li> </ul> </li> <li>• Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate.</li> <li>• Enhance the City's transportation system, consistent with City policies and programs.</li> </ul> q. ii. The TDM Plan should include the following: <ul style="list-style-type: none"> <li>• 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.</li> <li>• Proposed TDM strategies to achieve VTR goals (see below).</li> </ul> r. 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.	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
s. 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.		



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Transportation and Circulation (cont.)		



t.

u.	Improvement	v. Required by code or when...
w.	Bus boarding bulbs or islands	<ul style="list-style-type: none"> <li>• A bus boarding bulb or island does not already exist and a bus stop is located along the project frontage; and/or</li> <li>• 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</li> </ul>
x.	Bus shelter	<ul style="list-style-type: none"> <li>• A stop with no shelter is located within the project frontage, or</li> <li>• The project is located within 0.10 miles of a flag stop with 25 or more boardings per day</li> </ul>
y.	Concrete bus pad	<ul style="list-style-type: none"> <li>• A bus stop is located along the project frontage and a concrete bus pad does not already exist</li> </ul>
z.	Curb extensions or bulb-outs	<ul style="list-style-type: none"> <li>• Identified as an improvement within site analysis</li> </ul>
aa.	Implementation of a corridor-level bikeway improvement	<ul style="list-style-type: none"> <li>• 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</li> <li>• The project would generate 500 or more daily bicycle trips</li> </ul>
bb.	Implementation of a corridor-level transit capital improvement	<ul style="list-style-type: none"> <li>• A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and</li> <li>• The project would generate 400 or more peak period transit trips</li> </ul>
cc.	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.	<ul style="list-style-type: none"> <li>• Always required</li> </ul>
dd.	Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.)	<ul style="list-style-type: none"> <li>• When improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection</li> </ul>
ee.	In-street bicycle corral	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
ff.	Intersection improvements <sup>1</sup>	<ul style="list-style-type: none"> <li>• Identified as an improvement within site analysis</li> </ul>
gg.	New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards	<ul style="list-style-type: none"> <li>• Always required</li> </ul>



Standard Conditions of Approval/Mitigation Measures		Mitigation Implementation/ Monitoring	
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hh. No monthly permits and establish minimum price floor for public parking <sup>2</sup>	<ul style="list-style-type: none"> <li>If proposed parking ratio exceeds 1:1000 sf. (commercial)</li> </ul>		
ii. Parking garage is designed with retrofit capability	<ul style="list-style-type: none"> <li>Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf. (commercial)</li> </ul>		
ii. <b>Transportation and Circulation (cont.)</b>			
kk.			
ll. Improvement	mm. Required by code or when...		
nn. Parking space reserved for car share	<ul style="list-style-type: none"> <li>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.</li> </ul>		
oo. Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section	<ul style="list-style-type: none"> <li>Typically required</li> </ul>		
pp. Pedestrian crossing improvements	<ul style="list-style-type: none"> <li>Identified as an improvement within site analysis</li> </ul>		
qq. Pedestrian-supportive signal changes <sup>3</sup>	<ul style="list-style-type: none"> <li>Identified as an improvement within operations analysis</li> </ul>		
rr. Real-time transit information system	<ul style="list-style-type: none"> <li>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</li> </ul>		
ss. Relocating bus stops to far side	<ul style="list-style-type: none"> <li>A project is located within 0.10 mile of any active bus stop that is currently near-side</li> </ul>		
tt. Signal upgrades <sup>4</sup>	<ul style="list-style-type: none"> <li>Project size exceeds 100 residential units, 80,000 sf. of retail, or 100,000 sf. of commercial; and</li> <li>Project frontage abuts an intersection with signal infrastructure older than 15 years</li> </ul>		
uu. Transit queue jumps	<ul style="list-style-type: none"> <li>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</li> </ul>		

<sup>1</sup> Including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines.

<sup>2</sup> May also provide a cash incentive or transit pass alternative to a free parking space in commercial properties.

<sup>3</sup> 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.

<sup>4</sup> Including typical traffic lights, pedestrian signals, bike actuated signals, transit-only signals



Standard Conditions of Approval/Mitigation Measures		Mitigation Implementation/ Monitoring	
		Schedule	Responsibility
<p>VV. Trenching and placement of conduit for providing traffic signal interconnect</p> <ul style="list-style-type: none"> <li>• Project size exceeds 100 units, 80,000 sf. of retail, or 100,000 sf. of commercial; and</li> <li>• Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and</li> <li>• A major transit improvement is identified within operations analysis requiring traffic signal interconnect</li> </ul>			
<p>WW. Unbundled parking</p> <ul style="list-style-type: none"> <li>• If proposed parking ratio exceeds 1:1.25 (residential)</li> </ul>			
<p>XX. iii. Other TDM strategies to consider include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>			
<b>Transportation and Circulation (cont.)</b>			
<ul style="list-style-type: none"> <li>• Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping.</li> <li>• 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.</li> <li>• 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 <a href="http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf">http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf</a> and <a href="http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf">http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf</a>, respectively) and any applicable streetscape plan.</li> <li>• Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.</li> <li>• 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).</li> <li>• 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.</li> <li>• 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).</li> <li>• Guaranteed ride home program for employees, either through 511.org or through separate program.</li> <li>• Pre-tax commuter benefits (commuter checks) for employees.</li> <li>• 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.</li> <li>• On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools.</li> </ul>			



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<ul style="list-style-type: none"> <li>Distribution of information concerning alternative transportation options.</li> <li>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.</li> <li>Parking management strategies including attendant/valet parking and shared parking spaces.</li> <li>Requiring tenants to provide opportunities and the ability to work off-site.</li> <li>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).</li> <li>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.</li> </ul>		
<b>Transportation and Circulation (cont.)</b>		
<p>yy. 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.</p> <p>zz. <u>When Required:</u> Prior to approval of construction-related permit</p> <p>aaa. <u>Initial Approval:</u> Bureau of Planning</p> <p>bbb. <u>Monitoring/Inspection:</u> N/A</p> <p>b. <b>TDM Implementation – Physical Improvements</b>  <u>Requirement:</u> 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.</p> <p>ccc. <u>When Required:</u> Prior to building permit final</p> <p>ddd. <u>Initial Approval:</u> Bureau of Building</p> <p>eee. <u>Monitoring/Inspection:</u> Bureau of Building</p> <p>c. <b>TDM Implementation – Operational Strategies</b>  <u>Requirement:</u> 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.</p>		



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
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<p>fff. NOTE: This measure has been implemented by the project applicant and no further action is required. The TDM Plan is included as Appendix A to the 1750 Broadway Project CEQA Checklist/Exemption Report.</p>		
<p>SCA TRA-4 (Standard Condition of Approval 80) <i>Transportation Impact Fee</i>  <u>Requirement:</u> 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).</p>	Prior to issuance of building permit.	City of Oakland Bureau of Building
<p>SCA TRA-5 (Standard Condition of Approval 83) <i>Plug-In Electric Vehicle (PEV) Charging Infrastructure</i>  a. <i>PEV-Ready Parking Spaces</i>  <u>Requirement:</u> 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.</p>	Prior to Issuance of Building Permit	City of Oakland Bureau of Building
<b>Transportation and Circulation (cont.)</b>		
<p>b. <i>PEV-Capable Parking Spaces</i>  <u>Requirement:</u> 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.</p>		
<p>c. <i>ADA-Accessible Spaces</i>  <u>Requirement:</u> 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).</p>		
<b>Utilities and Service Systems</b>		
<p>SCA UTIL-1 (Standard Condition of Approval 84) <i>Construction and Demolition Waste Reduction and Recycling</i>  <u>Requirement:</u> 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 <a href="http://www.greenhalosystems.com">www.greenhalosystems.com</a> 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.</p>	Prior to approval of construction-related permit	City of Oakland Public Works Department, Environmental Services Division
<p>SCA UTIL-2 (Standard Condition of Approval 85) <i>Underground Utilities</i>  <u>Requirement:</u> 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</p>	During construction.	City of Oakland Bureau of Building



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
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.		
<p><b>SCA UTIL-3 (Standard Condition of Approval 86) Recycling Collection and Storage Space</b></p> <p><u>Requirement:</u> 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.</p>	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building
<p><b>SCA UTIL-4 (Standard Condition of Approval 87) Green Building Requirements</b></p> <p><b>a. Compliance with Green Building Requirements During Plan-Check</b></p> <p><u>Requirement:</u> 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).</p>	<p>a. Prior to approval of construction-related permit.</p> <p>b. During construction.</p> <p>c. Prior to final approval.</p>	<p>a. City of Oakland Bureau of Building Inspections</p> <p>b. City of Oakland Bureau of Building</p>
<b>Utilities and Service Systems (cont.)</b>		
<p>i. The following information shall be submitted to the City for review and approval with the application for a building permit:</p> <ul style="list-style-type: none"> <li>Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards.</li> <li>Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.</li> <li>Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit.</li> <li>Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below.</li> <li>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.</li> <li>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.</li> <li>Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.</li> </ul> <p>ii. The set of plans in subsection (i) shall demonstrate compliance with the following:</p> <ul style="list-style-type: none"> <li>CALGreen mandatory measures.</li> <li>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.</li> </ul>		<p>c. City of Oakland Bureau of Planning and Bureau of Building</p>



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<ul style="list-style-type: none"> <li>Compliance with the appropriate and applicable checklist approved during the Planning entitlement process.</li> <li>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.</li> <li>The required green building point minimums in the appropriate credit categories.</li> </ul> <p><b>b. Compliance with Green Building Requirements During Construction</b>  <u>Requirement:</u> 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:</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.</li> </ul>		
<b>Utilities and Service Systems (cont.)</b>		
<p><b>c. Compliance with Green Building Requirements After Construction</b>  <u>Requirement:</u> Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.</p>		
<p><b>SCA UTIL-5 (Standard Condition of Approval 89) Sanitary Sewer System</b>  <u>Requirement:</u> 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.</p>	Prior to approval of construction-related permit.	City of Oakland Public Works Department, Department of Engineering and Construction
<p><b>SCA UTIL-6 (Standard Condition of Approval 90) Storm Drain System</b>  <u>Requirement:</u> 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.</p>	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
<p><b>SCA UTIL-7 (Standard Condition of Approval 92) Water Efficient Landscape Ordinance (WELO)</b>  <u>Requirement:</u> The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage. For any landscape project with an aggregate (total noncontiguous) landscape area equal to 2,500 sq. ft. or less. The project applicant may implement either the Prescriptive Measures or the Performance Measures, of, and in accordance with the California's Model Water Efficient Landscape Ordinance. For any landscape project with an aggregate (total noncontiguous) landscape area over 2,500 sq. ft., the project applicant shall implement the Performance Measures in accordance with the WELO.</p>	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning



Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
<p><i>Prescriptive Measures:</i> Prior to construction, the project applicant shall submit documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance (see website below starting on page 23): <a href="http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%20Official%20CCR%20pages.pdf">http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%20Official%20CCR%20pages.pdf</a></p> <p><i>Performance Measures:</i> Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, which includes the following:</p> <p>a. Project Information:</p> <ol style="list-style-type: none"> <li>Date,</li> <li>Applicant and property owner name,</li> <li>Project address,</li> <li>Total landscape area,</li> <li>Project type (new, rehabilitated, cemetery, or home owner installed),</li> <li>Water supply type and water purveyor,</li> <li>Checklist of documents in the package, and</li> <li>Applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package."</li> </ol>		
<b>Utilities and Service Systems (cont.)</b>		
<p>b. Water Efficient Landscape Worksheet</p> <ol style="list-style-type: none"> <li>Hydrozone Information Table</li> <li>Water Budget Calculations with Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use</li> </ol> <p>c. Soil Management Report</p> <p>d. Landscape Design Plan</p> <p>e. Irrigation Design Plan, and</p> <p>f. Grading Plan</p> <p>Upon installation of the landscaping and irrigation systems, the Project applicant shall submit a Certificate of Completion and landscape and irrigation maintenance schedule for review and approval by the City. The Certificate of Compliance shall also be submitted to the local water purveyor and property owner or his or her designee.</p> <p>For the specific requirements within the Water Efficient Landscape Worksheet, Soil Management Report, Landscape Design Plan, Irrigation Design Plan and Grading Plan, see the link below. Effective May 1, 2018 Page 77 <a href="http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%20Official%20CCR%20pages.pdf">http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%20Official%20CCR%20pages.pdf</a></p>		
Also SCAs HYD-1, Erosion and Sedimentation Control Plan for Construction, and HYD-2, NPDES C.3 Stormwater Requirements for Regulated Projects. See <i>Hydrology and Water Quality</i> , above.		



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MAR 13 2019

City of Oakland  
Planning & Zoning Division

# 1750 BROADWAY

OAKLAND, CALIFORNIA  
PLANNING COMMISSION  
MARCH 12, 2019

Attachment D



# PROJECT INFORMATION

Development Team : Rubicon Point Partners  
 Architectural Team : Handel Architects

Location : 1750 Broadway  
 Project Type: Mix-use Residential  
 Apartments / Retail

Site: 27,600 SF  
 Number of units: 307  
 Residential: 341,880 GSF (273,270 NSF)  
 Number of parking stalls: 170  
 Garage: 114,240 GSF  
 Mechanical: 19,980 GSF  
 Retail: 5,000 GSF

Project Total: approximately 499,676 SF

Bicycle Parking : Short Term - 24  
 (22 Residential / 2 Retail)  
 Long Term - 200  
 (198 Residential / 2 Retail)

Off Street Loading : 2 Spaces @ 12' x 30'

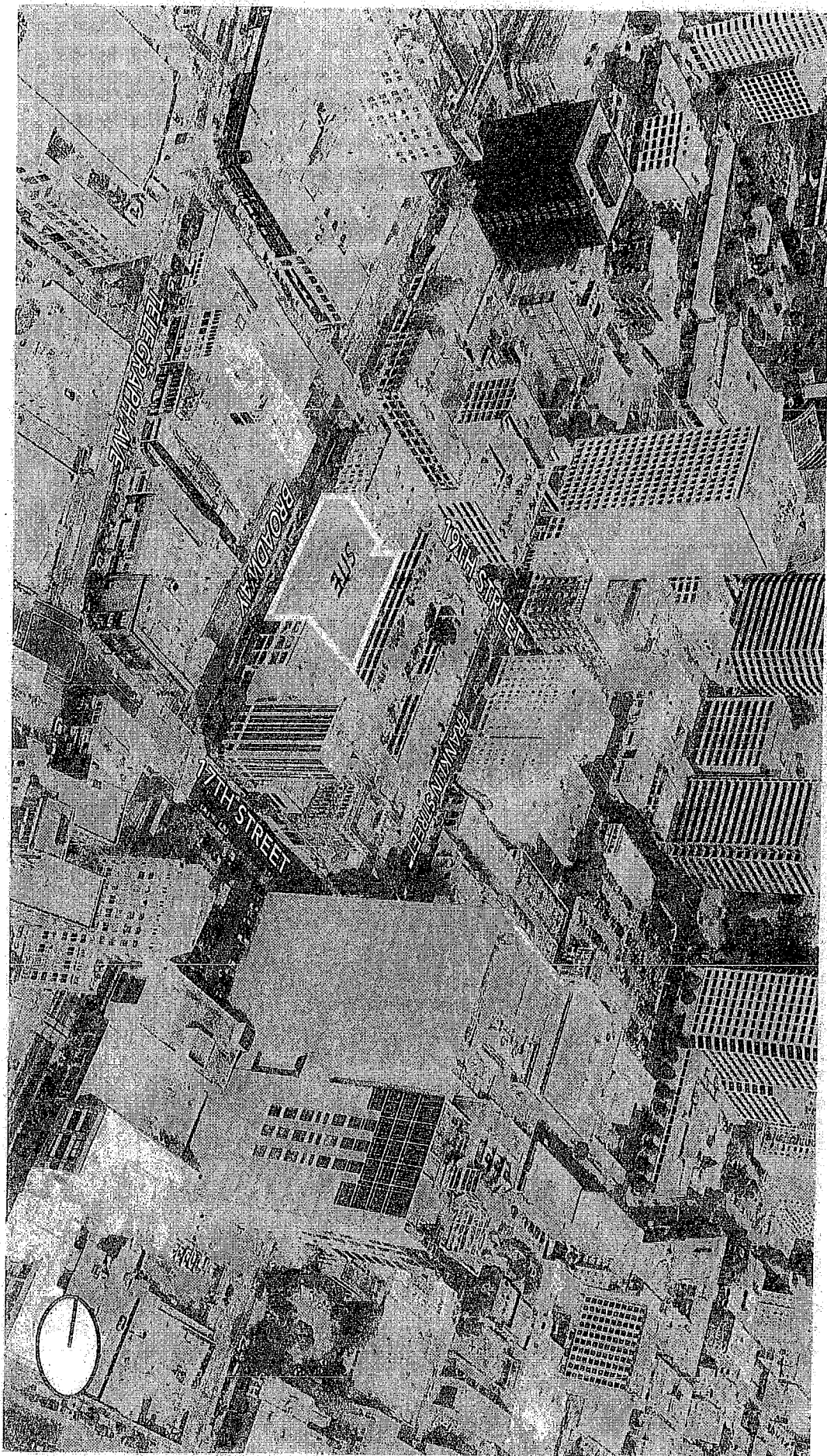
Recycling : 425 SF Room @ Ground Level.  
 Bi-Sorter chute serving all Residential Levels

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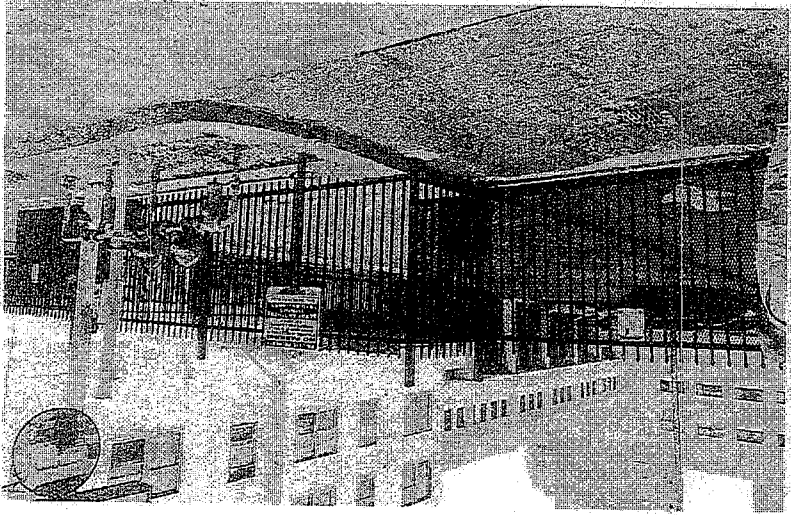
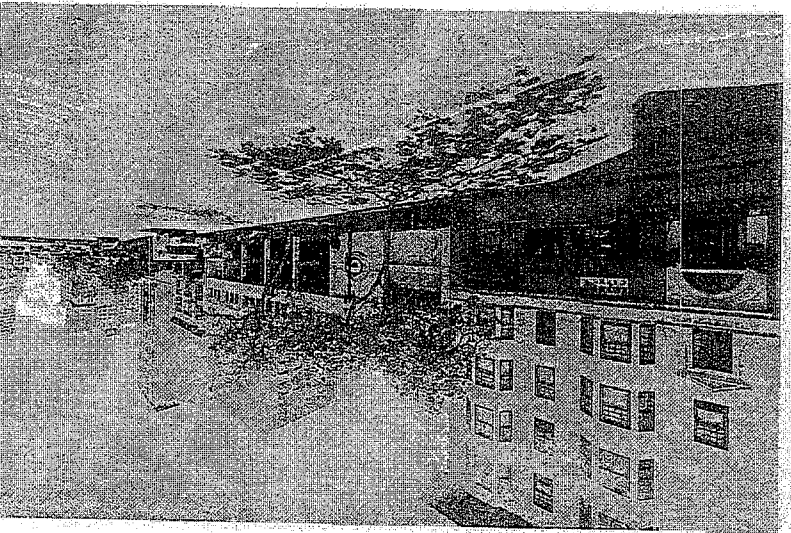
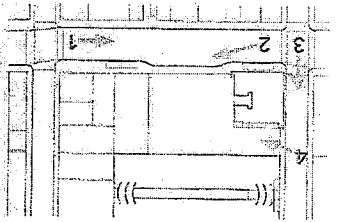
SITE



PLANNING COMMISSION 1750 BROADWAY, OAKLAND, CA



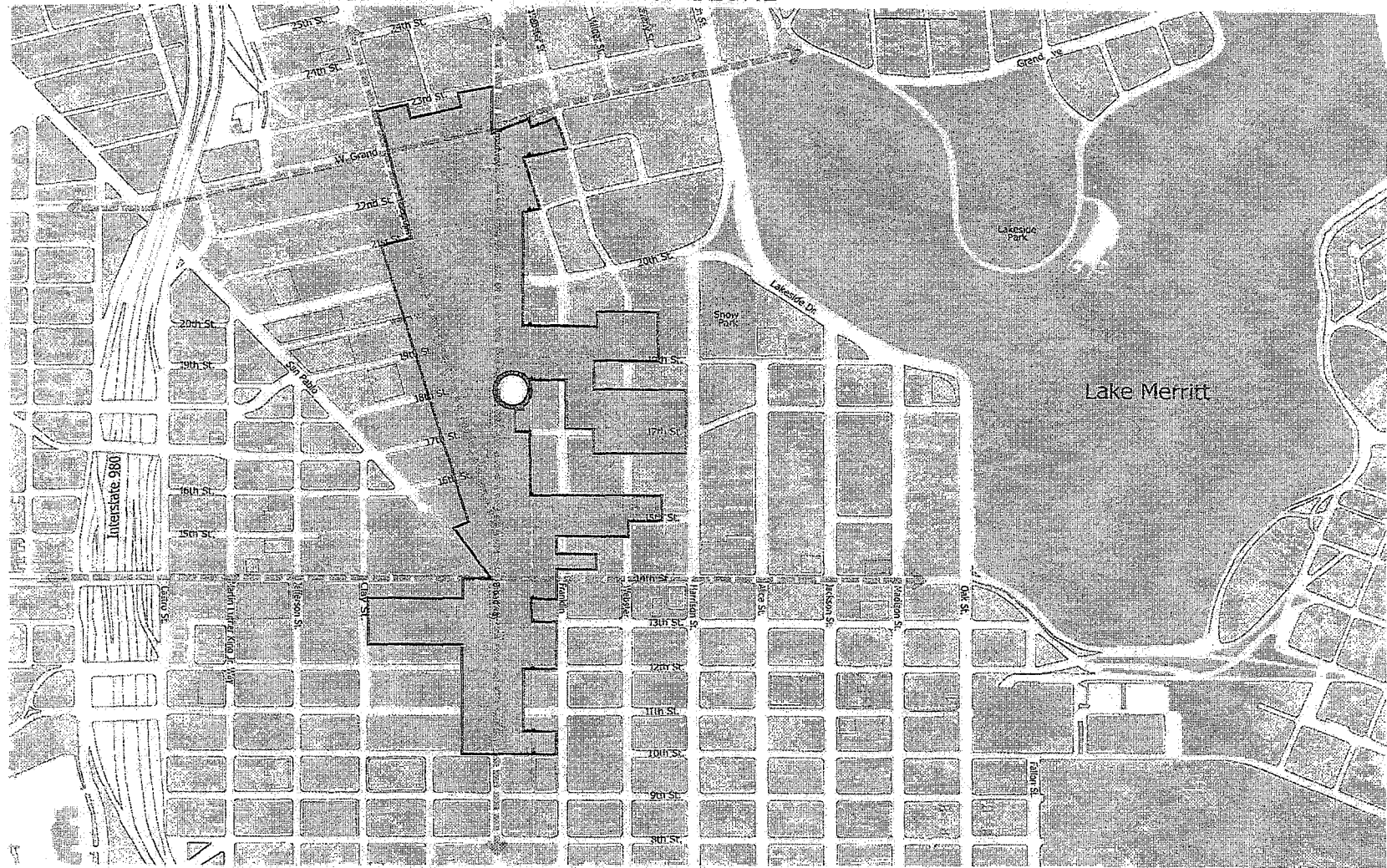
# SITE PHOTOS





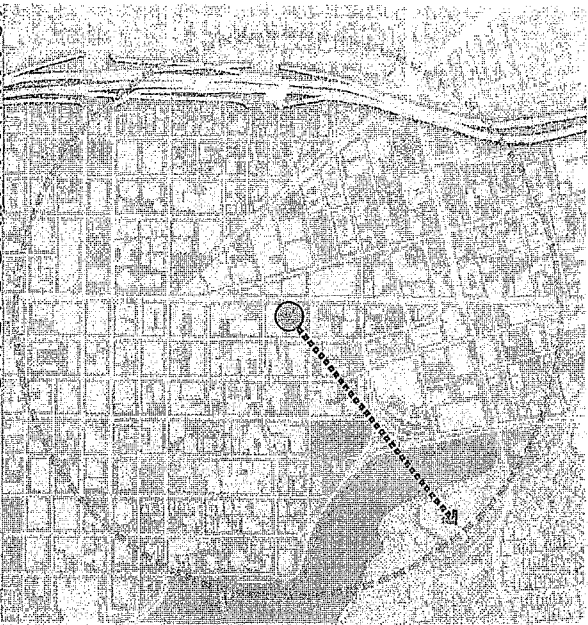
## UPTOWN HUB

### CENTRAL BUSINESS DISTRICT - PEDESTRIAN RETAIL COMMERCIAL ZONE

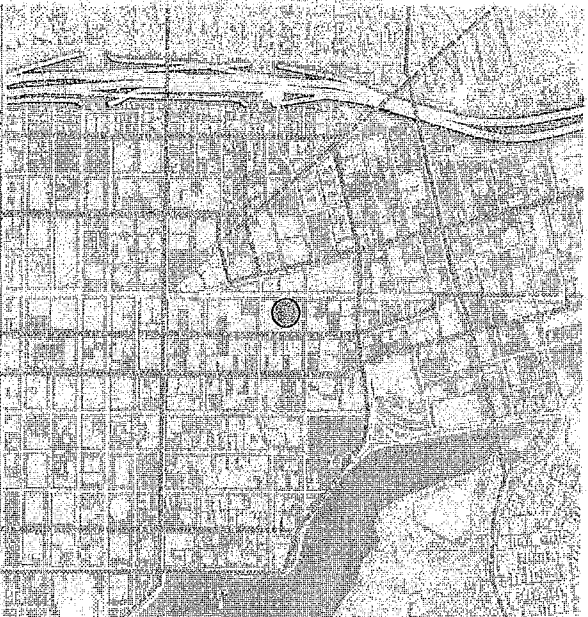
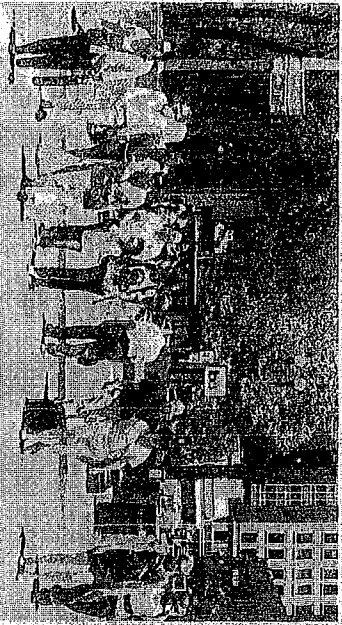




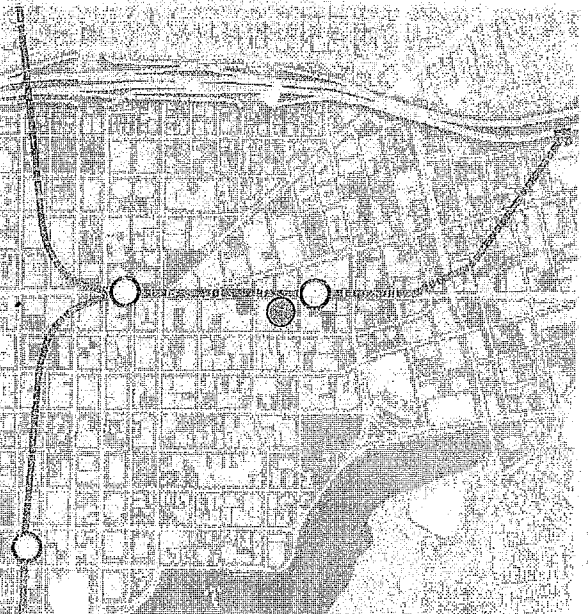
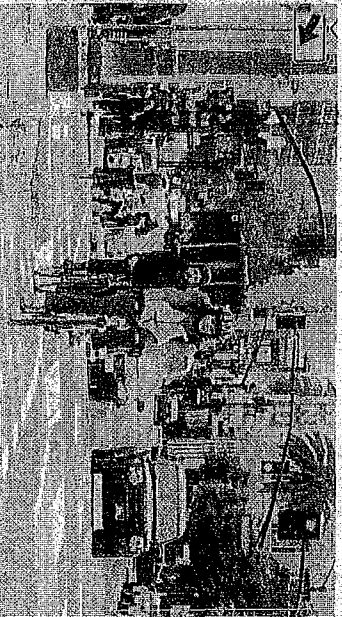
# MOVEMENT



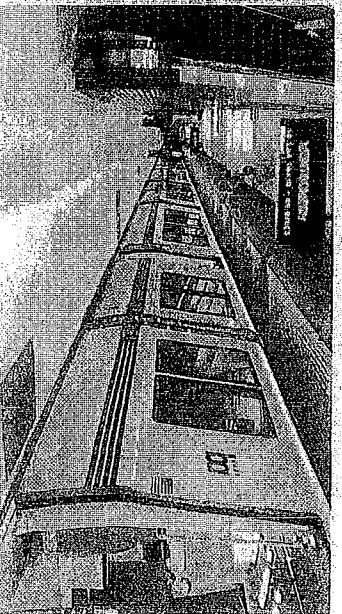
10 MIN WALKING RADIUS



BIKE PATH

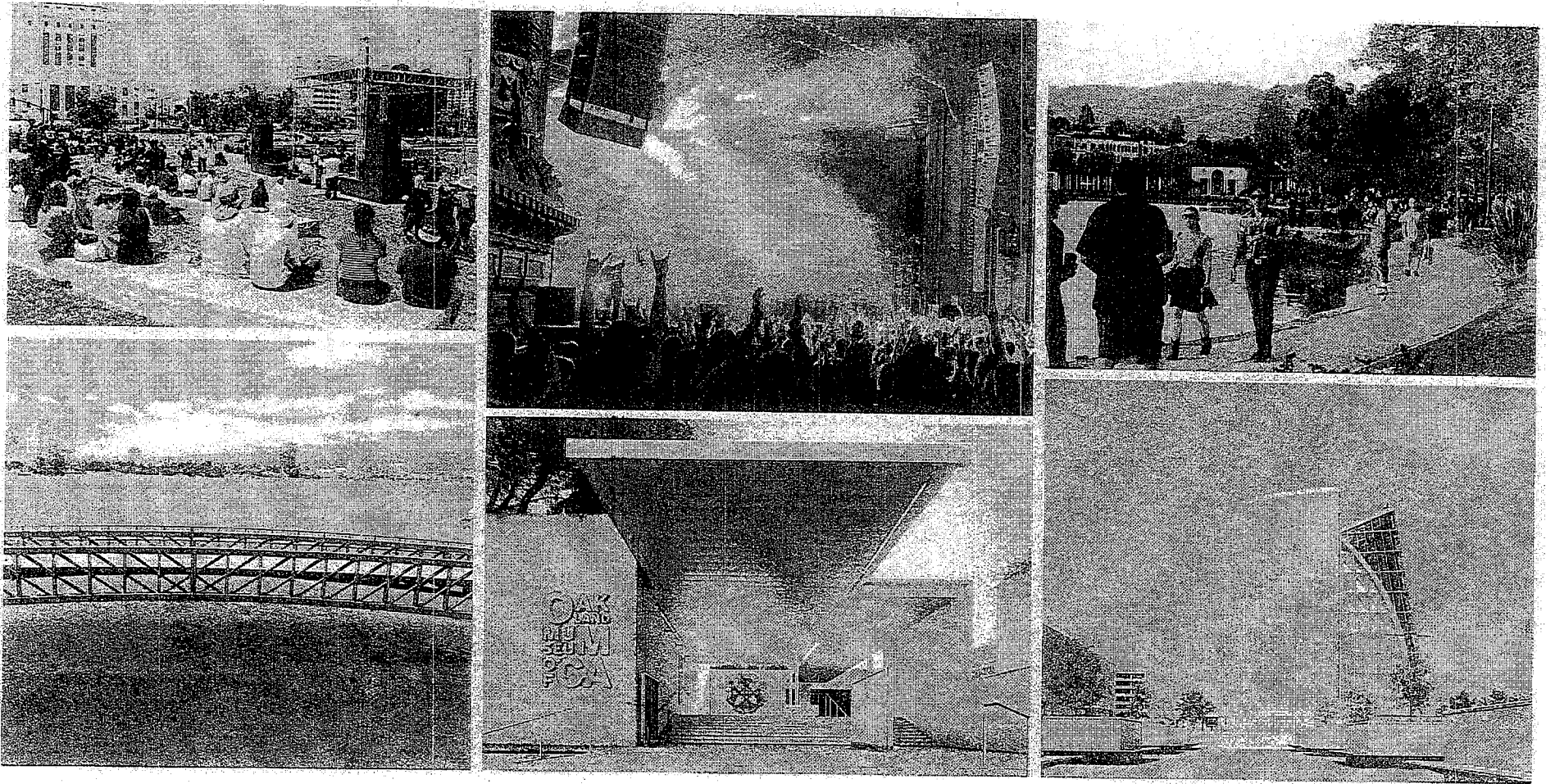


BART



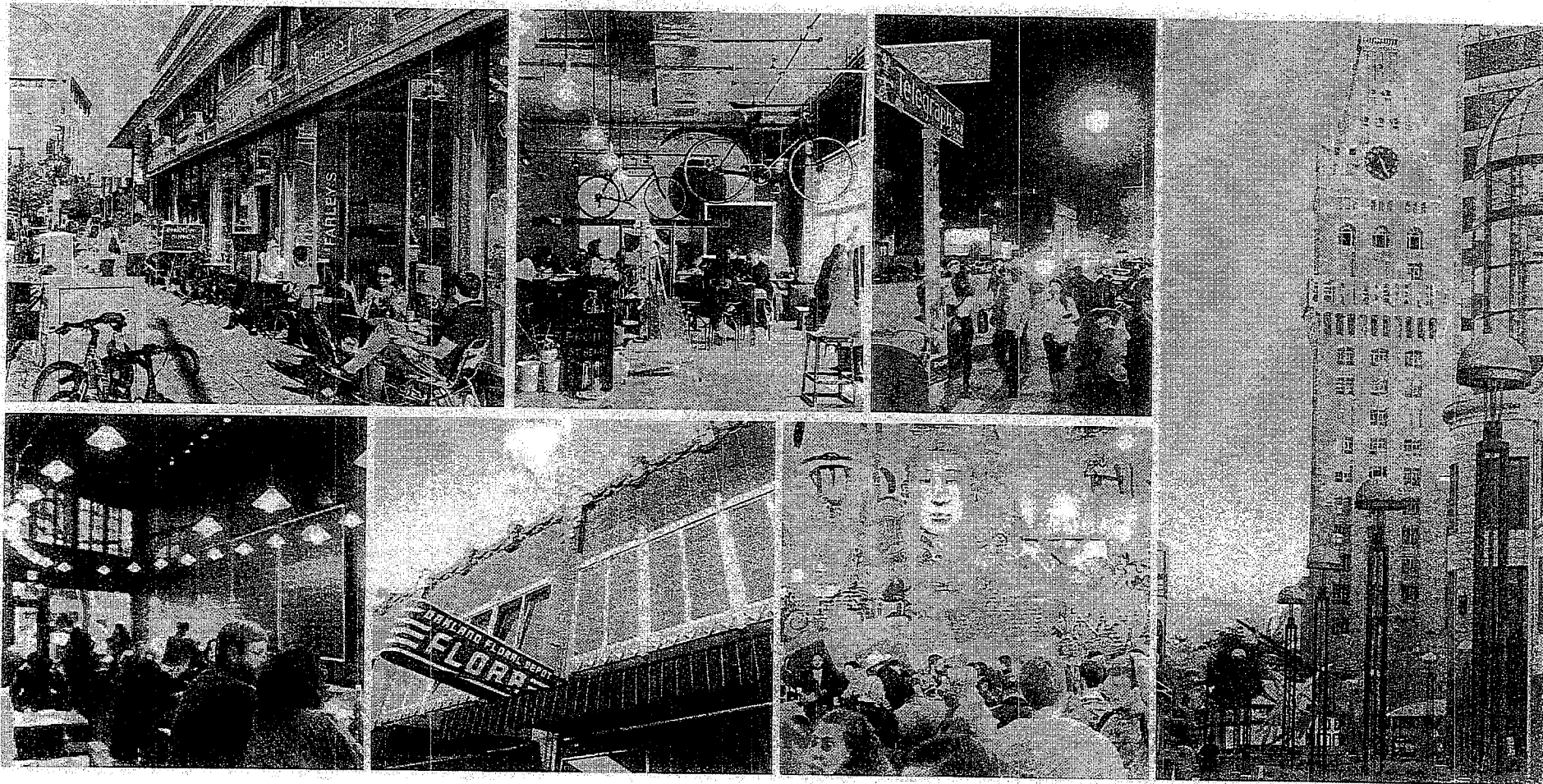


## SURROUNDING AMENITIES





## UPTOWN VIBE



PLANNING COMMISSION 1750 BROADWAY, OAKLAND, CA



# UPTOWN LANDMARKS

CENTRAL BUSINESS DISTRICT - PEDESTRIAN RETAIL COMMERCIAL ZONE

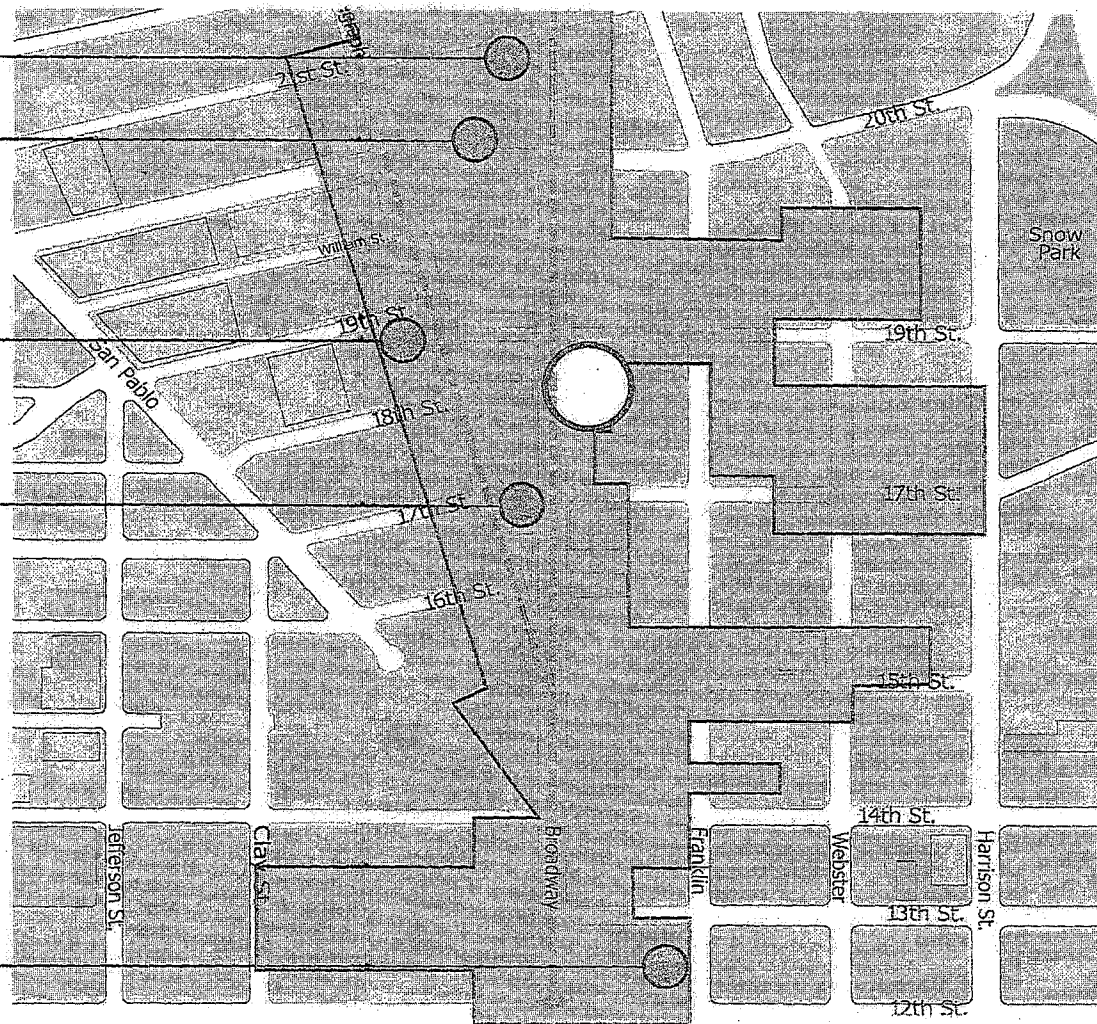
PARAMOUNT THEATER

MAGNIN BUILDING

FOX THEATER

CATHEDRAL BUILDING

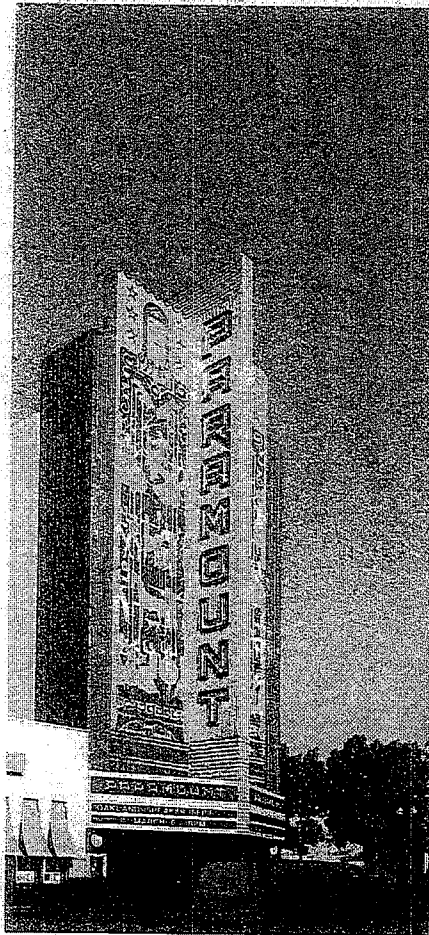
OAKLAND TRIBUNE TOWER



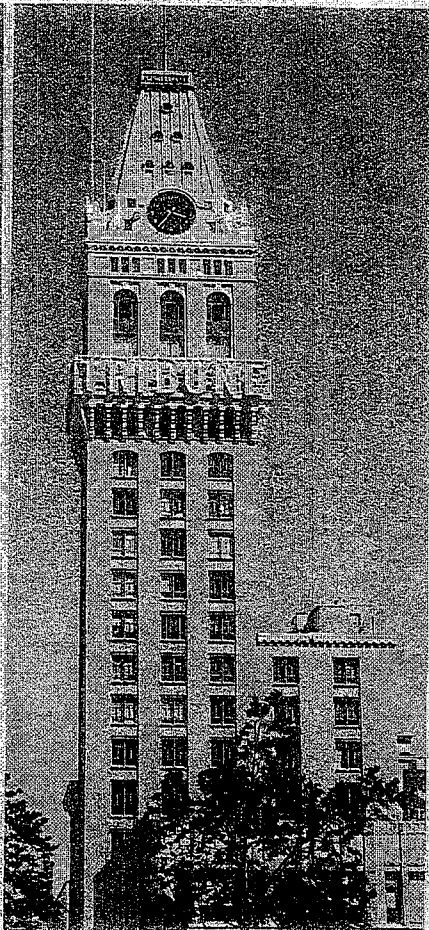


# UPTOWN LANDMARKS

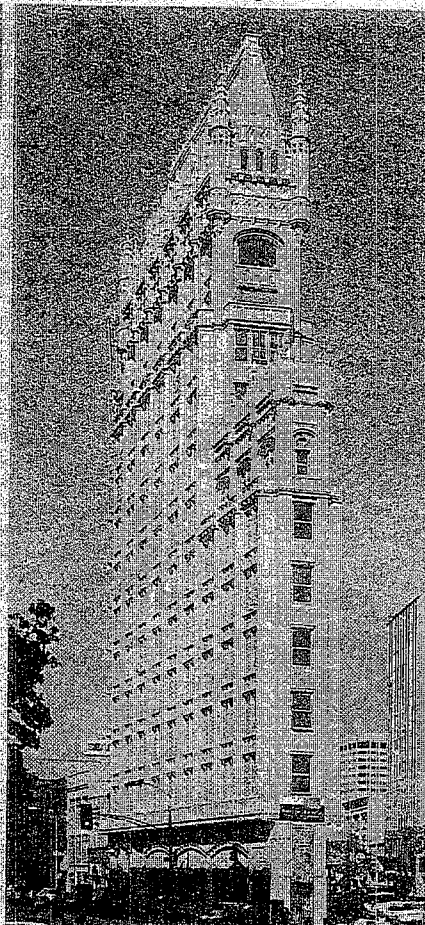
PARAMOUNT THEATER



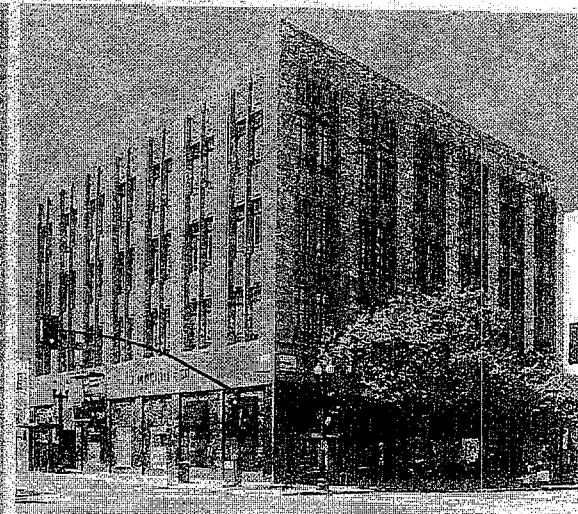
OAKLAND TRIBUNE TOWER



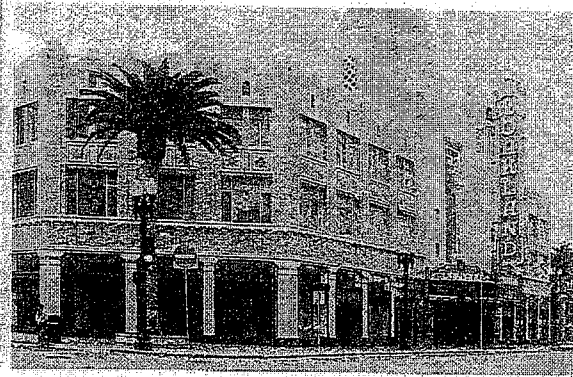
CATHEDRAL BUILDING



I MAGNIN BUILDING

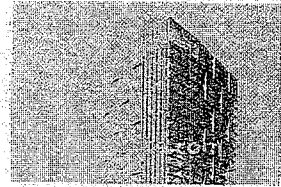


FOX THEATER

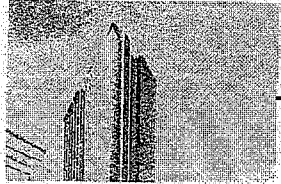




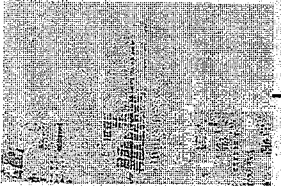
# FUTURE DEVELOPMENTS



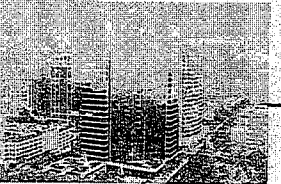
**1721 WEBSTER**  
Holland Partner Group  
270'  
Approved



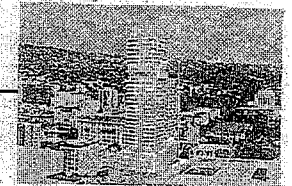
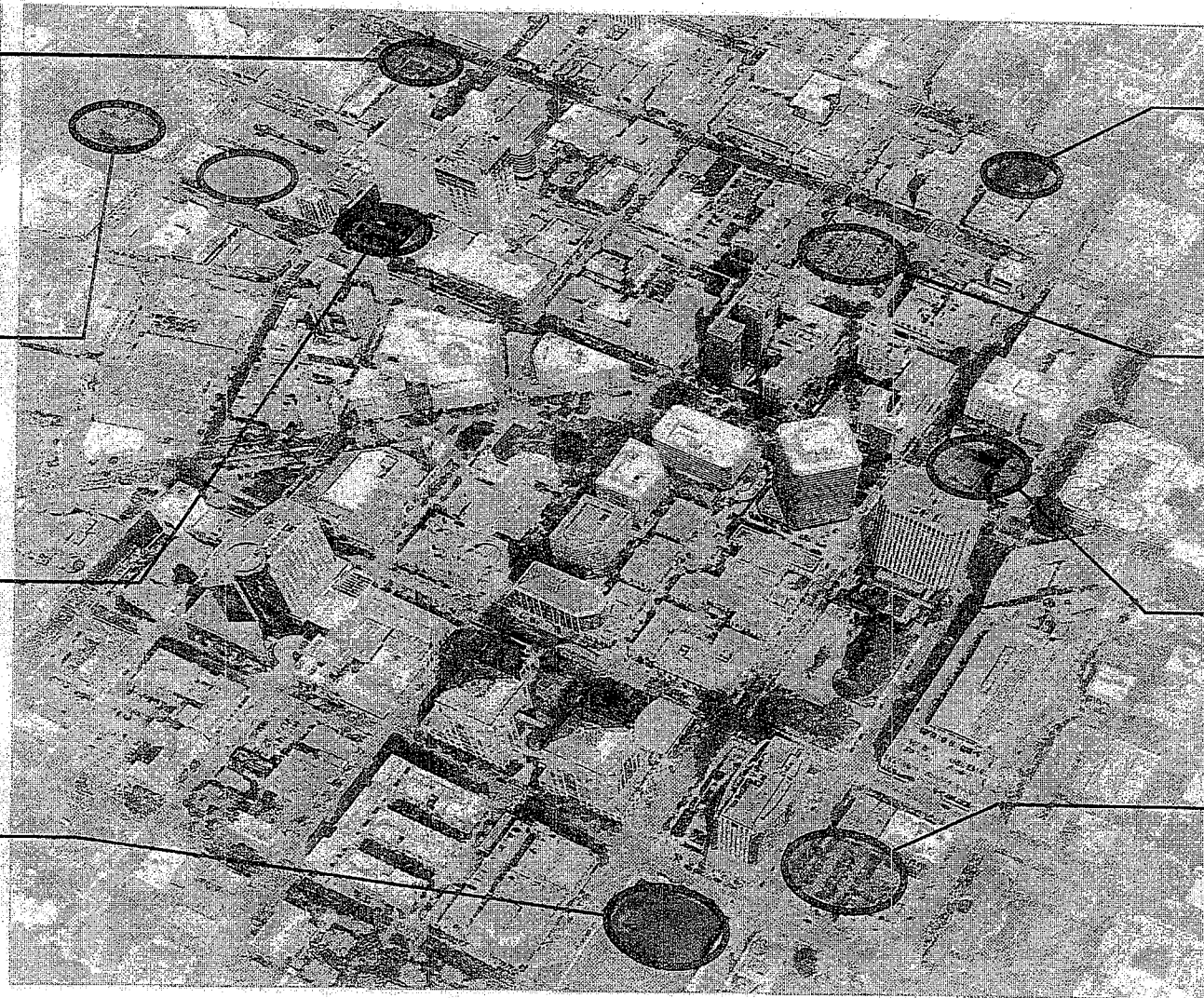
**1900 BROADWAY**  
Brick LLP  
339'  
Approved



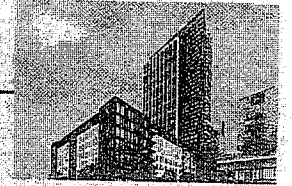
**1640 BROADWAY**  
Lennar  
380'  
Under Construction



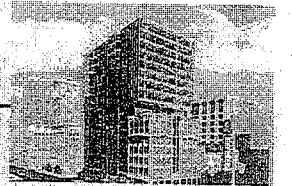
**601 CITY CENTER**  
Shorenstein  
24 story  
Under Construction



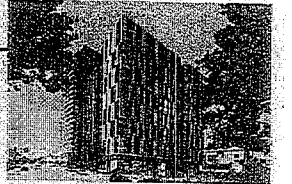
**1261 Harrison**  
Pinnacle Red Group  
360'  
Pending Approval



**1314 FRANKLIN**  
Carmel Partners  
401'  
Approved



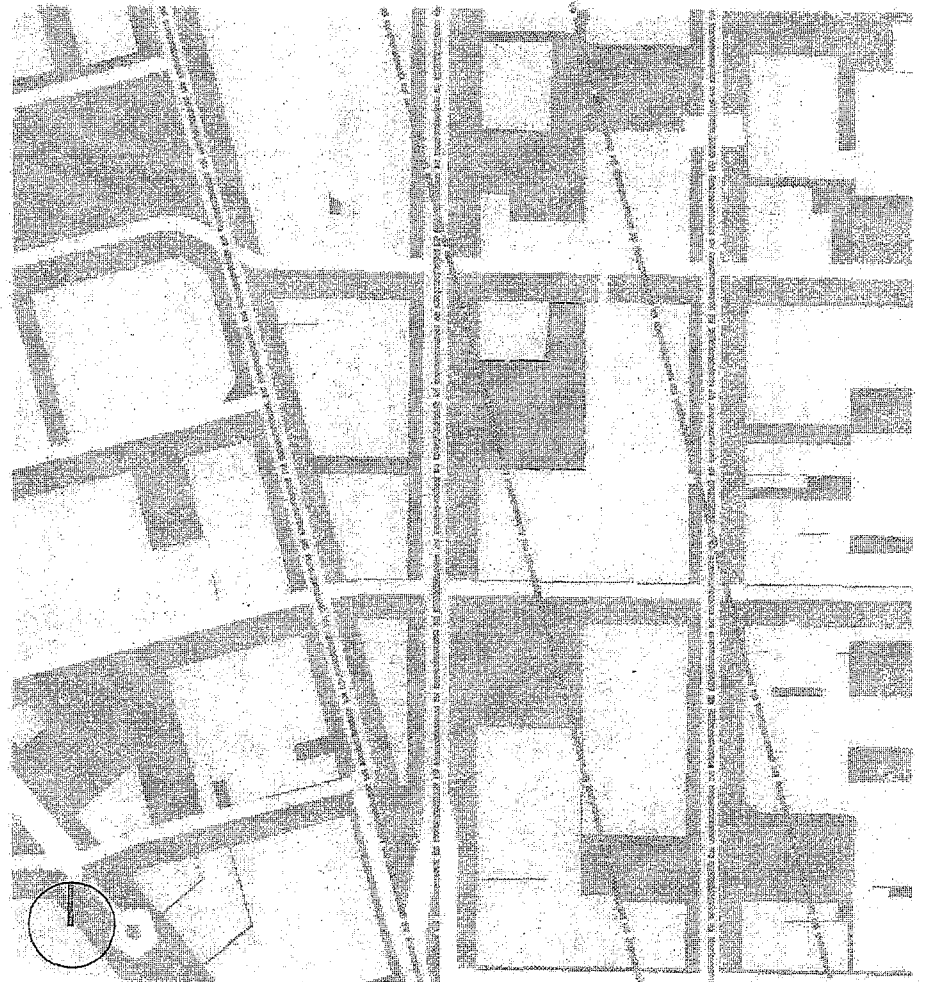
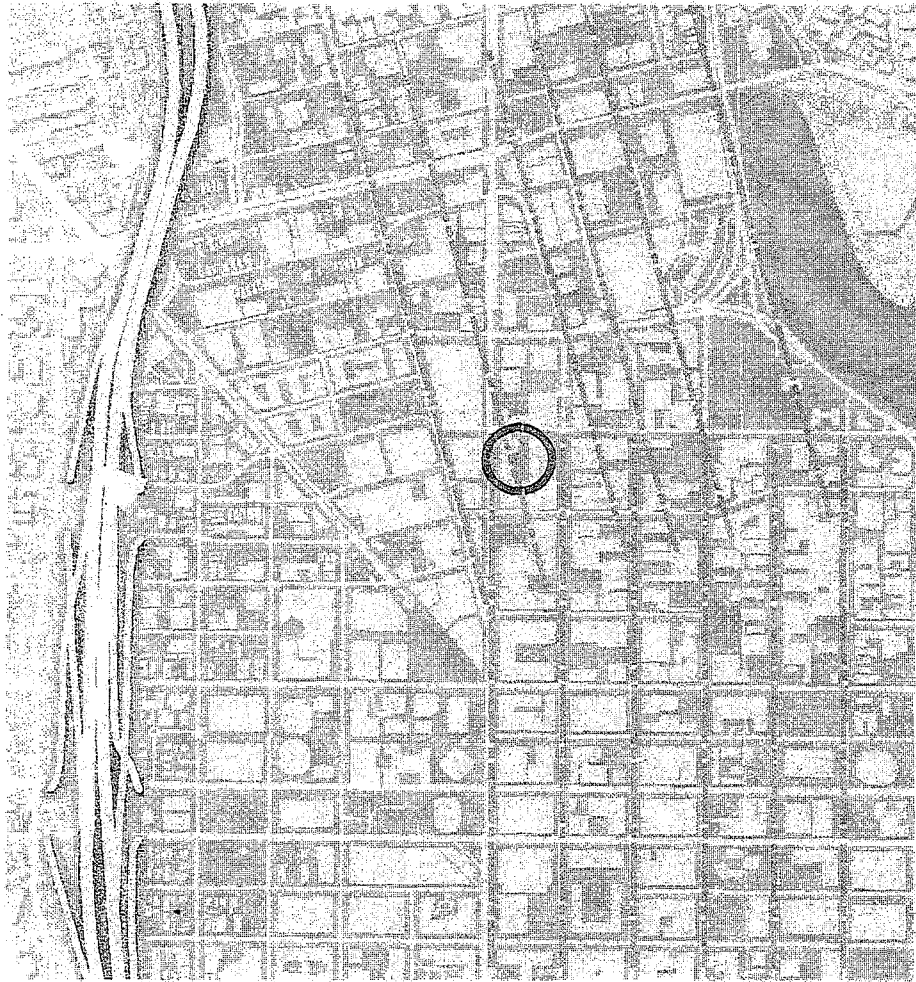
**1100 BROADWAY**  
Ellis Partners  
240'  
Pending Approval



**1100 CLAY**  
Strada Investment Group  
181'  
Building Permit Pending

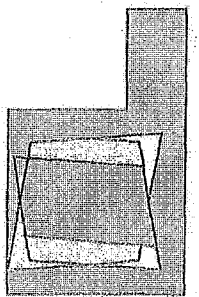
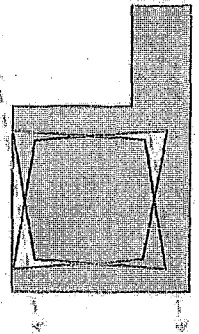
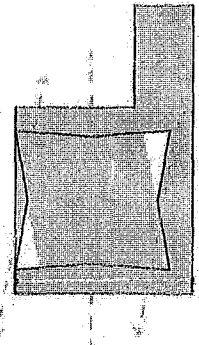
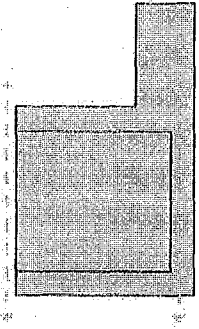
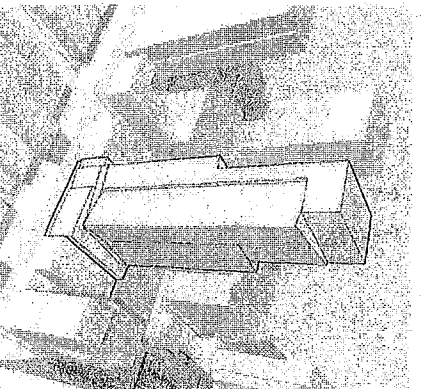
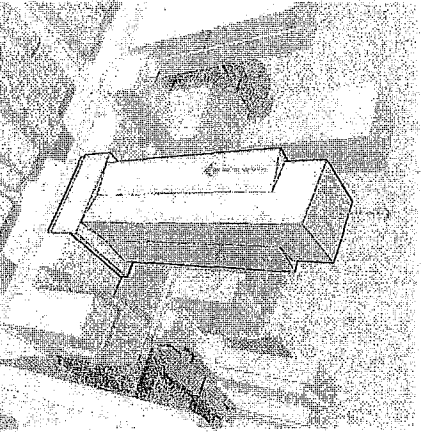
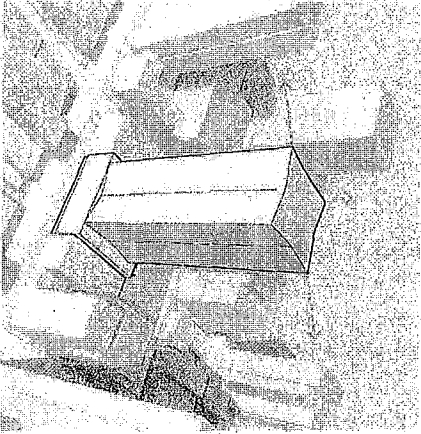
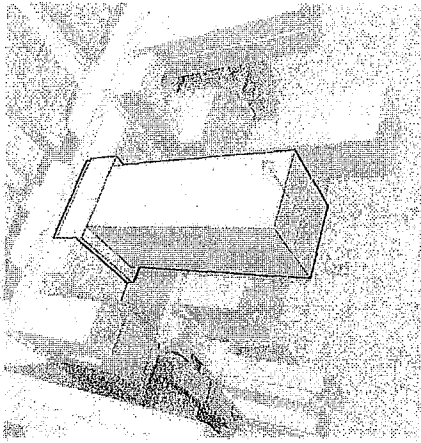


## BUILDING MASSING TOWER CONCEPT





# BUILDING MASSING TRANSFORMATION

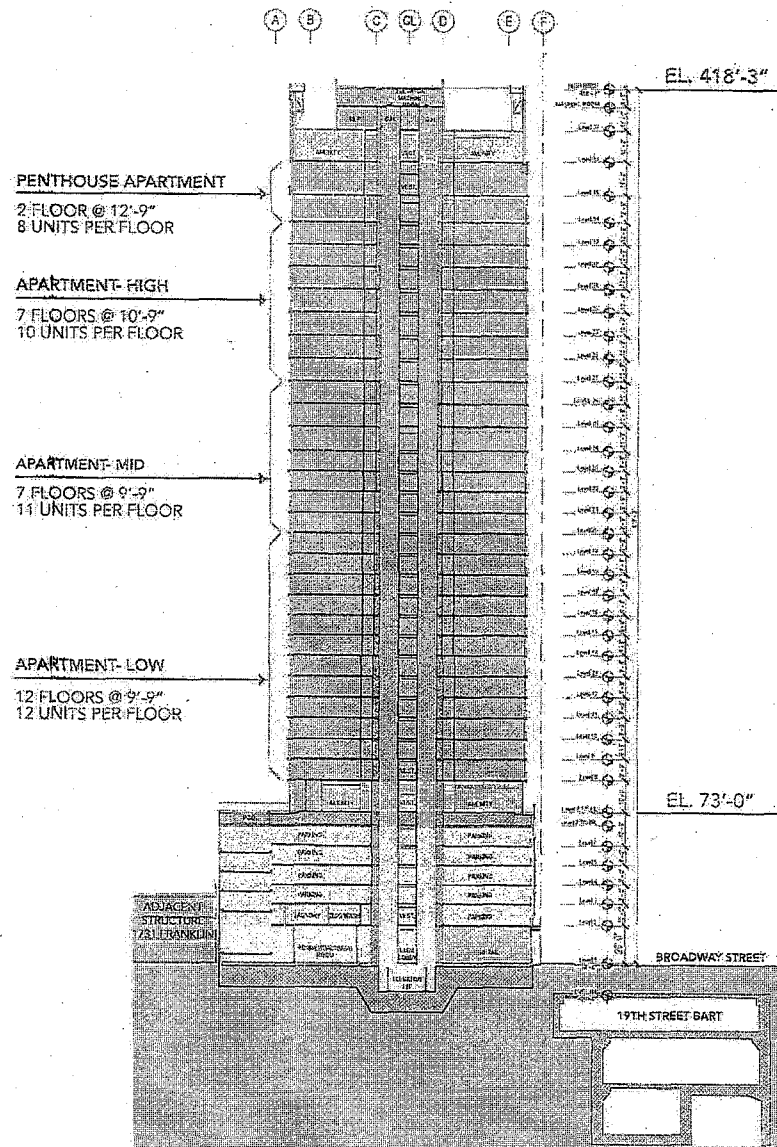




# BUILDING SECTION

EAST-WEST

## PROGRAM STACKING





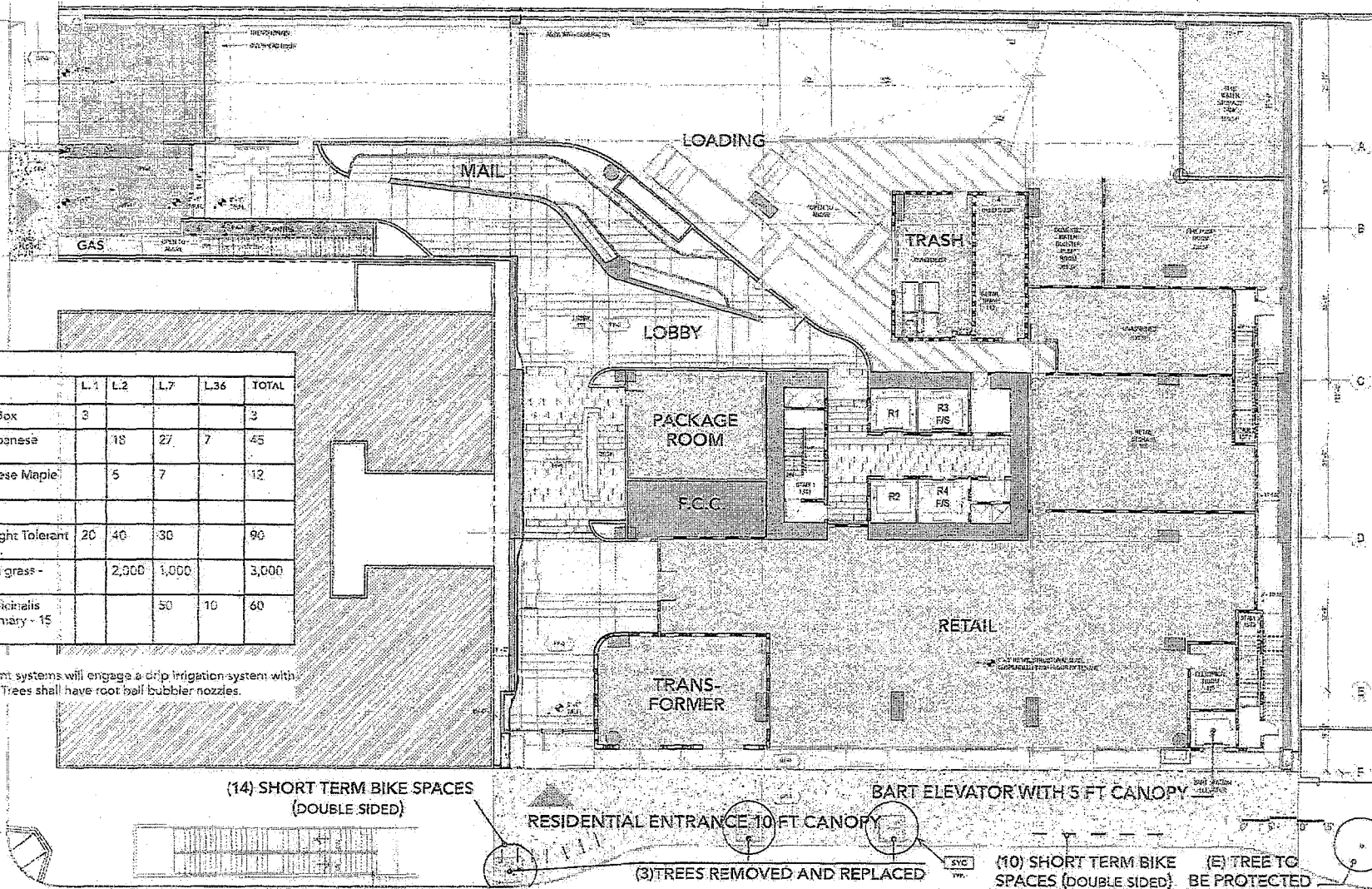
# GROUND FLOOR PLAN

APARTMENT LOBBY  
RETAIL  
LOADING  
BIKES

19TH ST.  
RESIDENTIAL  
ENTRANCE

PLANTING KEY						
TREES		L.1	L.2	L.7	L.36	TOTAL
SYC	Sycamore - 4" Box	3				3
BJW	Bloodgood Japanese Maple - 2" Box		18	27	7	45
AJM	Aureum Japanese Maple - 3" Box		5	7		12
PLANTINGS						
PA-1	Perennial Drought Tolerant Grasses - 1 Gal.	20	40	30		90
PA-2	Turf, Inland salt grass - 2,000sf		2,000	1,000		3,000
PA-3	Rosmarinus Officinalis Common Rosemary - 15 Gal.			50	10	60

Irrigation: Water efficient systems will engage a drip irrigation system with turf and low plantings. Trees shall have root ball bubbler nozzles.



(14) SHORT TERM BIKE SPACES  
(DOUBLE SIDED)

RESIDENTIAL ENTRANCE 10 FT CANOPY

BART ELEVATOR WITH 5 FT CANOPY

(3) TREES REMOVED AND REPLACED

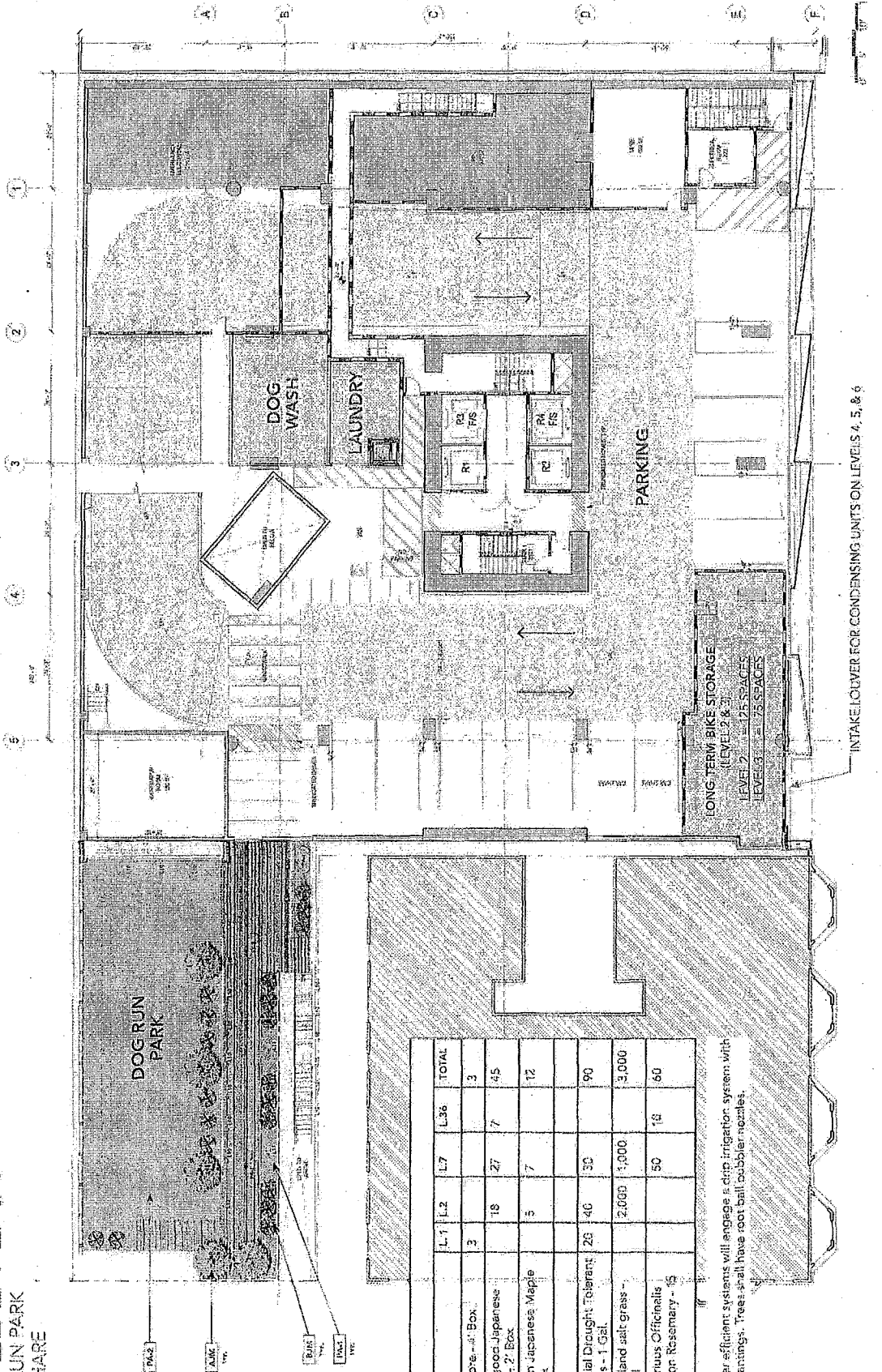
(10) SHORT TERM BIKE SPACES (DOUBLE SIDED)

(E) TREE TO BE PROTECTED



# LEVEL 2 PLAN

DOG-RUN PARK  
CAR SHARE

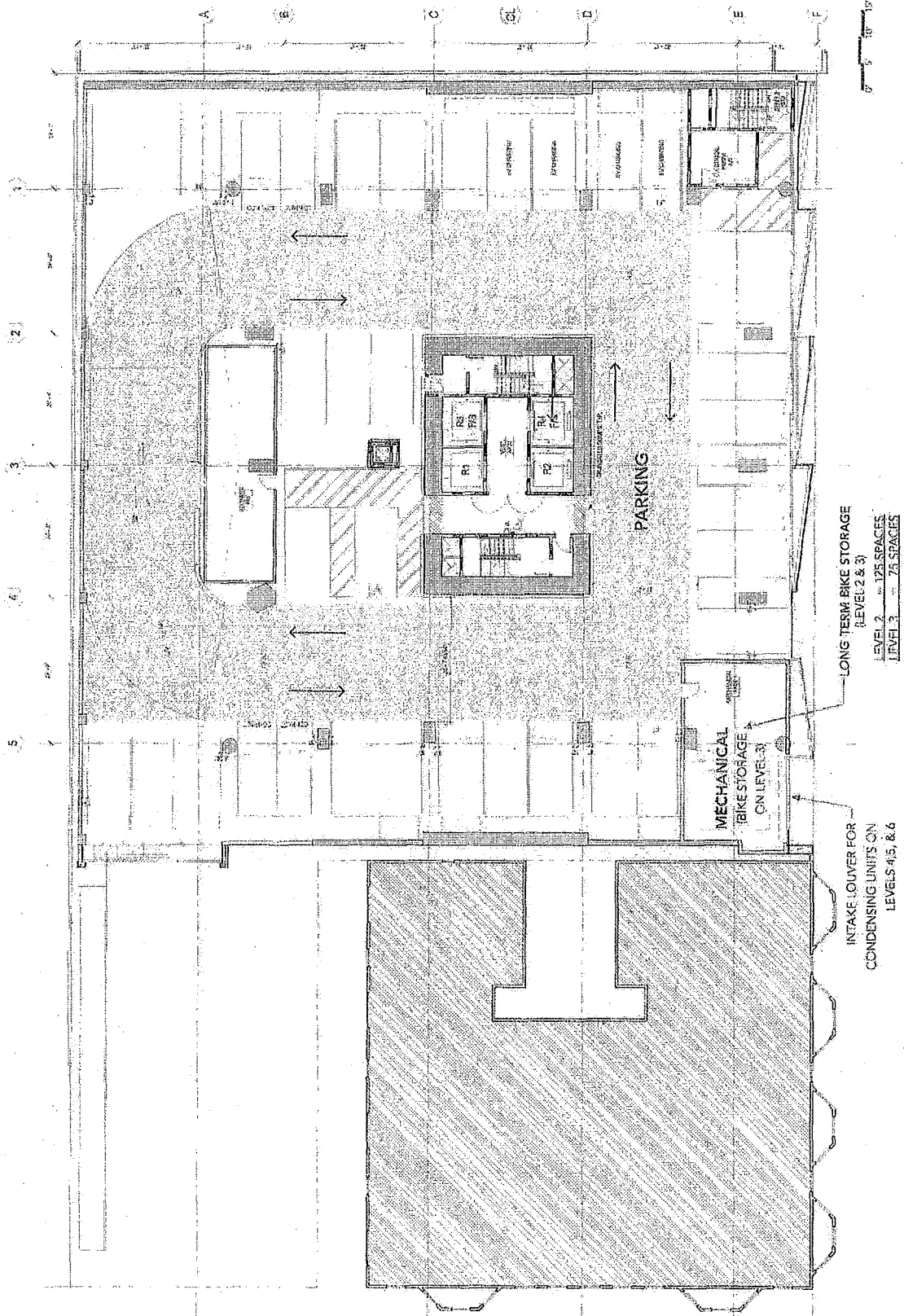


PLANTING KEY						
TREES	L1	L2	L7	L36	TOTAL	
S/C Sycamore - 4' Box	3				3	
B/JM Blackgood Japanese Maple - 2' Box		18	27	7	45	
A/JM Aureum Japanese Maple - 3' Box		5	7		12	
PLANTINGS						
PA-1 Perennial Drought Tolerant Grasses - 1 Gal.	20	40	30		90	
PA-2 Turf, Inland salt grass - 2,000sf		2,000	1,000		3,000	
PA-3 Rosmarinus Officialis Common Rosemary - 45 Gal.			50	10	60	

Irrigation: Water effluent systems will engage a drip irrigation system with turf and low plantings. Trees shall have root ball bubbler nozzles.



# LEVEL 3-6 PLAN





# LEVEL 7 PLAN AMENITY

FITNESS GYM  
PILATES / YOGA / FLEX  
LAP POOL  
LOUNGE AND TERRACE  
GARDENS  
CHILDREN'S ACTIVITY AND PLAY AREA

PLANTING KEY						
TREES		L.1	L.2	L.7	L.36	TOTAL
SYC	Sycamore - 4' Box	3				3
BJM	Blackgood Japanese Maple - 2' Box		18	27	7	45
AJM	Aureum Japanese Maple - 3' Box		5	7		12
PLANTINGS						
PA-1	Perennial Drought Tolerant Grasses - 1 Gal.	20	40	30		90
PA-2	Turf, Inland salt grass - 2,000sf		2,000	1,000		3,000
PA-3	Rosmarinus Officinalis Common Rosemary - 15 Gal.			50	10	60

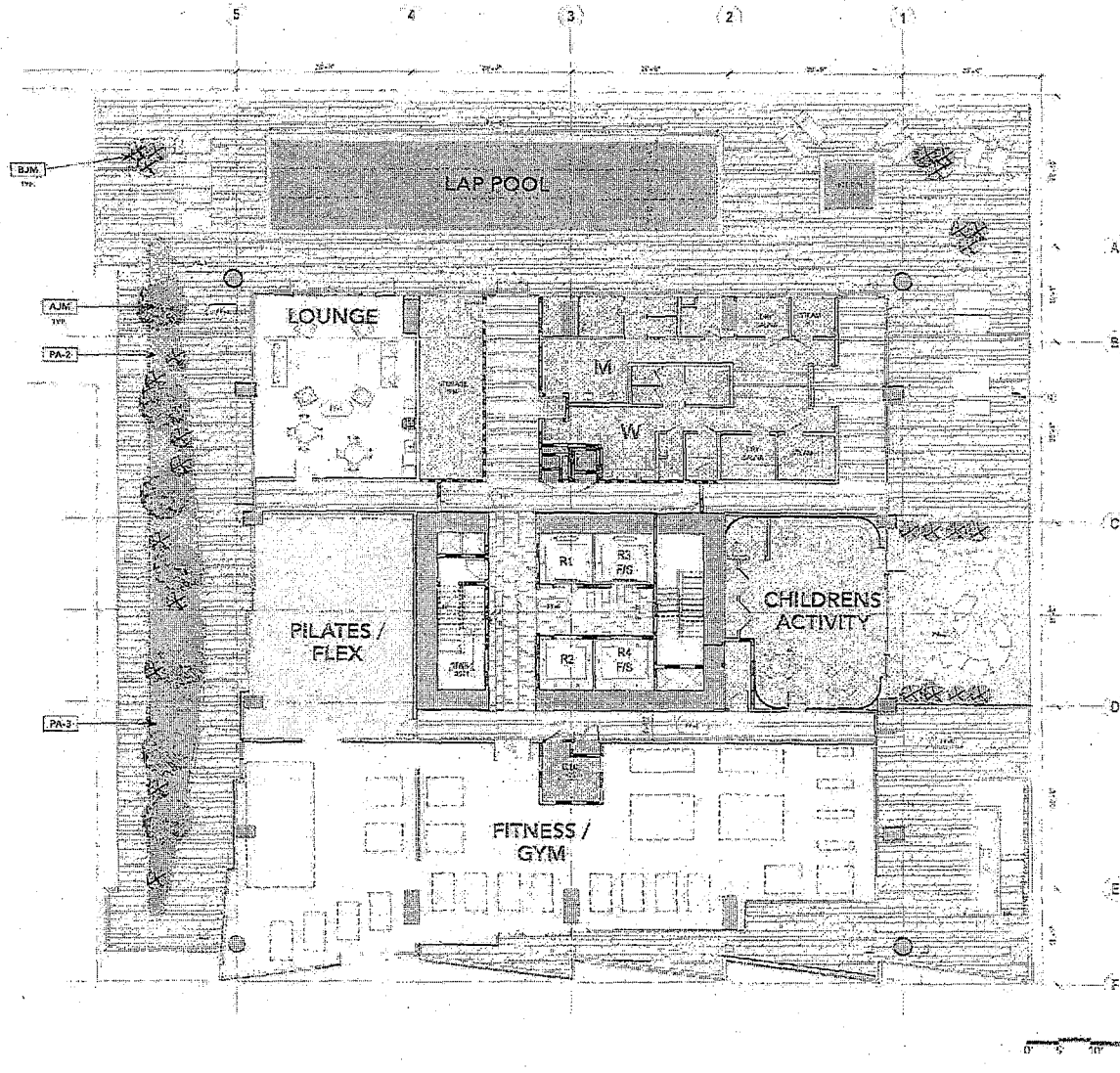
Irrigation: Water efficient systems will engage a drip irrigation system with turf and low plantings. Trees shall have root ball bubbler nozzles.

## OPEN SPACE SUMMARY

COMMON OPEN SPACE LEVEL 2 = 3,155 SF  
COMMON OPEN SPACE LEVEL 8 = 6,060 SF  
COMMON OPEN SPACE LEVEL 38 = 2,985 SF  
TOTAL COMMON OPEN SPACE = 15,200 SF

PRIVATE OPEN SPACE LEVEL 26 = 309 SF  
PRIVATE OPEN SPACE LEVEL 36 = 754 SF  
PRIVATE OPEN SPACE LEVEL 37 = 115 SF  
TOTAL PRIVATE OPEN SPACE = 1,178 SF

TOTAL OPEN SPACE = 16,378 SF

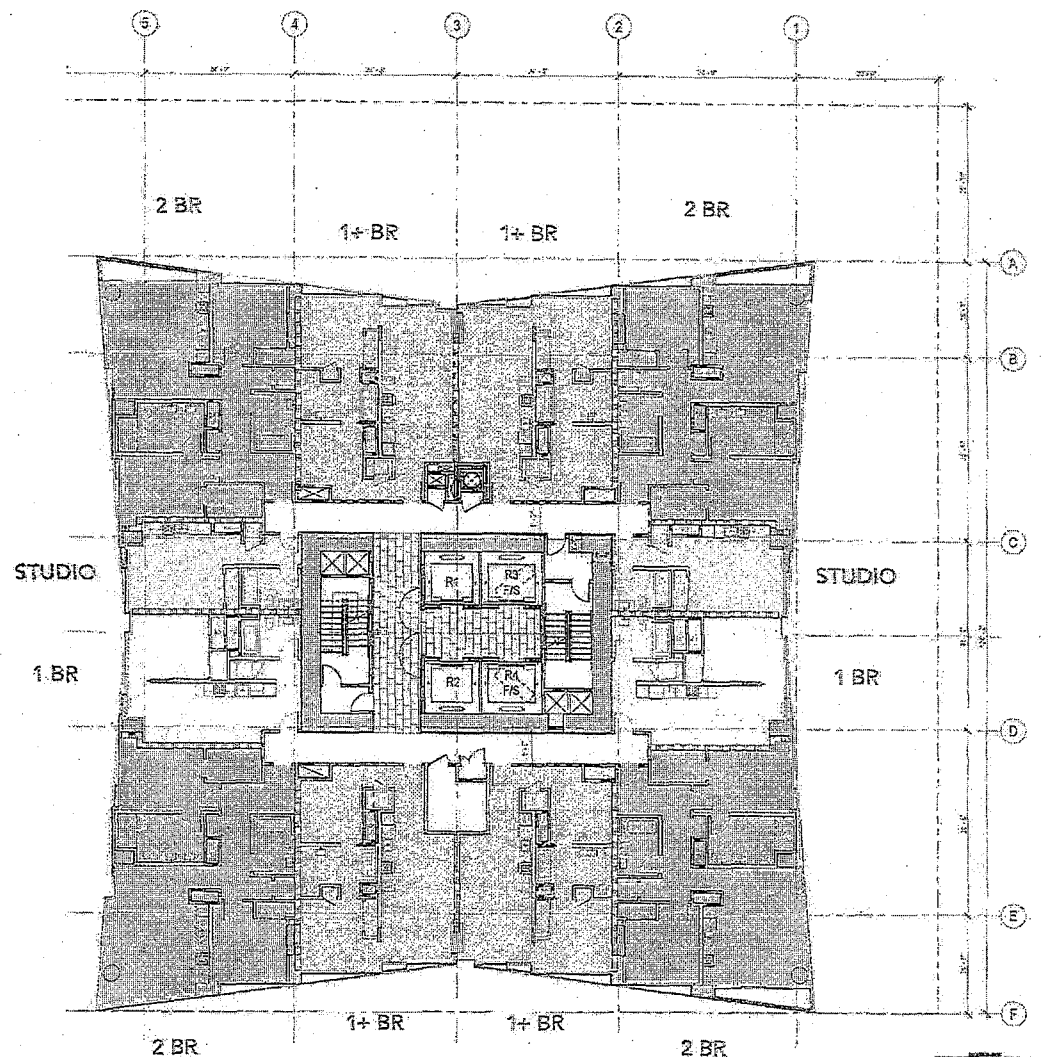




# LEVEL 8-19 PLAN APARTMENT-LOW

## LEGEND & UNIT MIX

APARTMENT LEVEL		ST.	1 BR	1+ BR	2 BR	3BR	Totals	
LOW	8-19	COUNT	24	24	48	48	0	144
		AVG SIZE (SF)	406	587	784	1166	0	816
MID	20-26	COUNT	7	14	28	21	7	77
		AVG SIZE (SF)	415	602	795	1161	1667	904
HIGH	27-33	COUNT	0	14	28	21	7	70
		AVG SIZE (SF)	0	598	807	1234	1632	976
PENTHOUSE	34-35	COUNT	0	2	6	8	0	16
		AVG SIZE (SF)	0	743	801	1519	0	1153
TOTAL		COUNT	31	54	110	98	14	307
		AVG SIZE (SF)	408	600	794	1208	1650	892

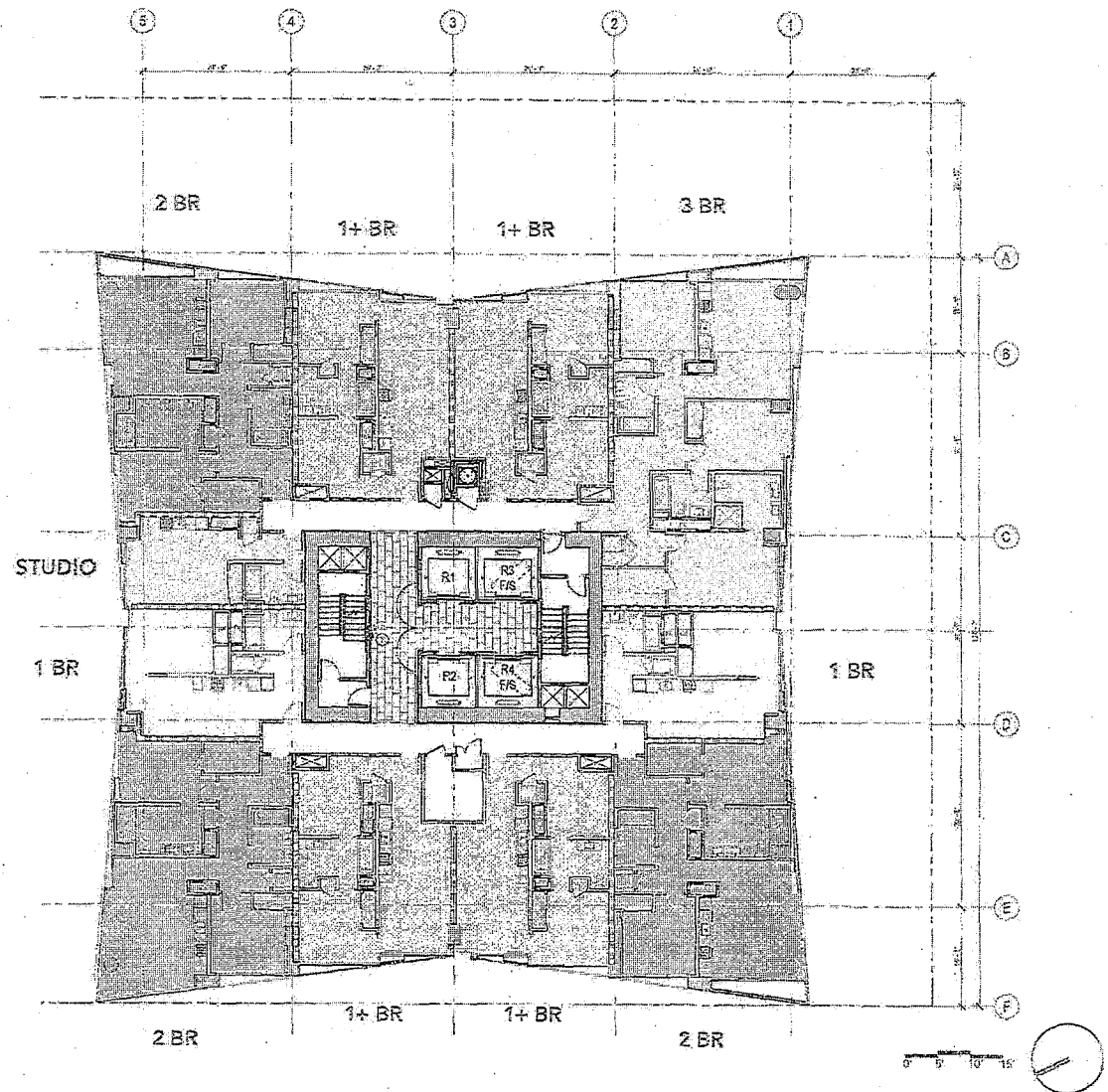




# LEVEL 20-26 PLAN APARTMENT-MID

## LEGEND & UNIT MIX

APARTMENT LEVEL		ST	1 BR	1+ BR	2 BR	3BR	Totals	
LOW	S-19	COUNT	24	24	48	48	0	144
		AVG SIZE (SF)	406	587	784	1166	0	816
MID	20-26	COUNT	7	14	28	21	7	77
		AVG SIZE (SF)	415	602	795	1161	1667	904
HIGH	27-33	COUNT	0	14	28	21	7	70
		AVG SIZE (SF)	0	598	807	1234	1632	976
PENTHOUSE	34-35	COUNT	0	2	6	8	0	16
		AVG SIZE (SF)	0	743	801	1519	0	1153
TOTAL		COUNT	31	54	110	98	14	307
		AVG SIZE (SF)	408	600	794	1208	1650	892

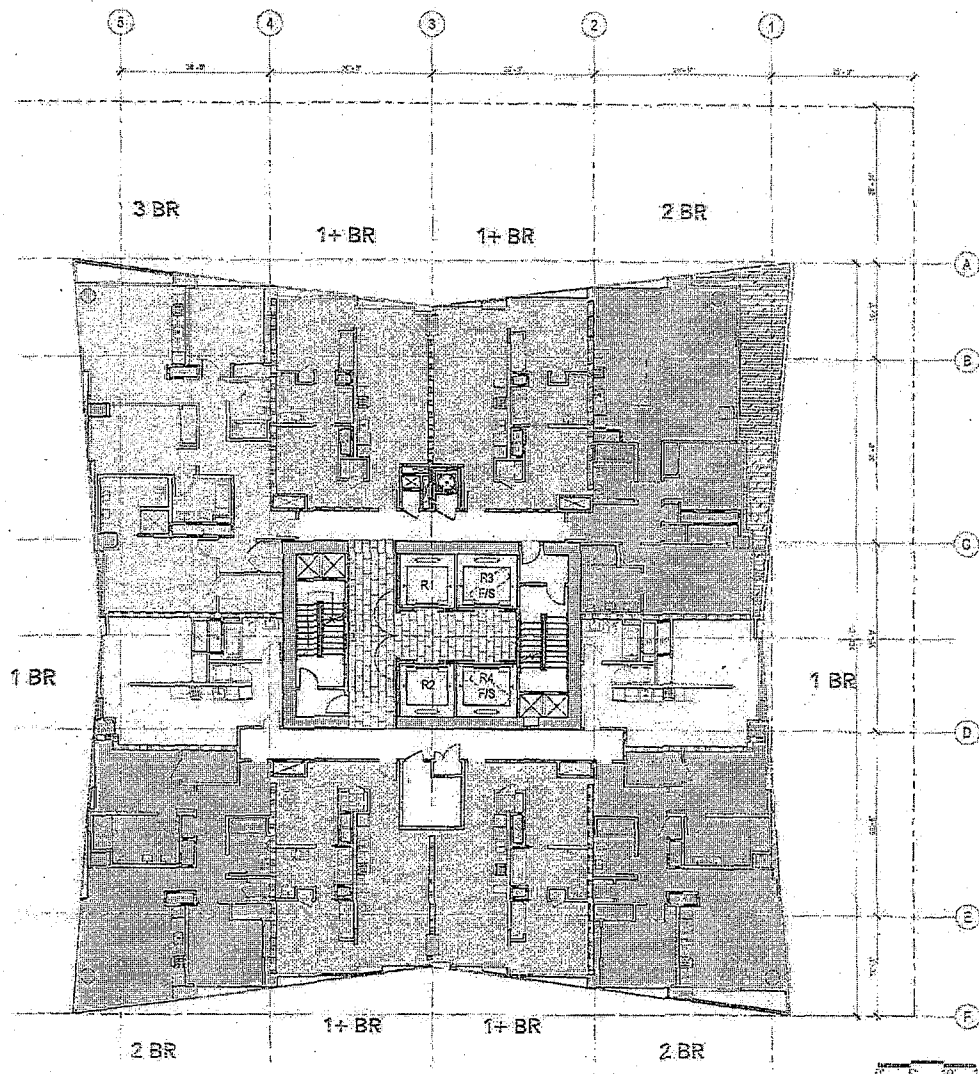




# LEVEL 27-33 PLAN APARTMENT-HIGH

## LEGEND & UNIT MIX

APARTMENT LEVEL		ST	1 BR	1+ BR	2 BR	3BR	Totals	
LOW	3-19	COUNT	24	24	48	48	0	144
		AVG SIZE (SF)	406	587	784	1166	0	816
MID	20-26	COUNT	7	14	28	21	7	77
		AVG SIZE (SF)	415	602	795	1161	1667	904
HIGH	27-33	COUNT	0	14	28	21	7	70
		AVG SIZE (SF)	0	598	807	1234	1632	976
PENTHOUSE	34-35	COUNT	0	2	6	8	0	16
		AVG SIZE (SF)	0	743	801	1519	0	1153
TOTAL		COUNT	31	54	110	98	14	307
		AVG SIZE (SF)	408	600	794	1208	1650	892

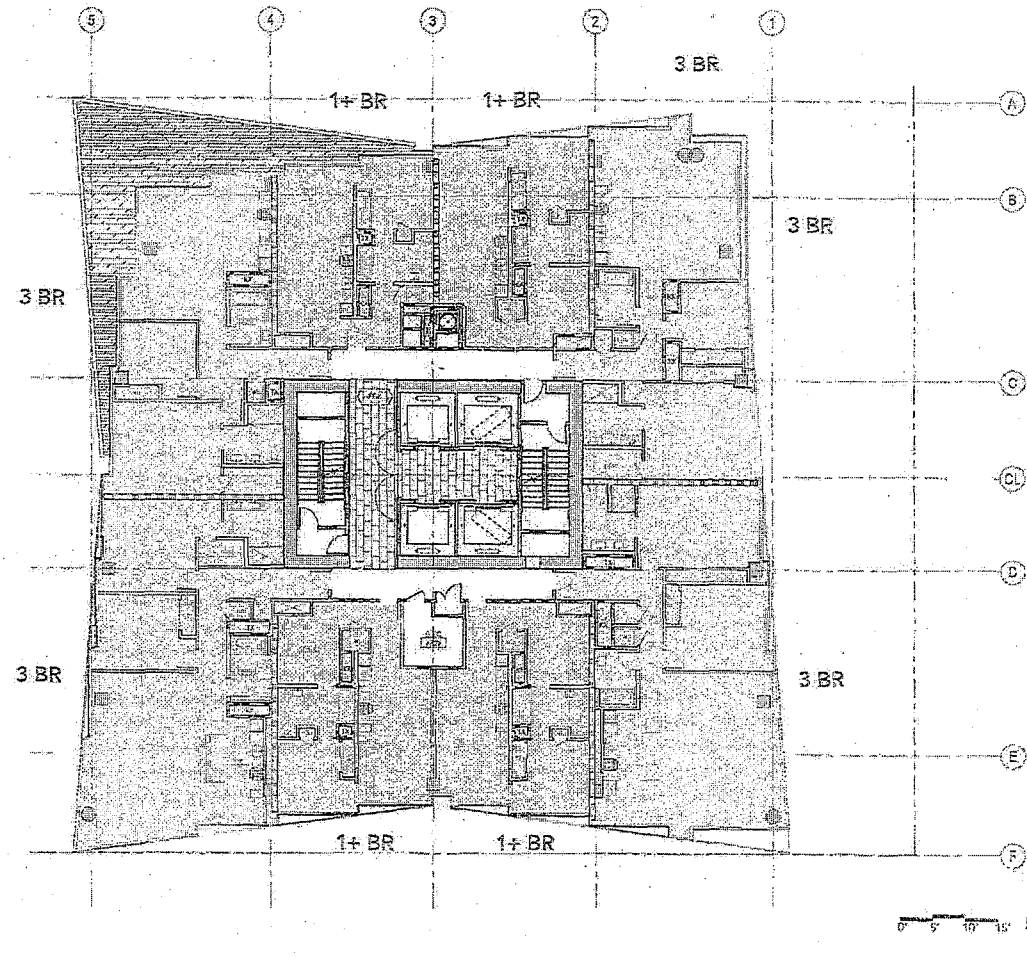




# LEVEL 34-35 PLAN APARTMENT-PENTHOUSE

## LEGEND & UNIT MIX

APARTMENT LEVEL		ST.	1 BR	1+ BR	2 BR	3BR	Totals	
LOW	8-19	COUNT	24	24	48	48	0	144
		AVG SIZE (SF)	406	587	784	1166	0	816
MID	20-26	COUNT	7	14	28	21	7	77
		AVG SIZE (SF)	415	602	795	1161	1667	904
HIGH	27-33	COUNT	0	14	28	21	7	70
		AVG SIZE (SF)	0	598	807	1234	1632	976
PENTHOUSE	34-35	COUNT	0	2	6	8	0	16
		AVG SIZE (SF)	0	743	801	1519	0	1153
TOTAL		COUNT	31	54	110	98	14	307
		AVG SIZE (SF)	408	600	794	1208	1650	892





# LEVEL 36 PLAN AMENITY

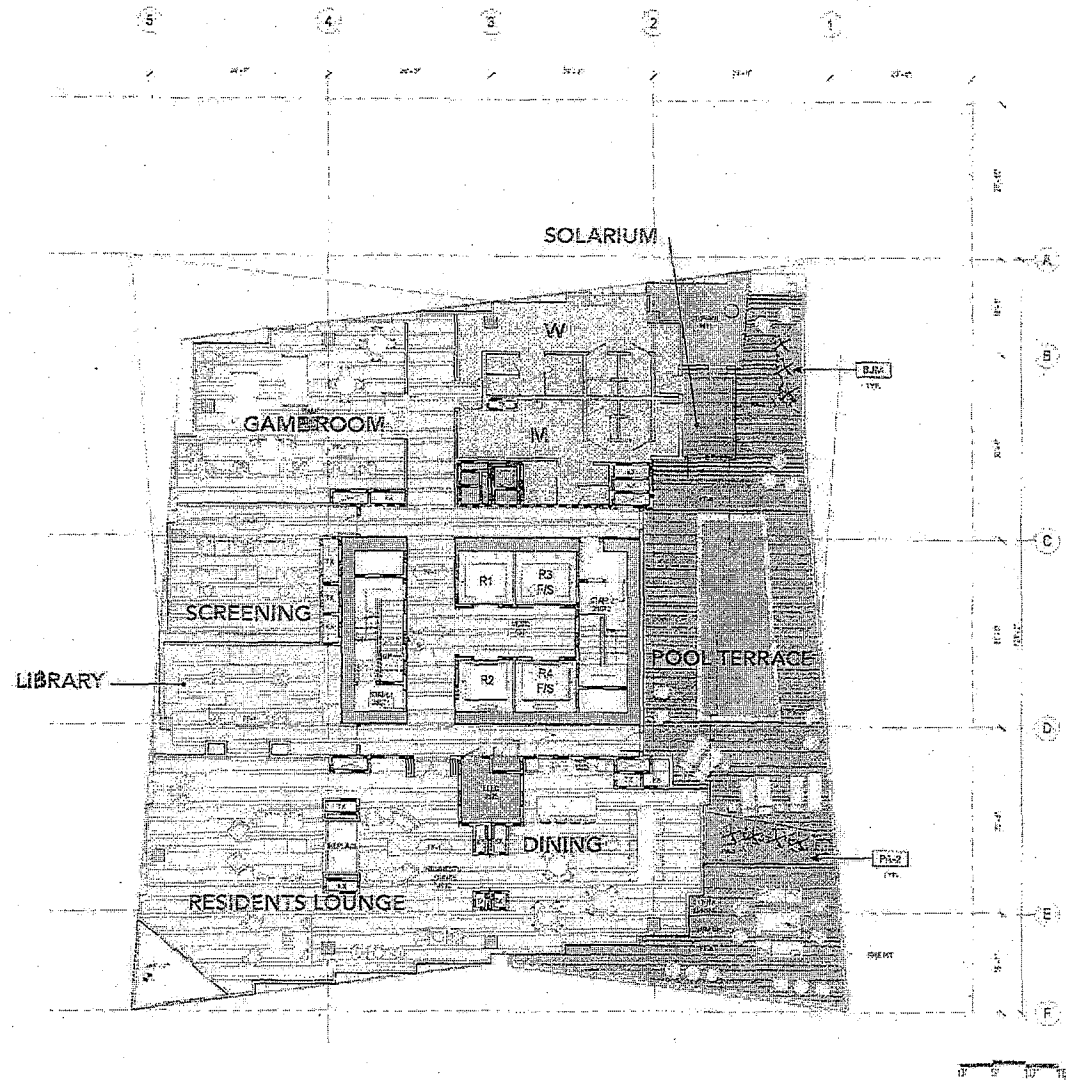
RESIDENT'S LOUNGE  
DINING  
GAME ROOM  
LIBRARY  
SCREENING ROOM  
POOL TERRACE

PLANTING KEY					
TREES		L. 1	L. 2	L. 7	L. 36
SYC	Sycamore - 4' Box	3			3
BJM	Bloodgood Japanese Maple - 2' Box		18	27	7
AJM	Aureum Japanese Maple - 3' Box		5	7	
PLANTINGS					
PA-1	Perennial Drought Tolerant Grasses - 1 Gal.	20	40	30	
PA-2	Turf, Inland salt grass - 2,000sf		2,000	1,000	
PA-3	Rosmarinus Officinalis Common Rosemary - 15 Gal.			50	10

Irrigation: Water efficient systems will engage a drip irrigation system with turf and low plantings. Trees shall have root ball bubbler nozzles.

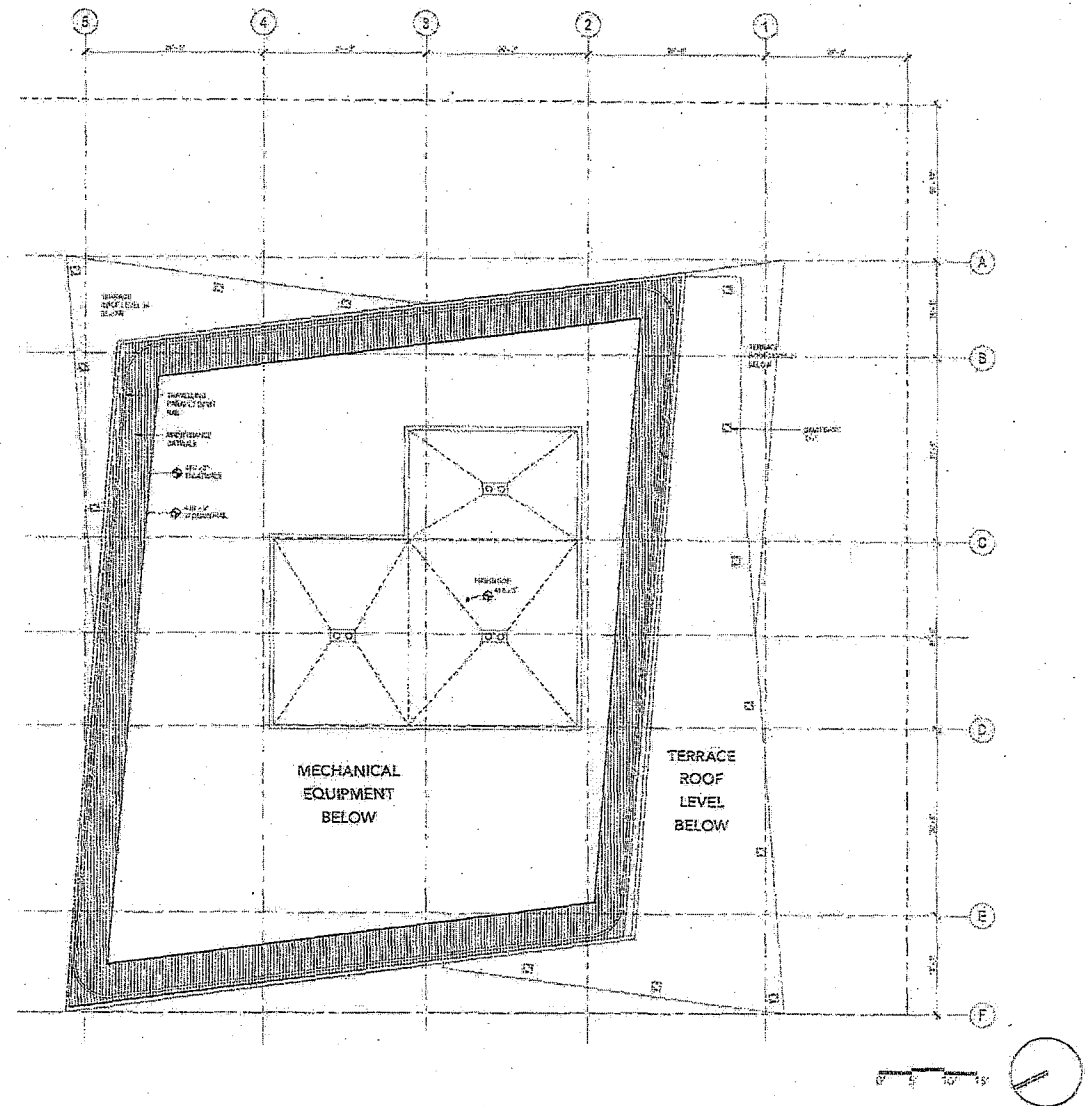
## OPEN SPACE SUMMARY

COMMON OPEN SPACE LEVEL 2	= 3,155 SF
COMMON OPEN SPACE LEVEL 8	= 9,060 SF
COMMON OPEN SPACE LEVEL 38	= 2,885 SF
TOTAL COMMON OPEN SPACE	= 15,200 SF
PRIVATE OPEN SPACE LEVEL 26	= 309 SF
PRIVATE OPEN SPACE LEVEL 36	= 754 SF
PRIVATE OPEN SPACE LEVEL 37	= 115 SF
TOTAL PRIVATE OPEN SPACE	= 1,178 SF
TOTAL OPEN SPACE	= 16,378 SF



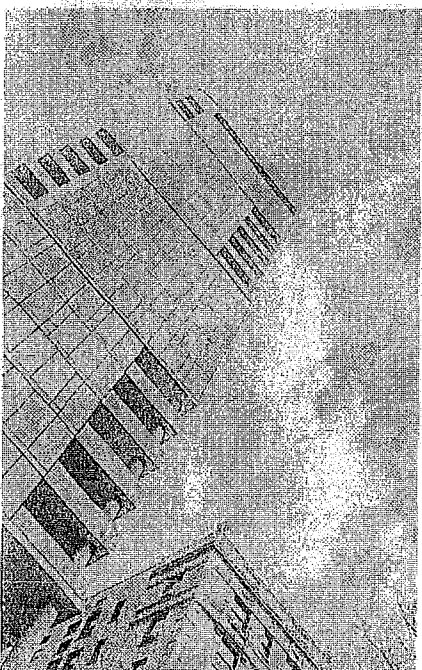
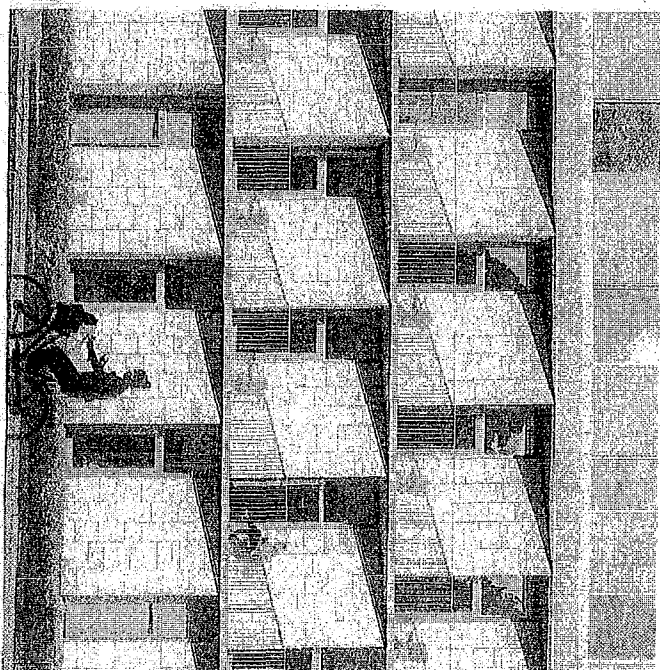
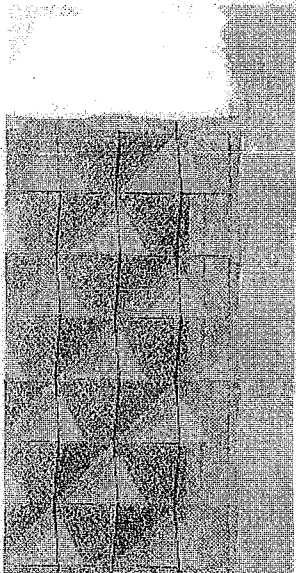
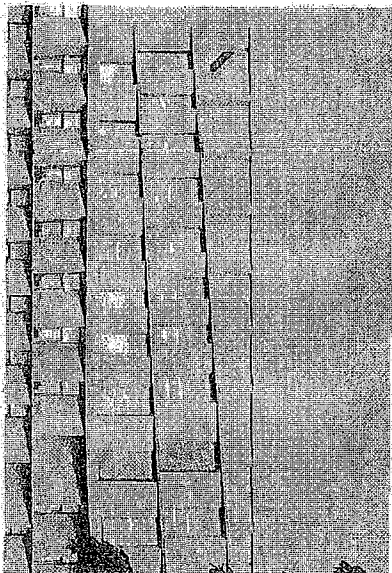
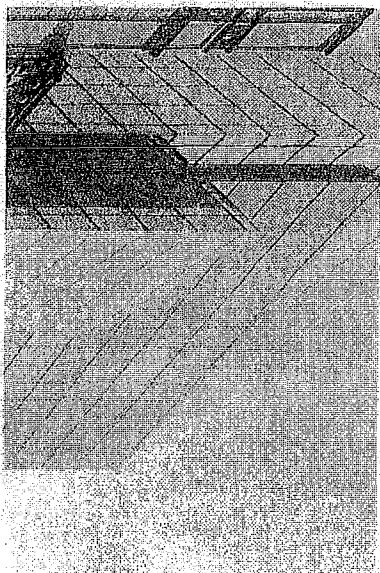
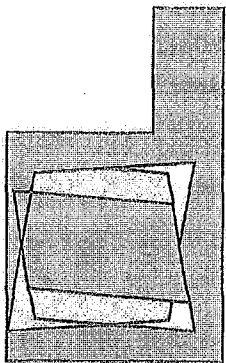
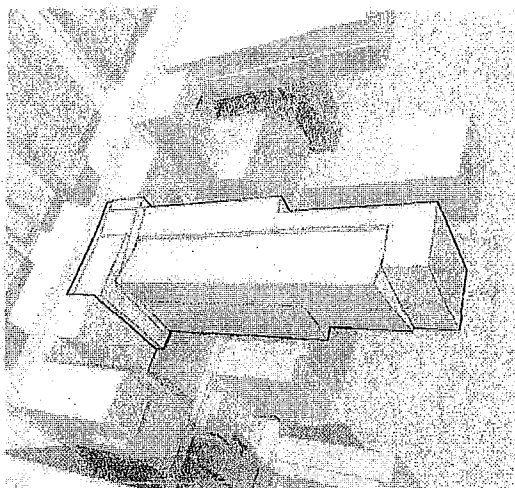


# LEVEL ROOF PLAN



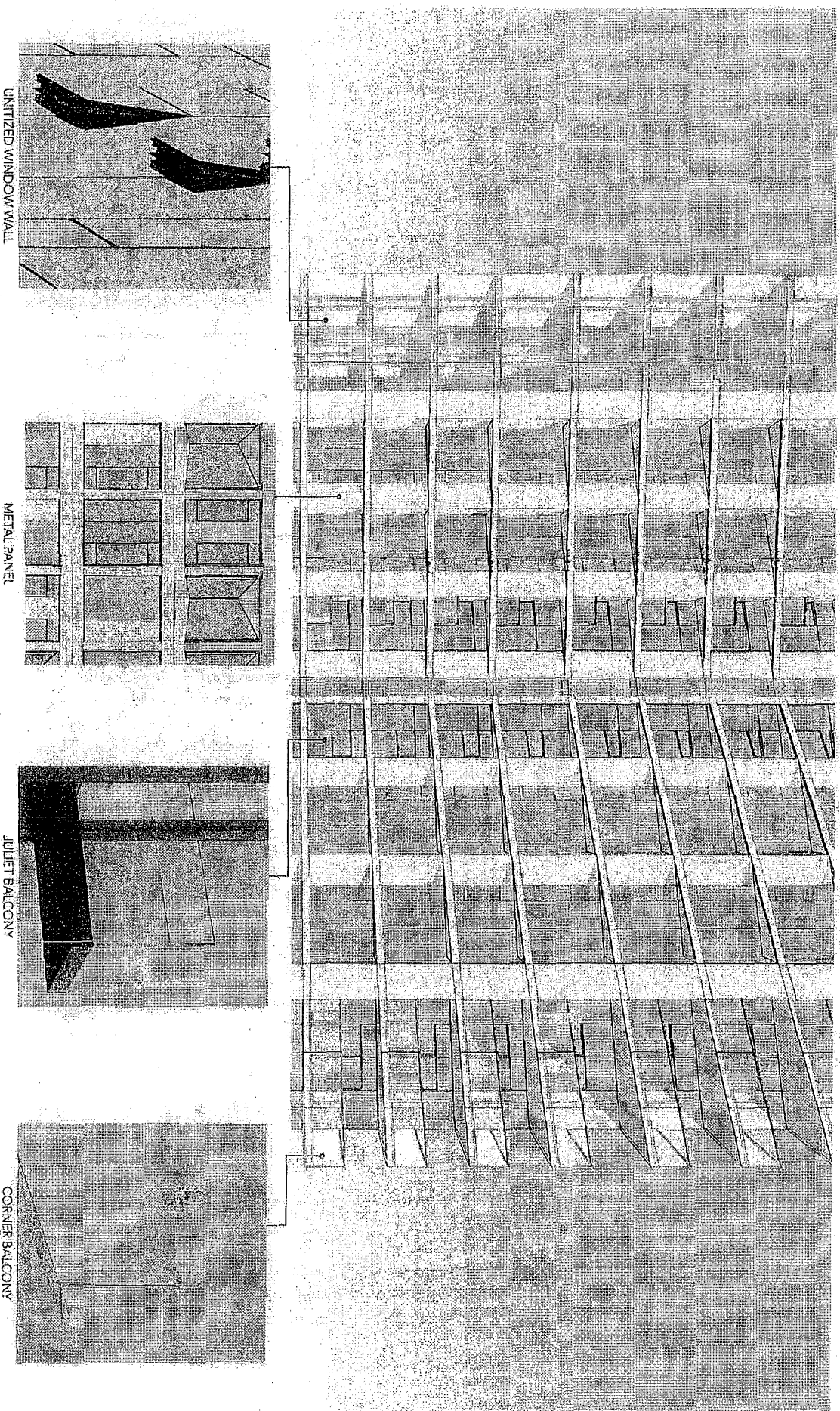


# FACADE CONCEPT





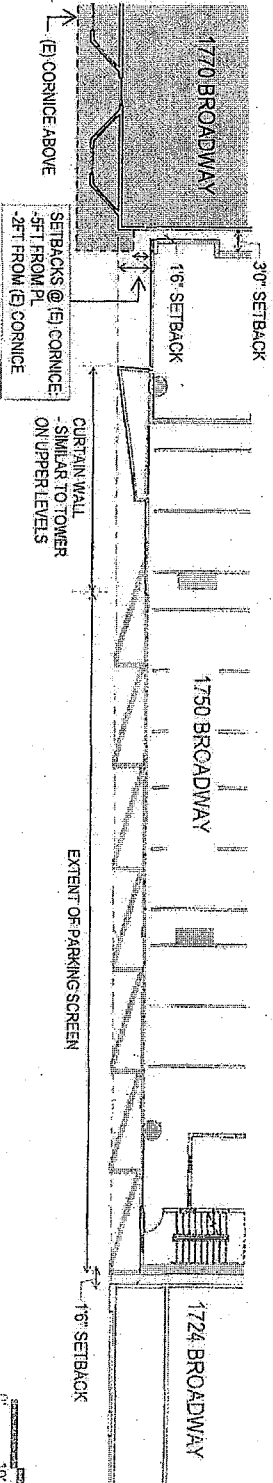
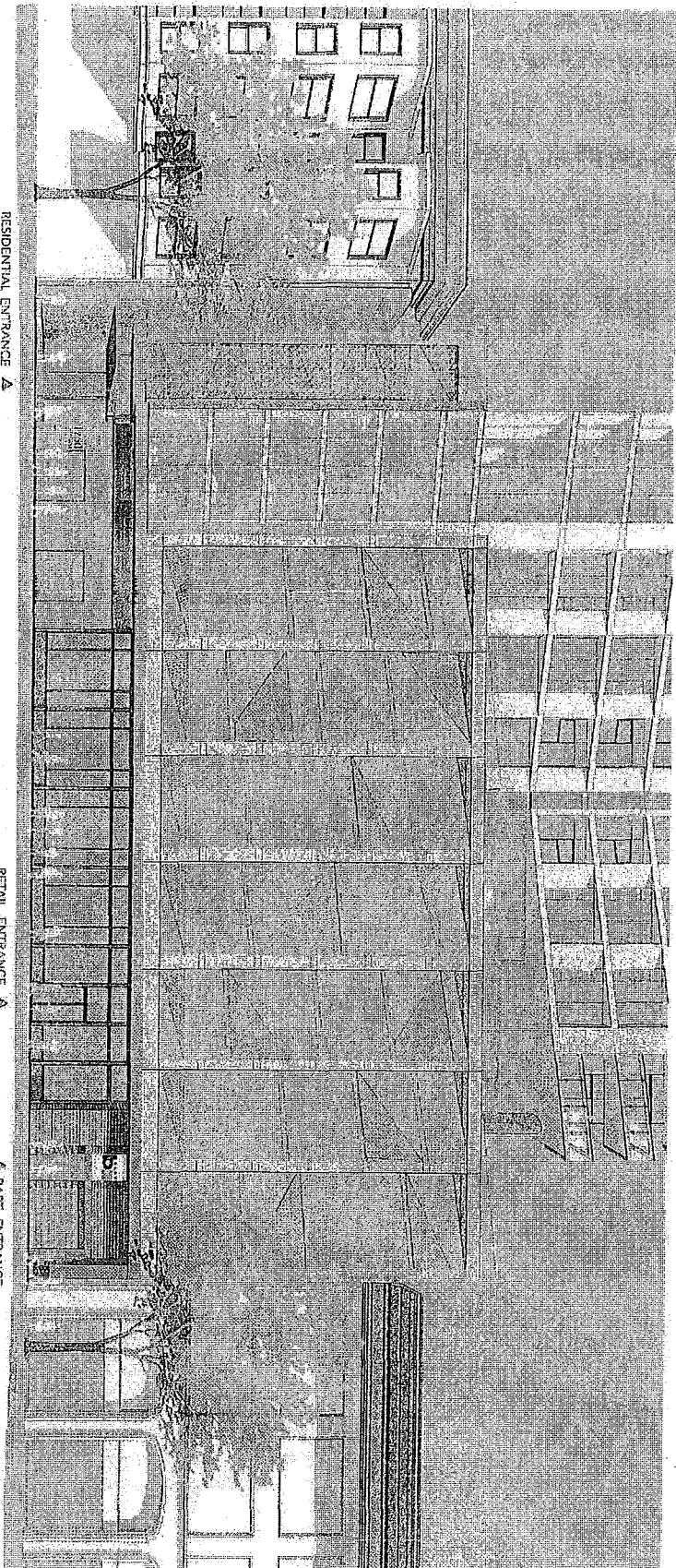
# TOWER FACADE



PLANNING COMMISSION 1750 BROADWAY, OAKLAND, CA



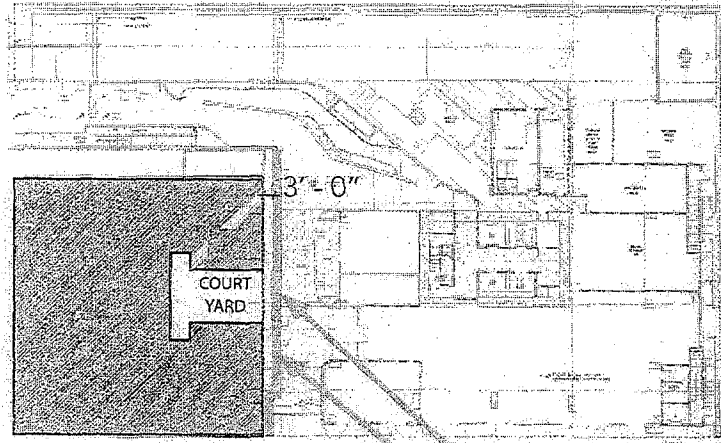
# PODIUM FACADE





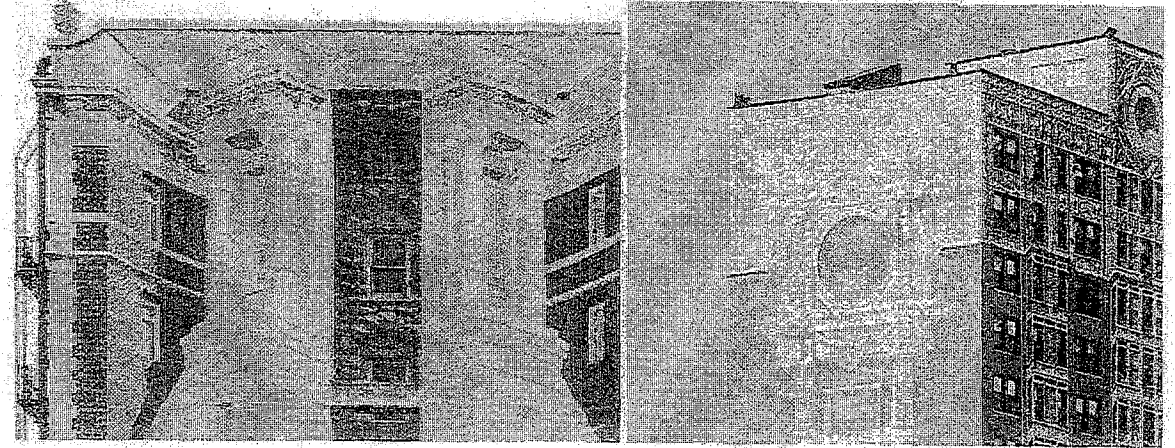
# RESIDENTIAL NEIGHBOR

## ADJACENT COURTYARD



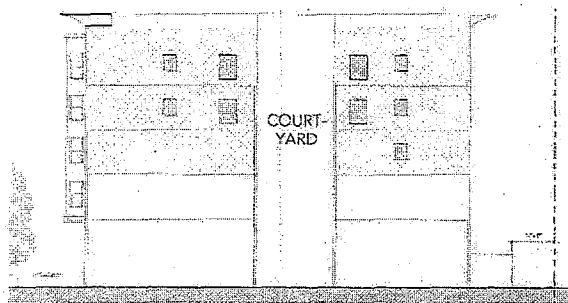
1770 BROADWAY PLAN

IMAGES BELOW ARE EXAMPLES ONLY OF TROMPE L'OEIL MURALS:  
PROPOSAL TO BE DEVELOPED THROUGH PUBLIC ART OUTREACH



POTENTIAL TROMPE L'OEIL MURAL TO VISUALLY COMPLETE THE COURTYARD  
PODIUM WALL TO BE SET BACK 3FT FROM PROPERTY LINE FOR AIR AND LIGHT

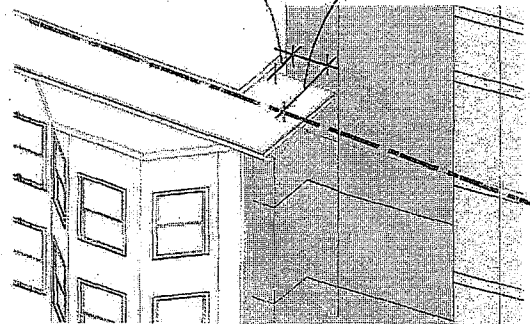
## ADJACENT ELEVATION



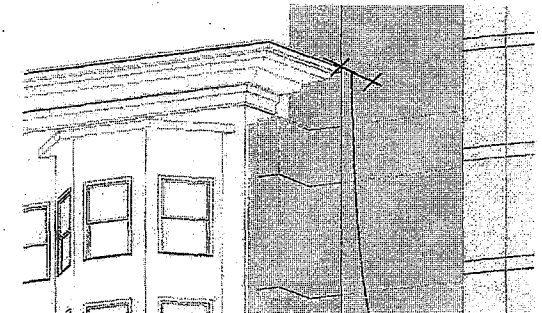
1770 LOT LINE ELEVATION

2FT CLEARANCE FROM BACK OF ADJACENT  
(E) CORNICE TO FACE OF (N) BUILDING\*

FACE OF (N) BUILDING SET BACK 5FT FROM  
PROPERTY LINE AT ADJACENT (E) CORNICE\*



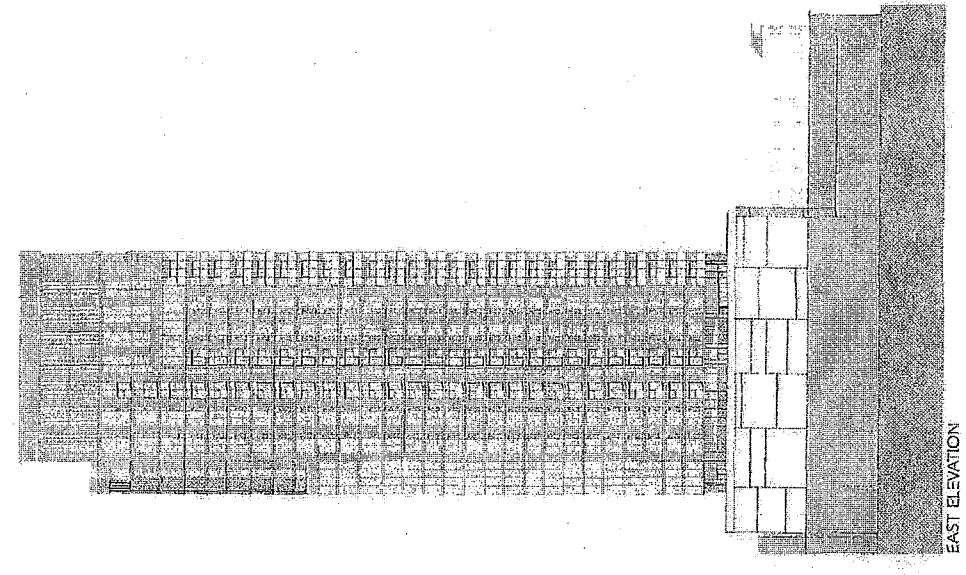
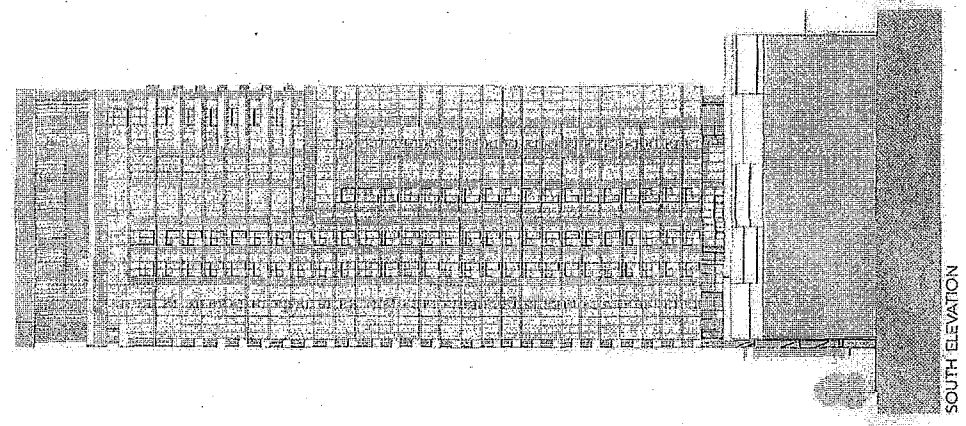
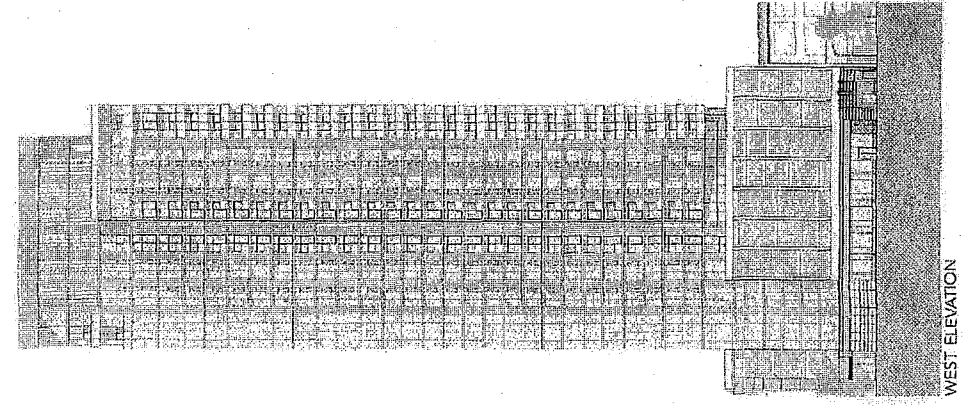
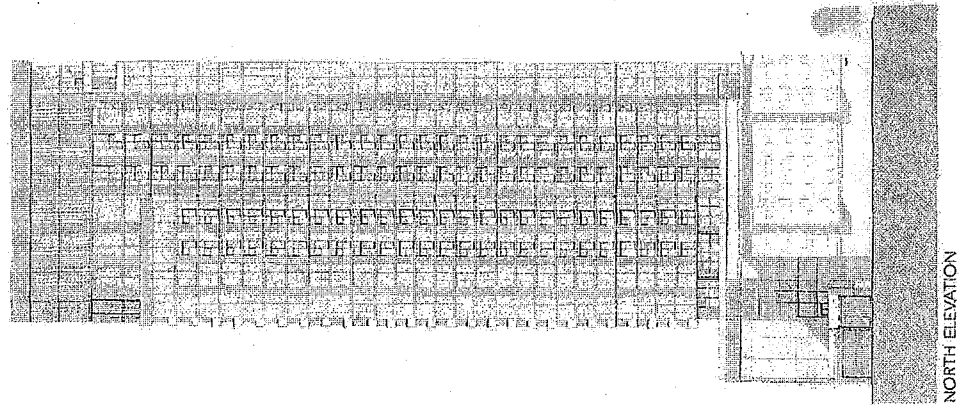
\*ENCROACHMENT AREA HAS BEEN RECORDED IN EASEMENT



2FT CLEARANCE FROM BACK  
OF ADJACENT (E) CORNICE  
TO FACE OF (N) BUILDING



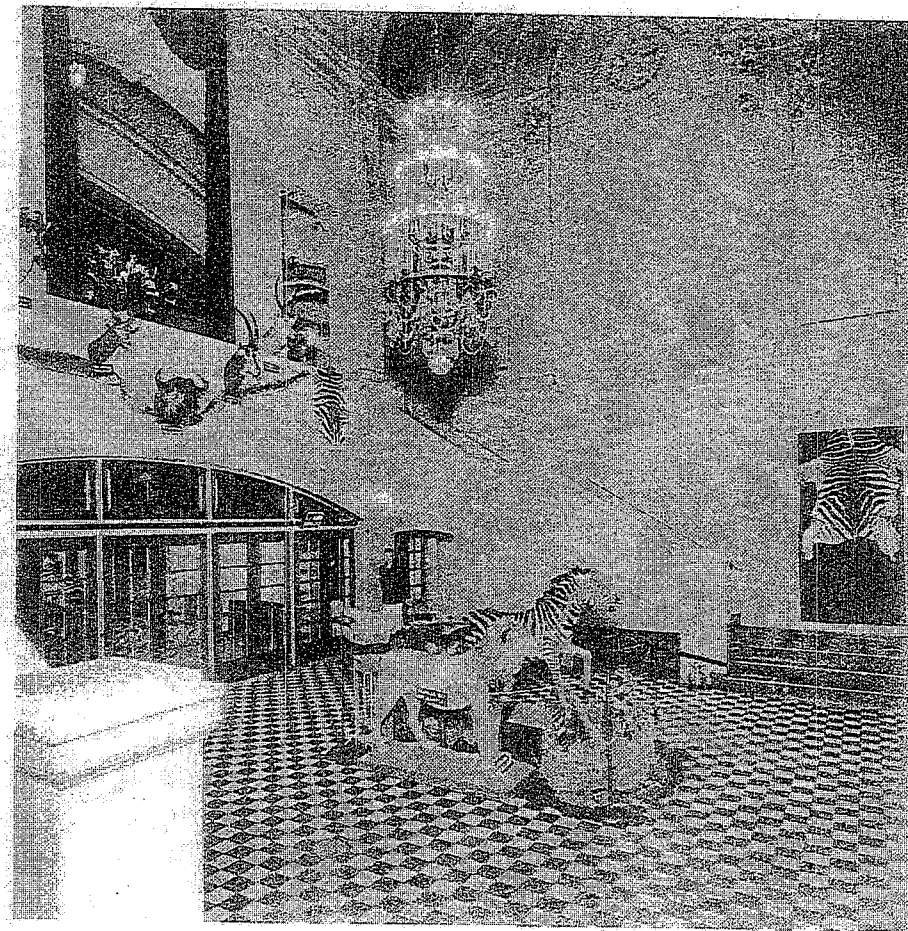
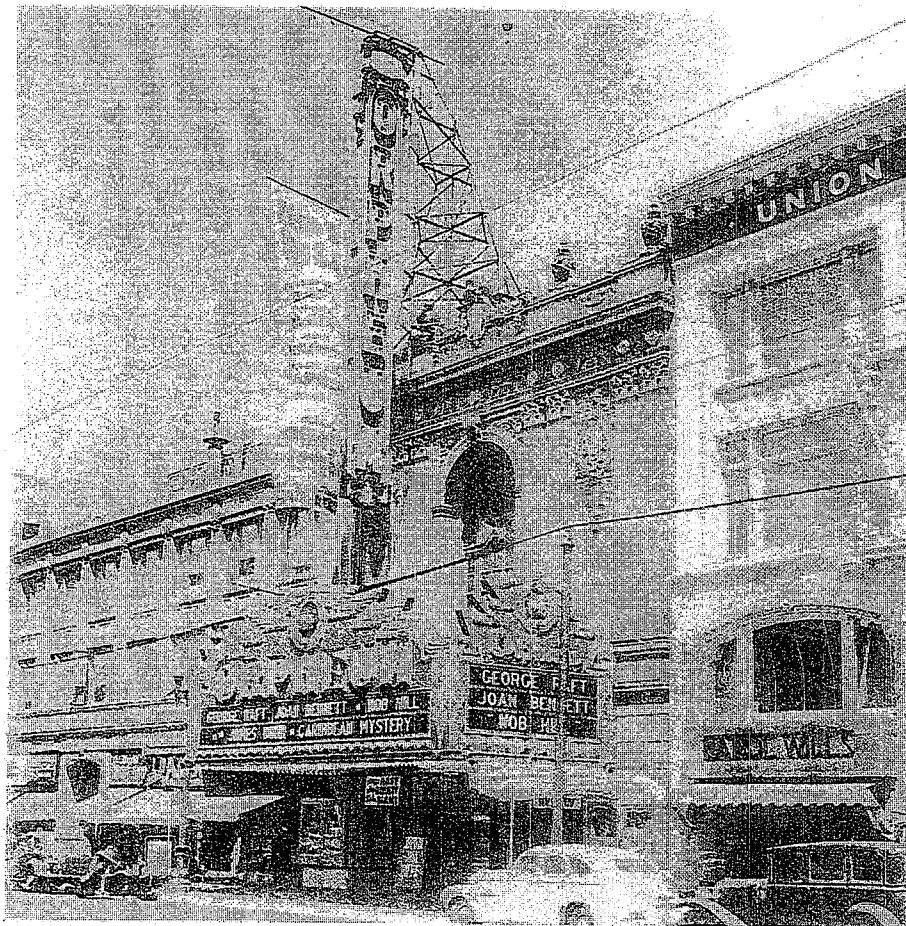
TOWER ELEVATIONS / PROFILES





## HISTORICAL CONTEXT

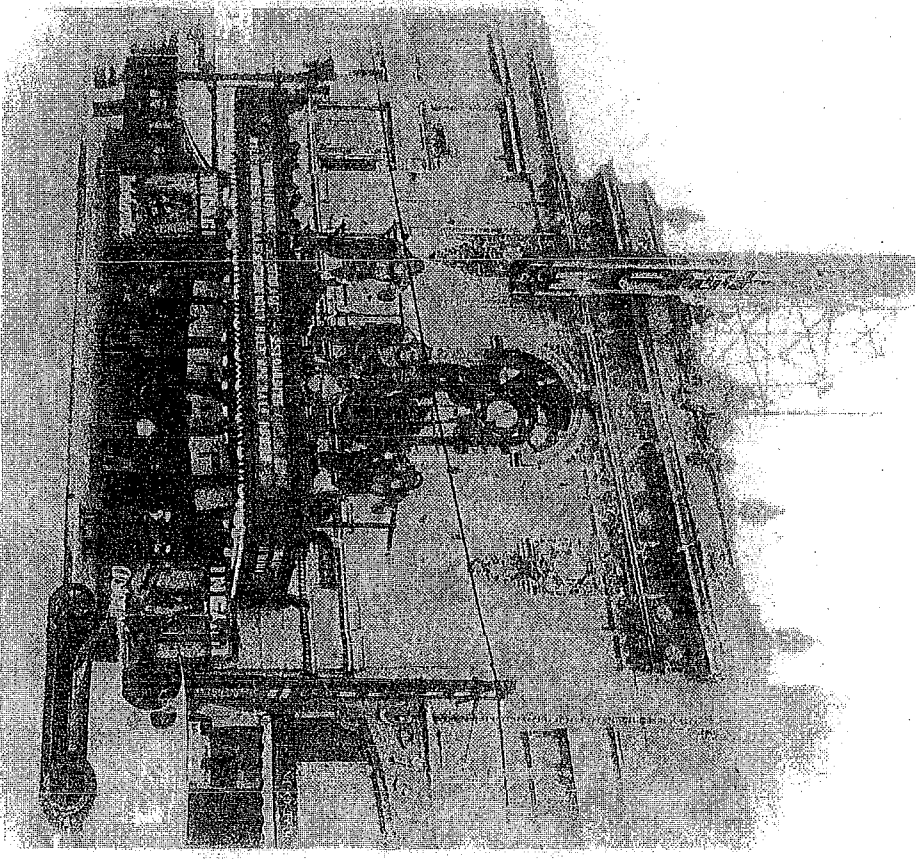
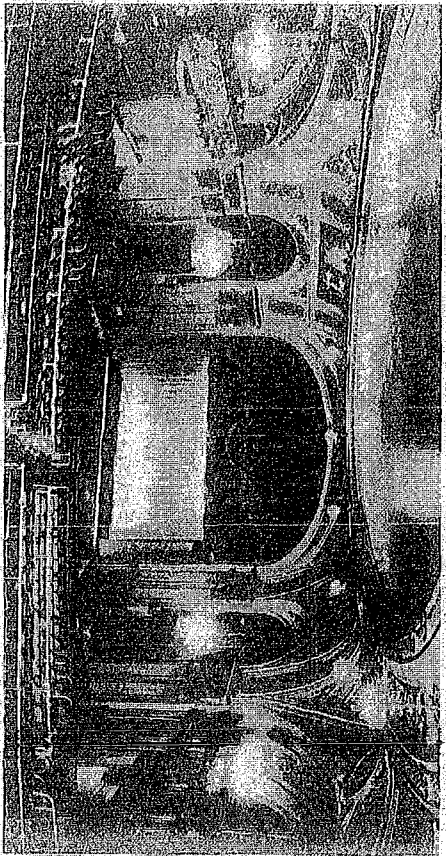
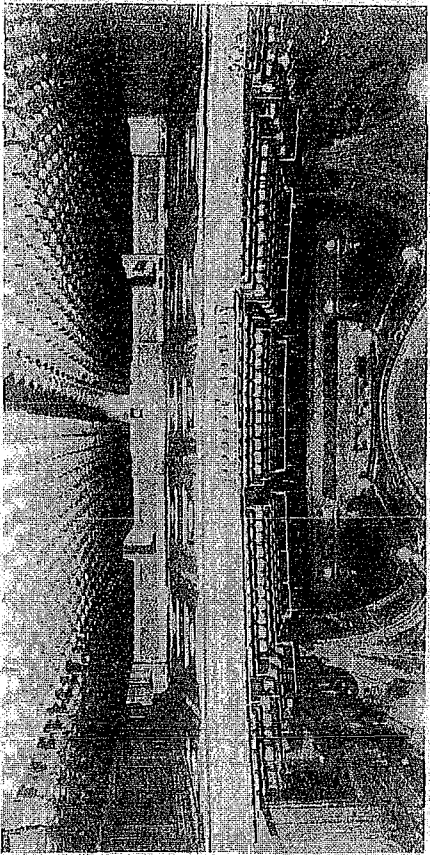
The original Fox-Orpheum Theater at 1730 Broadway





## HISTORICAL CONTEXT

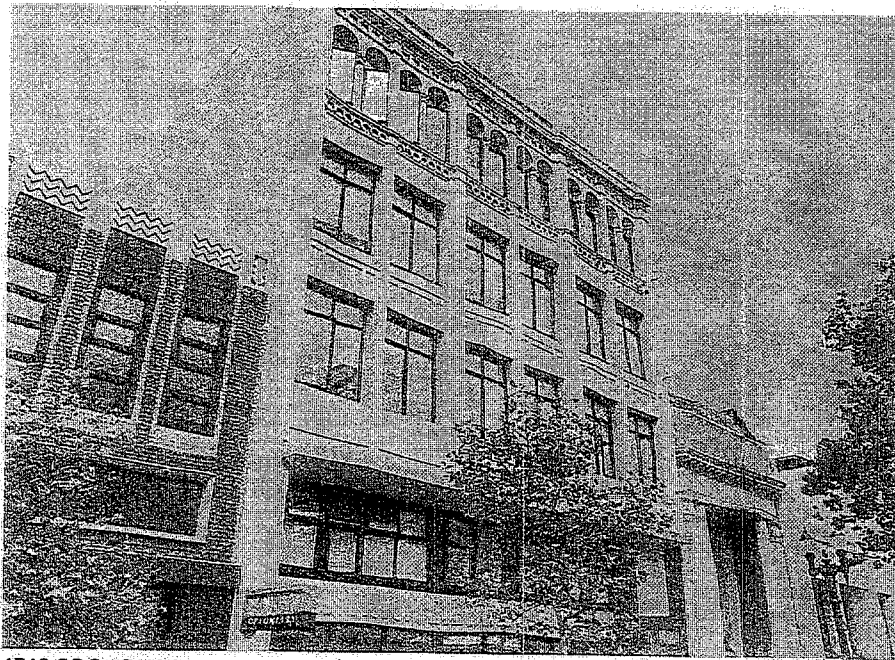
The original Fox-Orpheum Theater at 1730 Broadway





## ADDITIONAL CONTEXT

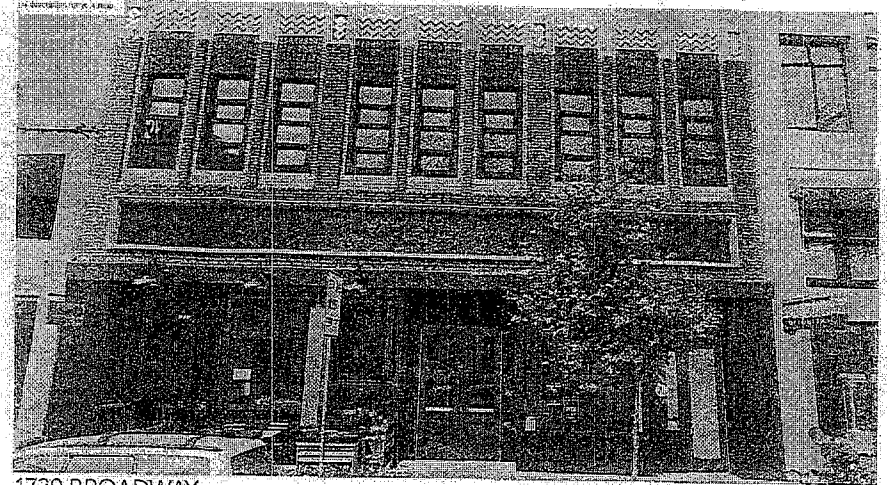
Facades along Broadway between 17th and 19th Streets



1749 BROADWAY



1721 BROADWAY

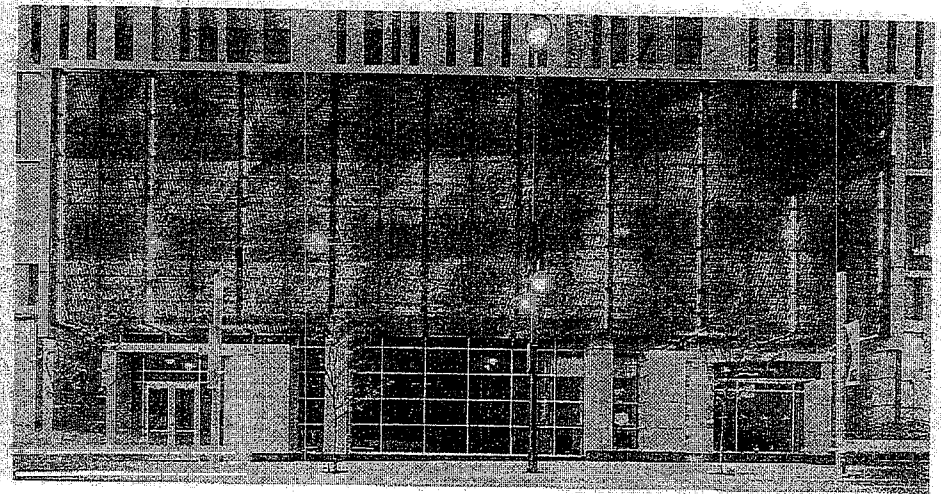
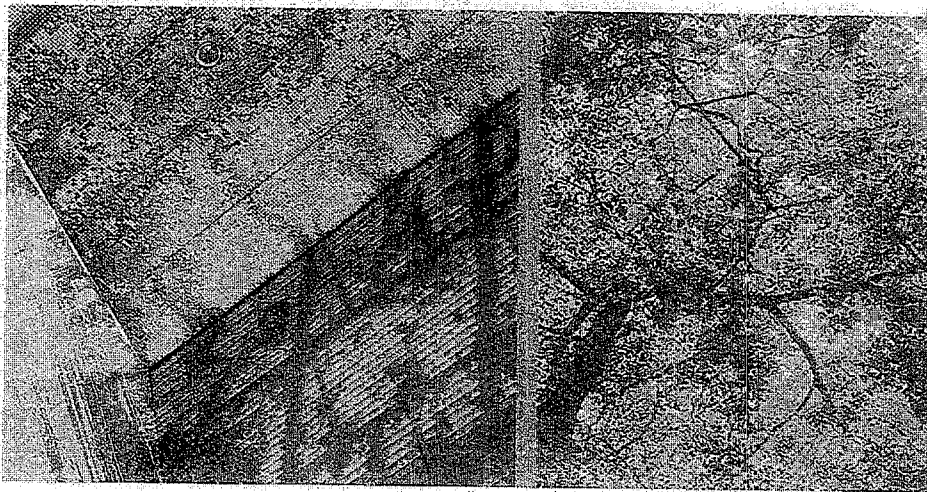
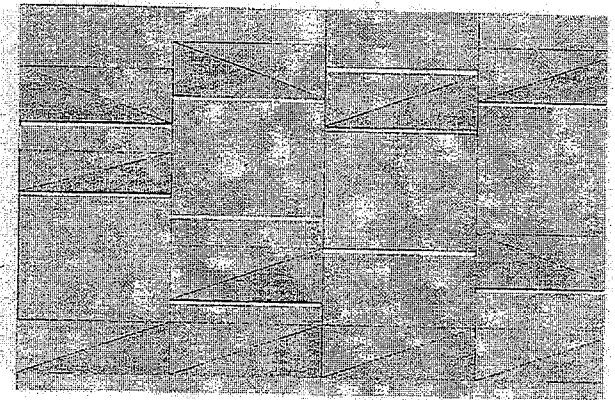
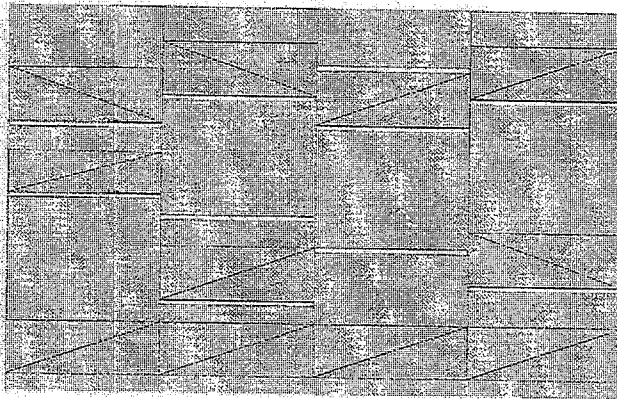
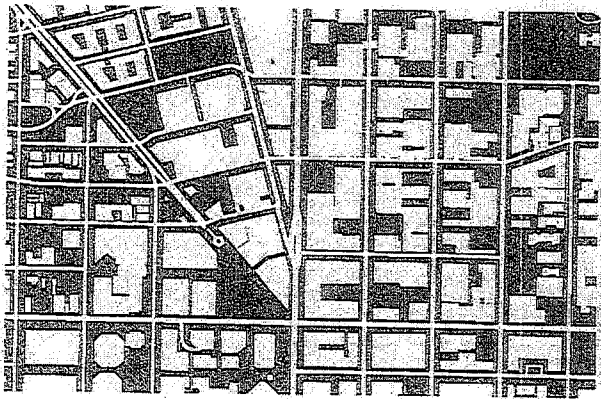


1739 BROADWAY



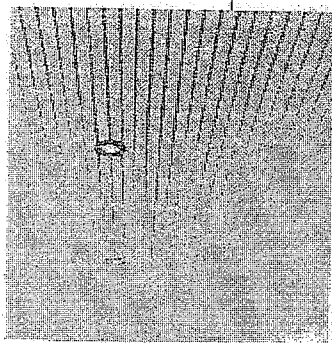
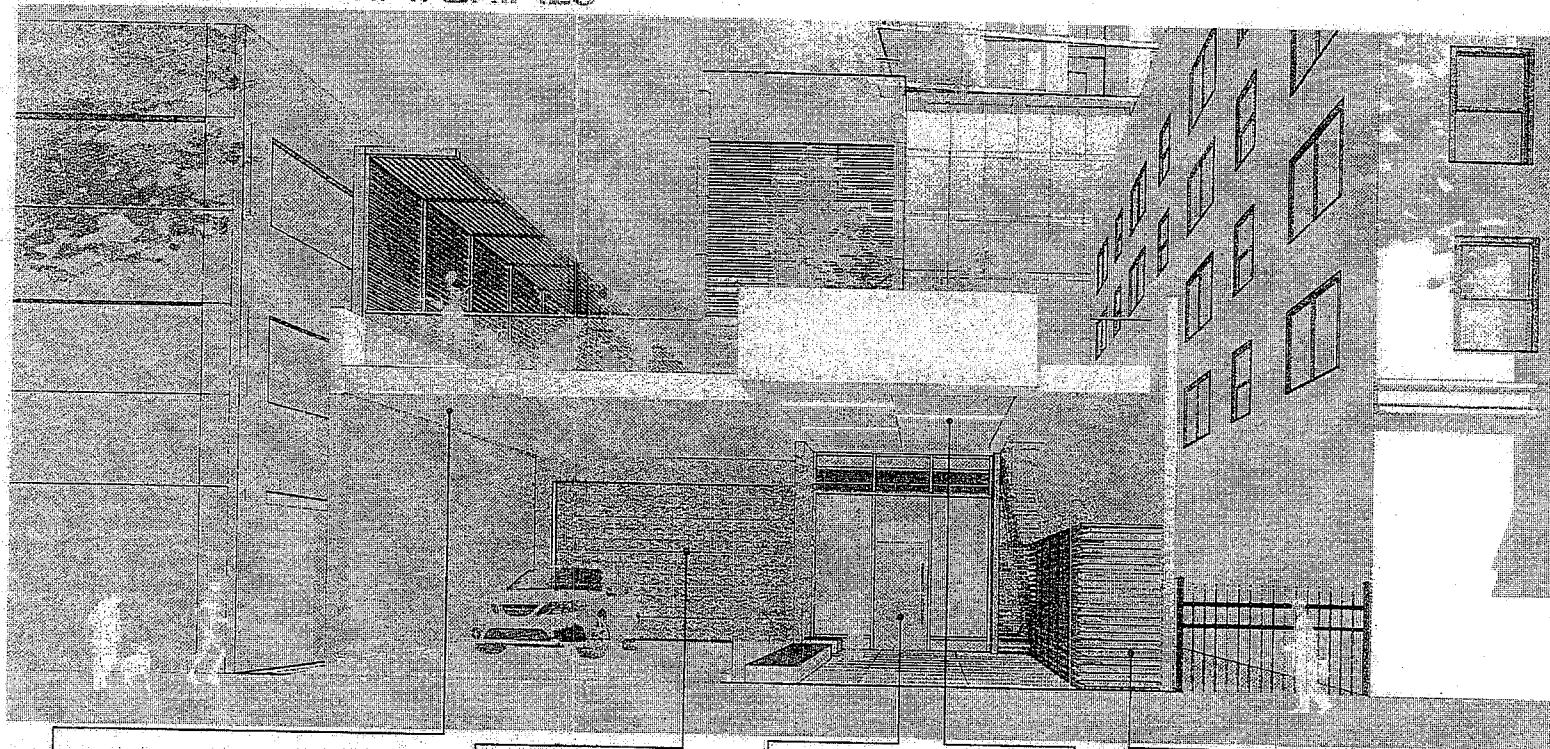
## PERFORATED METAL SCREENS

ALLOW FOR VENTILATION - LIGHT - ANIMATION  
CONCEPT OF MAPPING

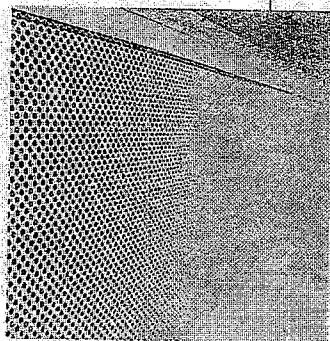




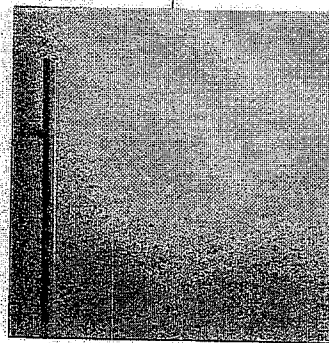
# 19TH STREET VIEW - MATERIALS



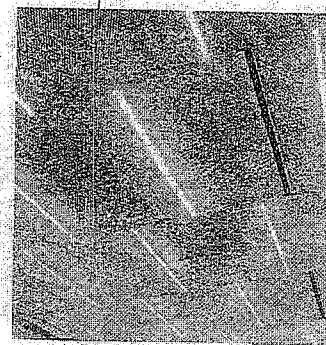
WOOD SOFFIT



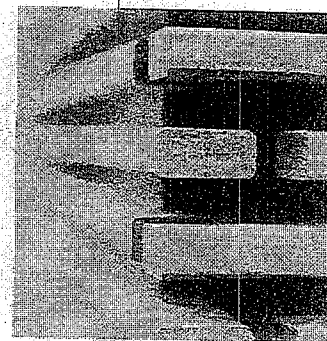
PERFORATED METAL DOOR



METAL LOBBY DOOR



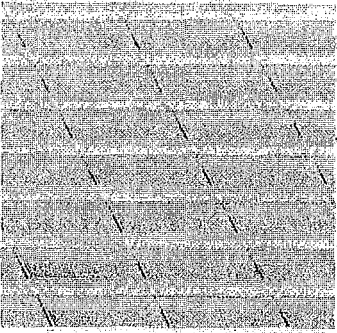
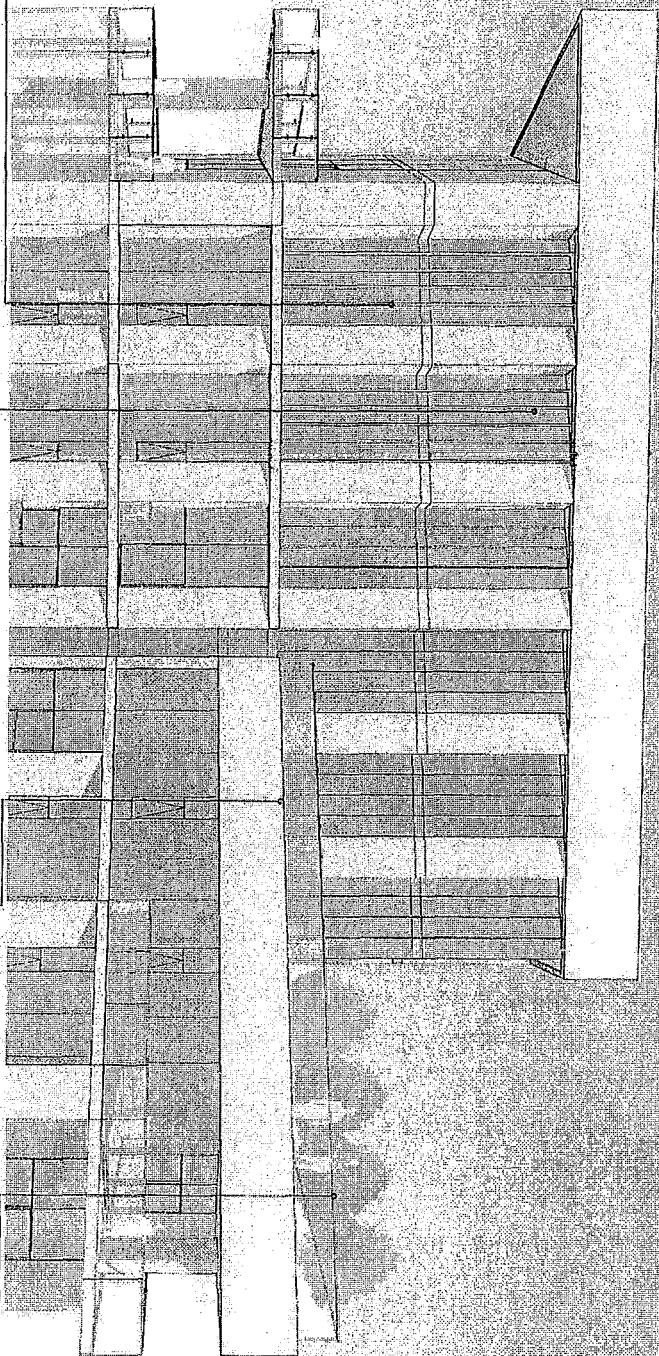
METAL SOFFIT WITH LIGHTS



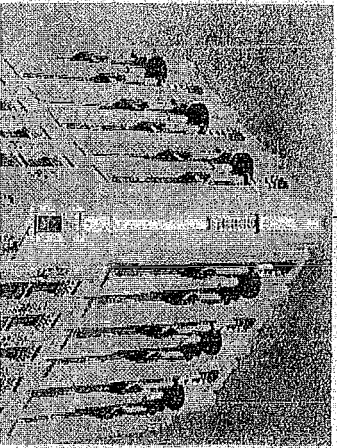
GAS METER ROOM SCREEN



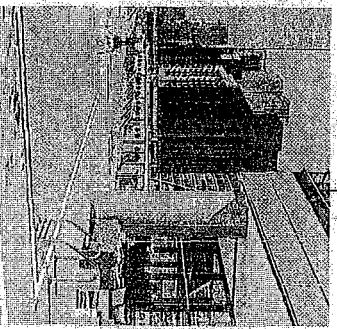
# CROWN FACADE



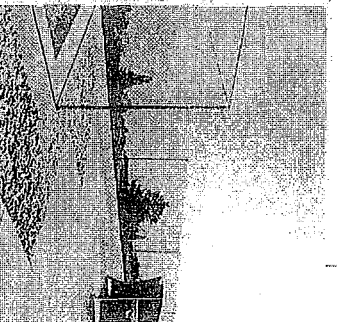
TEXTURED FACADE



CROWN



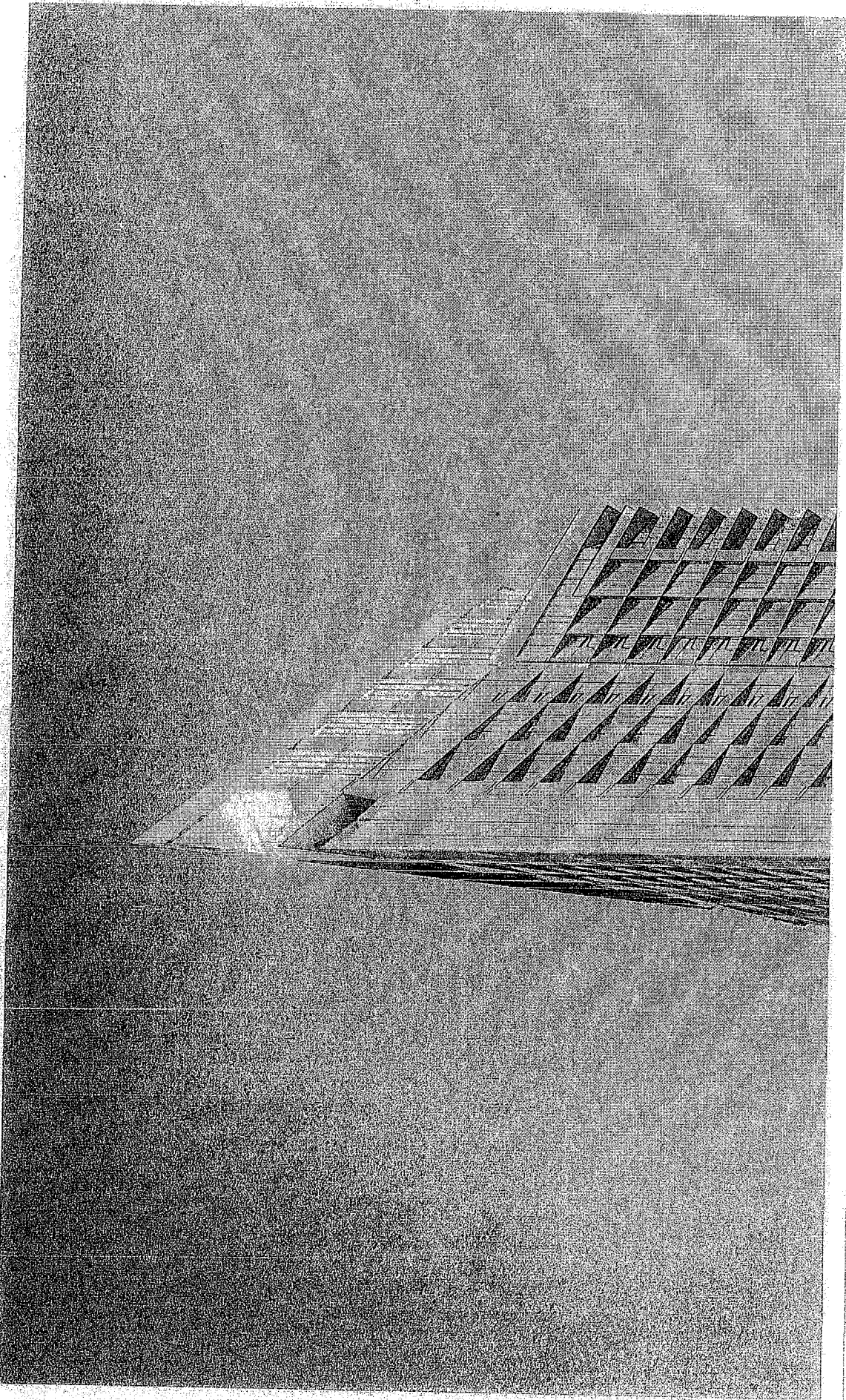
ROOF DECK



ROOF DECK GLASS RAILING



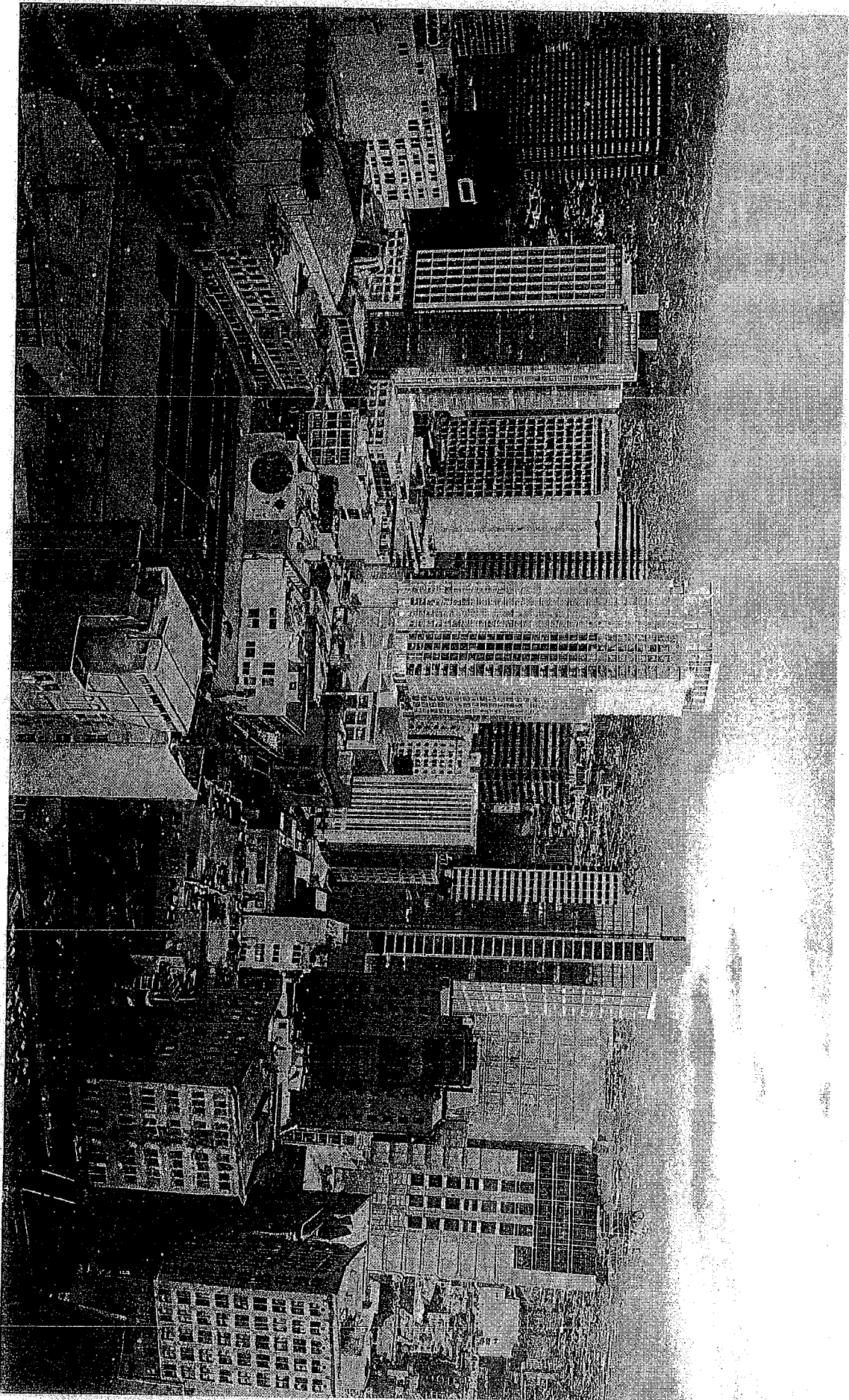
CROWN FACADE



PLANNING COMMISSION 1750 BROADWAY, OAKLAND, CA



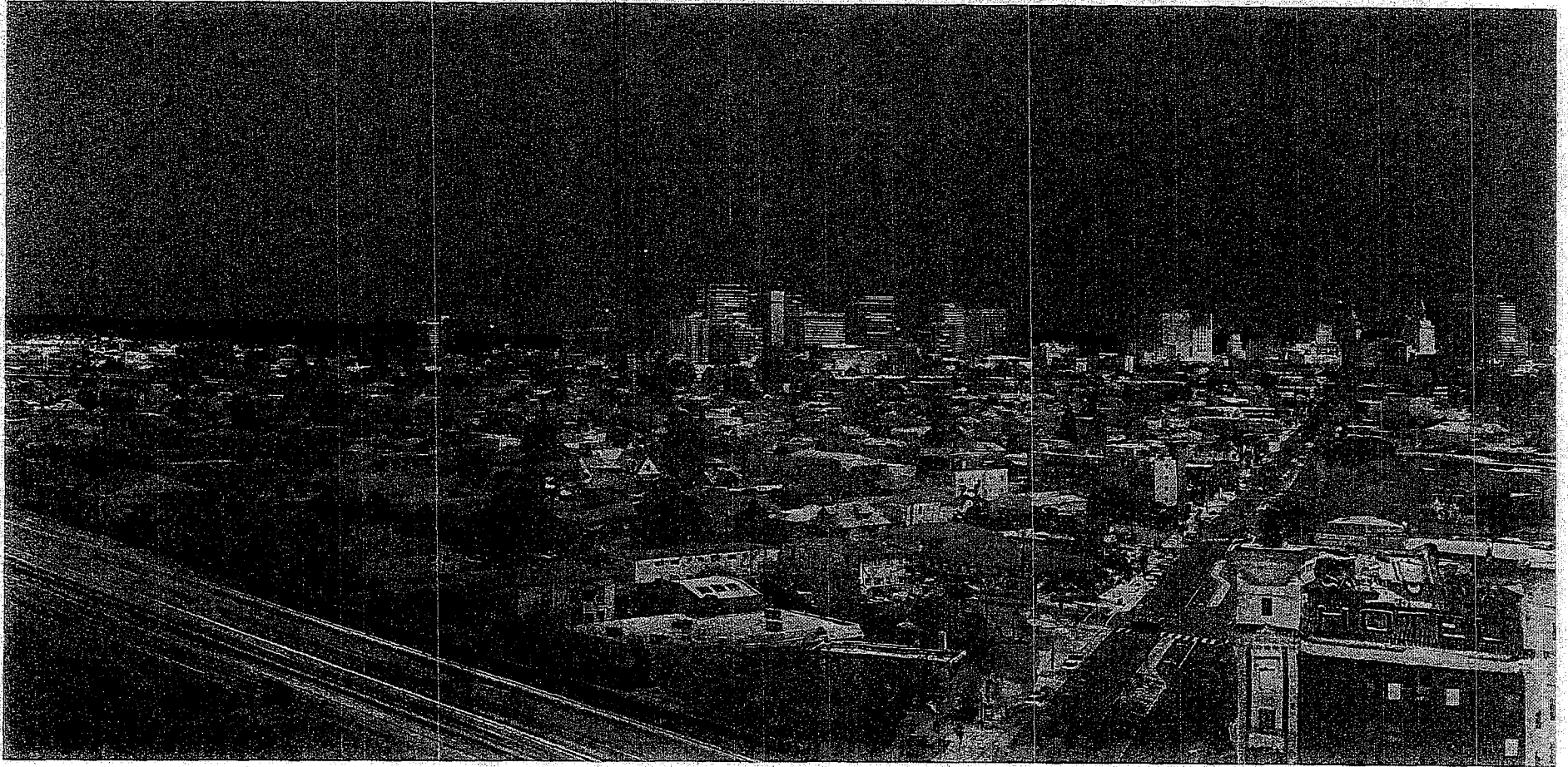
AERIAL VIEW



PLANNING COMMISSION 1750 BROADWAY, OAKLAND, CA

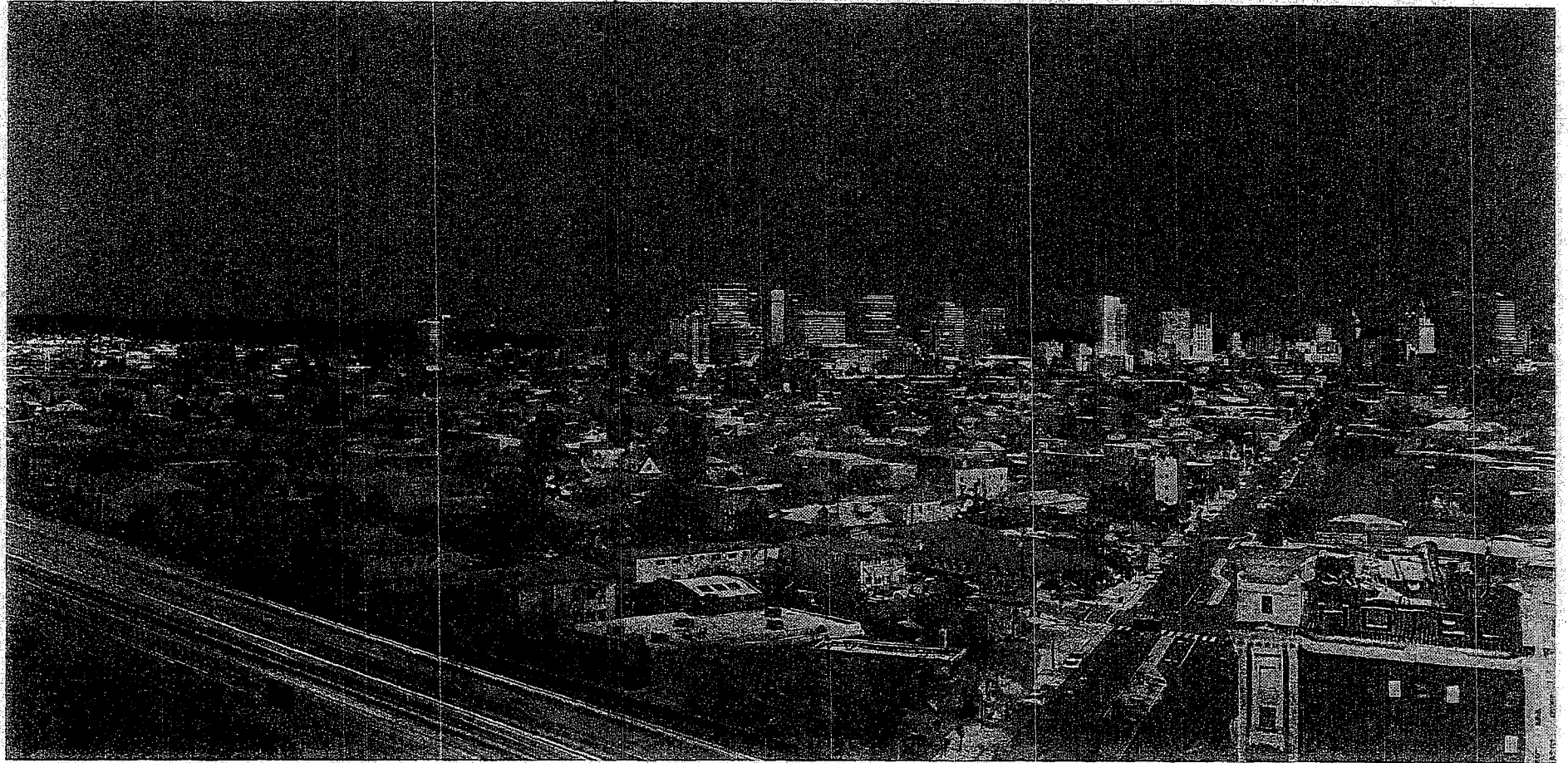


## OAKLAND SKYLINE - BEFORE



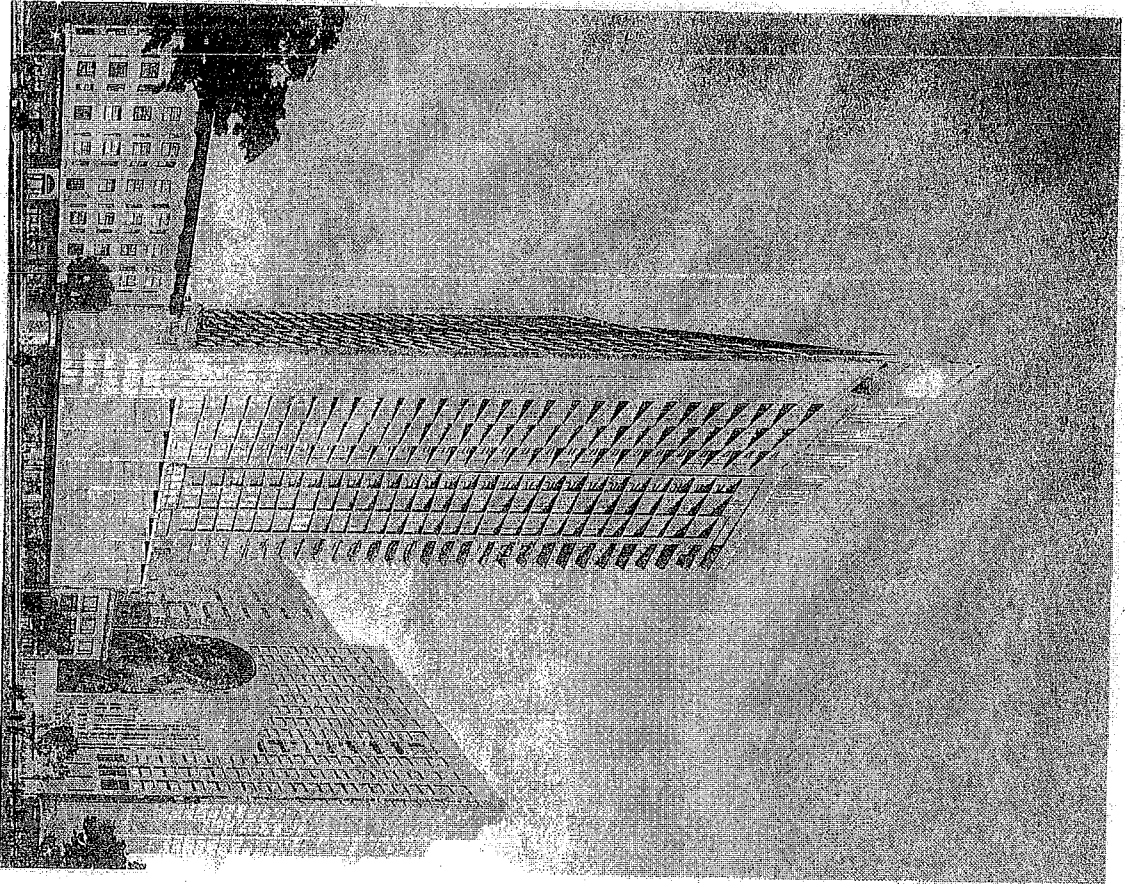


## OAKLAND SKYLINE - AFTER





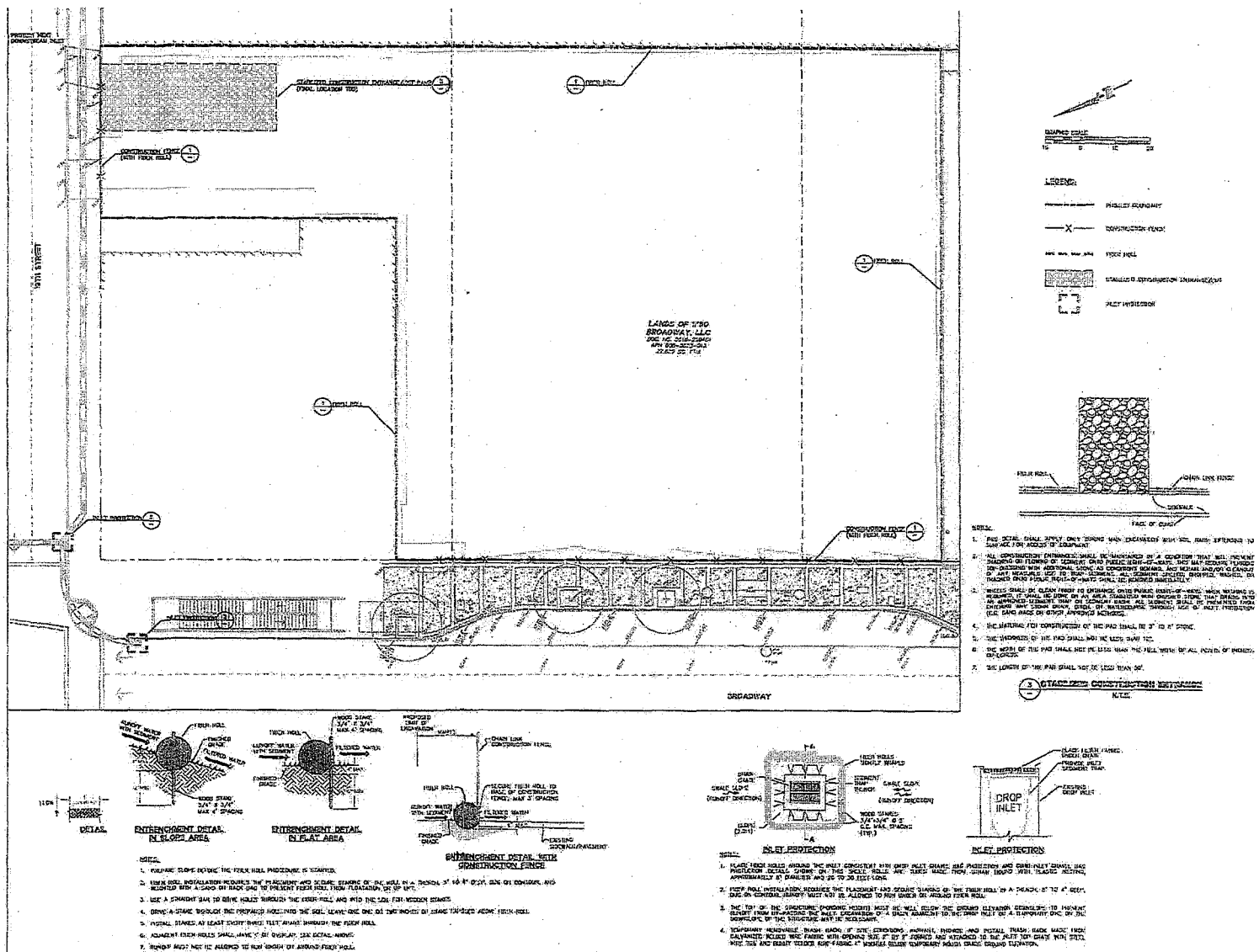
## BROADWAY VIEW



PLANNING COMMISSION 1750 BROADWAY, OAKLAND, CA



# APPENDIX A- EROSION CONTROL PLAN





**ZONING INFORMATION**

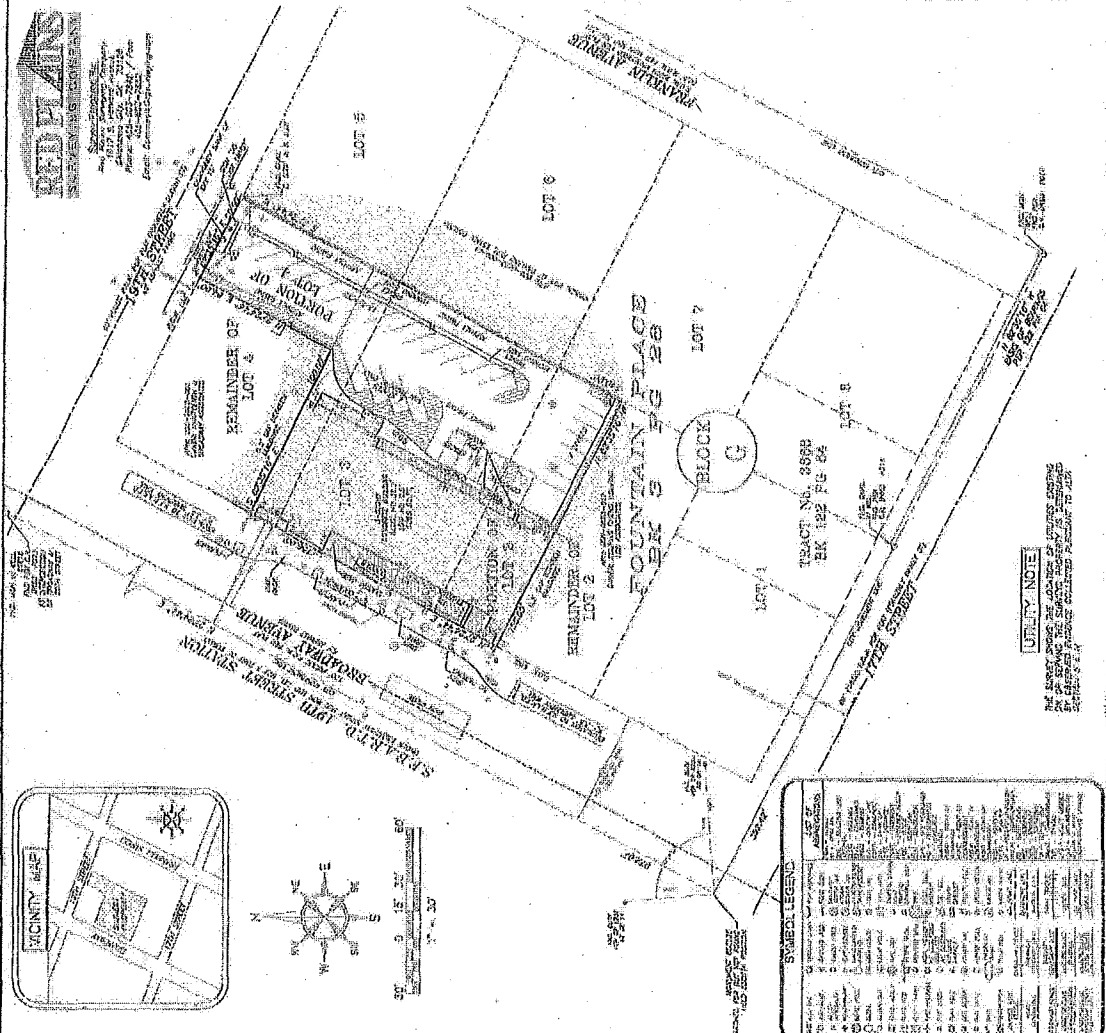
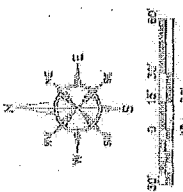
Check with the District Agent, or your State's Agents on whether an ordinance is in effect in your State, or whether a zoning ordinance is in effect in your State, or whether a zoning ordinance is in effect in your State.

For more information, see - **CHAPTER 1, SECTION 1**

For more information, see - **CHAPTER 1, SECTION 1**

For more information, see - **CHAPTER 1, SECTION 1**

For more information, see - **CHAPTER 1, SECTION 1**

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SUPPLY RELATED ITEMS  
CORRESPONDING TO SCHEDULE  
E TITLE COMMENTARY

ALTA/NSPS LAND TITLE SURVEY  
ON  
1160 BROADWAY  
PARTNER, PROJECT NUMBER (NOT PROVIDED)  
PROPERTY ADDRESS: 1160 BROADWAY, DOWNTOWN, IN  
THIS SURVEY BASED ON REFLECT SURVEY THE SURVEY COMPANY, THE  
CONTRACTOR NO. 01800-12345, STARTING AN ADDRESS OF 01/11/2011

[illegible]

1751 EAST GARRY AVENUE  
SANTA ANA, CA 92705  
714-283-4858  
schore@earthlink.net  
http://www.schore.net



[illegible]

FOUNTAIN PLACE  
BK 3 PG 28

123

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Rivera, Mike

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**From:** Rivera, Mike  
**Sent:** Friday, March 8, 2019 3:38 PM  
**To:** 'Chris Relf'  
**Subject:** 1750 Broadway. Public Comments Received

Hi Chris,

FYI:

-----Original Message-----

From: Joseph Hornof [mailto:hornof@earcom.com]  
Sent: Wednesday, March 6, 2019 12:40 PM  
To: Ranelletti, Darin <DRanelletti@oaklandca.gov>  
Subject: Please help us save our affordable housing

Dear Mr Ranelletti,

Greetings from down the street. I live at 1770 Broadway, on the corner of 19th St. Our building is historic, dating back to 1912.

We have 48 apartments at affordable rent. Some of my neighbors have been here for many years. Some of us provide vital services to our community.

For over a year, we've been tracking the development proposed next door at 1750 Broadway though the Planning Commission. We've spoken at meetings and submitted our concerns but it feels as if we are being ignored.

The process has not been transparent. Contrary to previous reports they published, the developers finally had their first discussions with us last week. They sprang the meeting with 30 hours notice, which limited the number of us who could attend.

The next Planning Commission meeting was postponed to Wednesday March 20. The developer is presenting their CEQA report. 1770 Broadway is referenced a scant half-dozen times in their 400 pages of reports. Some of our significant concerns are not addressed. Once again, it feels like we hardly exist.

One area which omits us is the shadow study. A shadow study is required for our building as it is an historic resource. The function of this resource should be considered. It's more than a facade; it contains apartments. I believe this study will show that we will lose all of our natural sunlight, permanently putting us in an unhealthy environment.

There's a larger problem which will arise before that. At the community meeting, we learned that construction is scheduled to last

28-36 months. Three years is significantly longer than other projects. The noise from this construction will render our apartments unlivable during that period. We're speaking from experience. We've been impacted by the construction at 17th St for over a year; construction across 19th St. is just starting up. 1750 Broadway will be right against our walls and wrap around our building.

Safety is another issue. Will their crane haul material over our heads? The size of this building is frightening. If anything should slip, it could come crashing into our light well and into our apartments. This puts us in a position of tremendous risk.



Those are some of our many concerns. We'd appreciate if we could talk to you about this.

Thanks for your time and attention,

-Joe

Joseph Hornof  
1770 Broadway #112  
Oakland, CA 94612  
510.763.1488  
hornof@earcom.com



Re: Case Files PLN18369/ZP170064; 1750 Broadway  
December 5, 2018

Dear Members of the Design Review Committee,

Please forgive me - I'm having a hard time trying to learn how this process works. This is a follow-up to my public comment from 11/28/18, prior to the meeting scheduled last week.

It was only by chance that I learned this meeting was rescheduled. A public notice was not posted on the premises of 1750 Broadway. That sign still reads 11/28. Why does the City of Oakland website post only the agendas for these meetings, but no minutes or reports?

Yesterday I received a phone message from Christopher Relf of Rubicon Partners, the developers of this proposed project. I didn't list my phone number on the comment I submitted last week, but I would like to thank him for reaching out. I didn't get home in time to return his call and I'm not sure how to respond. I don't have the authority, expertise or resources to negotiate and enforce the mitigating measures that should be required for a project of this scale.

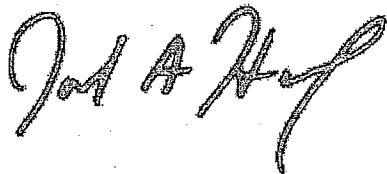
That's why I'm writing the Planning Commission, right? Isn't that your job? I'm sorry, I'm still trying to figure out how this works.

Tonight a neighbor with better eyes than me pointed out #7 in the background summary: Demonstrate communication with the affected tenant of existing facility. Once again, I appreciate Mr. Relf's phone call, but I am not the only affected tenant of a singular existing facility. There are 48 apartments in our building, along with retail on the ground floor, with neighbors up and down and across our street.

At a minimum, this communication should include:

- An informational packet including details of demolition and construction plans, timelines, how the **completed building will affect our quality of life. Is this tantamount to eviction? Should we plan on moving out? What mitigation measures will be offered? Some of the residents in my building do not have access to the Internet. One is worried about living under such a big building in an area prone to earthquakes. If someone drops a coffee cup off this tower, it's plunging straight into our lightwell. The residents of my building will be literally, physically impacted.**
- A community meeting to speak directly with Rubicon Partners and representation from the City of Oakland Planning Commission who can guide us and provide necessary oversight. Our neighbors at East Bay Paratransit could provide a conference room to host this. This is a humongous project. It deserves more than a kangaroo court - public safety is at stake. If the Planning Commission wishes to place due diligence upon my sole shoulders, I would consider that negligent.

Thank you for your consideration,



Joseph Hornof  
1770 Broadway Apt 112  
Oakland, CA 94612

Attachment E



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## East Bay Paratransit

1750 Broadway  
Oakland, CA 94612

December 3, 2018  
Mike Rivera, City Planner  
City of Oakland Department of Planning and Building Bureau of Planning  
250 Frank H. Ogawa Plaza, Suite 2114  
Oakland, CA 94612

RE: Comments on 1750 Broadway Project

Dear Mr. Rivera:

We would like to provide comments on the proposed project at 1750 Broadway, Case File Number AP170064.

First, we would like to acknowledge that Rubicon is correct that there have been a number of discussions/emails and a few meetings between the landlord and the tenant, as noted in Rubicon's November 8<sup>th</sup>, 2018 letter. However, the truth of the matter is that a majority of those communications were regarding tenant/landlord concerns and were not addressing the project currently under review by the DRC nor how it would impact the terms of the lease.

We are glad that Rubicon recognizes the terms of the lease which provide for the tenant and the agencies to hold, at our option, until 2030. We believe it is important, however, to make clear to the committee where the negotiations stand currently – no meetings have occurred, nor has correspondence been exchanged regarding a potential resolution of the relevant issue, since April 2018. There is no pending offer on the table, no ongoing negotiations, and we are not close to reaching a settlement with Rubicon to relocate. Any action to move on this project or the proposed development is premature. At this point, East Bay Paratransit (EBP) plans to remain at the site until 2030.

The agencies have invested in improvements to customize the property so that it would serve the unique needs of our EBP disabled riders. The location is ideal for meeting the needs of many riders and families that come to our office each day. Over 85 workers are employed at the office, many of which are in starting level jobs and rely on BART and AC Transit to commute to work. We invite you to visit our office and meet the workers and riders that are part of the East Bay Paratransit family.

Sincerely,



Cynthia Lopez  
Acting General Manager, Transdev, on behalf of the East Bay Paratransit Consortium  
1780 Broadway  
Oakland, CA 94612 Office: 510 446-2008.



Re: Case Files PLN18369/ZP170064; 1750 Broadway

November 28, 2018

Dear Members of the Design Review Committee,

I supplied written comments regarding this project on January 31 and February 28, 2018. Several residents of my building attended your meeting on February 28 and voiced their concerns. We addressed many real-world questions regarding how his project will impact our quality of life and the well-being of our neighborhood.

It appears your Committee has chosen to ignore us. There is no mention of our concerns listed or considered in your report.

Moreover, you have printed a false statement not just once, but twice. It can be found in the Applicant's Letter with Responses, dated February 15, 2018, in Part 2, Page 37 of the 2018-11-28-DRC report. This false statement has been provided to the public in print and on the City of Oakland website.

I am listed by name six times in this single paragraph. I have had no discussion with the applicant regarding this project. This claim is entirely false. To the best of my knowledge, the applicant has had no discussion with any of my fellow tenants.

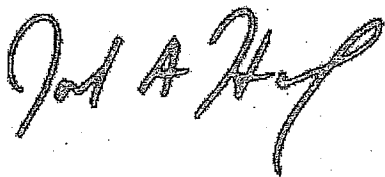
Our correspondence and comments were provided to the Planning Commission, from whom we have received no response.

Before this project is allowed to proceed, all statements attached to my name should be ~~corrected~~ and/or retracted.

Moreover, the applicant's decision to respond with an untruthful statement indicates that our fears are warranted and worthy of acknowledgment.

If the Planning Commission negotiates in the interest of the citizens of Oakland, we should be treated with respect. Our lives will be impacted by this project. We deserve a truthful voice in this process.

Sincerely,

A handwritten signature in dark ink, appearing to read "Joe A. Hornof", written in a cursive style.

Joseph Hornof  
1770 Broadway Apt 112  
Oakland, CA 94612



1770 Broadway Apt 112  
Oakland, CA 94612  
(510) 763-1488  
hornof@earcom.com  
Re: Case File Number ZP170064; 1750 Broadway  
February 28, 2018

Dear members of the Design Review Committee,

I supplied a public comment on this project prior to your meeting on January 31, 2018. While the committee mentioned in passing they had received my correspondence, none of my concerns were addressed.

I am a resident of 1770 Broadway. This project will dramatically affect the living conditions in our building. Before this project is approved, I think it would be fair and prudent to present the residents of my building full and detailed information, and an opportunity to discuss the impact of this project with representatives from the Planning Commission.

The 1750 Broadway proposal would envelope our building and cast it into the shadows, blocking nearly all direct sunlight. That is one of my many concerns. And that is far down the road: first we will be impacted by the destruction of the current building and the construction of the tower. That may make our units virtually unlivable for the duration.

Many of the residents in our building have been here for years. Decreased conditions will affect them. Relocation may be very difficult for some of them. Moreover, we can tell you first hand the challenges we face living here, the changes we have witnessed from the development which has transpired and that which is under construction. **These are livability issues that will face future residents of downtown Oakland.**

Subsequent to the January 31 meeting, I presented information to the occupants of my building, both residential and retail, and invited them to tonight's meeting so they can see how this process works. I believe this information should be presented to potentially impacted residents by the city itself.

After discussing this with my neighbors, I've received more questions and concerns, too many to list in this letter. Some of these issues may be somewhat private, not suitable to be published in public comment. These issues are real and valid. As citizens of Oakland, we feel we have both a right and a duty to ensure that they are addressed.

Sincerely,

A handwritten signature in dark ink, appearing to read "Joe A. Hornof", written in a cursive style.

Joseph Hornof





February 21, 2018  
Via Email

City of Oakland  
Design Review Committee (DRC)

RE: Case File No. -- 1750 Broadway

Dear Chair Myres and Commissioners Mamus and Monchamp:

We are writing in regards to the project proposal for 1750 Broadway that houses the agency's East Bay Paratransit (EBP) Broker offices. EBP is a joint venture between AC Transit and BART to provide mandated complementary Americans with Disabilities Act (ADA) paratransit to those individuals that, due to a cognitive or physical impairment, are unable to utilize the fixed-route bus or rail.

The Broker has responsibility for eligibility determinations, reservations, scheduling, dispatch and customer service. The Broker employs 85 employees, on behalf of AC Transit and BART. Additionally, the Broker holds contracts with three private firms for the operations and maintenance of vehicles utilized in EBP service.

We appreciate you allowing staff to address the Design Review Committee (DRC) during your regular meeting on January 31. Due to the limited time (2 minutes) we have attached their talking points to this correspondence for your consideration.

This item was discussed during the AC/BART Inter-agency Liaison Committee (ILC) on February 7. The ILC is comprised of three (3) members of each of the agency's respective publicly elected transit boards. The ILC meets frequently to discuss matters of mutual interest to both agencies including EBP. Staff also provided a verbal update to the full AC Transit Board of Directors during its regularly scheduled meeting on February 14.

Both AC Transit and BART have a mutual interest in the success of EBP and we are concerned about this project moving forward without consideration of or accommodation for EBP. The fact is, we have over 12 years remaining on our lease for this property and have no intention of leaving. Like AC Transit and BART, the EBP Broker's principal offices have always and will continue to be in downtown Oakland.

EBP provides a vital service to the most frail and vulnerable in our community and must be accounted for should this project move forward.

We appreciate your consideration and attention to this matter.

Respectfully,

ALAMEDA-CONTRA COSTA  
TRANSIT DISTRICT

Michael A. Hursh  
General Manager

SAN FRANCISCO BAY AREA  
RAPID TRANSIT DISTRICT

Grace Crunican  
General Manager

Cc: City of Oakland Planning Commissioners  
AC Transit Board of Directors  
Laura Timothy, BART Customer Service and Access



January 31, 2018

Talking Points for DRC

Jahmese Myres, Design Review Committee (DRC) Chair  
Amanda Monchamp  
Clark Manus

Re: Case File No. ZP170064- 1750 Broadway

My name is Mallory Brush. I am the Accessible Services Manager for AC Transit. I am joined by my counterpart at BART, Laura Timothy.

- In 1994, BART and AC Transit entered into an agreement to provide federally mandated paratransit. This program is known as East Bay Paratransit (EBP) and is for individuals who, due to a physical or cognitive disability, are unable to ride the bus or BART.
- AC/BART contracts with a Broker to operate a large call center and oversee 3 service providers who maintain and operate the 210 EBP vehicle fleet.
- EBP has over 16,000 registered clients and provides over ¾ million trips per year. Over 40% of those trips are into and out of Oakland.
- The Broker is the current tenant of 1750 Broadway. However, AC/BART pay 100% of the costs to operate this facility. As such, effectively AC/BART are the tenants.
- Like AC Transit and BART, EBP's principal offices have always been and will continue to be in downtown Oakland.
- After 20 years in 1 location we relocated the call center 2 doors down to 1750 in June of 2015.
- We selected this location due to its proximity to BART and bus lines, additional and upgraded office space, a community room and secure parking in the rear of the building taking our vehicles off Broadway and providing a safe environment for our passengers/guests to visit the Office.
- The facility houses 85 employees and a community meeting room. The community meeting room hosts 3 senior and disabled advisory groups and the AC/BART Interagency Liaison Committee comprised of three publicly elected officials from each agency, among others.



- The community meeting room also functions as EBP's Emergency Operations Center.
- The Base Lease, effective June 2015, was for a period of 10 years with an option for 5 additional years. We have an additional 12.5 years remaining.
- The building was purchased by Rubicon, with principal offices in San Francisco, in October 2016. The plans subject to DRC review were filed in July, 2017.
- No formal or informal notification was ever provided to us by Rubicon until the DRC notice was posted in the front of our building. Can you image the dismay and now ongoing concern of our 85 employees upon seeing the plans with no prior notification?
- The service provided by EBP is vital to our communities' most frail and vulnerable. As long as AC Transit and BART are running, EBP will continue to exist. The EBP service cannot be disrupted in any way.
- The plans are deficient in that they do not accommodate our office space requirements and community meeting room (approx. 15,000 sq. ft.)
- We understand that no decision to approve or deny the project will be made at this meeting. However, we needed to express our deep concern that the accommodation of EBP's vital service was/has not been considered.
- This project simply cannot move forward without that accommodation and consideration.

Questions:

A question to the DRC is if permits are issued for this project, how long are these permits valid? It should be noted that the 2 permits identified in the staff report do not include permits that may need to be obtained from BART.

Can you explain the process moving forward?



1770 Broadway Apt 112  
Oakland, CA 94612  
(510) 763-1488  
hornof@earcom.com

January 31, 2018

Dear Mr. Rivera,

Thank you for speaking with me today. As you suggested, here is a letter you can forward to the Oakland Planning Commission Design Review Committee.

This is in reference to item 1 on today's agenda: Case File Number ZP170064; 1750 Broadway; APN 008

I am a resident of 1770 Broadway, and am typing a dozen feet away from where these new walls would rise. I have a number of concerns about how this project will affect the living conditions in our building. Before this project is approved, I think it would be fair and prudent for the residents of my building to have an opportunity to address our concerns.

Our five-story building has been a fixture in Oakland for over 100 years. A former mayor of Oakland, John L. Davie, once lived here. Our building is comprised of 4 retail shops on the ground floor and 48 apartments above, on 4 floors with 12 apartments per floor. Half of the apartments have windows facing outwards, half face inwards towards a light well.

This new proposal would envelope our building on two sides. It will throw our building into the shadows, blocking nearly all direct sunlight. That is one of my many concerns. And that is far down the road: first we will be impacted by the destruction of the current building and the construction of the tower. That may make our units virtually unlivable for the duration.

Some of the residents in our building have been here for years. Decreased conditions will affect them. Relocation may be hard for many of them. Moreover, we can tell you first hand the challenges we have faced living here, the changes we have witnessed from the development which has transpired and that which is under construction. These are livability issues that will face future residents of downtown Oakland.



I will attend this meeting tonight, but somewhat in a state of fear. I doubt many of my fellow tenants will appear. For a start, I doubt any of them noticed the public notice that was posted and subsequently has been removed. Nobody has provided our residents any notice of these plans.

I don't think we can have a proper discussion by filling out speaking cards; many of our tenants would be intimidated, including myself. I'm also somewhat afraid of possible reprisal. I have a very good relationship with my landlord, Ted Dang of Commonwealth Companies. Additionally, I recently began paying rent to 1750 Broadway LLC for a parking space in the back of our building. I don't want to imperil either of these landlord/tenant relationships.

Before this plan is approved, could you provide a time and space where we could discuss some of these concerns? We represent a good batch of proud downtown Oakland residents - we should work together. I would greatly appreciate that opportunity, myself.

Sincerely,

A handwritten signature in dark ink, appearing to read "Joe A. Hornof". The signature is fluid and cursive, with the first name "Joe" and last name "Hornof" clearly legible.

Joseph Hornof



## **Rivera, Mike**

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**From:** Geeky Girl <geekygirl@gmail.com>  
**Sent:** Wednesday, March 20, 2019 12:03 PM  
**To:** Rivera, Mike  
**Subject:** Public comment for 1750 Broadway - Case File Number: PLN18369

Greetings Oakland Planning Commission and Mike Rivera,

I am a resident of Oakland and work in the city of San Francisco. I heard about the proposed building at 1750 Broadway and am concerned about several aspects of the project.

Oakland is vibrant because of the people who live here. It's refreshing to walk down the street and see people you recognize on a daily basis. It's made up of all types of people and I want to see that maintained.

I live at 1770 Broadway has 48 units of affordable, market rate housing. Tenant have lived here from 1 year to over 20 years. Many of us are working class people. There are also several residents who have limited mobility or are on fixed incomes. We all get along very well and often host seasonal neighbor gatherings.

The intersection of 19th and Broadway is a very busy intersection for pedestrians and vehicles throughout the day, especially during commuting hours. I find it difficult to understand how a large scale construction project can take place here.

### **Concern - Project Communication**

For this specific project, I've been very surprised how little notice the tenants have received for both City Planning meetings and communication from the developer, Rubicon. For the Community meeting Rubicon hosted at Oakstop on February 26th, 2019, they posted flyers in our lobby the day before in the afternoon. This gave most tenants less than 24 hours notice but 8 of us were able to attend. Neighbors across the street at 1755 Broadway who are condo owners reported similar short notice as well. I did ask Chris from Rubicon why they had not mailed notices to us about the community meeting but he didn't have an answer. At City Planning Commission meetings in 2018 that I attended it sounds like a nearby organization, AC Paratransit, also had very little communication as well.

Ask #1 -- Have the developer provide ample notice and require they incorporate residents living within 2,000 feet into their planning

### **Concern - Health and Accessibility**

There has been construction at 1640 Broadway (PLN15281) for the last two years. Construction is just starting at 1900 Broadway (PLN15179) and these are the concerns I'd like addressed:

- The shadow study for 1750 Broadway didn't take our building into account
- Has the existing building been evaluated for harmful elements like asbestos?
- What will happen to the BART elevator for people who need it?
- Rubicon's expected 18 months - 36 months of construction is disruptive and harmful

Ask #2 -- Have the developer incorporate our building into the CEQA shadow study with current buildings like 1640 Broadway, analyze existing building at 1750 for harmful elements and provide estimated decibel levels during demo/construction and post build for HVAC systems.

### **Concern - Building Stability**

Our apartment building was built at the turn of the last century. Has the developer explored and validated that the demolition and construction will not structurally damage our building?



Ask #3 -- Have developer work with building owner, Commonwealth Properties, to do what is necessary to evaluate structural stability

**Concern - Affordable Housing**

Oakland has risen to be on the top 5 most expensive cities to live in for the United States. Despite this, housing availability is scarce. For a similar studio or 1 bedrooms rents are well above \$2,000. This is causing people to share sleeping areas or move further into the East Bay and commute farther to work, leading to more congestion on BART and the highways. Rubicon indicated there will be no affordable units in the new construction.

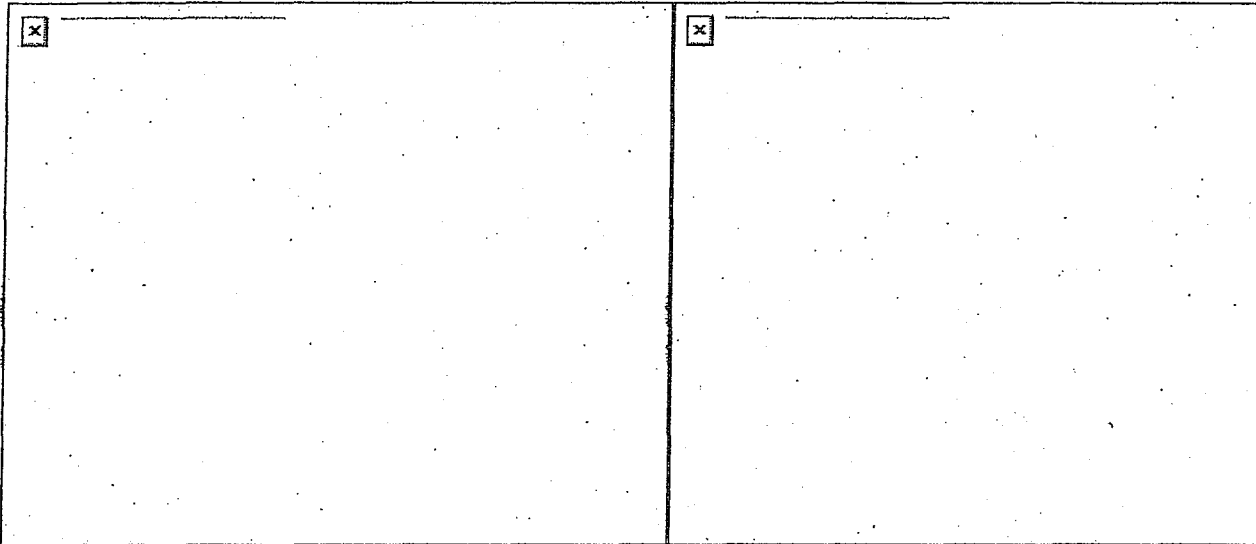
If our building was damaged during construction of 1750 Broadway and deemed unlivable, it would be very difficult to find similar housing in Oakland and I would consider moving out of the Bay Area which I've called home for almost 10 years.

Ask #4 -- Ask the developer to incorporate affordable units into the plan.

**Concern - Oakland Art Vibe**

Lastly, the concern of ongoing art that is being covered up by these high rise buildings. This was the one Oakland lost when 1900 Broadway went up <https://sf.curbed.com/2017/11/10/16634372/vintage-believe-in-people-oakland-high-rise-mural>

Ask #5 -- Ask the develop to consider other designs that will not cover up the existing artwork



Sincerely,

Adria Anderson  
1770 Broadway, Oakland, CA 94612



**Rivera, Mike**

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**From:** Rosewood1942 <rosewood1942@gmail.com>  
**Sent:** Wednesday, March 20, 2019 10:57 AM  
**To:** Rivera, Mike  
**Subject:** 1750 Broadway proposed project, Case File Number: PLN18369

Good Day City of Oakland Planning Committee,

I am submitting my comments and concerns regarding the proposed construction of a large building adjacent the the apartment complex I've lived in for 20 years and rented since 1999.

1770 Broadway is the first and only Oakland building I've lived in. Previously I was a resident in San Francisco for 17 years.

I was an artist for many years, a traveler and and very active in the community. In my former years, I hosted gatherings, attended festivals and performed with my deepest passion being the design of period costumes. Oakland has been a wonderful place for me to connect with other artists, promote my art and find people with similar interests.

The proposed building at 1750 Broadway as with any large scale construction project, will bring noise, dust and vibrations.

My primary concern is the potential adverse health impact of this project. I am housebound and spend a majority of time in bed, prone position, due to chronic illness. I live in constant pain. There are many studies, including an in-depth CDC study, that chronic pain and sensory disturbances from excessive light and noise.

The accessibility in Oakland is very bad. Particularity in locations where there is construction. I have fallen where there isn't a ramp. Where there are big, bulky things in the street. Partially due to the construction and partly because they are not putting money into the city.

I require an electric scooter as I cannot walk unassisted. In the past I have used Paratransit's services to get to these appointments so having their scheduling office nearby has been a blessing. I utilize the Center for Independent Living as well.

**Here are my questions:**

What has the developer done to assure the tenants of our building that we will not be breathing in harmful dust when the building is taken down?

What are the construction hours and how long will the construction last for?

In terms of accessibility, will the sidewalk be blocked or will there be a wooden ramp? If so, have they done research on how it will affect those of us with mobility problems?

The history of the neighborhood is really much more important than a putting up a luxury building. The thought of attempting to move out of the apartment I've called home for so long is literally impossible without significant help. I'd rather stay in my apartment, with my neighbors and in the city of Oakland.

Sincerely,



Jwlhyfer de Winter  
Resident of 1770 Broadway, Oakland California



**Rivera, Mike**

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**From:** Joseph Hornof <hornof@earcom.com>  
**Sent:** Tuesday, March 19, 2019 4:41 PM  
**To:** Rivera, Mike  
**Subject:** Public comment: Case File Number: PLN18369, 1750 Broadway  
**Attachments:** PLN18369response031919hornof.pdf

Hi Mr Rivera -

I'm attaching my public comment for tomorrow's Planning Commission meeting as a PDF. It includes a few charts, so hopefully this will be easy to print:

PLN18369response031919hornof.pdf

I apologize for its length, but there are a number of issues I had to specifically address. I did my best not to wait until the last minute.

Also I want to thank you for your help. It hasn't been easy for me to learn the Planning Commission's policies and practices. You have been patiently helping me through that, while juggling a lot of other important cases. I have many complaints about this project, but your level of service has been first-rate.

I'd appreciate if you can confirm you received this. Tomorrow, I'll check to make sure you received the responses from other residents that were sent.

Thanks again,

-Joe

Joseph Hornof  
1770 Broadway #112  
Oakland, CA 94612  
510.763.1488  
hornof@earcom.com



Re: Case File Number: PLN18369, 1750 Broadway  
March 19, 2019

Dear Planning Commission Members,

We live at 1770 Broadway, directly adjacent to 1750 Broadway. Our walls physically touch. The new project will encircle our rear exit, and rise 423 feet above our heads. Before you approve this project, we have a number of concerns we hope you will address. We also believe the project may violate numerous regulatory schemes:

This project would dramatically impact our quality of life. Its construction could risk our personal safety and displace the current 48 tenants at historic 1770 Broadway. Some are elderly or disabled and will require assistance. Our displacement would cause even greater loss to our city: it will impact our employers, their clients and the citizens who we serve.

Here are some of the problems we need to address.

#### 1) Planning Process

The planning process has not been transparent. It is difficult to find Planning Commission information on the City websites. Agendas are posted, but the decisions are not. Meetings have been scheduled and postponed at little notice, which decreases a citizen's ability to participate. Citizens have presented concerns that have not been addressed and questions which have not been answered.

We were informed of the first community meeting held for this project with only 30 hours notice. *This meeting was held on Tuesday, February 26, 2019, shortly before the Planning Commission meeting originally scheduled for March 6, postponed until today. Only seven of our 48+ residents were able to attend this community meeting, due to such short notice. There we learned details that had not been presented at previous Planning Commission meetings, such as the duration of construction: 28-36 months. Our jaws dropped.*

The developers of this project presented false information in prior reports to the Design Review Committee. They reported discussions with myself and residents of our building that never took place. This has been reported to the Planning Commission, as evidenced by the public comments in the March 20, 2019 Staff Report:

<https://cao-94612.s3.amazonaws.com/documents/2019-03-20-PC-Item-01-for-Publication.pdf>

In the Staff Report, February 28, 2018, page 8, the developers wrote:

<http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak069364.pdf>



Finally, we received the letter from Joseph Hornof, our neighbor at 1770 Broadway, the day of the DRC hearing. Following the DRC hearing we reached out to Mr. Hornof to discuss his concerns in more detail. We discussed with him, as we mentioned during the DRC hearing, that the project will be incorporating a mural along the garage walls and will be setting back the building from the property line by three (3) feet. We are discussing the concerns regarding light with Mr. Hornof's landlord as well as with Mr. Hornof and his fellow tenants and are also discussing their concerns regarding demolition and construction. The project will be required to comply with the City's standard conditions of approval regarding demolition and construction and we believe compliance with these measures should help mitigate Mr. Hornof's concerns. We also will provide Mr. Hornof with notice of key construction milestones and commit to provide him with the contact information for the construction manager to ensure that any concerns he may have regarding demolition or construction are responded to in a timely fashion.

The developers may have received the letter I submitted to the Design Review Committee, but we never discussed this project. To the best of my knowledge, no discussion with any of my fellow tenants was held until our first community meeting, one year later, prior to the Planning Commission scheduled for March 6. Representatives of East Bay Paratransit reported similar false statements presented during their negotiation with the developers.

## 2) CEQA report

Today this project will present its CEQA report.

<http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak072045.pdf>  
<http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak072046.pdf>

We are not CEQA experts and it is beyond our means to challenge this report in a court of law. Nonetheless, the City of Oakland has a responsibility to preserve public health, safety, and welfare, and to advance the housing policies of the city with regard to low- and fixed-income persons, people of color, students, and those needing special protections, such as long-term elderly and disabled tenants. The deficiency of this CEQA report is contained within the single sentence that references our building, with only one word acknowledging our human existence:

*A five-story mixed-use residential building with ground floor retail is located adjacent to the existing building to the north (1770 Broadway), and is occupied by multiple restaurant and commercial tenants including Oaksterdam University, a cannabis educational facility; Zaya Café; and Sweet Belly Desserts.*

This description and the remainder of the CEQA report entirely disregards the adverse impacts this project will affect upon the residents of our 48 apartments. If this report is intended to be accurate, transparent and reflect real-life, we have some questions:

### a) Shadow Study

The CEQA report is deficient in that it fails to adequately consider the shadow the new project would cast on our building.



In Appendix G, PreVision Design states:

Under City of Oakland thresholds of significance, a project would have a significant shadow impact if it would:

*D. cast shadow on an historic resource 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.*

Our 5-story building, 1770 Broadway, is a historic resource and listed as such in 1750 Broadway's CEQA report under Project Setting. The Bauer Apartments were constructed circa 1912 by Righetti and Headman, renowned Bay Area architects. There are two retail stores and two cafes on our ground floor. Above that are 4 floors of apartments. Our apartments are both affordable and market-rate. The Bauer Apartments are historic not just for their facade, but their purpose, which includes the former residence of Mayor John L. Davie. Yet the impacts upon 1770 Broadway are entirely absent in this CEQA report, including this Shadow Study.

Our building has already sacrificed significant sunlight to our city's new luxury towers. The shadow study for 1750 Broadway is out of date - it was prepared January 25, 2018 and does not include 1640 Broadway. The shadow study diagrams do not accurately portray the additional sunlight our residents would lose to the 1750 Broadway tower. We demand to see more accurate data. Once 1750 Broadway is complete, we may live in a perpetual cave. Sunlight is important for physical and emotional health. Any new building proposed between us and 1640 Broadway should be staggered in height, to preserve our remaining natural sunlight.

b) Pollution:

The CEQA report fails to adequately consider the additional pollution the tenants would suffer. Our entire building is the size of 1750's parking garage, which will stretch from levels 2 through 6. The ventilation of exhaust from this garage will flow directly to our windows. We request a more thorough report of this impact.

We also have significant concerns regarding the pollution that will be generated during construction, which could span three years, addressed below.

c) Traffic: Broadway at 19th St was designated as a high-injury corridor in Oakland's 2017 Pedestrian Plan. The 2017 traffic studies are outdated and need to be recalculated with new traffic patterns, including electric scooters and rideshare, projects recently completed, under construction, or approved. This block of 19th St. currently features two busy parking lots; this number will double, with additional sets of entrance/exits on each side of the street.

The CEQA report characterizes the current structure at 1750 Broadway as an "underutilized site with outmoded facilities and/or marginal existing use." That would be disputed by the current occupants of this building, East Bay Paratransit, and the citizens who benefit from their services. East Bay Paratransit has been on our block for over two decades and have characterized this



building an ideal location. They have a long-term lease on their facilities. This site provides their clients access to a BART elevator directly from their building. Their small, gated surface parking lot allows for safe ingress and egress from their busses. This reference to their building as underutilized and/or marginal insults their service, their ridership, and the Americans with Disabilities Act (ADA).

### 3) Construction

Construction of the new project will endanger our safety and likely lead to lawsuits.

A land use impact due to construction activity is a function of the intensity and duration of construction work, the sensitivity of land uses adjacent to the construction areas, and distance of these land uses to the construction site. Construction-related effects that can result in land-use conflicts include increase in noise, increase in dust levels and other pollutants, traffic and circulation issues, and decrease in safety. A significant socioeconomic construction impact would occur if construction activity diminishes the use of our apartments.

The Implied Covenant of Quiet Enjoyment is a foundational concept built into every rental agreement. It affords a tenant rights including the freedom from unreasonable and recurring disturbances from the landlord and/or other neighbors, and a premise that is free of bodily hazards. The construction of this project may force us out of our apartments due to noise, disruption of the foundation of our building, material which may fall upon us, or any other external impact which results in a red tag hazard. Our building will not be a safe place to live while 1750 Broadway is constructed. Breach of the covenant can result in an injunction and monetary damages.

**In their CEQA report, the developers claim:**

*There is nothing unique or peculiar about the Project or its construction that would suggest that the Proposed Project would have greater noise impacts than other typical high-rise construction projects within Downtown Oakland*

Contrary to this plan's claims, it is not comparable to other projects. At 423 feet high, it would be the tallest building in Oakland, with the deepest foundation, another 150 feet below the surface. It has the longest construction timeline, longer than other tower projects. Here again, they ignore our existence. This project entirely is unique due to its prolonged impact upon existing residents and their proximity to this impact. We have 12 apartments in our building which touch the existing building they intend to demolish, plus another 4 apartments immediately above that. The rear of our building and its 12 apartments will be impacted, as they will face the area where heavy equipment and building materials will be staged, within a 50 foot distance from their living spaces.

The developers claim:

*The Proposed Project would comply with the City of Oakland Noise Ordinance*



Oakland Planning Code section 17.120.050 states the Maximum Allowable Receiving Noise Level Standards.

TABLE 17.120.02

## MAXIMUM ALLOWABLE RECEIVING NOISE LEVEL STANDARDS

Cumulative Number of Minutes in Either the Daytime or Nighttime One-Hour Time Period	Anytime
20	65
10	70
5	75
1	80
0	85

Sound levels of 80 dB are permitted for one minute per hour; sound levels over 85dB are not permitted. If construction lasts 28-36 months, this construction zone will impact us for a great portion of our lives. Long-term construction or demolition operation is defined as 10 days or more; this construction will take place over a minimum of 850 days, or 1095 days if it stretches over 3 years, which we anticipate. Oakland Planning Code lists the maximum allowable receiving noise levels for construction and demolition:

TABLE 17.120.04

## MAXIMUM ALLOWABLE RECEIVING NOISE LEVEL STANDARDS, dBA

	Daily 2 a.m. to 7 p.m.	Weekends 2 a.m. to 8 p.m.
Short-Term Operation		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Operation		
Residential	65	55
Commercial, Industrial	70	60

In the Health Risk Assessment, Appendix C, the CEQA report states that Concrete/Industrial Saws will be used for 8 hours per day for 59 days during demolition and grading. At their source, concrete saws are deafening, reaching sound levels over 110 dB. They will be used to cut through thick concrete mere inches from our windows. Their sound level is 90dB at a 50 foot distance.

Demolition and grading will entail 3,188 hauling trips; over 300 hauling trips per day during the grading process, removing 24,500 cubic yards of excavated materials. A clam shovel dropping material into a dump truck has a sound level of 93 dB at 50 feet; the dump truck contributes another 84 dB at this distance.



Building Construction is estimated at 494 days. The CEQA report omits the number of the hauling trips required to deliver material to this site. A concrete mixer truck is rated at 85 dB at 50 feet. While concrete is being poured an air compressor adds another 80 dB at that distance.

These are just a few examples of construction activity which will violate noise ordinances. The cumulative sound levels of all construction activities and their duration must be calculated. Construction of this building will take up to three years, and the health risks regarding noise are not theoretical. Exposure to a noise level of 85 dB for even one workday can produce hearing loss. Chronic exposure to noise levels as low as 65 dB can increase adrenaline and stress hormone levels and elevate blood pressure, which increases the risk of heart disease and stroke.

We do not believe the particulate pollution that will be emitted by construction has been accurately calculated. It gets worse - will the demolition of the current building release asbestos?

*The Proposed Project would also include demolition of the existing building totaling an area of 27,600 square feet. The existing building may contain Asbestos Containing Materials (ACM) which could pose a health risk to workers and nearby receptors during demolition.*

As nearby receptors, before this project is approved, we demand this question is answered.

A building of this size in such close proximity to our living spaces presents another significant safety issue: gravity. Will their crane swing heavy material over our heads, above our airspace, up to 500 feet in the air, over 494 days of operation? Where it will be affixed to their structure at great height, a short horizontal distance away from our apartments? Where if anything should slip, it could crush through our roof or fall into our center light well and crash through our windows? The City of Oakland would be negligent to place its citizens in such a position of great risk.

CEQA mandates that an analysis of a project's impacts consider whether the project might cause existing environmental hazards to get worse. For a project of such long duration, one such hazard is the impact of construction traffic. 19th St. is a busy pedestrian and vehicular traffic corridor. If 1750 Broadway is under construction at the same time as 1900 Broadway, both sides of 19th St. will be clogged due to additional construction traffic. If construction occurs sequentially, it will be noisy and congested for a longer period of time. The impact of construction of both of these and other projects must be considered together, as this is how they impact our city.

This project will require the removal and replacement of the 19th St. BART elevator. For how long will disabled citizens lose access to a central BART station? The construction of 1750 Broadway will cause additional impact upon infrastructure which is already suffering impact from neighboring construction projects.

#### 4) Increase in Housing Disparity and other long-term effects

No replacement apartments similar to ours are under construction in downtown Oakland. The approval of 1750 Broadway's luxury apartments will fall outside the housing guidelines set by both



the City of Oakland and State of California, which could put our city's funding at risk. It will place additional stress on the infrastructure and social fabric of our city.

Our city has a responsibility to prevent our displacement or rehouse residents who will be impacted. We didn't choose this fight. Rather, we unwittingly contributed to the "Oakland Vibe" listed in the marketing material of those who wish to displace us.

*"Oakland is fast becoming unaffordable to those who have called our city home for generations and who give our city its rich diversity. This is unacceptable."*

- Libby Schaaf, Oakland At Home, 2016

Another 350 units of luxury apartments will only exacerbate Oakland's existing housing crisis. They will be unaffordable for those who serve our city, including Oakland's teachers, police officers and even city council members. Moreover, the impact upon our building will result in a net decrease in livable, affordable units.

The 2017 Housing Element Annual Progress report can be found here:

<http://www2.oaklandnet.com/government/o/PBN/OurOrganization/PlanningZoning/OAK045364>

### ANNUAL ELEMENT PROGRESS REPORT Housing Element Implementation (CCR Title 25 §6202 )

Jurisdiction OAKLAND  
Reporting Period 01/01/2017 - 12/31/2017

Table B  
**Regional Housing Needs Allocation Progress**  
*Permitted Units Issued by Affordability*

Enter Calendar Year starting with the first year of the RHNA allocation period. See Example.												Total Units to Date (all years)	Total Remaining RHNA by Income Level
Income Level	RHNA Allocation by Income Level	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9			
Very Low	Deed Restricted	98	26	247	0	0	0	0	0	0		371	1638
	Non-Restricted	0	0	0	0	0	0	0	0	0			
Low	Deed Restricted	30	13	66	0	0	0	0	0	0		109	1956
	Non-Restricted	0	0	0	0	0	0	0	0	0			
Moderate	2015	0	0	11	0	0	0	0	0	0		11	2804
Above Moderate	7816	643	2082	3960	0	0	0	0	0	0		6685	1131
Total RHNA by COG. Enter allocation number:													
Total Units		771	2121	4284	0	0	0	0	0	0		7176	7589
Remaining Need for RHNA Period													

Note: Units serving extremely low-income households are included in the very low-income permitted units totals.

The 2018 Progress Report is scheduled to be released on April 1, 2019. After projects approved in 2018 have been added, the target for Above Moderate units (> 120% AMI) will be exceeded. All other targets will remain disproportionately unfulfilled.



Enforcement of these guidelines have been lax, but Governor Newsom may change this. In his first budget speech, he suggested withdrawing gas tax money from cities if they don't meet regional housing targets.

<https://www.sfchronicle.com/bayarea/article/Newsom-touches-a-nerve-by-connecting-gas-tax-13546364.php>

Approval of additional Above Moderate units will result in further non-compliance. These guidelines were put in place to build healthy, vibrant communities where the needs of all residents are met. Regional Housing Needs Allocation guidelines cannot be deliberately and flagrantly flaunted. If this trend is not reversed, it may adversely affect the financial health of our City and its residents.

#### 5) Funding

The funding mechanisms employed by neighboring downtown projects have been somewhat suspect, as is the proposed funding for 1750 Broadway. Last year, the Planning Commission extended another one-year extension for the 1900-1944 Broadway project. This building is being funded via EB-5 visas, a program that has been noted for rampant fraud. Meanwhile this block across our street remains sitting in blight. The historic Tapscott Building has been entered by homeless people and peeping toms.

In lightly reported news last September, it appears 1750 Broadway LLC tokenized their ownership of their property. As the listed developers, do they intend to finance this project via a blockchain product?

<https://www.globest.com/2018/09/21/how-one-group-of-owners-tokenized-an-office-for-greater-liquidity/>

By Erika Morphy | September 21, 2018

*SAN FRANCISCO - It is all well and good to hear the theory behind blockchain and how it can help commercial real estate, but to see it in action is another thing all together. Case in point: A group of owners of an office building in Oakland, CA's uptown district just tokenized the building to provide greater liquidity and make it easier for the owners to sell and exchange their shares.*

*Essentially this was a securities transaction, according to Razmig Boladian, co-founder and managing partner of Real Estate Private Equity firm Rubicon Point Partners. Boladian spoke to GlobeSt.com on behalf of the building owners. "It was a faster, cheaper and more liquid route instead of trading paper," he says.*

*The transaction complete, the shares have already been distributed among the owners, he adds. The owners used Flote, a fintech startup based in San Francisco, to tokenize the shares of the office building, which is valued at \$10 million. Flote provides software and services to fractionalize large commercial real estate assets into tradeable tokens on blockchain.*



*Because it is a new method of finance, some users can be leery of it, Roland Pan, CEO of Flote, tells GlobeSt.com.*

The developers have not divulged this information to the Planning Commission. Flote is a very cryptic form of cryptocurrency. Roland Pan is a mystery man. Flote has no website or publicly available information.

1750 Broadway LLC is required to fulfill specific financial obligations to the City. Who are these owners? Are their funding sources legitimate? Are they legal, secure and accountable? As our apartments may be catastrophically impacted, we have a right to know this information, as damages may cause us to seek redress. The citizens of Oakland may wish to be informed of the funding sources for this project. Why has this been kept secret?

#### 6) Appeal to City Council

We believe we have provided the Planning Commission sufficient evidence demonstrating why this project cannot proceed as planned. Any project for the 1750 Broadway parcel must start with a sufficient set of mitigation measures approved by the impacted residents of our building. Should this project go forward, we will seek injunctions and appropriate monetary damages.

If this project returns to the Agenda of future Planning Commission meetings, we request 28 days notice prior to this meeting. The developers have been allowed to set the schedule and spring meetings on us with little warning, resulting in insufficient time for us to prepare. We have been living under the threat of this life-altering project and its potential impacts for over a year.

The 1750 Broadway project requires a Major Conditional Use Permit. If the Planning Commission approves this project, we intend to appeal this decision in front of the City Council. ~~If the Planning Commission finds this project is in accordance with current city policy, we will address this policy~~ at a level where its consequences can be considered. We will enlist greater public support and engage other organizations who share these policy concerns.

We have been quoted an appeal fee of \$1,891.08. This fee is not listed in the City of Oakland Fiscal Year 2018-9 Master Fee Schedule or anywhere else on the City's website. This fee should be published as public information. We will raise this fee through crowd-funding and must provide transparency to our donors.

Our appeal will raise each and every issue that is contested above, along with all the arguments and evidence other residents of 1770 Broadway have placed in the record and presented to the City Planning Commission prior to the close of its public hearing on this item.

Thank you for your time and attention,

Joseph Hornof  
1770 Broadway #112  
Oakland, CA 94612



**Rivera, Mike**

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**From:** Chantal Reynolds <creynolds@actransit.org>  
**Sent:** Tuesday, March 19, 2019 4:13 PM  
**To:** jmyres.oakplanningcommission@gmail.com; amandamonchamp@gmail.com;  
tlimon.opc@gmail.com; jfearnopc@gmail.com; cmanusopc@gmail.com;  
SShiraziOPC@gmail.com; NHegdeOPC@gmail.com  
**Cc:** Claudia Burgos; Beverly Greene; Robert Del Rosario; Mallory Nestor; Rivera, Mike  
**Subject:** Letter from AC Transit and BART General Managers regarding Item number 1 - Case File  
PLN18369 - 1750 Broadway at March 20th Planning Commission Meeting  
**Attachments:** City of Oakland Planning Commission\_2019-03-14 (003).pdf

Dear Planning Commissioners,

Please find the attached letter from AC Transit and BART General Managers regarding the East Bay Paratransit Consortium site and lease at 1750 Broadway on the March 20<sup>th</sup> Planning Commission agenda.

Kindest regards,

Chantal Reynolds | External Affairs Representative  
Legislative Affairs and Community Relations Department



Alameda-Contra Costa Transit District  
1600 Franklin Street | Oakland, CA 94612  
Phone: 510-891-7194 | Cell: 510-418-9364 | Fax: 510-891-4874  
Email: [creynolds@actransit.org](mailto:creynolds@actransit.org) | [www.actransit.org](http://www.actransit.org)





March 14, 2019

Via email

Jahmese Myres, Chair  
City of Oakland Planning Commission  
250 Frank Ogawa Plaza  
Suite 2114  
Oakland, CA 94612

Dear Chair Myres and Commissioners:

AC Transit and BART write with respect to project API70064 located at 1750 Broadway. This project calls for the demolition of the existing building and the construction of a multi-story, mixed use tower in its stead.

Previously AC Transit and BART informed the City's Design Review Committee that the first two floors of the property are currently leased by the East Bay Paratransit Consortium (EBPC). The lease on this property, including options, runs through 2030.

As you may be aware, EBPC provides door-to-door service for individuals within the service area who are unable, due to a cognitive or physical disability, to use regular buses or trains. EBPC is jointly funded by AC Transit and BART. The current location of the office is ideal for a number of reasons: secure parking for EBPC vans in the rear of the building, off Broadway, convenient access to multiple bus and BART lines for the numerous advisory/community meetings we host at the location, and direct access to the BART elevator at the property.

While AC Transit and BART are aware of Rubicon's desire to repurpose this property, we remain concerned that this project is moving forward through the planning approval process at this time; with more than 11 years remaining on the leasehold.

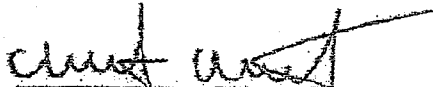



Representatives of AC Transit and BART have met with Rubicon to discuss the project, and various alternatives, but as of this writing no firm agreement has been reached between the parties to shorten the leasehold.

AC Transit and BART believe that it is important for the Planning Commission to be aware of the circumstances related to the existing building in considering an application for the redevelopment of the property. Given the nature of EBPC's leasehold interest, we suggest that the present application is premature.

This situation might change if the parties are able to come to a mutually satisfactory agreement to reduce the term of the leasehold, but until such an agreement is reached the consortium intends to remain at the property for the duration of its lease. In fact, for the first time in the parties' ongoing negotiations, Rubicon recently presented a proposal that AC Transit, BART, and Transdev may be able to use as the basis for reaching a deal to allow EBPC to move out of the building earlier than the lease provides. However, the parties are still negotiating the terms of such an agreement and have a way to go to finalize the specifics.

We appreciate your consideration of the facts outlined herein.

  
Michael Hursh  
General Manager  
AC Transit

  
Grace Crunican  
General Manager  
BART



**Rivera, Mike**

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**From:** Stephen Merjavy <merjavy.stephen@gmail.com>  
**Sent:** Tuesday, March 19, 2019 11:46 PM  
**To:** Rivera, Mike  
**Subject:** Case File Number: PLN18369, 1750 Broadway  
**Attachments:** 1750 broadway.docx

Dear Mr. Rivera,

Attached is my letter regarding the proposed development at 1750 Broadway. Thank you

Stephen Merjavy



Dear Mr. Rivera,

I am writing in regard to my concerns around the proposed development at 1750 Broadway. I have been living at 1770 Broadway for the last year and a half and think this development would significantly affect the quality of life in our building and irrevocably change the neighborhood.

1. Noise/air pollution: I live in a 3<sup>rd</sup> floor apartment facing the parking lot where the staging area for the construction of 1750 Broadway will be. Since I often work at night and sleep in the day this project will likely have effects on my health, as my ability to rest will certainly be curtailed. I'm already finding difficulty with maintaining a restful atmosphere with the beginning of construction across 19<sup>th</sup> street. If this project is to move forward and I'm looking at multiple years of noisy construction disturbance, I may need to move.

2. Parking: Street parking and movement in the 19<sup>th</sup> street area is already limited and congested by the numerous construction projects in the surrounding blocks. Rubicon needs to be more specific about what affects their development will have on parking and people movement, in concert with other current and proposed projects nearby. This development does not occur in a bubble given the rapid changes happening nearby.

3. Equity: Rubicon developers plan to build 300+ market rate apartments, the rental price of which they are unable to quote. I might be able to support a project that was more open to having a significant portion of affordable housing units in their development. Rubicon has no plan of this and the pittance of an impact fee that they will pay (quoted as \$6.8 million) would likely build fewer than 15 affordable units given current construction costs (~\$500,000+ for an affordable unit). Many of 1750's future residents will likely work in San Francisco and commute due to the comparatively lower rent of these market rate apartments. It is unclear what their contributions will be to Oakland itself.

I question why the "progressive" Oakland city council would not take a stronger stand against these types of market rate only developments as they further drive inequality in downtown. Yes, there is a need for housing affordable or not, but soon there will be only wealthy residents and the homeless in the downtown area. It seems this is their vision.

Stephen Merjavy  
1770 Broadway Resident



**Rivera, Mike**

---

**From:** Manar Harb <manar.harb@gmail.com>  
**Sent:** Wednesday, March 20, 2019 6:02 AM  
**To:** Rivera, Mike  
**Cc:** Geeky Girl; Joseph Hornof  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Public Comment on Case File Number: PLN18369, 1750 Broadway  
To: [MRivera@oaklandca.gov](mailto:MRivera@oaklandca.gov)

Mr. Rivera,

I am a current resident at 1770 Broadway and I am deeply concerned about the proposed development plan for 1750 Broadway. There is no consideration to the environment in the proposed plan for 1750 Broadway, and no consideration to the residents who live on Broadway, particularly 1770 Broadway residents.

The development will negatively-impact our lives and living conditions. Health wise, the scale and dimensions of the building will block natural sunlight from the left side of the building. Sunlight deprivation is a leading cause for depression and can cause serious health issues. In addition, the construction will bring noise and dust into our homes, disrupting our living conditions on a daily basis and causing an increase in allergies and respiratory problems. It will likely force us to shut our windows for the entire time of the construction, taking away our ability to circulate the air in our homes.

Mr. Rivera, I urge to take our concerns seriously and not accept the current development plan for 1750 Broadway. Help preserve the history of Oakland and advocate for health-conscious development projects that are environmentally conscious and friendly to the community of Oakland.

Thank you,

Manar Harb



**Rivera, Mike**

---

**From:** Joy Chao-yi Meng <joychaoyim@yahoo.com>  
**Sent:** Monday, March 18, 2019 6:18 PM  
**To:** Office of the Mayor  
**Cc:** Rivera, Mike; Joseph Hornof; Geeky Girl; Nosakhare, Shereda  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Dear Mayor Schaaf:

Hope your day went well. This email is to advocate for all residents at 1770 Broadway apartment building and the residents nearby.

I have been living at 1770 Broadway since December 15th, 2001. As a long term resident and immigrant, I am here to URGE you stopping the possibility of building a luxurious skyscraper at 1750 Broadway for the following 3 major reasons:

- 1. Three years of construction will be unsafe and unhealthy to neighbors within 5 blocks of all directions** - we, residents at 1770 Broadway apartment building, would suffer the most from potential construction errors - very likely to destroy the foundation of our historical apartment building(1910's), endless noise/air pollutions, and lack of access for sidewalk heading toward city hall, where lots of activities happen. We people who live in 1770 Broadway deserve better quality of fear-free live. This potential long term construction would not possibly pass any evaluation of safety and health (our mental health would be ruined by consistent anxiety and stresses).
- 2. Oakland Mayor has the obligation to END GENTRIFICATION but not introducing it to downtown Oakland.** I came to Oakland in 2001 from Taiwan for its' historical activism for civil rights, for its' origin of Black Panthers' movement, for its' hip-hop/ black and brown culture (enriching American culture globally for decades), for its' home of Tupac's legacy impacting young people around the world to this date, for its' socio-economic equity, and for its' nurture for people who are willing to serve for the underserved communities with limited incomes. An "out-of place" high skyscraper that is designed for the 1% simply doesn't fit in our Oakland spirit. We, the 99%, OCCUPIED OAKLAND for fighting against greedy bankers and cooperates downtown Oakland right here in October 2011. This skyscraper at 1750 would take away the Oakland spirit and push us 99% out of downtown Oakland.
- 3. There are way too many luxurious buildings (built or currently under construction) within 10 blocks in every directions nearby 1750 Broadways.** Oaklanders DO NOT NEED to have more buildings serve the wealthy; city of Oakland has historical responsibilities to provide affordable housing and increase the mobility for people who live in East and West Oakland moving to downtown Oakland, which would decrease culture and racial segregations by zip codes. **I urge you, Mayor Schaaf, please preserve downtown Oakland as one of the very few areas where reflect on true current American populations.** The history is in your hands - for the people or for cooperates. You promised us Oaklanders to serve the people during your two champions. Please do not disappoint Oakland like most of politicians.

I am serving for QUSD students whose mental health is severely compromised (high scores of childhood adversity). These precious young lives are the victims of segregating people by our abilities gaining capitals and our skin colors. The skyscraper at 1750 Broadway would segregate us much



further more socioeconomically. I urge you to give us HOPE that the students and their families that I love from bottom of my heart could one day afford living in downtown Oakland experiencing inclusiveness culturally and socioeconomically.

Respectfully,

Joy

**Chao-Yi Meng**  
**Instructional Support Specialist**  
**Incentive Counseling Enrich Special Day Class**  
**Home Address:**  
**1770 Broadway, Apt. #401**  
**Oakland, CA 94612**  
**Home: 510-590-9243**  
**Cell: 510-219-4901**



**Rivera, Mike**

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**From:** Joy Chao-yi Meng <joychaoyim@yahoo.com>  
**Sent:** Monday, March 18, 2019 8:56 PM  
**To:** Rivera, Mike  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Dear Commissioner Mr. Rivera,

Hope your day went well. This email is to advocate for all residents at 1770 Broadway apartment building and the residents nearby.

I have been living at 1770 Broadway since December 15th, 2001. As a long term resident and immigrant, I am here to URGE you stopping the possibility of building a luxurious skyscraper at 1750 Broadway for the following 3 major reasons:

- 1. Three years of construction will be unsafe and unhealthy to neighbors within 5 blocks of all directions** - we, residents at 1770 Broadway apartment building, would suffer the most from potential construction errors - very likely to destroy the foundation of our historical apartment building(1910's), endless noise/air pollution, and lack of access for sidewalk heading toward city hall, where lots of activities happen. We people who live in 1770 Broadway deserve better quality of fear-free live. This potential long term construction would not possibly pass any evaluation of safety and health (our mental health would be ruined by consistent anxiety and stresses).
- 2. Oakland Mayor has the obligation to END GENTRIFICATION but not introducing it to downtown Oakland.** I came to Oakland in 2001 from Taiwan for its' historical activism for civil rights, for its' origin of Black Panthers' movement, for its' hip-hop/ black and brown culture (enriching American culture globally for decades), for its' home of Tupac's legacy impacting young people around the world to this date, for its' socio-economic equity, and for its' nurture for people who are willing to serve for the under-served communities with limited incomes. An "out-of place" high skyscraper that is designed for the 1% simply doesn't fit in our Oakland spirit. We, the 99%, OCCUPIED OAKLAND for fighting against greedy bankers and cooperates downtown Oakland right here in October 2011. This skyscraper at 1750 would take away the Oakland spirit and push us 99% out of downtown Oakland.
- 3. There are way too many luxurious buildings (built or currently under construction) within 10 blocks in every directions nearby 1750 Broadways.** Oaklanders DO NOT NEED to have more buildings serve the wealthy; city of Oakland has historical responsibilities to provide affordable housing and increase the mobility for people who live in East and West Oakland moving to downtown Oakland, which would decrease culture and racial segregation by zip codes. **I urge you, Mayor Schaaf, please preserve downtown Oakland as one of the very few areas where reflect on true current American populations.** The history is in your hands - for the people or for cooperates. You promised us Oaklanders to serve the people during your two champions. Please do not disappoint Oakland like most of politicians.

I am serving for OUSD students whose mental health is severely compromised (high scores of childhood adversity). These precious young lives are the victims of segregating people by our abilities gaining capitals and our skin colors. The skyscraper at 1750 Broadway would segregate us much further more socioeconomically. I urge you to give us HOPE that the students and their families that I



love from bottom of my heart could one day afford living in downtown Oakland experiencing inclusiveness culturally and socioeconomically.

Respectfully,

Joy

**Chao-Yi Meng**  
**Instructional Support Specialist**  
**Incentive Counseling Enrich Special Day Class**  
**Home Address:**  
**1770 Broadway, Apt. #401**  
**Oakland, CA 94612**  
**Home: 510-590-9243**  
**Cell: 510-219-4901**



**Rivera, Mike**

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**From:** Scott Goff <scott.c.goff@gmail.com>  
**Sent:** Monday, March 18, 2019 9:11 PM  
**To:** Rivera, Mike  
**Subject:** Re: Case File Number: PLN18369, 1750 Broadway

Dear Planning Commissioners,

I have lived at 1770 Broadway for nine years, now. It is my home, as well as the home of my partner, Angela Roberts, with whom I moved into our apartment almost a decade ago. Prior to that, I have lived in Oakland since 2002, and Angela since 2005.

Angela works at a nonprofit, the Progress Foundation, that operates an array of recovery houses in San Francisco and the North Bay, serving people with mental health, addiction, and chronic homelessness issues, helping them to stabilize and access the services they need to get back on their feet. I work at a company called Ponoko in Oakland, associated with the "Maker Movement" and offering laser cutting services to a wide array of people: Etsy sellers, hobbyists, students, inventors, tinkerers, hardware manufacturers, dreamers, movers, and shakers. We are also both active in the Oakland arts community, helping to enrich the place we call home by pouring our creative energies into playing music at shows and participating in the literature scene. We both bring great value to this Bay Area community, but like many others, still find ourselves placed squarely into the fringe due to increasing pressures induced by the greatly inflated housing market blooming in Oakland.

With this inflated housing market in mind, the proposed project at 1750 Broadway is almost a perfect foil for Angela and I. It is a building not designed for us, therefore exclusionary. It offers no value to us, longtime residents of the city and its proposed neighbors. The only things that this development presents to us, and to all the residents of 1770 Broadway and our current neighbors, at large, are twofold: a big metaphorical "GET OUT" sign, dangled in our faces and impossible to ignore, and a very real, very physically and mentally stressful 3 year intrusion into our lives at 1770 Broadway.

I realize that projects like this are inevitable in cities, but as someone involved in the planning and permitting of this project, you have to realize the impact it will have on residents of neighboring structures, especially in the case of the residents of 1770 Broadway. Most of us cannot afford to move elsewhere, lest we lose our rent control and are priced out of this city entirely. The reality is that for many of us, this is our last foothold in the city we love and call home. And, if the 1750 project goes through as planned, it will literally envelope our home on two of four sides, with constant traffic and interruption of our lives on the remaining two sides bordered by the city streets. This will be our reality for *three years*, with incessant noise, construction dust and grime, street constrictions and closures, danger from overhead cranes, blockage of natural light, and general chaos from the proposed 7am to 7pm on weekdays, and 9am to 5pm on Saturdays. Is this how you would want to live? In your own home? For *three years*?

And then, should this project be finished to completion, the city will be left with 307 new units, filled with new residents being sluiced into surrounding city infrastructure that was never designed for even the current number of residents. To green-light such a project without first expanding and fortifying the surrounding city infrastructure, at the whim of real estate developers who are doing this not for Oakland, but because they feel they can profit from this venture, seems at the very best ill advised, and at worst highly unethical. And ultimately, we current residents will be the ones to feel the first wave, the brunt, of the effects on our neighborhood. From the first breaking of ground on the project, through to its opening, we will suffer if there are not steps taken to mitigate the situation.

I am not a city planner or a real estate developer, nor am I a contractor, architect, or construction worker. I am simply a resident of this city, which I love dearly and wish to flourish. Oakland is a rich tapestry of culture, arts, and history. I do



not think that the way for it to flourish is through subjecting the people who make this city the jewel that it is to years of physical and mental abuse. If you do not speak up on behalf of the residents of this area, you will be doing Oakland a great disservice. Oakland has not and should not be about 36 story buildings with literally no affordable housing contained within. Such buildings and the people who propose to build them are not representative of the fabric of Oakland, and are simply profiteering based on our currently inflated real estate market. The elected and appointed members of our city government should be fighting on our behalf, and at the very least mitigating the impact of this development on the residents of this neighborhood to the highest degree possible. I urge you to take our situation into account when dealing with the proposed development at 1750 Broadway. Our way of life depends on your care and concern at this point, and if you do not listen to us, who will?

Sincerely,

Scott Goff and Angela Roberts  
(510) 517-1433  
1770 Broadway #203  
Oakland, CA  
94612



**Rivera, Mike**

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**From:** Matt Perry <mcp514@gmail.com>  
**Sent:** Monday, March 18, 2019 10:27 AM  
**To:** Rivera, Mike  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Dear Mr. Rivera:

I have been a resident of 1770 Broadway since 2007. I have lived in Oakland, on and off, since 1966, and I am proud to call myself an Oaklander.

As you are aware, another large-scale development is looming Downtown/Uptown: 1750 Broadway.

I am concerned about the noise, dust, traffic, air quality, safety, natural sunlight (or lack thereof), lack of parking during construction, the economic impact of local businesses during construction, and the overall inconvenience.

While I do recognize the need for additional housing, I also recognize the impact this project will have on my fellow residents and local businesses.

What is the City of Oakland doing to mitigate these issues?

Sincerely,

Matt Perry

1770 Broadway, #208

Oakland, CA 94612

[mcp514@gmail.com](mailto:mcp514@gmail.com)

Matt



## Rivera, Mike

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**From:** Velta Mara <veltamara@gmail.com>  
**Sent:** Sunday, March 17, 2019 6:51 PM  
**To:** Rivera, Mike  
**Cc:** Joseph Hornof; geekygirl@gmail.com  
**Subject:** Re: Case File Number: PLN18369; 1750 Broadway

I am also concerned about green space in our vicinity... This area needs at least 5 trees per block on either side of the street to offset all of the pollution created by development... are green walls and roofs being considered? not just for projected wealthy tenants, but for historic neighbors and the general public? the well being and health of the neighborhood?

Best,  
Velta Savelis  
Resident 1770 Broadway

> On 17 Mar 2019, at 11:30 AM, Velta Mara <veltamara@gmail.com> wrote:

>

> Hello Mr. Rivera-

>

> I am writing this note to express my concern around the projected construction on Broadway between 17th and 19th streets in Oakland. I am a resident of the building (for two years) and a native of Oakland. I am very concerned about a next high rise development occurring so close to my residence when there are already so many high rise developments occurring at this time in Oakland. It is very stressful to live with the constant din of construction and I am becoming increasingly disturbed as the demolitions, jackhammering, cranes and cement mixers are constantly active around this neighborhood.

>

> I am also concerned about the displacement of even more folks from Oakland and dismayed at the thought of yet **another monstrosity, taking away natural sunlight and fresh air from those of us who live and work here.**

>

> I am aware that none of the new living spaces will be affordable to myself nor most working or disabled/elderly people in Oakland and implore you to take into consideration those of us living at 1770 Broadway who may not have other affordable/convenient options available.

>

> Thank you for your time and consideration in reconsidering this new "project"...

>

> Kindly,

>

> Velta.Savelis

> 1770 Broadway Resident

>



## **Rivera, Mike**

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**From:** Velta Mara <veltamara@gmail.com>  
**Sent:** Sunday, March 17, 2019 11:31 AM  
**To:** Rivera, Mike  
**Cc:** Joseph Hornof; geekygirl@gmail.com  
**Subject:** RE: Case File Number: PLN18369, 1750 Broadway

Hello Mr. Rivera-

I am writing this note to express my concern around the projected construction on Broadway between 17th and 19th streets in Oakland. I am a resident of the building (for two years) and a native of Oakland. I am very concerned about a next high rise development occurring so close to my residence when there are already so many high rise developments occurring at this time in Oakland. It is very stressful to live with the constant din of construction and I am becoming increasingly disturbed as the demolitions, jackhammering, cranes and cement mixers are constantly active around this neighborhood.

I am also concerned about the displacement of even more folks from Oakland and dismayed at the thought of yet another monstrosity, taking away natural sunlight and fresh air from those of us who live and work here.

I am aware that none of the new living spaces will be affordable to myself nor most working or disabled/elderly people in Oakland and implore you to take into consideration those of us living at 1770 Broadway who may not have other affordable/convenient options available.

Thank you for your time and consideration in reconsidering this new "project"...

Kindly,

Velta Savellis  
1770 Broadway Resident



## **Rivera, Mike**

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**From:** Andre Owens <andreacehigh@yahoo.com>  
**Sent:** Friday, March 15, 2019 9:31 PM  
**To:** Rivera, Mike  
**Subject:** Public Comment on Case File Number: PLN18369, 1750 Broadway

Subject: Public Comment on Case File Number: PLN18369, 1750 Broadway  
To: MRivera@oaklandca.gov

Mr. Rivera,

I am a resident at 1770 Broadway. I have concerns about the size of the proposed construction at 1750 Broadway and safety risks this construction poses. During construction, something could easily drop from this building onto and through my roof, damaging the building structure or worse, hurting residents. Additionally, the duration of construction is expected to last up to 36 months. That is 3 years of sleep. I will never get back. I work nights and sleep during the day. My bedroom faces south and will be pressed against the proposed parking garage. Can you guarantee me that noise, dust, and other safety risks will not adversely impact my health? Could a smaller building with an appropriate amount of space between buildings be a solution? Also, where are the low-income units? Oakland already has many new constructions of luxury and market-rate apartments. Oakland needs more affordable housing and the planning department needs to stand up to developers, demanding affordable units and refusing an easy payout. I request that Oakland planning put a stop to taking developer's money and letting developers have an easy go of our city. Oakland deserves more than a simple impact fee, we need housing that will contribute to the culture and prosperity of Oakland by providing shelter to low- and moderate-income residents who are currently underserved. Where does that "impact" money go, anyways? We need more housing, yes, but we do not need to sell ourselves short and, in the process, endanger residents. Make new developments work for Oakland and don't rush to approve projects that are ill-advised. Please do not approve this project as proposed. By the looks of the current proposal, I will be buried alive.

**Sincerely,**

**Andre Owens, 1770 Broadway resident**



**Rivera, Mike**

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**From:** Nancy Morosohk <NMorosohk@familypaths.org>  
**Sent:** Sunday, March 17, 2019 10:02 AM  
**To:** Rivera, Mike  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Hi,

I am writing to express my strong objection to the continued development of expensive luxury apartments in Oakland. I have lived in Oakland for the past 30 years and raised my daughter here. For the past almost 18 years I have also worked at a nonprofit in Oakland that serves the most vulnerable members of our community. As my daughter graduated from college 2 years ago and returned to the Bay Area, I was initially excited to see the construction of so many new apartment buildings around the city. Then I was shocked to discover that they all seemed to be luxury apartments that are very far out of the price range not only for my daughter, who works at a local school, but also for all of the experienced professionals I work with who are living on a non profit salary. While I am happy to see Oakland thriving, I am very troubled by this trend which seems to care more about the tech and business community that is new to Oakland and less about those of us who are already here and helping to make and keep Oakland the great city that it is.

As the Planning Commission of Oakland, I hope you will prioritize Planning for the citizens Oakland and not allow Oakland to become the next San Francisco where only the richest of people can afford to live. We need our diversity, we need to support our local workforce and we need to make it possible for the people who were raised here and who love Oakland to live here now and in the future.

I urge the Planning Commission to make the construction and preservation of affordable housing it's top priority. There are already enough luxury apartments here. Please do the right thing so that Oakland can stay a home for all people....that's what makes it Oakland! Thank you, Nancy

Nancy Morosohk, LCSW  
TIPS Program Manager  
[nmorosohk@familypaths.org](mailto:nmorosohk@familypaths.org)  
Pronouns: she, her, and hers

Family Paths  
1727 Martin Luther King Jr. Way #109  
Oakland, CA 94612  
(510)893-9230x217

[www.familypaths.org](http://www.familypaths.org)

you can call our 24/7 parental stress hotline 510-893-5444

Family Paths strengthens family relationships by providing mental health treatment and supportive services with respect, integrity, compassion, and hope.

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**Rivera, Mike**

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**From:** Clay Kilby <wckilby@gmail.com>  
**Sent:** Friday, March 15, 2019 8:48 AM  
**To:** Rivera, Mike  
**Subject:** Public Comment on Case File Number: PLN18369, 1750 Broadway

Mr. Rivera,

My name is Clay Kilby, and I'm writing to express some concerns about the new construction planned for 1750 Broadway, Case File Number: PLN18369.

I'm a resident of 1770 Broadway and have been for just over three years. I run a small creative agency serving non-profits and I work from home. This apartment has been a true gift to me because of the proximity it has afforded me to the organizations I work with and the opportunity to live within the community I am working to support.

Upon becoming aware of the new development at 1750 Broadway, I have become concerned. My apartment, on the third floor, faces the area set aside for the new building's construction staging. It seems unlikely that I will be able to work productively during the day with the noise and inconveniences of construction, which is projected to last for years. Though I have loved living here, and have no desire and little ability to move, I believe I will be forced to relocate when construction begins. I am uncertain about my future. Having been here for years, I am quite dependent on my rent controlled rate. I doubt I will be able to afford another apartment in the area, and will be forced to consider moving out of Oakland, which has been my home for much longer than I have been at 1770 Broadway.

But my deepest concerns over this project are not over my own wellbeing. In talking with my neighbors in my building and across the street I have come to realize that many will real harm to their quality of life, far beyond my own, as a consequence of this project. Many in my building will loose their only access to the outside world as their windows will be covered over by the new building's walls. Across the street many residents expect to loose their windows too, but to an overabundance of light, as the new structure reflects glaring light into their apartments during the day, and beams artificial light in at night. At the recent public planning meeting the developer representatives for the 1750 Broadway project offered access to their proposed dog park for these residents, which I consider a woefully inadequate solution. These residents should be compensated financially in an amount that would allow them relocate to a similar property in the neighborhood, or should be offered a comparable apartment at 1750 Broadway, subsidized to their current rent. I'm not advocating for a handout or windfall here. When doing harm to the life of another, the most appropriate solution is to compensate them in amount nearest to the harm they received in the form nearest to what has been lost.

My second concern is for the residents of downtown Oakland more broadly. The cost of living here is already extraordinarily high. I am not opposed to new development. I believe it to be a necessary part of the solution, reducing housing cost by reducing housing scarcity. I am however opposed to regressive development, that which adds housing only for the wealthy and at the expense of the poor. I am not opposed to the influx of new residents of wealth or any class, from San Francisco or anywhere else. Oakland welcomed me some years ago and I have been grateful to call it my home ever since. But I am concerned about new development which serves only those with means, and excludes those without, especially those who have already worked so hard to carve out a life here. For too long we poor residents have been told to accept new construction intended only for the wealthy. That serving them would somehow, someday trickle down to help us. It hasn't. It won't. This new building should include copious amounts of affordable, below market rate units for residents of limited means, much more than is currently proposed.

During the recent meeting I attended, developer representatives told us that they were attracted to this location by the distinctive "Uptown vibe," showing us photos of its iconic buildings, the Fox, the Paramount, the Magnin Building. They claimed to be inspired by these structures and duty bound to make their building one that would do service to the



aesthetic of the neighborhood. I don't think they're wrong about the uptown vibe. It is a beautiful, diverse, creative, and fun place to live. But this uptown vibe is not defined by its architecture. It is defined by its residents. They are hardworking. They are diverse in ethnicity and in class. They are artists, and public servants, and entrepreneurs, and families. They are the architects of the uptown vibe. They have a right to remain here. They are the life in this city. Without them all the iconic buildings, and this new construction too, will be little more than dead boxes.

Thank you,  
Clay Kilby  
1770 Broadway #310  
[wckilby@gmail.com](mailto:wckilby@gmail.com)  
864-710-4994



**Rivera, Mike**

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**From:** Christy Booth <christybooth@gmail.com>  
**Sent:** Friday, March 15, 2019 12:56 PM  
**To:** Rivera, Mike  
**Cc:** bsilver@familypaths.org  
**Subject:** Case File Number: PLN18369, 1750 Broadway

(Hi Christy, if you can add this to public comment, please do so.)

Public comment on the 1750 Broadway high-rise.

As the Executive Director of Family Paths, an Oakland based non-profit that employs over 80 people to provide mental health services and supportive services, I am extremely concerned about the lack of affordable housing in the planning for this new construction. Non-profit employers who serve the most vulnerable Oakland residents are losing our workforce due to the housing crisis and lack of affordable housing for our staff. I urge the planning commission to strongly prioritize the construction and preservation of affordable housing so that small and mid-size businesses can continue to hire local residents. The City is losing precious human capital that helps this community thrive and I urge you to plan for them as well and require affordable units in this project.

Barbra Silver, MFT  
Executive Director  
Pronouns: she, her, and hers  
Family Paths, Inc.  
510-893-9230 ext. 227  
[bsilver@familypaths.org](mailto:bsilver@familypaths.org)

*Family Paths strengthens family relationships by providing mental health and supportive services with respect, integrity, compassion, and hope.*

[www.familypaths.org](http://www.familypaths.org)



## Rivera, Mike

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**From:** Christy Booth <christybooth@gmail.com>  
**Sent:** Friday, March 15, 2019 7:07 AM  
**To:** Rivera, Mike  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Dear Mike Rivera,

My husband and I have lived at 1770 Broadway since August 2013. We are originally from NC and having this affordable place to live enabled me to study counseling psychology at a local graduate school and, since 2015, serve low-income families and children throughout Alameda County with quality mental health services. The invaluable services I and others like me provide are in jeopardy as the high cost of living has forced many young mental health professionals to leave the bay area or leave the non-profit sector. I work for a non-profit that receives county funds. We work to prevent and end child abuse.

I am also an artist and have contributed to Oakland First Fridays and other local events. I am concerned that the creative community I have actively contributed to is being exploited by those who seek an easy payday without giving anything to the community in return.

Please help us save our building. If 1750 goes up as planned, I will no longer be able to live in my apartment, leaving my job and the bay area altogether. Noise, traffic, pollution, and rising costs in the neighborhood are already significant stressors. If 1750 is built, my bedroom window will be one of the windows only inches from a concrete wall and directly exposed to "28-36 months" of construction, fumes, and any other danger this construction will pose to my wellbeing.

Of what I have read in the CEQA report, I am concerned that 1770 Broadway has no recognition as a place that will be impacted. We are 48 units of hard-working members of the community and we should not be invisible. The shadow study insufficiently describes the impact to our building. The traffic study relies on data from 2017 and does not take into account numerous current factors impacting congestion in the uptown/downtown area, including the addition of **scooters, new businesses, road closures** due to additional new construction, and ongoing festivities such as **marathons, parades, protests, and rallies**. I urge you to reconsider the validity of the CEQA report and demand further study into current traffic patterns and health costs to current residents, including the mental and physical toll of living with noise pollution and limited sunlight. We are being squeezed into a dark, noisy, shaft.

I have no doubt that I will be displaced as a result of this construction. Moreover, I can afford to earn a minimal wage working at Family Paths, the non-profit I am employed at full-time and live only 4 blocks from, because I have rent control. For me, losing my housing means leaving my job, and abandoning the dozens of families I support in order to reduce their risk of negative life outcomes, including depression, suicide, child abuse, substance abuse, gang involvement, and stunted academic progress. I am bilingual and serve the Latinx immigrant community. We always have a waitlist--of families in crisis!--because we do not have enough bilingual mental health professionals in the bay area. Families in crisis should never be told they have to wait for help, yet families end up waiting for months while their problems get worse.

Where is the affordable housing for people like me who work every day to create a better community by enriching and empowering lives? Allowing the proposed building at 1750 Broadway sends the message that Oakland is only for the wealthy and that Oakland officials are unable to recognize the actual lived experiences and valuable contributions of their low- and middle-income residents.

Please help us save our building and make a commitment to ensuring stability and safety for low- and middle-income residents.



Sincerely,

Christy Booth  
1770 Broadway resident







**Rivera, Mike**

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**From:** Chris Relf <chris@RubiconPoint.com>  
**Sent:** Monday, March 18, 2019 10:00 PM  
**To:** Rivera, Mike  
**Cc:** Will Sandman  
**Subject:** 1750 Broadway Case File Number: ZP170064 - Letter for Planning Commission  
**Attachments:** 1750 Broadway - Update Letter 3-18-19.pdf

Mike,

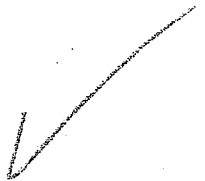
Thanks for all your hard work on the staff report.

Please see the attached letter with some updates for the Planning Commission Wednesday.

Let me know if you have any questions or would like to discuss any items further.

Thank you,

Chris Relf | Rubicon Point Partners | 650 224 6381 c | 415 500 6410 o | 55 2<sup>nd</sup> Street, Suite 1900, San Francisco, CA 94105 | [www.RubiconPoint.com](http://www.RubiconPoint.com)





# RUBICON POINT

PARTNERS

1750 Broadway, LLC  
c/o Rubicon Point Partners, LLC  
55 2nd Street, Suite 1900  
San Francisco, CA 94105  
(415) 500-6400 Main  
(877) 702-2738 Fax

Tuesday, March 19<sup>th</sup>, 2019

Mike Rivera  
Major Planning, Bureau of Planning  
250 Frank H. Ogawa, Suite 2114  
City of Oakland  
Oakland, CA 94612  
Phone: (510) 238-6417  
Fax: (510) 238-4730

**Re: 1750 Broadway (Case File Number: PLN18369) - Project Update**

Dear Mr. Rivera,

We are writing to provide an update on our project at 1750 Broadway in advance of our Planning Commission hearing on Wednesday, March 20<sup>th</sup>, 2019. As you know, we presented to the Design Review Committee on December 5<sup>th</sup>, 2018 and the project was recommended to go forward to Planning Commission for final consideration. Since that hearing, we have had some developments in the design of the project and in our discussions with the current tenant on the first and second floor, as discussed below.

**Garage Screen Design:** In advance of our Planning Commission hearing, Staff requested that we look at options for modifying the design of the garage screen to integrate it more into the design of the rest of the tower. After meeting with Staff on March 8<sup>th</sup> to discuss various options, we all agreed to move forward with one of those options. Attached to this letter is the design that was presented to the DRC along with the modified design that was agreed upon as a result of Staff's comments. The intent of the new design is to bring more elements of the tower into the screen by adding the same metal panels that clad the tower into the screen, which also breaks up the massing of the screen.

**Tenant Discussions:** We also wanted to provide an update on our discussions with the tenant on the first floor and second floor of the existing building at 1750 Broadway, Transdev. Transdev is a privately-owned company that provides contracted transportation services of varying types across North America. The Transdev offices at 1750 Broadway have a contract with BART & AC Transit to provide paratransit services (i.e., transportation services for individuals with disabilities) throughout the East Bay. Transdev currently has a lease in the property with approximately 7 years remaining on the lease term. The tenant also has a 5-year renewal option that can be exercised at the end of the current lease term.

In February 2019, we met with senior members of Transdev, BART, and AC Transit. At the meeting, we presented an offer to the tenant that would allow them to continue their



operations at an alternate location, which would allow for development of the proposed project. The offer was well received, and both parties agreed to work in good faith to towards an amendment to their lease with the overarching terms that were presented in our offer.

**Community Outreach:** We also wanted to provide an update on our community outreach efforts for the project. In February, we held a community meeting across the street from 1750 Broadway where we presented our project design and held a Q&A session to hear everyone's questions, thoughts, and concerns. We had attendees from local community groups as well as local residents and neighbors. The majority of the concerns that were raised were related to construction disturbances and light and shadow impacts on neighboring buildings. We also gathered input and suggestions from those in attendance about the retail use on the ground floor of the building (approximately 5,000 SF). We provided everyone that attended the meeting with a copy of the CEQA report that was prepared for the project, and we committed to continuing to provide updates to the neighbors as the project moves forward. In addition to the community meetings, we have met with various community organizations, such as the Oakland Chamber of Commerce, the Oakland Heritage Alliance, local artists, local business owners, and others to discuss the project and gather input.

As you know, Oakland and the entire Bay Area is in a housing crisis. The proposed project at 1750 Broadway would add 307 new residential units in the heart of the city on an underdeveloped, transit-oriented site consistent with the vision of Oakland's General Plan for this location. The project is anticipated to bring over 450 new residents to Oakland and to generate \$3 million in new annual tax revenue from increased property taxes and business license taxes. The project is anticipating paying over \$13 million in affordable housing impact fees and permit fees and is expected to create close to 1,000 jobs during construction. Additionally, an analysis conducted by Hausrath Economics Group (attached to this letter) concluded that the new residents of this project would spend over \$7.9 million annually at local retail stores, service businesses, and other recreation and entertainment activities in Oakland, which will support increased employment and business activity in the city.

In sum, we believe that the project, as currently proposed, creates a significant benefit to the city, and we're excited to have the opportunity to build it. If you have any questions or need any additional information, please let me know.

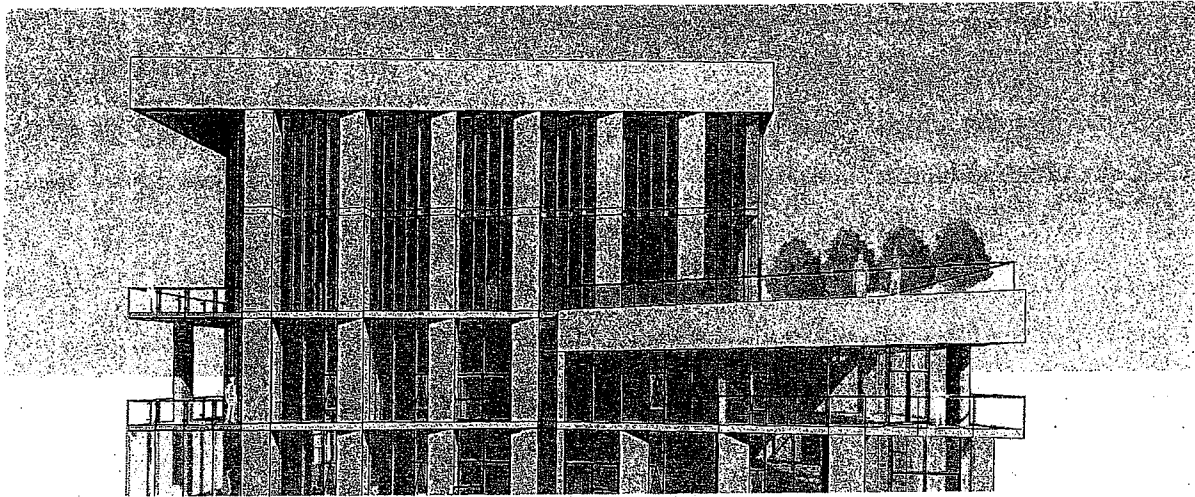
Sincerely,

Chris Relf  
Construction Management Director  
Rubicon Point Partners

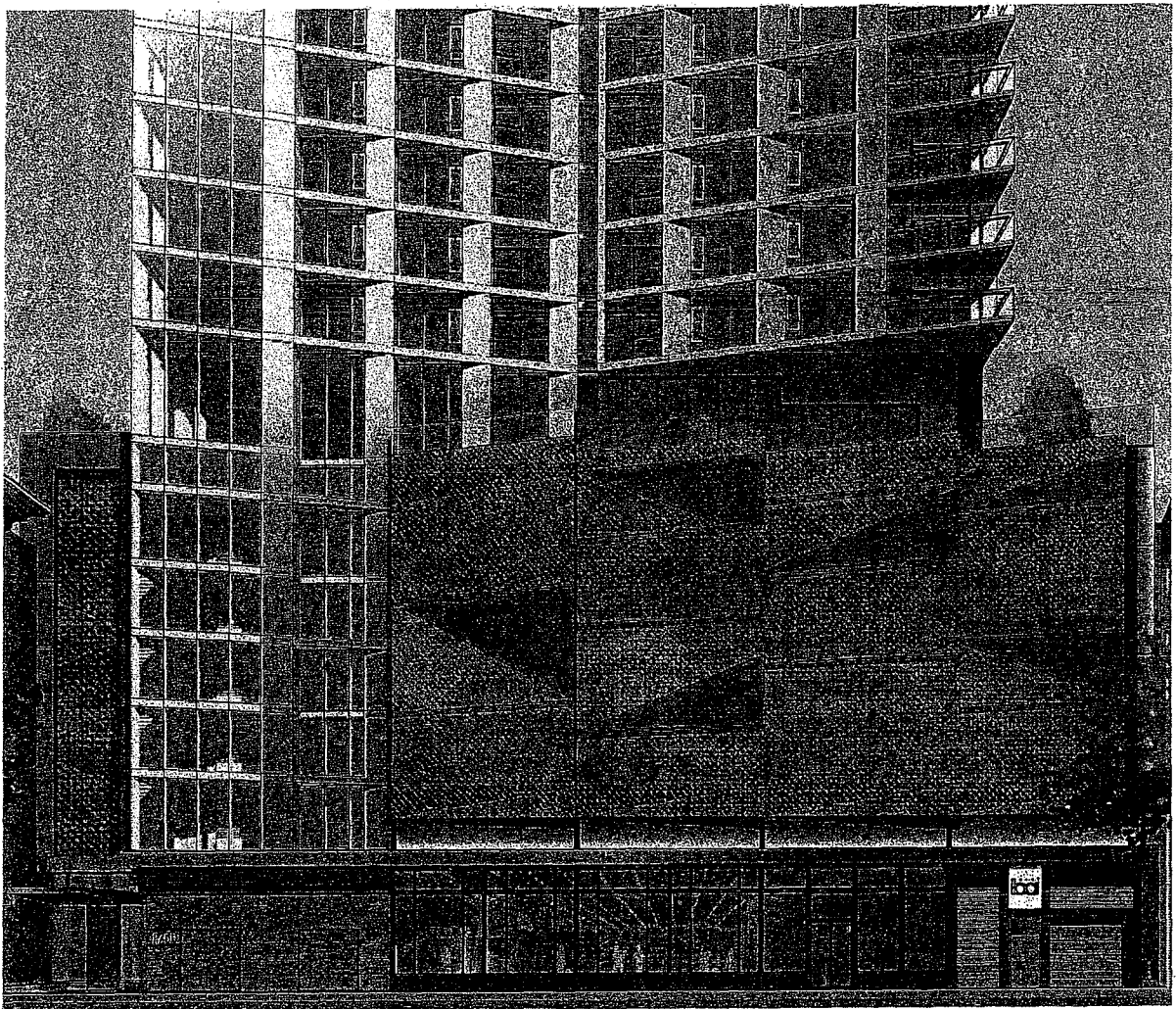
**Attachments**

- (1) Modified Garage Screen Design
- (2) Hausrath Economics Group Impact Study



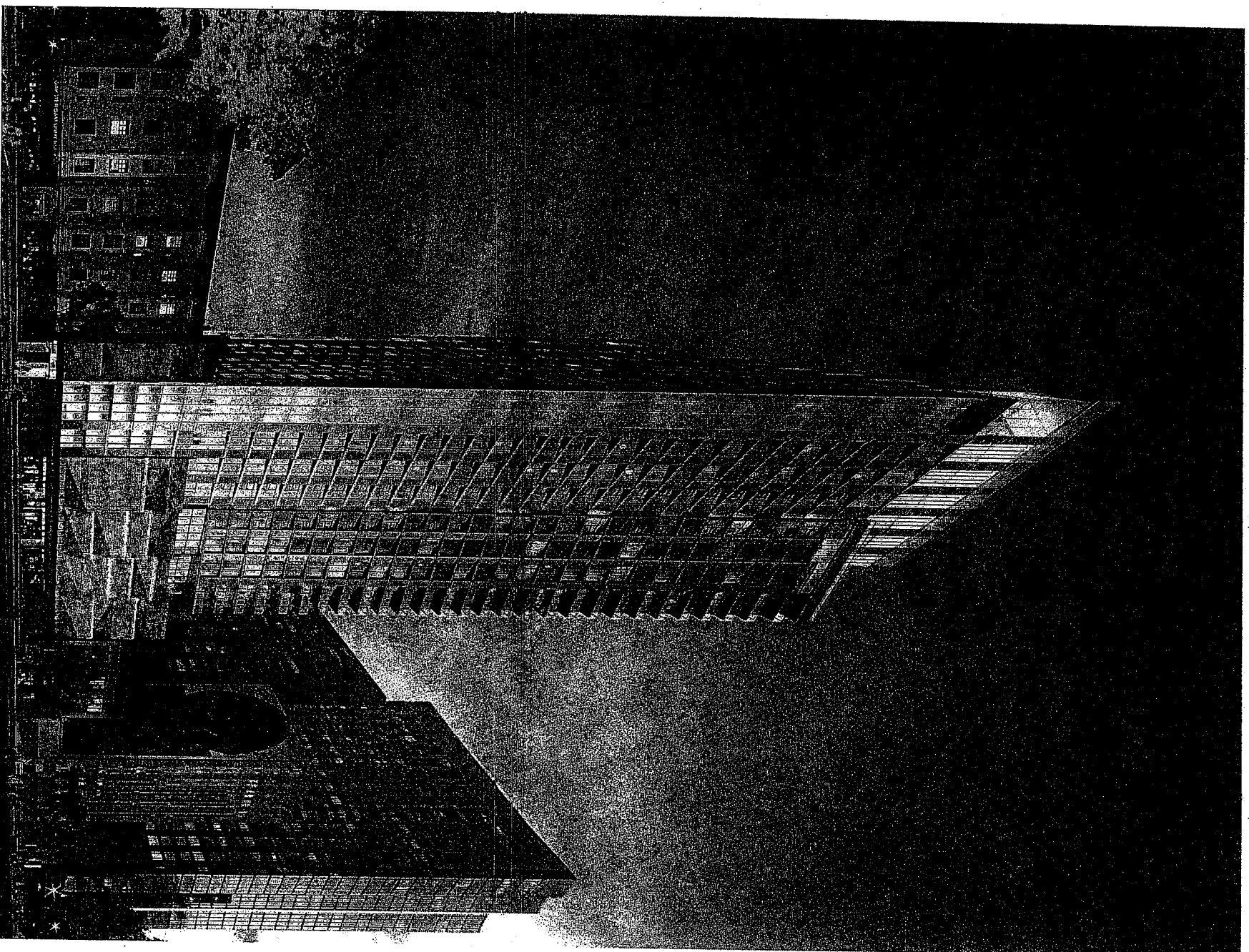


CROWN



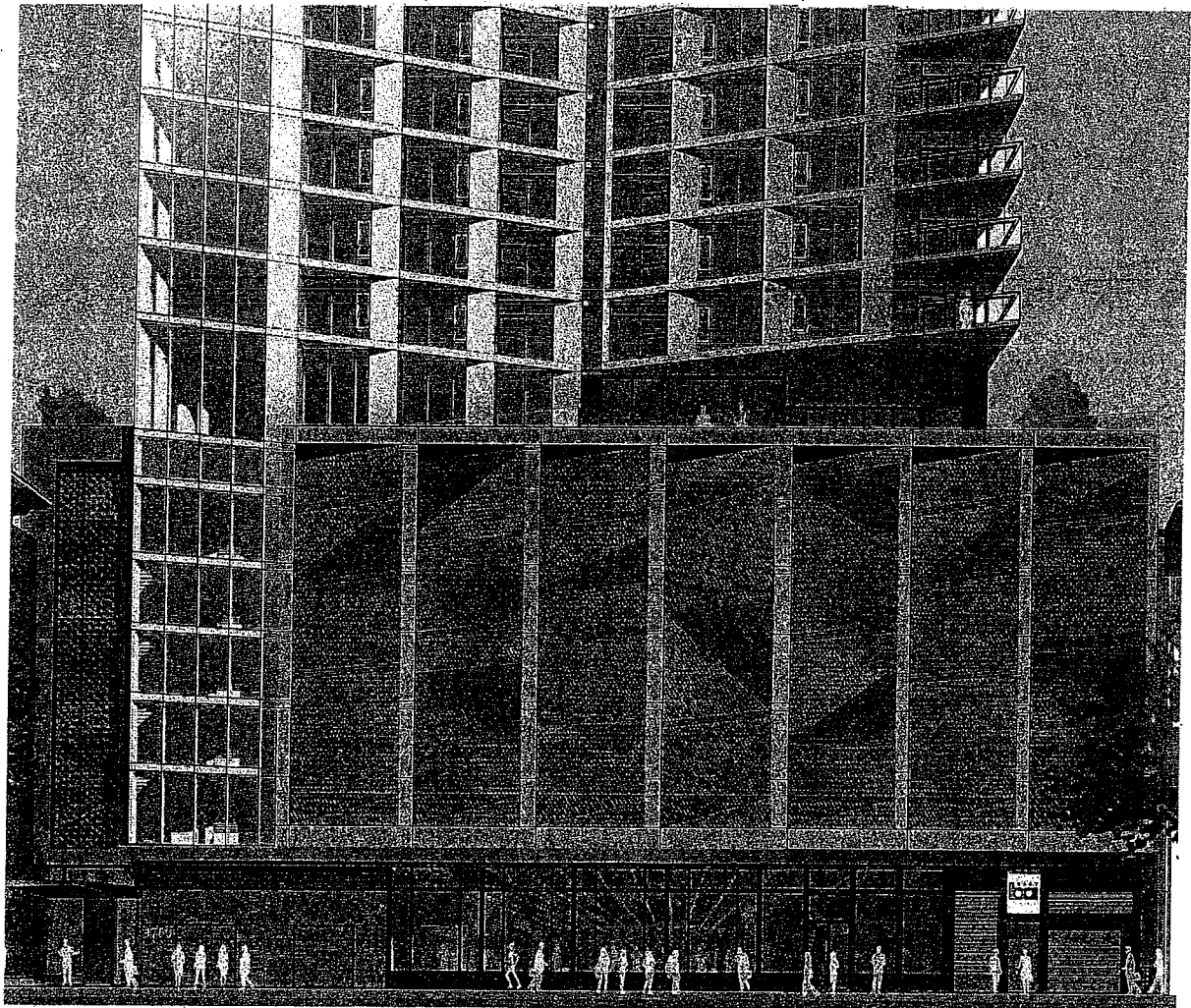
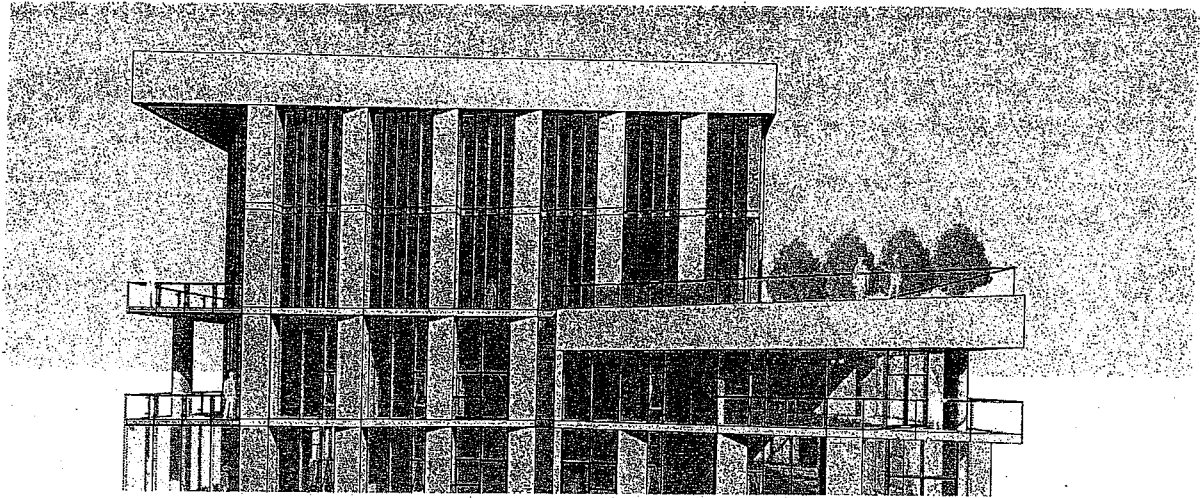
ORIGINAL DESIGN





ORIGINAL DESIGN





UPDATED DESIGN.



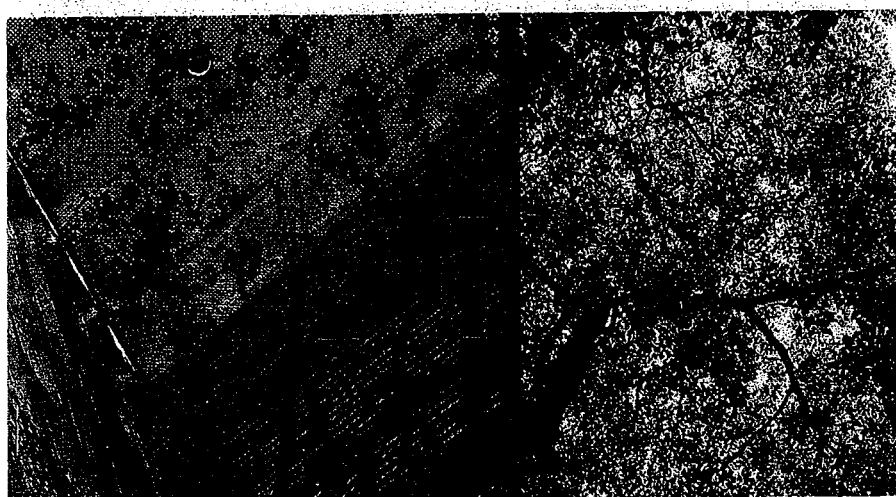
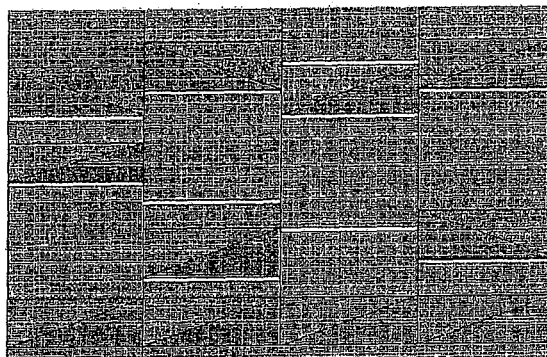
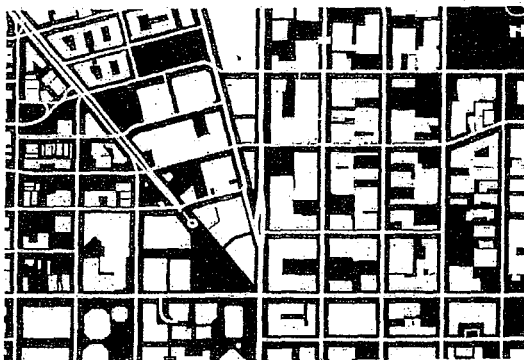


UPDATED DESIGN



# PERFORATED METAL SCREENS

ALLOW FOR VENTILATION - LIGHT - ANIMATION  
CONCEPT OF MAPPING







## MEMORANDUM

**Date:** March 1, 2019  
**To:** Rubicon Point Partners  
**From:** Hausrath Economics Group  
**Subject:** Economic Impact Analysis

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### **Household Spending and Sales Tax Benefits of Residential Development at 1750 Broadway**

The proposal for new high-rise residential development at 19<sup>th</sup> and Broadway in downtown Oakland includes 307 units. The range of unit types consists of studios, one-bedroom, two-bedroom, and three-bedroom units. The households living in these new units will generate spending for retail and service businesses downtown and elsewhere in Oakland. The table on the next page summarizes the results. Based on our economic analysis, the following spending, business activity, and sales tax benefits are expected:

- ♦ \$7.9 million per year in total spending at retail and service businesses in Oakland will support increased business activity, employment, and payroll in the city. The total amount consists of \$5.6 million of retail spending and \$2.3 million of household spending for services in Oakland.
- ♦ The \$5.6 million per year of household retail spending in Oakland will support businesses downtown and in the rest of the City.
- ♦ The largest amount of retail spending (\$2.2 million) will be for convenience goods in grocery and food stores, drug stores, and liquor stores. The new households will also spend \$1.3 million per year in clothing stores, bookstores, gift shops, and other specialty retailers in Oakland; \$1.0 million per year in restaurants, bars, and cafés; and \$1.1 million for vehicle purchases, supplies, and gas.
- ♦ \$4.1 million of this retail spending in Oakland will be taxable, generating additional sales tax revenue for the City of Oakland on the order of \$40,000 per year.
- ♦ The households will also spend \$2.3 million per year for a variety of services in Oakland, including medical services, personal services and other household expenses, household and vehicle maintenance and repair services, and spending for recreation and entertainment activities in Oakland.



**Annual Household Spending and Sales Tax Estimates**  
**1750 Broadway Residential Development**

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<b>Retail Spending by Category</b>	
Convenience goods	\$2,187,000
Comparison goods	1,261,000
Eating and drinking out	1,030,000
Vehicles, gas, and supplies	<u>1,153,000</u>
<b>Subtotal retail spending</b>	<b>\$5,631,000</b>
 <b>Other household spending on services</b>	 <b><u>\$2,306,000</u></b>
 <b>Total household spending in Oakland</b>	 <b>\$7,937,000</b>
 <b>Taxable retail spending in Oakland</b>	 <b>\$4,122,000</b>
<b>Sales tax revenue to Oakland</b>	<b>\$39,000</b>

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Note: Estimates of annual spending and annual sales tax revenue at stabilized occupancy of the new development.

Source: Hausrath Economics Group based on a project description from Rubicon Point Partners and analysis of the U.S. Department of Commerce, Bureau of Labor Statistics, *Consumer Expenditure Survey, 2016-2017*, State of California Board of Equalization taxable sales data, and data from the U.S. Department of Commerce Census of Retail Trade, California.



**Rivera, Mike**

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**From:** Joseph Hornof <hornof@earcom.com>  
**Sent:** Tuesday, March 19, 2019 4:41 PM  
**To:** Rivera, Mike  
**Subject:** Public comment: Case File Number: PLN18369, 1750 Broadway  
**Attachments:** PLN18369response031919hornof.pdf

Hi Mr Rivera -

I'm attaching my public comment for tomorrow's Planning Commission meeting as a PDF. It includes a few charts, so hopefully this will be easy to print:

PLN18369response031919hornof.pdf

I apologize for its length, but there are a number of issues I had to specifically address. I did my best not to wait until the last minute.

Also I want to thank you for your help. It hasn't been easy for me to learn the Planning Commission's policies and practices. You have been patiently helping me through that, while juggling a lot of other important cases. I have many complaints about this project, but your level of service has been first-rate.

I'd appreciate if you can confirm you received this. Tomorrow, I'll check to make sure you received the responses from other residents that were sent.

Thanks again,

-Joe

Joseph Hornof  
1770 Broadway #112  
Oakland, CA 94612  
510.763.1488  
hornof@earcom.com



Re: Case File Number: PLN18369, 1750 Broadway  
March 19, 2019

Dear Planning Commission Members,

We live at 1770 Broadway, directly adjacent to 1750 Broadway. Our walls physically touch. The new project will encircle our rear exit, and rise 423 feet above our heads. Before you approve this project, we have a number of concerns we hope you will address. We also believe the project may violate numerous regulatory schemes.

This project would dramatically impact our quality of life. Its construction could risk our personal safety and displace the current 48 tenants at historic 1770 Broadway. Some are elderly or disabled and will require assistance. Our displacement would cause even greater loss to our city: it will impact our employers, their clients and the citizens who we serve.

Here are some of the problems we need to address.

#### 1) Planning Process

The planning process has not been transparent. It is difficult to find Planning Commission information on the City websites. Agendas are posted, but the decisions are not. Meetings have been scheduled and postponed at little notice, which decreases a citizen's ability to participate. Citizens have presented concerns that have not been addressed and questions which have not been answered.

We were informed of the first community meeting held for this project with only 30 hours notice. **This meeting was held on Tuesday, February 26, 2019, shortly before the Planning Commission meeting originally scheduled for March 6, postponed until today. Only seven of our 48+ residents** were able to attend this community meeting, due to such short notice. There we learned details that had not been presented at previous Planning Commission meetings, such as the duration of construction: 28-36 months. Our jaws dropped.

The developers of this project presented false information in prior reports to the Design Review Committee. They reported discussions with myself and residents of our building that never took place. This has been reported to the Planning Commission, as evidenced by the public comments in the March 20, 2019 Staff Report:

<https://cao-94612.s3.amazonaws.com/documents/2019-03-20-PC-Item-01-for-Publication.pdf>

In the Staff Report, February 28, 2018, page 8, the developers wrote:

<http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak069364.pdf>



Finally, we received the letter from Joseph Hornof, our neighbor at 1770 Broadway, the day of the DRC hearing. Following the DRC hearing we reached out to Mr. Hornof to discuss his concerns in more detail. We discussed with him, as we mentioned during the DRC hearing, that the project will be incorporating a mural along the garage walls and will be setting back the building from the property line by three (3) feet. We are discussing the concerns regarding light with Mr. Hornof's landlord as well as with Mr. Hornof and his fellow tenants and are also discussing their concerns regarding demolition and construction. The project will be required to comply with the City's standard conditions of approval regarding demolition and construction and we believe compliance with these measures should help mitigate Mr. Hornof's concerns. We also will provide Mr. Hornof with notice of key construction milestones and commit to provide him with the contact information for the construction manager to ensure that any concerns he may have regarding demolition or construction are responded to in a timely fashion.

The developers may have received the letter I submitted to the Design Review Committee, but we never discussed this project. To the best of my knowledge, no discussion with any of my fellow tenants was held until our first community meeting, one year later, prior to the Planning Commission scheduled for March 6. Representatives of East Bay Paratransit reported similar false statements presented during their negotiation with the developers.

## 2) CEQA report

Today this project will present its CEQA report.

<http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak072045.pdf>  
<http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak072046.pdf>

We are not CEQA experts and it is beyond our means to challenge this report in a court of law. Nonetheless, the City of Oakland has a responsibility to preserve public health, safety, and welfare, and to advance the housing policies of the city with regard to low- and fixed-income persons, people of color, students, and those needing special protections, such as long-term elderly and disabled tenants. The deficiency of this CEQA report is contained within the single sentence that references our building, with only one word acknowledging our human existence:

*A five-story mixed-use residential building with ground floor retail is located adjacent to the existing building to the north (1770 Broadway), and is occupied by multiple restaurant and commercial tenants including Oaksterdam University, a cannabis educational facility; Zaya Café; and Sweet Belly Desserts.*

This description and the remainder of the CEQA report entirely disregards the adverse impacts this project will affect upon the residents of our 48 apartments. If this report is intended to be accurate, transparent and reflect real-life, we have some questions:

### a) Shadow Study

The CEQA report is deficient in that it fails to adequately consider the shadow the new project would cast on our building.



In Appendix G, PreVision Design states:

Under City of Oakland thresholds of significance, a project would have a significant shadow impact if it would:

*D. cast shadow on an historic resource 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.*

Our 5-story building, 1770 Broadway, is a historic resource and listed as such in 1750 Broadway's CEQA report under Project Setting. The Bauer Apartments were constructed circa 1912 by Righetti and Headman, renowned Bay Area architects. There are two retail stores and two cafes on our ground floor. Above that are 4 floors of apartments. Our apartments are both affordable and market-rate. The Bauer Apartments are historic not just for their facade, but their purpose, which includes the former residence of Mayor John L. Davie. Yet the impacts upon 1770 Broadway are entirely absent in this CEQA report, including this Shadow Study.

Our building has already sacrificed significant sunlight to our city's new luxury towers. The shadow study for 1750 Broadway is out of date - it was prepared January 25, 2018 and does not include 1640 Broadway. The shadow study diagrams do not accurately portray the additional sunlight our residents would lose to the 1750 Broadway tower. We demand to see more accurate data. Once 1750 Broadway is complete, we may live in a perpetual cave. Sunlight is important for physical and emotional health. Any new building proposed between us and 1640 Broadway should be staggered in height, to preserve our remaining natural sunlight.

**b) Pollution:**

**The CEQA report fails to adequately consider the additional pollution the tenants would suffer.** Our entire building is the size of 1750's parking garage, which will stretch from levels 2 through 6. The ventilation of exhaust from this garage will flow directly to our windows. We request a more thorough report of this impact.

We also have significant concerns regarding the pollution that will be generated during construction, which could span three years, addressed below.

**c) Traffic:** Broadway at 19th St was designated as a high-injury corridor in Oakland's 2017 Pedestrian Plan. The 2017 traffic studies are outdated and need to be recalculated with new traffic patterns, including electric scooters and rideshare, projects recently completed, under construction, or approved. This block of 19th St. currently features two busy parking lots; this number will double, with additional sets of entrance/exits on each side of the street.

The CEQA report characterizes the current structure at 1750 Broadway as an "underutilized site with outmoded facilities and/or marginal existing use." That would be disputed by the current occupants of this building, East Bay Paratransit, and the citizens who benefit from their services. East Bay Paratransit has been on our block for over two decades and have characterized this



building an ideal location. They have a long-term lease on their facilities. This site provides their clients access to a BART elevator directly from their building. Their small, gated surface parking lot allows for safe ingress and egress from their busses. This reference to their building as underutilized and/or marginal insults their service, their ridership, and the Americans with Disabilities Act (ADA).

### 3) Construction

Construction of the new project will endanger our safety and likely lead to lawsuits.

A land use impact due to construction activity is a function of the intensity and duration of construction work, the sensitivity of land uses adjacent to the construction areas, and distance of these land uses to the construction site. Construction-related effects that can result in land-use conflicts include increase in noise, increase in dust levels and other pollutants, traffic and circulation issues, and decrease in safety. A significant socioeconomic construction impact would occur if construction activity diminishes the use of our apartments.

The Implied Covenant of Quiet Enjoyment is a foundational concept built into every rental agreement. It affords a tenant rights including the freedom from unreasonable and recurring disturbances from the landlord and/or other neighbors, and a premise that is free of bodily hazards. The construction of this project may force us out of our apartments due to noise, disruption of the foundation of our building, material which may fall upon us, or any other external impact which results in a red tag hazard. Our building will not be a safe place to live while 1750 Broadway is constructed. Breach of the covenant can result in an injunction and monetary damages.

**In their CEQA report, the developers claim:**

*There is nothing unique or peculiar about the Project or its construction that would suggest that the Proposed Project would have greater noise impacts than other typical high-rise construction projects within Downtown Oakland*

Contrary to this plan's claims, it is not comparable to other projects. At 423 feet high, it would be the tallest building in Oakland, with the deepest foundation, another 150 feet below the surface. It has the longest construction timeline, longer than other tower projects. Here again, they ignore our existence. This project entirely is unique due to its prolonged impact upon existing residents and their proximity to this impact. We have 12 apartments in our building which touch the existing building they intend to demolish, plus another 4 apartments immediately above that. The rear of our building and its 12 apartments will be impacted, as they will face the area where heavy equipment and building materials will be staged, within a 50 foot distance from their living spaces.

The developers claim:

*The Proposed Project would comply with the City of Oakland Noise Ordinance*



Oakland Planning Code section 17.120.050 states the Maximum Allowable Receiving Noise Level Standards.

TABLE 17.120.02

## MAXIMUM ALLOWABLE RECEIVING NOISE LEVEL STANDARDS

Cumulative Number of Minutes in Either the Daytime or Nighttime One-Hour Time Period	Maximum Allowable Receiving Noise Level (dBA)
20	65
10	70
5	75
1	80
0	85

Sound levels of 80 dB are permitted for one minute per hour; sound levels over 85dB are not permitted. If construction lasts 28-36 months, this construction zone will impact us for a great portion of our lives. Long-term construction or demolition operation is defined as 10 days or more; this construction will take place over a minimum of 850 days, or 1095 days if it stretches over 3 years, which we anticipate. Oakland Planning Code lists the maximum allowable receiving noise levels for construction and demolition:

TABLE 17.120.04

## MAXIMUM ALLOWABLE RECEIVING NOISE LEVEL STANDARDS, dBA

	Daily (7 a.m. to 7 p.m.)	Weekend (7 a.m. to 8 p.m.)
Short-Term Operation		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Operation		
Residential	65	55
Commercial, Industrial	70	60

In the Health Risk Assessment, Appendix C, the CEQA report states that Concrete/Industrial Saws will be used for 8 hours per day for 59 days during demolition and grading. At their source, concrete saws are deafening, reaching sound levels over 110 dB. They will be used to cut through thick concrete mere inches from our windows. Their sound level is 90dB at a 50 foot distance.

Demolition and grading will entail 3,188 hauling trips; over 300 hauling trips per day during the grading process, removing 24,500 cubic yards of excavated materials. A clam shovel dropping material into a dump truck has a sound level of 93 dB at 50 feet; the dump truck contributes another 84 dB at this distance.



Building Construction is estimated at 494 days. The CEQA report omits the number of the hauling trips required to deliver material to this site. A concrete mixer truck is rated at 85 dB at 50 feet. While concrete is being poured an air compressor adds another 80 dB at that distance.

These are just a few examples of construction activity which will violate noise ordinances. The cumulative sound levels of all construction activities and their duration must be calculated. Construction of this building will take up to three years, and the health risks regarding noise are not theoretical. Exposure to a noise level of 85 dB for even one workday can produce hearing loss. Chronic exposure to noise levels as low as 65 dB can increase adrenaline and stress hormone levels and elevate blood pressure, which increases the risk of heart disease and stroke.

We do not believe the particulate pollution that will be emitted by construction has been accurately calculated. It gets worse - will the demolition of the current building release asbestos?

*The Proposed Project would also include demolition of the existing building totaling an area of 27,600 square feet. The existing building may contain Asbestos Containing Materials (ACM) which could pose a health risk to workers and nearby receptors during demolition.*

As nearby receptors, before this project is approved, we demand this question is answered.

A building of this size in such close proximity to our living spaces presents another significant safety issue: gravity. Will their crane swing heavy material over our heads, above our airspace, up to 500 feet in the air, over 494 days of operation? Where it will be affixed to their structure at great height, a short horizontal distance away from our apartments? Where if anything should slip, it could crush through our roof or fall into our center light well and crash through our windows? The City of Oakland would be negligent to place its citizens in such a position of great risk.

CEQA mandates that an analysis of a project's impacts consider whether the project might cause existing environmental hazards to get worse. For a project of such long duration, one such hazard is the impact of construction traffic. 19th St. is a busy pedestrian and vehicular traffic corridor. If 1750 Broadway is under construction at the same time as 1900 Broadway, both sides of 19th St. will be clogged due to additional construction traffic. If construction occurs sequentially, it will be noisy and congested for a longer period of time. The impact of construction of both of these and other projects must be considered together, as this is how they impact our city.

This project will require the removal and replacement of the 19th St. BART elevator. For how long will disabled citizens lose access to a central BART station? The construction of 1750 Broadway will cause additional impact upon infrastructure which is already suffering impact from neighboring construction projects.

#### 4) Increase in Housing Disparity and other long-term effects

No replacement apartments similar to ours are under construction in downtown Oakland. The approval of 1750 Broadway's luxury apartments will fall outside the housing guidelines set by both



the City of Oakland and State of California, which could put our city's funding at risk. It will place additional stress on the infrastructure and social fabric of our city.

Our city has a responsibility to prevent our displacement or rehouse residents who will be impacted. We didn't choose this fight. Rather, we unwittingly contributed to the "Oakland Vibe" listed in the marketing material of those who wish to displace us.

*"Oakland is fast becoming unaffordable to those who have called our city home for generations and who give our city its rich diversity. This is unacceptable."*

- Libby Schaaf, Oakland At Home, 2016

Another 350 units of luxury apartments will only exacerbate Oakland's existing housing crisis. They will be unaffordable for those who serve our city, including Oakland's teachers, police officers and even city council members. Moreover, the impact upon our building will result in a net decrease in livable, affordable units.

The 2017 Housing Element Annual Progress report can be found here:

<http://www2.oaklandnet.com/government/o/PBN/OurOrganization/PlanningZoning/OAK045364>

### ANNUAL ELEMENT PROGRESS REPORT Housing Element Implementation (CCR Title 25 §6202 )

Jurisdiction OAKLAND  
Reporting Period 01/01/2017 - 12/31/2017

Table B

#### Regional Housing Needs Allocation Progress Permitted Units Issued by Affordability

Enter Calendar Year starting with the first year of the RHNA allocation period. See Example.												Total Units to Date (all years)	Total Remaining RHNA by Income Level	
Income Level		RHNA Allocation by Income Level	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9			
Very Low	Deed Restricted	2059	98	26	247	0	0	0	0	0	0	371	1688	
	Non-Restricted		0	0	0	0	0	0	0	0	0			
Low	Deed Restricted	2075	30	13	66	0	0	0	0	0	0	109	1966	
	Non-Restricted		0	0	0	0	0	0	0	0	0			
Moderate		2815	0	0	11	0	0	0	0	0	0	11	2804	
Above Moderate		7816	643	2082	3960	0	0	0	0	0	0	6685	1131	
Total RHNA by COG. Enter allocation number:		14765												
Total Units ▾ ▾ ▾			771	2121	4294	0	0	0	0	0	0	7176		
Remaining Need for RHNA Period ▾ ▾ ▾ ▾ ▾														7589

Note: units serving extremely low-income households are included in the very low-income permitted units totals.

The 2018 Progress Report is scheduled to be released on April 1, 2019. After projects approved in 2018 have been added, the target for Above Moderate units (> 120% AMI) will be exceeded. All other targets will remain disproportionately unfulfilled.



Enforcement of these guidelines have been lax, but Governor Newsom may change this. In his first budget speech, he suggested withdrawing gas tax money from cities if they don't meet regional housing targets.

<https://www.sfchronicle.com/bayarea/article/Newsom-touches-a-nerve-by-connecting-gas-tax-13546364.php>

Approval of additional Above Moderate units will result in further non-compliance. These guidelines were put in place to build healthy, vibrant communities where the needs of all residents are met. Regional Housing Needs Allocation guidelines cannot be deliberately and flagrantly flaunted. If this trend is not reversed, it may adversely affect the financial health of our City and its residents.

### 5) Funding

The funding mechanisms employed by neighboring downtown projects have been somewhat suspect, as is the proposed funding for 1750 Broadway. Last year, the Planning Commission extended another one-year extension for the 1900-1944 Broadway project. This building is being funded via EB-5 visas, a program that has been noted for rampant fraud. Meanwhile this block across our street remains sitting in blight. The historic Tapscott Building has been entered by homeless people and peeping toms.

In lightly reported news last September, it appears 1750 Broadway LLC tokenized their ownership of their property. As the listed developers, do they intend to finance this project via a blockchain product?

<https://www.globest.com/2018/09/21/how-one-group-of-owners-tokenized-an-office-for-greater-liquidity/>

*By Erika Morphy | September 21, 2018*

*SAN FRANCISCO - It is all well and good to hear the theory behind blockchain and how it can help commercial real estate, but to see it in action is another thing all together. Case in point: A group of owners of an office building in Oakland, CA's uptown district just tokenized the building to provide greater liquidity and make it easier for the owners to sell and exchange their shares.*

*Essentially this was a securities transaction, according to Razmig Boladian, co-founder and managing partner of Real Estate Private Equity firm Rubicon Point Partners. Boladian spoke to GlobeSt.com on behalf of the building owners. "It was a faster, cheaper and more liquid route instead of trading paper," he says.*

*The transaction complete, the shares have already been distributed among the owners, he adds. The owners used Flote, a fintech startup based in San Francisco, to tokenize the shares of the office building, which is valued at \$10 million. Flote provides software and services to fractionalize large commercial real estate assets into tradeable tokens on blockchain.*



*Because it is a new method of finance, some users can be leery of it, Roland Pan, CEO of Flote, tells GlobeSt.com.*

The developers have not divulged this information to the Planning Commission. Flote is a very cryptic form of cryptocurrency. Roland Pan is a mystery man. Flote has no website or publicly available information.

1750 Broadway LLC is required to fulfill specific financial obligations to the City. Who are these owners? Are their funding sources legitimate? Are they legal, secure and accountable? As our apartments may be catastrophically impacted, we have a right to know this information, as damages may cause us to seek redress. The citizens of Oakland may wish to be informed of the funding sources for this project. Why has this been kept secret?

#### 6) Appeal to City Council

We believe we have provided the Planning Commission sufficient evidence demonstrating why this project cannot proceed as planned. Any project for the 1750 Broadway parcel must start with a sufficient set of mitigation measures approved by the impacted residents of our building. Should this project go forward, we will seek injunctions and appropriate monetary damages.

If this project returns to the Agenda of future Planning Commission meetings, we request 28 days notice prior to this meeting. The developers have been allowed to set the schedule and spring meetings on us with little warning, resulting in insufficient time for us to prepare. We have been living under the threat of this life-altering project and its potential impacts for over a year.

The 1750 Broadway project requires a Major Conditional Use Permit. **If the Planning Commission approves this project, we intend to appeal this decision in front of the City Council. If the Planning Commission finds this project is in accordance with current city policy, we will address this policy at a level where its consequences can be considered.** We will enlist greater public support and engage other organizations who share these policy concerns.

We have been quoted an appeal fee of \$1,891.08. This fee is not listed in the City of Oakland Fiscal Year 2018-9 Master Fee Schedule or anywhere else on the City's website. This fee should be published as public information. We will raise this fee through crowd-funding and must provide transparency to our donors.

Our appeal will raise each and every issue that is contested above, along with all the arguments and evidence other residents of 1770 Broadway have placed in the record and presented to the City Planning Commission prior to the close of its public hearing on this item.

Thank you for your time and attention,

Joseph Hornof  
1770 Broadway #112  
Oakland, CA 94612



**Rivera, Mike**

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**From:** Chantal Reynolds <creynolds@actransit.org>  
**Sent:** Tuesday, March 19, 2019 4:13 PM  
**To:** jmyres.oakplanningcommission@gmail.com; amandamonchamp@gmail.com;  
tlimon.opc@gmail.com; jfearnopc@gmail.com; cmanusopc@gmail.com;  
SShiraziOPC@gmail.com; NHegdeOPC@gmail.com  
**Cc:** Claudia Burgos; Beverly Greene; Robert Del Rosario; Mallory Nestor; Rivera, Mike  
**Subject:** Letter from AC Transit and BART General Managers regarding Item number 1 - Case File  
PLN18369 - 1750 Broadway at March 20th Planning Commission Meeting  
**Attachments:** City of Oakland Planning Commission\_2019-03-14 (003).pdf

Dear Planning Commissioners,

Please find the attached letter from AC Transit and BART General Managers regarding the East Bay Paratransit Consortium site and lease at 1750 Broadway on the March 20<sup>th</sup> Planning Commission agenda.

Kindest regards,

Chantal Reynolds | External Affairs Representative  
Legislative Affairs and Community Relations Department



Alameda-Contra Costa Transit District  
1600 Franklin Street | Oakland, CA 94612  
Phone: 510-891-7194 | Cell: 510-418-9364 | Fax: 510-891-4874  
Email: [creynolds@actransit.org](mailto:creynolds@actransit.org) | [www.actransit.org](http://www.actransit.org)





March 14, 2019

Via email

Jahmese Myres, Chair  
City of Oakland Planning Commission  
250 Frank Ogawa Plaza  
Suite 2114  
Oakland, CA 94612

Dear Chair Myres and Commissioners:

AC Transit and BART write with respect to project API70064 located at 1750 Broadway. This project calls for the demolition of the existing building and the construction of a multi-story, mixed use tower in its stead.

Previously AC Transit and BART informed the City's Design Review Committee that the first two floors of the property are currently leased by the East Bay Paratransit Consortium (EBPC). The lease on this property, including options, runs through 2030.

As you may be aware, EBPC provides door-to-door service for individuals within the service area who are unable, due to a cognitive or physical disability, to use regular buses or trains. EBPC is jointly funded by AC Transit and BART. The current location of the office is ideal for a number of reasons: secure parking for EBPC vans in the rear of the building, off Broadway, convenient access to multiple bus and BART lines for the numerous advisory/community meetings we host at the location, and direct access to the BART elevator at the property.

While AC Transit and BART are aware of Rubicon's desire to repurpose this property, we remain concerned that this project is moving forward through the planning approval process at this time; with more than 11 years remaining on the leasehold.

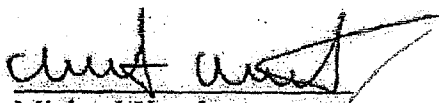


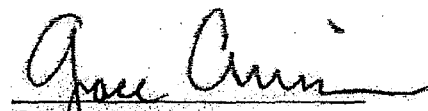
Representatives of AC Transit and BART have met with Rubicon to discuss the project, and various alternatives, but as of this writing no firm agreement has been reached between the parties to shorten the leasehold.

AC Transit and BART believe that it is important for the Planning Commission to be aware of the circumstances related to the existing building in considering an application for the redevelopment of the property. Given the nature of EBPC's leasehold interest, we suggest that the present application is premature.

This situation might change if the parties are able to come to a mutually satisfactory agreement to reduce the term of the leasehold, but until such an agreement is reached the consortium intends to remain at the property for the duration of its lease. In fact, for the first time in the parties' ongoing negotiations, Rubicon recently presented a proposal that AC Transit, BART, and Transdev may be able to use as the basis for reaching a deal to allow EBPC to move out of the building earlier than the lease provides. However, the parties are still negotiating the terms of such an agreement and have a way to go to finalize the specifics.

We appreciate your consideration of the facts outlined herein.

  
Michael Hursh  
General Manager  
AC Transit

  
Grace Crunican  
General Manager  
BART



**Rivera, Mike**

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**From:** Stephen Merjavy <merjavy.stephen@gmail.com>  
**Sent:** Tuesday, March 19, 2019 11:46 PM  
**To:** Rivera, Mike  
**Subject:** Case File Number: PLN18369, 1750 Broadway  
**Attachments:** 1750 broadway.docx

Dear Mr. Rivera,

Attached is my letter regarding the proposed development at 1750 Broadway. Thank you

Stephen Merjavy



Dear Mr. Rivera,

I am writing in regard to my concerns around the proposed development at 1750 Broadway. I have been living at 1770 Broadway for the last year and a half and think this development would significantly affect the quality of life in our building and irrevocably change the neighborhood.

1. Noise/air pollution: I live in a 3<sup>rd</sup> floor apartment facing the parking lot where the staging area for the construction of 1750 Broadway will be. Since I often work at night and sleep in the day this project will likely have effects on my health, as my ability to rest will certainly be curtailed. I'm already finding difficulty with maintaining a restful atmosphere with the beginning of construction across 19<sup>th</sup> street. If this project is to move forward and I'm looking at multiple years of noisy construction disturbance, I may need to move.

2. Parking: Street parking and movement in the 19<sup>th</sup> street area is already limited and congested by the numerous construction projects in the surrounding blocks. Rubicon needs to be more specific about what affects their development will have on parking and people movement, in concert with other current and proposed projects nearby. This development does not occur in a bubble given the rapid changes happening nearby.

3. Equity: Rubicon developers plan to build 300+ market rate apartments, the rental price of which they are unable to quote. I might be able to support a project that was more open to having a significant portion of affordable housing units in their development. Rubicon has no plan of this and the pittance of an impact fee that they will pay (quoted as \$6.8 million) would likely build fewer than 15 affordable units given current construction costs (~\$500,000+ for an affordable unit). Many of 1750's future residents will likely work in San Francisco and commute due to the comparatively lower rent of these market rate apartments. It is unclear what their contributions will be to Oakland itself.

I question why the "progressive" Oakland city council would not take a stronger stand against these types of market rate only developments as they further drive inequality in downtown. Yes, there is a need for housing affordable or not, but soon there will be only wealthy residents and the homeless in the downtown area. It seems this is their vision.

Stephen Merjavy  
1770 Broadway Resident



Rivera, Mike

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**From:** Manar Harb <manar.harb@gmail.com>  
**Sent:** Wednesday, March 20, 2019 6:02 AM  
**To:** Rivera, Mike  
**Cc:** Geeky Girl; Joseph Hornof  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Public Comment on Case File Number: PLN18369, 1750 Broadway  
To: [MRivera@oaklandca.gov](mailto:MRivera@oaklandca.gov)

Mr. Rivera,

I am a current resident at 1770 Broadway and I am deeply concerned about the proposed development plan for 1750 Broadway. There is no consideration to the environment in the proposed plan for 1750 Broadway, and no consideration to the residents who live on Broadway, particularly 1770 Broadway residents.

The development will negatively impact our lives and living conditions. Health wise, the scale and dimensions of the building will block natural sunlight from the left side of the building. Sunlight deprivation is a leading cause for depression and can cause serious health issues. In addition, the construction will bring noise and dust into our homes, disrupting our living conditions on a daily basis and causing an increase in allergies and respiratory problems. It will likely force us to shut our windows for the entire time of the construction, taking away our ability to circulate the air in our homes.

Mr. Rivera, I urge to take our concerns seriously and not accept the current development plan for 1750 Broadway. Help preserve the history of Oakland and advocate for health-conscious development projects that are environmentally conscious and friendly to the community of Oakland.

Thank you,

Manar Harb



Rivera, Mike

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**From:** Joy Chao-yi Meng <joychaoyim@yahoo.com>  
**Sent:** Monday, March 18, 2019 6:18 PM  
**To:** Office of the Mayor  
**Cc:** Rivera, Mike; Joseph Hornof; Geeky Girl; Nosakhare, Shereda  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Dear Mayor Schaaf:

Hope your day went well. This email is to advocate for all residents at 1770 Broadway apartment building and the residents nearby.

I have been living at 1770 Broadway since December 15th, 2001. As a long term resident and immigrant, I am here to URGE you stopping the possibility of building a luxurious skyscraper at 1750 Broadway for the following 3 major reasons:

1. **Three years of construction will be unsafe and unhealthy to neighbors within 5 blocks of all directions** - we, residents at 1770 Broadway apartment building, would suffer the most from potential construction errors - very likely to destroy the foundation of our historical apartment building(1910's), endless noise/air pollutions, and lack of access for sidewalk heading toward city hall, where lots of activities happen. We people who live in 1770 Broadway deserve better quality of fear-free live. This potential long term construction would not possibly pass any evaluation of safety and health (our mental health would be ruined by consistent anxiety and stresses).
2. **Oakland Mayor has the obligation to END GENTRIFICATION but not introducing it to downtown Oakland.** I came to Oakland in 2001 from Taiwan for its' historical activism for civil rights, for its' origin of Black Panthers' movement, for its' hip-hop/ black and brown culture (enriching American culture globally for decades), for its' home of Tupac's legacy impacting young people around the world to this date, for its' socio-economic equity, and for its' nurture for people who are willing to serve for the underserved communities with limited incomes. An "out-of place" high skyscraper that is designed for the 1% simply doesn't fit in our Oakland spirit. We, the 99%, **OCCUPIED OAKLAND** for fighting against greedy bankers and cooperates downtown Oakland right here in October 2011. This skyscraper at 1750 would take away the Oakland spirit and push us 99% out of downtown Oakland.
3. **There are way too many luxurious buildings (built or currently under construction) within 10 blocks in every directions nearby 1750 Broadways.** Oaklanders DO NOT NEED to have more buildings serve the wealthy; city of Oakland has historical responsibilities to provide affordable housing and increase the mobility for people who live in East and West Oakland moving to downtown Oakland, which would decrease culture and racial segregations by zip codes. **I urge you, Mayor Schaaf, please preserve downtown Oakland as one of the very few areas where reflect on true current American populations.** The history is in your hands - for the people or for cooperates. You promised us Oaklanders to serve the people during your two champions. Please do not disappoint Oakland like most of politicians.

I am serving for OUSD students whose mental health is severely compromised (high scores of childhood adversity). These precious young lives are the victims of segregating people by our abilities gaining capitals and our skin colors. The skyscraper at 1750 Broadway would segregate us much



further more socioeconomically. I urge you to give us HOPE that the students and their families that I love from bottom of my heart could one day afford living in downtown Oakland experiencing inclusiveness culturally and socioeconomically.

Respectfully,

Joy

**Chao-Yi Meng**  
**Instructional Support Specialist**  
**Incentive Counseling Enrich Special Day Class**  
**Home Address:**  
**1770 Broadway, Apt. #401**  
**Oakland, CA 94612**  
**Home: 510-590-9243**  
**Cell: 510-219-4901**



Rivera, Mike

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**From:** Joy Chao-yi Meng <joychaoyim@yahoo.com>  
**Sent:** Monday, March 18, 2019 8:56 PM  
**To:** Rivera, Mike  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Dear Commissioner Mr. Rivera,

Hope your day went well. This email is to advocate for all residents at 1770 Broadway apartment building and the residents nearby.

I have been living at 1770 Broadway since December 15th, 2001. As a long term resident and immigrant, I am here to URGE you stopping the possibility of building a luxurious skyscraper at 1750 Broadway for the following 3 major reasons:

1. **Three years of construction will be unsafe and unhealthy to neighbors within 5 blocks of all directions** - we, residents at 1770 Broadway apartment building, would suffer the most from potential construction errors - very likely to destroy the foundation of our historical apartment building (1910's), endless noise/air pollution, and lack of access for sidewalk heading toward city hall, where lots of activities happen. We people who live in 1770 Broadway deserve better quality of fear-free live. This potential long term construction would not possibly pass any evaluation of safety and health (our mental health would be ruined by consistent anxiety and stresses).
2. **Oakland Mayor has the obligation to END GENTRIFICATION but not introducing it to downtown Oakland.** I came to Oakland in 2001 from Taiwan for its' historical activism for civil rights, for its' origin of Black Panthers' movement, for its' hip-hop/ black and brown culture (enriching American culture globally for decades), for its' home of Tupac's legacy impacting young people around the world to this date, for its' socio-economic equity, and for its' nurture for people who are willing to serve for the under-served communities with limited incomes. An "out-of place" high skyscraper that is designed for the 1% simply doesn't fit in our Oakland spirit. We, the 99%, OCCUPIED OAKLAND for fighting against greedy bankers and cooperates downtown Oakland right here in October 2011. This skyscraper at 1750 would take away the Oakland spirit and push us 99% out of downtown Oakland.
3. **There are way too many luxurious buildings (built or currently under construction) within 10 blocks in every directions nearby 1750 Broadways.** Oaklanders DO NOT NEED to have more buildings serve the wealthy; city of Oakland has historical responsibilities to provide affordable housing and increase the mobility for people who live in East and West Oakland moving to downtown Oakland, which would decrease culture and racial segregation by zip codes. **I urge you, Mayor Schaaf, please preserve downtown Oakland as one of the very few areas where reflect on true current American populations.** The history is in your hands - for the people or for cooperates. You promised us Oaklanders to serve the people during your two champions. Please do not disappoint Oakland like most of politicians.

I am serving for OUSD students whose mental health is severely compromised (high scores of childhood adversity). These precious young lives are the victims of segregating people by our abilities gaining capitals and our skin colors. The skyscraper at 1750 Broadway would segregate us much further more socioeconomically. I urge you to give us HOPE that the students and their families that I



love from bottom of my heart could one day afford living in downtown Oakland experiencing inclusiveness culturally and socioeconomically.

Respectfully,

Joy

**Chao-Yi Meng**  
**Instructional Support Specialist**  
**Incentive Counseling Enrich Special Day Class**  
**Home Address:**  
**1770 Broadway, Apt. #401**  
**Oakland, CA 94612**  
**Home: 510-590-9243**  
**Cell: 510-219-4901**



**Rivera, Mike**

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**From:** Scott Goff <scott.c.goff@gmail.com>  
**Sent:** Monday, March 18, 2019 9:11 PM  
**To:** Rivera, Mike  
**Subject:** Re: Case File Number: PLN18369, 1750 Broadway

Dear Planning Commissioners,

I have lived at 1770 Broadway for nine years, now. It is my home, as well as the home of my partner, Angela Roberts, with whom I moved into our apartment almost a decade ago. Prior to that, I have lived in Oakland since 2002, and Angela since 2005.

Angela works at a nonprofit, the Progress Foundation, that operates an array of recovery houses in San Francisco and the North Bay, serving people with mental health, addiction, and chronic homelessness issues, helping them to stabilize and access the services they need to get back on their feet. I work at a company called Ponoko in Oakland, associated with the "Maker Movement" and offering laser cutting services to a wide array of people: Etsy sellers, hobbyists, students, inventors, tinkerers, hardware manufacturers, dreamers, movers, and shakers. We are also both active in the Oakland arts community, helping to enrich the place we call home by pouring our creative energies into playing music at shows and participating in the literature scene. We both bring great value to this Bay Area community, but like many others, still find ourselves placed squarely into the fringe due to increasing pressures induced by the greatly inflated housing market blooming in Oakland.

With this inflated housing market in mind, the proposed project at 1750 Broadway is almost a perfect foil for Angela and I. It is a building not designed for us, therefore exclusionary. It offers no value to us, longtime residents of the city and its proposed neighbors. The only things that this development presents to us, and to all the residents of 1770 Broadway and our current neighbors, at large, are twofold: a big metaphorical "GET OUT" sign, dangled in our faces and impossible to ignore, and a very real, very physically and mentally stressful 3 year intrusion into our lives at 1770 Broadway.

I realize that projects like this are inevitable in cities, but as someone involved in the planning and permitting of this project, you have to realize the impact it will have on residents of neighboring structures, especially in the case of the residents of 1770 Broadway. Most of us cannot afford to move elsewhere, lest we lose our rent control and are priced out of this city entirely. The reality is that for many of us, this is our last foothold in the city we love and call home. And, if the 1750 project goes through as planned, it will literally envelope our home on two of four sides, with constant traffic and interruption of our lives on the remaining two sides bordered by the city streets. This will be our reality *for three years*, with incessant noise, construction dust and grime, street constrictions and closures, danger from overhead cranes, blockage of natural light, and general chaos from the proposed 7am to 7pm on weekdays, and 9am to 5pm on Saturdays. Is this how you would want to live? In your own home? *For three years?*

And then, should this project be finished to completion, the city will be left with 307 new units, filled with new residents being sluiced into surrounding city infrastructure that was never designed for even the current number of residents. To green-light such a project without first expanding and fortifying the surrounding city infrastructure, at the whim of real estate developers who are doing this not for Oakland, but because they feel they can profit from this venture, seems at the very best ill advised, and at worst highly unethical. And ultimately, we current residents will be the ones to feel the first wave, the brunt, of the effects on our neighborhood. From the first breaking of ground on the project, through to its opening, we will suffer if there are not steps taken to mitigate the situation.

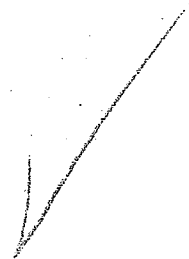
I am not a city planner or a real estate developer, nor am I a contractor, architect, or construction worker. I am simply a resident of this city, which I love dearly and wish to flourish. Oakland is a rich tapestry of culture, arts, and history. I do



not think that the way for it to flourish is through subjecting the people who make this city the jewel that it is to years of physical and mental abuse. If you do not speak up on behalf of the residents of this area, you will be doing Oakland a great disservice. Oakland has not and should not be about 36 story buildings with literally no affordable housing contained within. Such buildings and the people who propose to build them are not representative of the fabric of Oakland, and are simply profiteering based on our currently inflated real estate market. The elected and appointed members of our city government should be fighting on our behalf, and at the very least mitigating the impact of this development on the residents of this neighborhood to the highest degree possible. I urge you to take our situation into account when dealing with the proposed development at 1750 Broadway. Our way of life depends on your care and concern at this point, and if you do not listen to us, who will?

Sincerely,

Scott Goff and Angela Roberts  
(510) 517-1433  
1770 Broadway #203  
Oakland, CA  
94612





**Rivera, Mike**

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**From:** Matt Perry <mcp514@gmail.com>  
**Sent:** Monday, March 18, 2019 10:27 AM  
**To:** Rivera, Mike  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Dear Mr. Rivera:

I have been a resident of 1770 Broadway since 2007. I have lived in Oakland, on and off, since 1966, and I am proud to call myself an Oaklander.

As you are aware, another large-scale development is looming Downtown/Uptown: 1750 Broadway.

I am concerned about the noise, dust, traffic, air quality, safety, natural sunlight (or lack thereof), lack of parking during construction, the economic impact of local businesses during construction, and the overall inconvenience.

While I do recognize the need for additional housing, I also recognize the impact this project will have on my fellow residents and local businesses.

What is the City of Oakland doing to mitigate these issues?

Sincerely,

Matt Perry

1770 Broadway, #208

Oakland, CA 94612

[mcp514@gmail.com](mailto:mcp514@gmail.com)

Matt



## Rivera, Mike

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**From:** Velta Mara <veltamara@gmail.com>  
**Sent:** Sunday, March 17, 2019 6:51 PM  
**To:** Rivera, Mike  
**Cc:** Joseph Hornof; geekygirl@gmail.com  
**Subject:** Re: Case File Number: PLN18369, 1750 Broadway

I am also concerned about green space in our vicinity... This area needs at least 5 trees per block on either side of the street to offset all of the pollution created by development... are green walls and roofs being considered? not just for projected wealthy tenants, but for historic neighbors and the general public? the well being and health of the neighborhood?

Best,  
Velta Savelis  
Resident 1770 Broadway

> On 17 Mar 2019, at 11:30 AM, Velta Mara <veltamara@gmail.com> wrote:

>  
> Hello Mr. Rivera-

>  
> I am writing this note to express my concern around the projected construction on Broadway between 17th and 19th streets in Oakland. I am a resident of the building (for two years) and a native of Oakland. I am very concerned about a next high rise development occurring so close to my residence when there are already so many high rise developments occurring at this time in Oakland. It is very stressful to live with the constant din of construction and I am becoming increasingly disturbed as the demolitions, jackhammering, cranes and cement mixers are constantly active around this neighborhood.

>  
> I am also concerned about the displacement of even more folks from Oakland and dismayed at the thought of yet another monstrosity, taking away natural sunlight and fresh air from those of us who live and work here.

>  
> I am aware that none of the new living spaces will be affordable to myself nor most working or disabled/elderly people in Oakland and implore you to take into consideration those of us living at 1770 Broadway who may not have other affordable/convenient options available.

>  
> Thank you for your time and consideration in reconsidering this new "project"...

>  
> Kindly,

>  
> Velta Savelis  
> 1770 Broadway Resident

>



## **Rivera, Mike**

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**From:** Velta Mara <veltamara@gmail.com>  
**Sent:** Sunday, March 17, 2019 11:31 AM  
**To:** Rivera, Mike  
**Cc:** Joseph Hornof; geekygirl@gmail.com  
**Subject:** RE: Case File Number: PLN18369, 1750 Broadway

Hello Mr. Rivera-

I am writing this note to express my concern around the projected construction on Broadway between 17th and 19th streets in Oakland. I am a resident of the building (for two years) and a native of Oakland. I am very concerned about a next high rise development occurring so close to my residence when there are already so many high rise developments occurring at this time in Oakland. It is very stressful to live with the constant din of construction and I am becoming increasingly disturbed as the demolitions, jackhammering, cranes and cement mixers are constantly active around this neighborhood.

I am also concerned about the displacement of even more folks from Oakland and dismayed at the thought of yet another monstrosity, taking away natural sunlight and fresh air from those of us who live and work here.

I am aware that none of the new living spaces will be affordable to myself nor most working or disabled/elderly people in Oakland and implore you to take into consideration those of us living at 1770 Broadway who may not have other affordable/convenient options available.

Thank you for your time and consideration in reconsidering this new "project"...

Kindly,

Velta Savelis  
**1770 Broadway Resident**



**Rivera, Mike**

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**From:** Andre Owens <andreacehigh@yahoo.com>  
**Sent:** Friday, March 15, 2019 9:31 PM  
**To:** Rivera, Mike  
**Subject:** Public Comment on Case File Number: PLN18369, 1750 Broadway

Subject: Public Comment on Case File Number: PLN18369, 1750 Broadway  
To: MRivera@oaklandca.gov

Mr. Rivera,

I am a resident at 1770 Broadway. I have concerns about the size of the proposed construction at 1750 Broadway and safety risks this construction poses. During construction, something could easily drop from this building onto and through my roof, damaging the building structure or worse, hurting residents. Additionally, the duration of construction is expected to last up to 36 months. That is 3 years of sleep I will never get back. I work nights and sleep during the day. My bedroom faces south and will be pressed against the proposed parking garage. Can you guarantee me that noise, dust, and other safety risks will not adversely impact my health? Could a smaller building with an appropriate amount of space between buildings be a solution? Also, where are the low-income units? Oakland already has many new constructions of luxury and market-rate apartments. Oakland needs more affordable housing and the planning department needs to stand up to developers, demanding affordable units and refusing an easy payout. I request that Oakland planning put a stop to taking developer's money and letting developers have an easy go of our city. Oakland deserves more than a simple impact fee, we need housing that will contribute to the culture and prosperity of Oakland by providing shelter to low- and moderate-income residents who are currently underserved. Where does that "impact" money go, anyways? We need more housing, yes, but we do not need to sell ourselves short and, in the process, endanger residents. Make new developments work for Oakland and don't rush to approve projects that are ill-advised. Please do not approve this project as proposed. By the looks of the current proposal, I will be buried alive.

Sincerely,

Andre Owens, 1770 Broadway resident






**Rivera, Mike**

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**From:** Nancy Morosohk <NMorosohk@familypaths.org>  
**Sent:** Sunday, March 17, 2019 10:02 AM  
**To:** Rivera, Mike  
**Subject:** Case File Number: PLN18369, 1750 Broadway

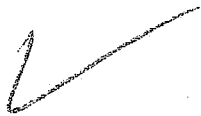


Hi,

I am writing to express my strong objection to the continued development of expensive luxury apartments in Oakland. I have lived in Oakland for the past 30 years and raised my daughter here. For the past almost 18 years I have also worked at a nonprofit in Oakland that serves the most vulnerable members of our community. As my daughter graduated from college 2 years ago and returned to the Bay Area, I was initially excited to see the construction of so many new apartment buildings around the city. Then I was shocked to discover that they all seemed to be luxury apartments that are very far out of the price range not only for my daughter, who works at a local school, but also for all of the experienced professionals I work with who are living on a non profit salary. While I am happy to see Oakland thriving, I am very troubled by this trend which seems to care more about the tech and business community that is new to Oakland and less about those of us who are already here and helping to make and keep Oakland the great city that it is.

As the Planning Commission of Oakland, I hope you will prioritize Planning for the citizens Oakland and not allow Oakland to become the next San Francisco where only the richest of people can afford to live. We need our diversity, we need to support our local workforce and we need to make it possible for the people who were raised here and who love Oakland to live here now and in the future.

I urge the Planning Commission to make the construction and preservation of affordable housing it's top priority. There are already enough luxury apartments here. Please do the right thing so that Oakland can stay a home for all people....that's what makes it Oakland! Thank you, Nancy



Nancy Morosohk, LCSW  
TIPS Program Manager  
[nmorosohk@familypaths.org](mailto:nmorosohk@familypaths.org)  
Pronouns: she, her, and hers

Family Paths  
1727 Martin Luther King Jr. Way #109  
Oakland, CA 94612  
(510)893-9230x217

[www.familypaths.org](http://www.familypaths.org)

you can call our 24/7 parental stress hotline 510-893-5444

Family Paths strengthens family relationships by providing mental health treatment and supportive services with respect, integrity, compassion, and hope.

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strictly prohibited. If you are not the intended recipient notify the sender immediately by return e-mail, delete this communication and destroy all copies.



Rivera, Mike

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**From:** Clay Kilby <wckilby@gmail.com>  
**Sent:** Friday, March 15, 2019 8:48 AM  
**To:** Rivera, Mike  
**Subject:** Public Comment on Case File Number: PLN18369, 1750 Broadway

Mr. Rivera,

My name is Clay Kilby, and I'm writing to express some concerns about the new construction planned for 1750 Broadway, Case File Number: PLN18369.

I'm a resident of 1770 Broadway and have been for just over three years. I run a small creative agency serving non-profits and I work from home. This apartment has been a true gift to me because of the proximity it has afforded me to the organizations I work with and the opportunity to live within the community I am working to support.

Upon becoming aware of the new development at 1750 Broadway, I have become concerned. My apartment, on the third floor, faces the area set aside for the new building's construction staging. It seems unlikely that I will be able to work productively during the day with the noise and inconveniences of construction, which is projected to last for years. Though I have loved living here, and have no desire and little ability to move, I believe I will be forced to relocate when construction begins. I am uncertain about my future. Having been here for years, I am quite dependent on my rent controlled rate. I doubt I will be able to afford another apartment in the area, and will be forced to consider moving out of Oakland, which has been my home for much longer than I have been at 1770 Broadway.

But my deepest concerns over this project are not over my own wellbeing. In talking with my neighbors in my building and across the street I have come to realize that many will real harm to their quality of life, far beyond my own, as a consequence of this project. Many in my building will loose their only access to the outside world as their windows will be covered over by the new building's walls. Across the street many residents expect to loose their windows too, but to an overabundance of light, as the new structure reflects glaring light into their apartments during the day, and beams artificial light in at night. At the recent public planning meeting the developer representatives for the 1750 Broadway project offered access to their proposed dog park for these residents, which I consider a woefully inadequate solution. These residents should be compensated financially in an amount that would allow them relocate to a similar property in the neighborhood, or should be offered a comparable apartment at 1750 Broadway, subsidized to their current rent. I'm not advocating for a handout or windfall here. When doing harm to the life of another, the most appropriate solution is to compensate them in amount nearest to the harm they received in the form nearest to what has been lost.


My second concern is for the residents of downtown Oakland more broadly. The cost of living here is already extraordinarily high. I am not opposed to new development. I believe it to be a necessary part of the solution, reducing housing cost by reducing housing scarcity. I am however opposed to regressive development, that which adds housing only for the wealthy and at the expense of the poor. I am not opposed to the influx of new residents of wealth or any class, from San Francisco or anywhere else. Oakland welcomed me some years ago and I have been grateful to call it my home ever since. But I am concerned about new development which serves only those with means, and excludes those without, especially those who have already worked so hard to carve out a life here. For too long we poor residents have been told to accept new construction intended only for the wealthy. That serving them would somehow, someday trickle down to help us. It hasn't. It won't. This new building should include copious amounts of affordable, below market rate units for residents of limited means, much more than is currently proposed.

During the recent meeting I attended, developer representatives told us that they were attracted to this location by the distinctive "Uptown vibe," showing us photos of its iconic buildings, the Fox, the Paramount, the Magnin Building. They claimed to be inspired by these structures and duty bound to make their building one that would do service to the



aesthetic of the neighborhood. I don't think they're wrong about the uptown vibe. It is a beautiful, diverse, creative, and fun place to live. But this uptown vibe is not defined by its architecture. It is defined by its residents. They are hardworking. They are diverse in ethnicity and in class. They are artists, and public servants, and entrepreneurs, and families. They are the architects of the uptown vibe. They have a right to remain here. They are the life in this city. Without them all the iconic buildings, and this new construction too, will be little more than dead boxes.

Thank you,  
Clay Kilby  
1770 Broadway #310  
[wckilby@gmail.com](mailto:wckilby@gmail.com)  
864-710-4994





**Rivera, Mike**

---

**From:** Christy Booth <christybooth@gmail.com>  
**Sent:** Friday, March 15, 2019 12:56 PM  
**To:** Rivera, Mike  
**Cc:** bsilver@familypaths.org  
**Subject:** Case File Number: PLN18369, 1750 Broadway

(Hi Christy, if you can add this to public comment, please do so.)

Public comment on the 1750 Broadway high-rise.

As the Executive Director of Family Paths, an Oakland based non-profit that employs over 80 people to provide mental health services and supportive services, I am extremely concerned about the lack of affordable housing in the planning for this new construction. Non-profit employers who serve the most vulnerable Oakland residents are losing our workforce due to the housing crisis and lack of affordable housing for our staff. I urge the planning commission to strongly prioritize the construction and preservation of affordable housing so that small and mid-size businesses can continue to hire local residents. The City is losing precious human capital that helps this community thrive and I urge you to plan for them as well and require affordable units in this project.

Barbra Silver, MFT  
Executive Director  
Pronouns: she, her, and hers  
Family Paths, Inc.  
510-893-9230 ext. 227  
[bsilver@familypaths.org](mailto:bsilver@familypaths.org)

*Family Paths strengthens family relationships by providing mental health and supportive services with respect, integrity, compassion, and hope.*

[www.familypaths.org](http://www.familypaths.org)



**Rivera, Mike**

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**From:** Christy Booth <christybooth@gmail.com>  
**Sent:** Friday, March 15, 2019 7:07 AM  
**To:** Rivera, Mike  
**Subject:** Case File Number: PLN18369, 1750 Broadway

Dear Mike Rivera,

My husband and I have lived at 1770 Broadway since August 2013. We are originally from NC and having this affordable place to live enabled me to study counseling psychology at a local graduate school and, since 2015, serve low-income families and children throughout Alameda County with quality mental health services. The invaluable services I and others like me provide are in jeopardy as the high cost of living has forced many young mental health professionals to leave the bay area or leave the non-profit sector. I work for a non-profit that receives county funds. We work to prevent and end child abuse.

I am also an artist and have contributed to Oakland First Fridays and other local events. I am concerned that the creative community I have actively contributed to is being exploited by those who seek an easy payday without giving anything to the community in return.

Please help us save our building. If 1750 goes up as planned, I will no longer be able to live in my apartment, leaving my job and the bay area altogether. Noise, traffic, pollution, and rising costs in the neighborhood are already significant stressors. If 1750 is built, my bedroom window will be one of the windows only inches from a concrete wall and directly exposed to "28-36 months" of construction, fumes, and any other danger this construction will pose to my wellbeing.

Of what I have read in the CEQA report, I am concerned that 1770 Broadway has no recognition as a place that will be impacted. We are 48 units of hard-working members of the community and we should not be invisible. The shadow study insufficiently describes the impact to our building. The traffic study relies on data from 2017 and does not take into account numerous current factors impacting congestion in the uptown/downtown area, including the addition of **scooters, new businesses, road closures due to additional new construction, and ongoing festivities such as marathons, parades, protests, and rallies.** I urge you to reconsider the validity of the CEQA report and demand further study into current traffic patterns and health costs to current residents, including the mental and physical toll of living with noise pollution and limited sunlight. We are being squeezed into a dark, noisy, shaft.

I have no doubt that I will be displaced as a result of this construction. Moreover, I can afford to earn a minimal wage working at Family Paths, the non-profit I am employed at full-time and live only 4 blocks from, because I have rent control. For me, losing my housing means leaving my job, and abandoning the dozens of families I support in order to reduce their risk of negative life outcomes, including depression, suicide, child abuse, substance abuse, gang involvement, and stunted academic progress. I am bilingual and serve the Latinx-immigrant community. We always have a waitlist--of families in crisis!--because we do not have enough bilingual mental health professionals in the bay area. Families in crisis should never be told they have to wait for help, yet families end up waiting for months while their problems get worse.

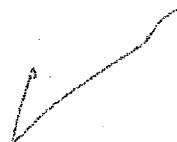
Where is the affordable housing for people like me who work every day to create a better community by enriching and empowering lives? Allowing the proposed building at 1750 Broadway sends the message that Oakland is only for the wealthy and that Oakland officials are unable to recognize the actual lived experiences and valuable contributions of their low- and middle-income residents.

Please help us save our building and make a commitment to ensuring stability and safety for low- and middle-income residents.



Sincerely,

Christy Booth  
1770 Broadway resident

A handwritten signature in black ink, appearing to be 'Christy Booth', located in the bottom right corner of the page.



# **ATTACHMENT B**

*April 1, 2019 Appeal by  
East Bay Residents for Responsible Development (EBRRD)*





**CITY OF OAKLAND**  
**APPEAL FORM**  
**FOR DECISION TO PLANNING COMMISSION, CITY**  
**COUNCIL OR HEARING OFFICER**

**PROJECT INFORMATION**

Case No. of Appealed Project: PLN18369  
Project Address of Appealed Project: 1750 Broadway, Oakland  
Assigned Case Planner/City Staff: Mike Rivera, Project Planner

**APPELLANT INFORMATION:** East Bay Residents for Responsible Development  
Printed Name: c/o Christina Caro Phone Number: (650) 589-1660  
Mailing Address: 601 Gateway Blvd #1000 Alternate Contact Number:  
City/Zip Code S. San Francisco, CA 94080 Representing: East Bay Residents for  
Email: ccaro@adamsbroadwell.com Responsible Development

An appeal is hereby submitted on:

☐ **AN ADMINISTRATIVE DECISION (APPEALABLE TO THE CITY PLANNING COMMISSION OR HEARING OFFICER)**

**YOU MUST INDICATE ALL THAT APPLY:**

- ☐ Approving an application on an Administrative Decision
- ☐ Denying an application for an Administrative Decision
- ☐ Administrative Determination or Interpretation by the Zoning Administrator
- ☐ Other (please specify) \_\_\_\_\_

**Please identify the specific Administrative Decision/Determination Upon Which Your Appeal is Based Pursuant to the Oakland Municipal and Planning Codes listed below:**

- ☐ Administrative Determination or Interpretation (OPC Sec. 17.132.020)
- ☐ Determination of General Plan Conformity (OPC Sec. 17.01.080)
- ☐ Design Review (OPC Sec. 17.136.080)
- ☐ Small Project Design Review (OPC Sec. 17.136.130)
- ☐ Minor Conditional Use Permit (OPC Sec. 17.134.060)
- ☐ Minor Variance (OPC Sec. 17.148.060)
- ☐ Tentative Parcel Map (OMC Section 16.304.100)
- ☐ Certain Environmental Determinations (OPC Sec. 17.158.220)
- ☐ Creek Protection Permit (OMC Sec. 13.16.450)
- ☐ Creek Determination (OMC Sec. 13.16.460)
- ☐ City Planner's determination regarding a revocation hearing (OPC Sec. 17.152.080)
- ☐ Hearing Officer's revocation/impose or amend conditions (OPC Sec. 17.152.150 &/or 17.156.160)
- ☐ Other (please specify) \_\_\_\_\_

(Continued on reverse)



(Continued)

☒ **A DECISION OF THE CITY PLANNING COMMISSION (APPEALABLE TO THE CITY COUNCIL)** ☒ Granting an application to: OR ☐ Denying an application to:

**YOU MUST INDICATE ALL THAT APPLY:**

Pursuant to the Oakland Municipal and Planning Codes listed below:

- ☒ Major Conditional Use Permit (OPC Sec. 17.134.070)
- ☐ Major Variance (OPC Sec. 17.148.070)
- ☒ Design Review (OPC Sec. 17.136.090)
- ☐ Tentative Map (OMC Sec. 16.32.090)
- ☐ Planned Unit Development (OPC Sec. 17.140.070)
- ☐ Environmental Impact Report Certification (OPC Sec. 17.158.220F)
- ☐ Rezoning, Landmark Designation, Development Control Map, Law Change (OPC Sec. 17.144.070)
- ☐ Revocation/impose or amend conditions (OPC Sec. 17.152.160)
- ☐ Revocation of Deemed Approved Status (OPC Sec. 17.156.170)
- ☒ Other (please specify) CEQA Findings / MMRP / CEQA Analysis and Exemptions

**FOR ANY APPEAL:** An appeal in accordance with the sections of the Oakland Municipal and Planning Codes listed above shall state specifically wherein it is claimed there was an error or abuse of discretion by the Zoning Administrator, other administrative decisionmaker or Commission (Advisory Agency) or wherein their its decision is not supported by substantial evidence in the record, or in the case of Rezoning, Landmark Designation, Development Control Map, or Law Change by the Commission, shall state specifically wherein it is claimed the Commission erred in its decision. The appeal must be accompanied by the required fee pursuant to the City's Master Fee Schedule.

You must raise each and every issue you wish to appeal on this Appeal Form (or attached additional sheets). Failure to raise each and every issue you wish to challenge/appeal on this Appeal Form (or attached additional sheets), and provide supporting documentation along with this Appeal Form, may preclude you from raising such issues during your appeal and/or in court. However, the appeal will be limited to issues and/or evidence presented to the decision-maker prior to the close of the public hearing/comment period on the matter.

The appeal is based on the following: *(Attach additional sheets as needed)*

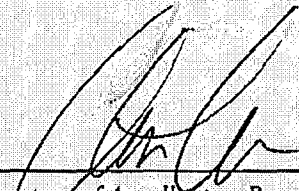
Please see attached.

**Supporting Evidence or Documents Attached.** *(The appellant must submit all supporting evidence along with this Appeal Form: however, the appeal will be limited evidence presented to the decision-maker prior to the close of the public hearing/comment period on the matter.*

(Continued on reverse)



(Continued)

  
\_\_\_\_\_  
Signature of Appellant or Representative of  
Appealing Organization

4/1/2019  
\_\_\_\_\_  
Date

**TO BE COMPLETED BY STAFF BASED ON APPEAL TYPE AND APPLICABLE FEE**

APPEAL FEE: \$ \_\_\_\_\_

Fees are subject to change without prior notice. The fees charged will be those that are in effect at the time of application submittal. All fees are due at submittal of application.

Date/Time Received Stamp Below:

Below For Staff Use Only

Cashier's Receipt Stamp Below:



ADAMS BROADWELL JOSEPH & CARDOZO

A PROFESSIONAL CORPORATION

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SARA F. DUDLEY  
THOMAS A. ENSLOW  
TANYA A. GULESSERIAN  
KYLE C. JONES  
RACHAEL E. KOSS  
NIRIT LOTAN  
MILES F. MAURINO

MARC D. JOSEPH  
*Of Counsel*

April 1, 2019

**Via Email and Hand Delivery**

Mike Rivera, Project Planner  
City of Oakland, Bureau of Planning  
250 Frank H. Ogawa, Suite 2114  
Oakland, CA 94612  
Email: [mrivera@oaklandnet.com](mailto:mrivera@oaklandnet.com)

City Clerk  
City of Oakland  
1 Frank H. Ogawa Plaza  
1st and 2nd Floors  
Oakland, CA 94612  
Email: [cityclerk@oaklandca.gov](mailto:cityclerk@oaklandca.gov)

Re: **Appeal to City Council re 1750 Broadway (Application Number:  
PLN18369; APN: 008 062301300)**

Dear Mr. Rivera, City Clerk:

We write on behalf of East Bay Residents for Responsible Development ("East Bay Residents") to appeal the Oakland Planning Commission's March 20, 2019 approval of the 1750 Broadway Project (Application Number: PLN18369; APN: 008 062301300) ("Project"), and the CEQA Checklist/Exemption Report ("CEQA Analysis") prepared for the Project by the City of Oakland ("City") pursuant to the California Environmental Quality Act ("CEQA").<sup>1</sup> This Appeal is taken from the following Planning Commission actions:

<sup>1</sup> Pub. Resources Code ("PRC") §§ 21000 et seq.; 14 Cal. Code Regs. ("CCR" or "CEQA Guidelines") §§ 15000 et seq.



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1. Adoption/approval of the CEQA Findings.
2. Approval of the Project, including Major Conditional Use Permit ("Major CUP") and Regular Design Review, subject to the Findings, Conditions of Approval ("Conditions"), and Mitigation Monitoring and Reporting Program ("MMRP") that were attached to the Planning Commission Staff Report.
3. The approval of an additional Condition of Approval (#24) imposed at the Planning Commission hearing to consider the feasibility of adding a new lightwell on the north side of the new building.<sup>2</sup>

The Project includes the proposed construction of a 37-story building consisting of 307 market-rate residential units, approximately 5,000 square feet of retail space, and a five-level parking garage for 170 parking spaces. The Project site is located at 1750 Broadway, between 17th and 19th Streets (APN: 008 062301300), and is proposed by Applicant Rubicon Point Partners ("Applicant").<sup>3</sup>

This Appeal letter demonstrates that the Planning Commission's decision to approve the Project was not supported by substantial evidence in the record.<sup>4</sup> Specifically, our prior comments, as well as the comments of several local residents and other members of the public that were submitted to the Planning Commission, identified several flaws in the City's analysis, and provided new information and substantial evidence demonstrating that the Project will have new and more severe impacts than previously analyzed in the City's General Plan Land Use and Transportation Element and its Environmental Impact Report ("LUTE EIR"), the 2007-2014 Housing Element, 2015-2023 Housing Element and their EIRs ("Housing Element EIRs"), and the City's 2011 Renewal Plan Amendments / Redevelopment Plan and EIR ("Redevelopment Plan").<sup>5</sup> These issues were not resolved by the Commission prior to approval.

The City's CEQA Analysis purports to evaluate the Project's potential environmental impacts and consistency with these prior EIRs, and erroneously

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<sup>2</sup> March 22, 2019 Planning Commission Decision Letter for Application Number: PLN18369; Property Location: 1750 Broadway; APN: 008 062301300 ("Decision Letter"), p. 1.

<sup>3</sup> March 20, 2019 Planning Commission Staff Report ("Staff Report"), p. 1.

<sup>4</sup> This Appeal is also accompanied with payment of the appeal fee of \$1,891.08 in accordance with the City of Oakland Master Fee Schedule.

<sup>5</sup> CEQA Analysis, p. 3.



asserts that the Project is exempt from further CEQA review pursuant to a number of CEQA exemptions, including the Class 32 infill exemption under CEQA Guidelines Section 15332, the streamlining exemptions for urban infill development projects under CEQA Guidelines Sections 15183 and 15183.3. In the alternative, the CEQA Analysis asserts that it is a CEQA Addendum prepared pursuant to CEQA Guidelines Sections 15162, 15163, and 15164 to address minor technical changes and additions in the prior analysis that do not trigger the need for subsequent environmental review.<sup>6</sup> However, as explained more fully below, and in the comments of other local residents and members of the public that were presented to the Planning Commission, the CEQA Analysis fails to disclose, analyze, and mitigate the Project's new, significant, and more severe impacts on air quality, public health, and construction noise that will occur during the Project's minimum 28-month construction period,<sup>7</sup> and fails to disclose, analyze, and mitigate the Project's new, significant, and more severe impacts on public transit which are likely to occur, and potentially escalate, throughout the life of the Project.

The CEQA Analysis failed to adequately disclose and mitigate these impacts, in violation of CEQA and local land use requirements. The Commission failed to resolve these deficiencies, and failed to remand the Project to Staff to prepare an EIR, prior to approving the Project. The Planning Commission therefore lacked substantial evidence to support its decision to approve the Project and its adoption of CEQA findings for the Project. As explained herein, the City Council should vacate the Planning Commission's approvals and remand the Project to Staff to prepare a legally adequate EIR, before the Project can be presented to City decision makers for approval.<sup>8</sup>

This appeal letter and attachments raises each and every issue that is contested, and addresses "issues and/or evidence" that was previously presented to the Planning Commission prior to its approval of the Project, as specified Sections 17.134.070 and 17.136.090 of the Oakland Planning Code and allowed pursuant to

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<sup>6</sup> CEQA Analysis, p. 3.

<sup>7</sup> CEQA Analysis, p. 51.

<sup>8</sup> PRC § 21094.5(a); 14 CCR § 15164(e); see *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal. 3d 506, 515.



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CEQA.<sup>9</sup> We previously filed comments on the Project on March 20, 2019 with the assistance of traffic engineer Daniel T. Smith Jr., P.E.<sup>10</sup> Local residents and members of the public submitted oral and written comments to the Planning Commission regarding the Project's significant construction noise impacts.<sup>11</sup> We also prepared this Appeal with the assistance of noise consultant Derek Watry, whose comments address the Project's construction noise impacts and need for additional mitigation identified by residents of 1770 Broadway,<sup>12</sup> and air quality and hazardous resources expert James J.J. Clark, PhD, whose comments address the issues previously raised by East Bay Residents regarding the CEQA Analysis' failure to accurately disclose and mitigate the Project's individual and cumulative public health risks to the surrounding community from exposure to toxic air contaminants ("TACs") during Project construction, and improper reliance on non-binding mitigation to reduce those impacts to less than significant levels.<sup>13</sup>

East Bay Residents urges the City Council to grant this Appeal and remand the Project to City Staff to prepare an EIR for the Project. The Project should not be rescheduled for a further public hearing until these issues have been addressed. East Bay Residents reserves the right to submit supplemental comments at any later hearings and proceedings related to the Project.<sup>14</sup>

## I. STATEMENT OF INTEREST

East Bay Residents is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards and environmental and public service impacts of the

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<sup>9</sup> Oak. Planning Code §§ 17.134.070.A; 17.136.090; PRC § 21177(a) (allowing members of the public to submit additional evidence to the lead agency regarding a project's CEQA compliance "until the close of the final hearing on the Project.").

<sup>10</sup> East Bay Residents' March 20, 2019 written comments to the Planning Commission are attached hereto as Exhibit A and incorporate by reference.

<sup>11</sup> Exemplary comments from residents of 1770 Broadway addressing construction noise impacts are attached hereto as Exhibit B and incorporated by reference.

<sup>12</sup> Mr. Watry's comments and curriculum vitae are attached hereto as Exhibit C and incorporated by reference.

<sup>13</sup> Dr. Clark's technical comments and curriculum vitae are attached hereto as Exhibit D

<sup>14</sup> Gov. Code § 65009(b); PRC § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield ("Bakersfield")* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.



Project. The association includes City of Oakland residents Jason Gumataotao, Kal Karn, and James O'Brien, labor organizations UA Plumbers and Pipefitters Local 342, International Brotherhood of Electrical Workers Local 595, Sheet Metal Workers Local 104, Sprinkler Fitters Local 483, their members and families, and other individuals that live and/or work in the City of Oakland and Alameda County.

Individual members of East Bay Residents and the its affiliated labor organizations live, work, recreate and raise their families in Alameda County, including the City of Oakland. They would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work on the Project itself. Accordingly, they will be first in line to be exposed to any health and safety hazards that exist onsite. East Bay Residents has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live there.

## II. LEGAL BACKGROUND

CEQA has two basic purposes, neither of which is satisfied by the CEQA Analysis. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental impacts of a project before harm is done to the environment.<sup>15</sup> The EIR is the "heart" of this requirement.<sup>16</sup> The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."<sup>17</sup>

To fulfill this function, the discussion of impacts in an EIR must be detailed, complete, and "reflect a good faith effort at full disclosure."<sup>18</sup> An adequate EIR

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<sup>15</sup> 14 Cal. Code Regs. § 15002(a)(1) ("CEQA Guidelines"); *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal.App.4th 1344, 1354 ("Berkeley Jets"); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

<sup>16</sup> *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 84.

<sup>17</sup> *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

<sup>18</sup> CEQA Guidelines § 15151; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 721-722.



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must contain facts and analysis, not just an agency's conclusions.<sup>19</sup> CEQA requires an EIR to disclose all potential direct and indirect, significant environmental impacts of a project.<sup>20</sup>

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring imposition of mitigation measures and by requiring the consideration of environmentally superior alternatives.<sup>21</sup> If an EIR identifies potentially significant impacts, it must then propose and evaluate mitigation measures to minimize these impacts.<sup>22</sup> CEQA imposes an affirmative obligation on agencies to avoid or reduce environmental harm by adopting feasible project alternatives or mitigation measures.<sup>23</sup> Without an adequate analysis and description of feasible mitigation measures, it would be impossible for agencies relying upon the EIR to meet this obligation.

Under CEQA, an EIR must not only discuss measures to avoid or minimize adverse impacts, but must ensure that mitigation conditions are fully enforceable through permit conditions, agreements or other legally binding instruments.<sup>24</sup> A CEQA lead agency is precluded from making the required CEQA findings unless the record shows that all uncertainties regarding the mitigation of impacts have been resolved; an agency may not rely on mitigation measures of uncertain efficacy or feasibility.<sup>25</sup> This approach helps "insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug."<sup>26</sup>

Following preliminary review of a project to determine whether an activity is subject to CEQA, a lead agency is required to prepare an initial study to determine

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<sup>19</sup> See *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 568.

<sup>20</sup> Pub. Resources Code § 21100(b)(1); CEQA Guidelines § 15126.2(a).

<sup>21</sup> CEQA Guidelines § 15002(a)(2) and (3); *Berkeley Jets*, 91 Cal.App.4th at 1354; *Laurel Heights Improvement Ass'n v. Regents of the University of Cal.* (1998) 47 Cal.3d 376, 400.

<sup>22</sup> Pub. Resources Code §§ 21002.1(a), 21100(b)(3).

<sup>23</sup> *Id.*, §§ 21002-21002.1.

<sup>24</sup> CEQA Guidelines § 15126.4(a)(2).

<sup>25</sup> *Kings County Farm Bur. v. County of Hanford* (1990) 221 Cal.App.3d 692, 727-26 (a groundwater purchase agreement found to be inadequate mitigation because there was no record evidence that replacement water was available).

<sup>26</sup> *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935.



whether to prepare an EIR or negative declaration, identify whether tiering or another appropriate process can be used for analysis of the project's environmental effects, or determine whether a previously prepared CEQA document could be used for the project, among other purposes.<sup>27</sup> The initial study must accurately describe the project, identify the environmental setting, identify environmental effects and show "some evidence" to support those conclusions, and a discussion of ways to mitigate the significant effects of the project, if any.<sup>28</sup> CEQA requires an agency to analyze the potential environmental impacts of its proposed actions in an EIR except in certain limited circumstances.<sup>29</sup> A negative declaration may be prepared instead of an EIR when, after preparing an initial study, a lead agency determines that a project "would not have a significant effect on the environment."<sup>30</sup> If the project has potentially significant environmental effects but those effects can be reduced to a level of insignificance by mitigation measures that the project's proponent has agreed to undertake, the lead agency may prepare a mitigated negative declaration ("MND").<sup>31</sup>

#### A. Subsequent CEQA Review.

When a previously approved project for which an EIR or an MND has been prepared is modified, CEQA requires the lead agency to conduct subsequent or supplemental environmental review when one or more of the following events occur:

- (a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report;
- (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report; or
- (c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.<sup>32</sup>

<sup>27</sup> CEQA Guidelines §§ 15060, 15063(c).

<sup>28</sup> CEQA Guidelines § 15063(d) (emphasis added).

<sup>29</sup> See, e.g., Pub. Resources Code § 21100.

<sup>30</sup> *Quail Botanical Gardens v. City of Encinitas* (1994) 29 Cal.App.4th 1597; Pub. Resources Code § 21080(c).

<sup>31</sup> PRC § 21080 (c)(2); 14 CCR § 15064(f)(2).

<sup>32</sup> Pub. Resources Code § 21166; CEQA Guidelines § 15162.



In assessing the need for subsequent or supplemental environmental review, the lead agency must determine, on the basis of substantial evidence in light of the whole record, if one or more of the following events have occurred:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant effects or a substantial increase in the severity of previously identified effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
  - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
  - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
  - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
  - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project



proponents decline to adopt the mitigation measure or alternative.<sup>33</sup>

Only where *none* of the conditions described above calling for preparation of a subsequent or supplemental EIR have occurred may the lead agency consider preparing a subsequent negative declaration, an addendum or no further documentation.<sup>34</sup> In any case, the decision must be supported by substantial evidence.<sup>35</sup> Here, the County's decision not to prepare a subsequent CEQA document for the Project is not supported by substantial evidence.

### B. CEQA Infill Streamlining Exemptions

The City seeks to rely on narrow CEQA exemptions that allow approval of projects without an EIR in very narrow circumstances, CEQA Section 21094.5<sup>36</sup> and CEQA Guidelines Sections 15183 and 15183.3 (Qualified Infill)<sup>37</sup> (collectively, the "Infill Exemption"). The Infill Exemption provides that, if an EIR was previously certified for a planning level decision of a city or county, subsequent CEQA review may be limited to evaluating a project's effects on the environment that are either (A) specific to the project or to the project site and were not addressed as significant effects in the prior environmental impact report or (B) where substantial new information shows the effects will be more significant than described in the prior environmental impact report.<sup>38</sup> The Infill Exemption allows a lead agency to forego preparation of an EIR if neither of these situations occur, or if the lead agency determines that uniformly applicable development policies or standards adopted by the agency will substantially mitigate the new effects. A lead agency's determination pursuant to this section must be supported by substantial evidence.<sup>39</sup>

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<sup>33</sup> CEQA Guidelines §§ 15162(a)(1)-(3).

<sup>34</sup> CEQA Guidelines § 15162(b).

<sup>35</sup> *Id.* §§ 15162 (a), 15164(e), and 15163(c)(4).

<sup>36</sup> Pub. Res. Code § 21094.5.

<sup>37</sup> 14 Cal. Code Regs. § 15183.3.

<sup>38</sup> Pub. Res. Code § 21094.5(a); 14 Cal. Code Regs. § 15183.3(a), (c).

<sup>39</sup> Pub. Res. Code § 21094.5(a).



### C. Categorical Exemptions.

CEQA identifies certain classes of projects which are exempt from the provisions of CEQA called categorical exemptions.<sup>40</sup> Categorical exemptions apply to certain classes of activities that generally do not have a significant effect on the environment.<sup>41</sup> Public agencies utilizing such exemptions must support their determination with substantial evidence.<sup>42</sup> CEQA exemptions are narrowly construed and “[e]xemption categories are not to be expanded beyond the reasonable scope of their statutory language.”<sup>43</sup> Erroneous reliance by a lead agency on a categorical exemption constitutes a prejudicial abuse of discretion and a violation of CEQA.<sup>44</sup> “[I]f the court perceives there was substantial evidence that the project might have an adverse impact, but the agency failed to secure preparation of an EIR, the agency’s action must be set aside because the agency abused its discretion by failing to follow the law.”<sup>45</sup>

CEQA contains several exceptions to categorical exemptions. In particular, a categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to “unusual circumstances,”<sup>46</sup> or where there is a reasonable possibility that the activity will have a significant effect on the environment, including (1) when “the cumulative impact of successive projects of the same type in the same place, over time is significant.”<sup>47</sup> An agency may not rely on a categorical exemption if to do so would require the imposition of mitigation measures to reduce potentially significant effects.<sup>48</sup>

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<sup>40</sup> PRC § 21084(a); 14 CCR §§ 15300, 15354.

<sup>41</sup> *Id.*

<sup>42</sup> PRC § 21168.5.

<sup>43</sup> *Mountain Lion Found. v. Fish & Game Com.* (1997) 16 Cal.4th 105, 125; *McQueen*, 2 Cal.App.3d at 1148.

<sup>44</sup> *Azusa*, 52 Cal.App.4th at 1192.

<sup>45</sup> *Dunn-Edwards Corp. v. Bay Area Air Quality Mgmt. Dist.* (1992) 9 Cal.App.4th 644, 656).

<sup>46</sup> 14 CCR § 15300.2(c).

<sup>47</sup> 14 CCR § 15300.2(b).

<sup>48</sup> *Salmon Pro. & Watershed Network v. County of Marin (“SPAWN”)* (2004) 125 Cal.App.4th 1098, 1198-1201.



### **III. THE COMMISSION'S RELIANCE ON PREVIOUS ENVIRONMENTAL ANALYSIS AND EXEMPTIONS VIOLATED CEQA**

#### **A. The Project is Not Consistent with CEQA Addendum and Infill Streamlining Exemption Requirements.**

The City's reliance on CEQA Addendum and Infill Streamlining Exemptions to approve the Project without preparing an EIR is misplaced for several reasons. First, the CEQA Analysis does not simply consist of "minor changes or additions are necessary" as is allowed under the Addendum provision. Rather, it includes an entirely new substantive analysis for a large development project which was not specifically analyzed in the LUTE EIR, Housing Element EIR, or Redevelopment Plan. The City must discontinue this practice, which clearly violates CEQA. Moreover, as explained further below, the Project will result in new or more severe significant impacts than analyzed in the previous EIRs that require mitigation that is not included in the CEQA Analysis or the City's Standard Conditions of Approval ("SCAs") and MMRP. CEQA requires that the City's decision to forego preparation of an EIR, and reliance on an Addendum, must be supported by substantial evidence.<sup>49</sup> In this case, the City's decision not to prepare a subsequent or supplemental EIR for the Project is not supported by substantial evidence because of these unanalyzed and/or unmitigated impacts.

The City also relies on narrow CEQA exemptions that are inapplicable or not supported by substantial evidence. Specifically, the City relies on CEQA Guidelines Sections 15183 (Community Plan)<sup>50</sup> and 15183.3 (Qualified Infill)<sup>51</sup> for Project approval. The exemptions apply only when a Project does not have impacts peculiar to the proposed project that are new or more significant than previously analyzed or can be substantially mitigated by uniformly applicable development policies or standards.

The Project fails to meet these requirements for three key reasons. First, the Project's health risks to local sensitive receptors from exposure during construction

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<sup>49</sup> *Id.* §§ 15162 (a), 15164(e), and 15168(c)(4).

<sup>50</sup> CEQA Guidelines Section 15183.

<sup>51</sup> CEQA Guidelines Section 15183.3.



to diesel particulate matter ("DPM") emissions, a TAC, constitute significant impacts, and the Commission failed to require binding mitigation to reduce these impacts to less than significant levels. Second, the Project will have significant construction noise impacts on local sensitive receptors that the CEQA Analysis fails to disclose, and fails to adequately mitigate. Finally, the City also failed to analyze the Project's impacts on public transit, in violation of CEQA and local land use requirements, and failed to disclose the Project's new and more severe impacts on local transit systems than the impacts previously envisioned in the LUTE EIR, Housing Element EIR, or Redevelopment Plan.

For these reasons, the Commission lacked substantial evidence to support its findings that the Project would not have any significant, unmitigated impacts on the urban environment and the health and welfare of local residents. The City Council cannot uphold the Commission's unsupported findings. The City Council should vacate the Commission approvals and require the City to provide detailed analysis of the Project's impacts in a subsequent or supplemental EIR.

**A. The Project Has Significant, Unmitigated Health Risks from Construction Emissions.**

The CEQA Analysis includes a health risk assessment ("HRA") which admits that the Project will have potentially significant individual and cumulative impacts during Project construction from cancer risk to nearby sensitive receptors, as follows:<sup>52</sup>

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<sup>52</sup> CEQA Analysis, HRA, p. C-7.



## MAXIMUM HEALTH RISKS FROM PROJECT CONSTRUCTION

Health Risk at MEIR	Maximum Cancer Risk (in a million)	Chronic Risk (Hazard Index)	Maximum PM <sub>2.5</sub> concentration
Residential Receptor - Infant	114	0.073	0.337
Residential Receptor - Child	23	0.073	0.337
Residential Receptor - Adult	3	0.073	0.337
Residential Receptor - Infant	4.5	0.003	0.014
Residential Receptor - Child	0.9	0.003	0.014
Residential Receptor - Adult	0.13	0.003	0.014
Project-level Threshold	10	1.0	0.3
Significant?	No	No	No

The CEQA Analysis demonstrates that the Project's unmitigated TAC emissions will exceed BAAQMD's CEQA significance threshold of 10 in one million for Project impacts for both children (23 in one million) and infants (114 in one million). The impact on infants also exceeds BAAQMD's cumulative cancer risk threshold of 100 in one million.<sup>53</sup> These are significant impacts which require mitigation under CEQA.

The CEQA Analysis relies entirely on the use of Tier 4 construction equipment to reduce the Project significant construction health risks to less than significant levels. However, the CEQA Analysis fails to adequately mitigate these risks because the City's reliance on Tier 4 construction equipment is not expressly required by either SCA AIR-3 or Conditions of Approval No. 13, the Construction Mitigation Plan ("CMP").

SCA AIR-3 contains two separate tracks which allow a project applicant to select either preparation of an HRA (SCA AIR-3.a.i) or agree to use Verified Diesel

<sup>53</sup> See CEQA Analysis, p. 43 (citing BAAQMD significance thresholds for TACs); see also BAAQMD California Environmental Quality Act Air Quality Guidelines (May 2017), at p. 2-2, available at [https://www.google.com/search?source=hp&ei=ITviXJutENL7-gSin7aQCg&q=baaqmd+ceqa+&btnK=Google+Search&oq=baaqmd+ceqa+&gs\\_l=psy-ab.3.0l2i0i22i30l3.1123.7295..7757..0.0.0.74.747.12.....0...1.gws-wiz.....0.0i131.9lsGEbDCYqA](https://www.google.com/search?source=hp&ei=ITviXJutENL7-gSin7aQCg&q=baaqmd+ceqa+&btnK=Google+Search&oq=baaqmd+ceqa+&gs_l=psy-ab.3.0l2i0i22i30l3.1123.7295..7757..0.0.0.74.747.12.....0...1.gws-wiz.....0.0i131.9lsGEbDCYqA)



Emission Control Strategies ("VDECS") for construction equipment, which may include, but does not require, Tier 4 engines (SCA AIR-3.a.ii).<sup>54</sup> Pursuant to SCA AIR-3.a.i, if the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures are then identified to reduce the health risk to "acceptable levels" as set forth under SCA AIR-3.a.ii. As explained by Dr. Clark, however, SCA AIR-3.a.ii's requirement to use VDECS does not bind the Applicant to the use of Tier 4 equipment. Rather, it simply offers the Applicant the opportunity to use the "most effective VDECS" available.<sup>55</sup> As Dr. Clark explains, "the wording of the SCA allows the Applicant, rather than the City, to determine whether 'available' equipment could include certified equipment that does not meet the Tier 4 requirement."<sup>56</sup> Condition No. 13 similarly requires preparation of a CMP, but does not expressly require the use of Tier 4 equipment.

Tier 4 equipment is not the only type of VDECS available.<sup>57</sup> There are also two levels of Tier 4 equipment currently available on the construction market – Tier 4 Interim and Tier 4 Final.<sup>58</sup> The CEQA Analysis assumes, with no supporting evidence, that the Project will use the most stringent Tier 4 Final equipment, which has limited availability and is harder to procure.<sup>59</sup> There is also no evidence in the record demonstrating that the Applicant has procured, or even committed to procure, the Tier 4 Final equipment. SCA AIR-3.a.ii requires that the Applicant's commitment to use VDECS "shall be verified through an equipment Inventory submittal and Certification Statement that the Contractor agrees to compliance."<sup>60</sup> However, neither the CEQA Analysis nor the Planning Commission Staff Report contain any such documentation.

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<sup>54</sup> See CEQA Analysis, Attachment C, SCA AIR-3.

<sup>55</sup> See Exhibit C, Clark Comments, p. 1.

<sup>56</sup> *Id.*

<sup>57</sup> See Emission Standards, Nonroad Diesel Engines, available at: <https://www.dieselnet.com/standards/us/nonroad.phpQ#tier3>.

<sup>58</sup> *Id.*

<sup>59</sup> See CEQA Analysis, Appendix C, Health Risk Analysis, CalEEMod Modeling, p. 2 ("All construction equipment used assumed to meet Tier 4 Final standards."). On limited availability of Tier 4 equipment, see "White Paper: An Industry Perspective on the California Air Resources Board Proposed Off-Road Diesel Regulations," Construction Industry Air Quality Coalition, available at: [http://www.agc-ca.org/uploadedFiles/Member\\_Services/Regulatory-Advocacy-Page-PDFs/White\\_Paper\\_CARB\\_OffRoad.pdf](http://www.agc-ca.org/uploadedFiles/Member_Services/Regulatory-Advocacy-Page-PDFs/White_Paper_CARB_OffRoad.pdf).

<sup>60</sup> SCA AIR-3.a.ii.



Dr. Clark explains that the reduction in DPM assumed by use of Tier 4 equipment includes reductions of emissions of up to 93% during the construction phase (0.26 tons to 0.019 tons of DPM emitted).<sup>61</sup> This assumption is entirely unsupported. The CEQA Analysis and Conditions of Approval fail to include a condition requiring Tier 4 engines, and the record fails to contain any evidence demonstrating that the Applicant will procure Tier 4 equipment for the Project. As a result, the City cannot rely on SCA AIR-3 to conclude that the Project's construction health risk would be reduced to below levels of significance, and there is currently no binding mitigation required for the Project that will effectively mitigate its significant cancer risks to less than significant levels. The City's significance conclusions regarding health risk are therefore unsupported, and the impact remains significant and unmitigated, and the City's approach to its health risk analysis fails to ensure that the public health will be protected.

**B. The Project Is Likely to Have Significant, Unmitigated Noise Impacts on Local Receptors during Project Construction.**

Several members of the public commented to the Planning Commission that the Project is likely to have significant impacts on neighboring residents from construction noise during the Project's 2-3 year construction period, resulting in more severe impacts on neighboring residents than analyzed by the City. Residents also expressed concerns that these impacts will not be mitigated to less than significant levels by the City's proposed SCAs. In particular, residents of 1770 Broadway, the neighboring property to the Project site, submitted both oral and written comments explaining that "construction [of 1750 Broadway] is scheduled to last 28-36 months...The noise from this construction will render our apartments unlivable during that period."<sup>62</sup>

The CEQA Analysis incorrectly concludes that the Project will have less than significant construction noise impacts based on two unsupported assumptions. First, the CEQA Analysis assumes that, because the Project would be required to comply with various land use regulations, including the City's Noise Ordinance, Municipal Code nuisance standards, California Noise Insulation Standards, and Oakland General Plan, that noise impacts would necessarily be less than

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<sup>61</sup> See Exhibit C, Clark Comments, p. 1.

<sup>62</sup> See Exhibit B, March 8, 2019 comments of 1770 Broadway resident J. Hornoff, p. 1.



significant.<sup>63</sup> Second, the CEQA Analysis assumes that implementation of SCA's NOI-1 through NOI-8 would reduce otherwise-significant construction noise impacts to a less than significant levels.<sup>64</sup> The City's reliance on these assumptions is unsupported and contrary to CEQA. By contrast, there is substantial evidence from local neighbors and noise consultant Mr. Watry demonstrating that the Project is likely to generate a substantial increase in ambient noise levels during Project construction that exceed noise levels existing without the Project, and that this increase remains substantial notwithstanding application of the SCAs to the Project.

**1. Compliance With Noise Regulations Is Not Substantial Evidence of Less Than Significant Impacts.**

The City relies on the Project's anticipated compliance with various land use regulations related to noise to conclude that the Project will not cause significant noise impacts in the first place. However, the City's reliance on compliance with regulations does not obviate the need for further analysis of noise impacts, nor does compliance with regulations provide any substantial evidence that the Project will not have significant noise impacts on surrounding sensitive receptors. The courts have held that compliance with noise regulations alone is insufficient to conclude that a project will not have significant noise impacts.

In *Keep our Mountains Quiet v. County of Santa Clara*,<sup>65</sup> neighbors of a wedding venue sued over the County of Santa Clara's failure to prepare an EIR for a proposed project to allow use permits for wedding and other party events at a residential property abutting an open space preserve. Neighbors and their noise expert contended that previous events at the facility had caused significant noise impacts that reverberated in neighbors' homes and disrupted the use and enjoyment of their property.<sup>66</sup> Similar to the CEQA Analysis in this case, the County had prepared a mitigated negative declaration ("MND"), which employed the noise standards set forth in the County's noise ordinance and general plan as

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<sup>63</sup> CEQA Analysis, pp. 39-41. The City relies on these "maximum" noise code violation standards as its significance thresholds to evaluate the severity of the Project's construction noise impacts.

<sup>64</sup> CEQA Analysis, p. 47.

<sup>65</sup> *Keep our Mountains Quiet v. County of Santa Clara* (2015) 236 Cal.App.4th 714.

<sup>66</sup> *Id.* at 724.



the County's thresholds for significant noise exposure from the project, deeming any increase to be insignificant so long as the absolute noise level did not exceed those standards.<sup>67</sup>

The Court examined a long line of CEQA cases which have uniformly held that conformity with land use regulations is not conclusive of whether or not a project has significant noise impacts.<sup>68</sup> In particular, citing *Berkeley Keep Jets Over the Bay Com. v. Board of Port Cmrs.*, the Court explained that "the fact that residential uses are considered compatible with a [County noise ordinance maximum] noise level of 65 decibels for purposes of land use planning is not determinative in setting a threshold of significance under CEQA."<sup>69</sup> The Court further explained that, as required by CEQA Guidelines Appendix G, § XII, subd. (d), the CEQA lead agency is required to "consider both the increase in noise level and the absolute noise level associated with a project" in evaluating whether a project has significant noise impacts. The Court held that the evidence submitted by local residents and their expert attesting to significant noise impacts felt directly on their residences amounted to substantial evidence demonstrating that the project would have potentially significant noise impacts. The Court also held that the County's reliance on the project's compliance with noise regulations did not constitute substantial evidence supporting the County's finding of no significant impacts.<sup>70</sup>

Similarly here, the CEQA Analysis relies on the Project's purported compliance with local and State noise regulations to conclude that the Project will not result in significant construction noise impacts, and requires the Applicant to prepare a plan to have the Project maintain noise levels that do not exceed these

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<sup>67</sup> *Id.* at 732.

<sup>68</sup> *Id.*, citing *Citizens for Responsible & Open Government v. City of Grand Terrace* (2008) 160 Cal.App.4th 1323, 1338; *Oro Fino Gold Mining Corp. v. County of El Dorado* (1990) 225 Cal.App.3d 872, 881-882; *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1416 (project's effects can be significant even if "they are not greater than those deemed acceptable in a general plan"); *Environmental Planning & Information Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 354, ("CEQA nowhere calls for evaluation of the impacts of a proposed project on an existing general plan").

<sup>69</sup> *Id.*, citing (2001) 91 Cal.App.4th 1344, 1381, 111 Cal.Rptr.2d 598 ("*Berkeley Jets*").

<sup>70</sup> *Id.* at 732-734.



regulatory standards.<sup>71</sup> As in *Keep Our Mountains Quiet*, the City's reliance on compliance with noise regulations does not provide substantial evidence to support the City's conclusion that the Project will not have significant noise impacts. Indeed, even more egregious than the MND in *Keep Our Mountains Quiet*, the CEQA Analysis does not even contain a project-specific noise study on which the City purports to rely to support its contention that the Project will comply with these noise regulations.<sup>72</sup> Thus, the City has no evidence that the Project will not exceed regulatory standards, let alone substantial evidence that compliance with the standards alone would reduce potentially significant noise increases from Project construction to less than significant levels.

By contrast, residents of 1770 Broadway have commented that construction noise from the nearby 1900 Broadway Project, located a block from the Project site, has already had significant impacts on their residences, and that they expect construction of the adjacent 1750 Broadway Project will have even more significant impacts due to the fact that 1750 Broadway is closer to their homes than 1900 Broadway.<sup>73</sup> Mr. Watry explains that the City's own evidence regarding noise impacts from the Housing Element EIR and the Renewal EIR demonstrated that "Typical Construction Noise Levels" range from 77 to 89 dBAs.<sup>74</sup> As Mr. Watry explains, the City's own noise estimates for construction equipment therefore exceed the City's "Maximum Allowable Noise Level" standards of 60 to 85 dBAs which the CEQA Analysis claims will not be violated by the Project.<sup>75</sup>

The CEQA Analysis contains no study or analysis demonstrating that Project construction equipment would be any quieter than the "Typical Construction Noise Levels" cited in the Housing Element EIR and the Renewal EIR on which the CEQA Analysis relies. Mr. Watry also independently opines that the Project will have significant, unmitigated construction noise impacts on sensitive receptors at 1770 Broadway because the maximum allowable construction noise level "will be on the

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<sup>71</sup> CEQA Analysis, pp. 39-41, 46.

<sup>72</sup> *Keep our Mountains Quiet*, 236 Cal.App.4th at 732-733; *Sierra Club v. County of Fresno*, (2018) 6 Cal.5th 502, 521 (EIR's cursory analysis of health risk from ozone exposure was "patently inadequate" because "the reader had no idea" whether the amount of ozone produced by the project would result in health risks).

<sup>73</sup> See Exhibit B, pp. 1-2.

<sup>74</sup> See Exhibit C, Watry Comments, p. 3.

<sup>75</sup> See Exhibit C, Watry Comments, p. 3; CEQA Analysis, pp. 39-41.



order of 10 to 15 dBA higher at the property line,” which he explains “will likely exceed the standard by 20 to 30 dB.”<sup>76</sup> Mr. Watry’s comments, the comments of Project neighbors, and the evidence of “typical” construction noise cited in the City’s own prior CEQA documents, constitute substantial evidence demonstrating that the Project is likely to have significant construction noise impacts that the CEQA Analysis entirely fails to disclose.<sup>77</sup>

**2. The SCAs Fail to Provide Binding, Effective Mitigation for Construction Noise.**

The CEQA Analysis attempts to justify the omission of a Project-specific noise study by stating that the Project is subject to the City’s SCAs related to construction noise levels.<sup>78</sup> Similar to its argument regarding compliance with noise regulations, the CEQA Analysis concludes that, because the Project will be required to comply with various mitigation measures and conditions set forth in SCA NOI-1 through SCA NOI-8, the Project “would not result in significant effects related to noise and vibration.”<sup>79</sup> This conclusion is unsupported.

As discussed above, compliance with generally applicable standards, including the SCAs, does not, by itself, provide substantial evidence supporting a conclusion that construction noise impacts will be reduced to less than significant levels. Moreover, as explained by Mr. Watry, SCAs NOI-1 to NOI-8 include vague, uncertain, outdated and, in some instances, wholly inapplicable mitigation measures which may have little or no impact on reducing actual Project construction noise.<sup>80</sup> Additionally, some of the SCA noise mitigations are only vaguely required “where feasible.”<sup>81</sup> Neither the City nor the Applicant has provided any evidence to the public demonstrating that the Applicant will “feasibly” be able to obtain the construction equipment specified by SCA NOI-2 prior to commencing construction. Thus, there is no substantial evidence in the record demonstrating that the “where feasible” mitigations will actually be applied to the

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<sup>76</sup> See Exhibit C, Watry Comments, p. 3.

<sup>77</sup> *Keep our Mountains Quiet*, 236 Cal.App.4th at 733-734.

<sup>78</sup> CEQA Analysis, p. 41.

<sup>79</sup> CEQA Analysis, p. 41.

<sup>80</sup> See Exhibit C, Watry Comments, pp. 3-4.

<sup>81</sup> *Id.*; see SCA NOI-2a and b.



Project. The "where feasible" noise mitigation is therefore uncertain and ineffective, in violation of CEQA.<sup>82</sup> The City's conclusion that SCAs NOI-1 through NOI-8 would effectively mitigate the Project's potentially significant noise impacts is therefore unsupported because the City lacks evidence to demonstrate that these measures will feasibly or effectively reduce construction noise to less than significant levels.

Finally, NOI-3 requires creation of a Construction Noise Management Plan for noise impacts that exceed 90 dBAs in order to "to further reduce construction impacts associated with extreme noise generating activities."<sup>83</sup> SCA NOI-3 effectively admits that some construction noise will exceed applicable noise regulation limits (which range from 60-80 dBAs), yet provides no mitigation for significant noise impacts between 60-90 dBA, a range which the City considers to be above even its own regulation-based significance thresholds. Thus, reliance on the noise SCAs alone does not assure that significant noise impacts will be mitigated to less than significant levels. The CEQA Analysis' conclusion that noise impacts will be less than significant is therefore unsupported.

3. Additional Mitigation is Necessary to Reduce Construction Noise Impacts to Less Than Significant Levels.

Mr. Watry explains that additional mitigation beyond the SCAs is necessary in order to reduce the Project's significant noise impacts on nearby receptors to less than significant levels. Mr. Watry proposes three additional noise attenuation measures which he explains can be feasibly applied to the Project to reduce the potentially massive construction noise impacts on the residents of the adjacent 1770 Broadway building to less significant levels, including (1) closing off lightwell with

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<sup>82</sup> A public agency may not rely on mitigation measures of uncertain efficacy or feasibility. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727 (finding groundwater purchase agreement inadequate mitigation measure because no record evidence existed that replacement water was available). "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. CEQA Guidelines § 15364. Mitigation measures must be fully enforceable through permit conditions, agreements or other legally binding instruments. *Id.* at § 15126.4(a)(2).

<sup>83</sup> See sCA NOI-3a.



sound-blocking construction curtains; (2) covering windows facing construction with airtight "storm windows"; and (3) hanging construction noise curtains from scaffolding.<sup>84</sup> An illustration of these mitigation measures is included below:

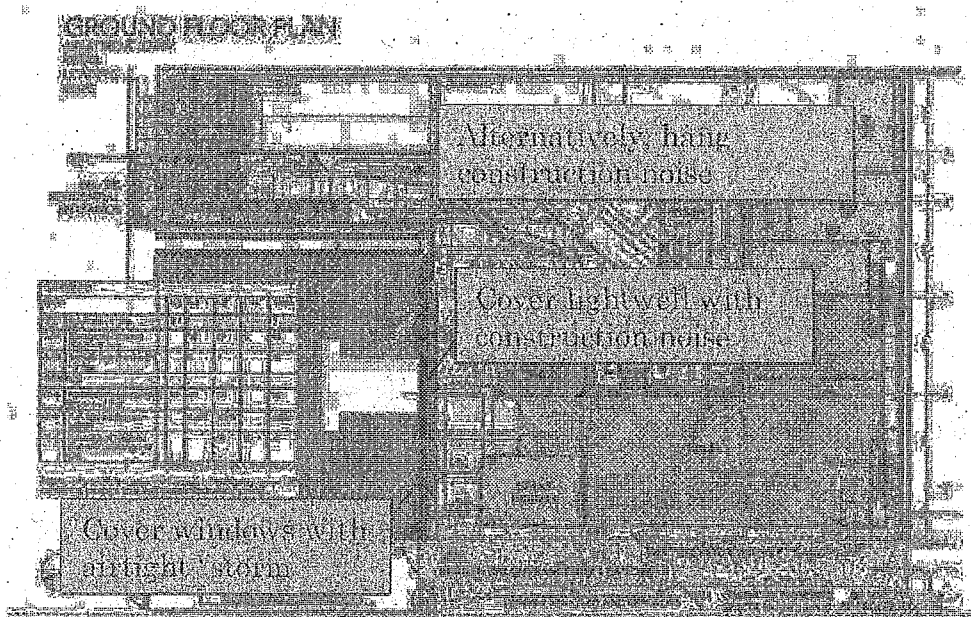


FIGURE 1 RECOMMENDED NOISE MITIGATION FOR 1770 BROADWAY<sup>85</sup>

The City should require that all of these measures be incorporated as binding mitigation for the Project.

**C. The CEQA Analysis Lacks Substantial Evidence to Support its Conclusion that the Project Will Not Have Significant Impacts on Public Transit.**

The CEQA Analysis concludes that the Project will be adequately served by public transit, but fails to include an analysis of the Project's impacts on public

<sup>84</sup> See Exhibit C, Watry Comments, pp. 5-7.

<sup>85</sup> See Exhibit C, Watry Comments, p. 5.



transit that identifies current levels of impacted use of local public transit.<sup>86</sup> The City cannot rely on its prior EIRs to provide this missing analysis because the prior EIRs on which the CEQA Analysis purports to tier failed to address current overburdened Bay Area transit conditions. For example, the 1998 LUTE EIR, on which the CEQA Analysis relies, concluded that infill projects like the Project would less than significant land use and transportation impacts due to proximity to public transit.<sup>87</sup>

There is abundant evidence demonstrating that public transit in the City of Oakland, including in the transit corridors surrounding the Project site, are already at or above existing capacity.<sup>88</sup> Thus, it is unsupported for the City to conclude that the Project will not cause any new or more severe impacts on transit, or that the Project will be adequately served by existing transit. The City cannot rely on CEQA exemptions or a CEQA Addendum in the absence of this evidence. It is incumbent on the City to analyze, mitigate, or provide feasible alternatives for the Project's potentially significant impacts on public transit.

#### **IV. THE PLANNING COMMISSION'S RELIANCE ON A CATEGORICAL EXEMPTION TO APPROVE THE PROJECT VIOLATED CEQA**

The City's reliance on the Class 32 Infill Exemption is unsupported because there is substantial evidence demonstrating that the Project will have a significant individual and cumulative cancer risk from exposure of sensitive receptors to TAC emissions during Project construction, and potentially significant, unmitigated

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<sup>86</sup> See Exhibit D, Smith Comments, pp. 1-2.

<sup>87</sup> CEQA Analysis, p. 5.

<sup>88</sup> See e.g. Train strain: BART working on capacity issues as ridership rises to record levels, available at <https://www.bart.gov/news/articles/2013/news20130117>; January 2018, THE TRANSBAY CORRIDOR CORE CAPACITY PROGRAM, available at [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=2ahUKEwiOktKQ95HhAhVRHTQIHSAKCVcQFjABegQICBAC&url=https%3A%2F%2Fwww.bart.gov%2Fsites%2Fdefault%2Ffiles%2Fdocs%2FBART%2520Core%2520Capacity%202018%2520TIRCP%2520Appendix.pdf&usq=AOvVaw2\\_kPRW6dowt2i6FqKohQ01](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=2ahUKEwiOktKQ95HhAhVRHTQIHSAKCVcQFjABegQICBAC&url=https%3A%2F%2Fwww.bart.gov%2Fsites%2Fdefault%2Ffiles%2Fdocs%2FBART%2520Core%2520Capacity%202018%2520TIRCP%2520Appendix.pdf&usq=AOvVaw2_kPRW6dowt2i6FqKohQ01).



construction noise impacts.<sup>89</sup> This renders the City's reliance on the Class 32 Infill Exemption improper for three reasons.

First, the City's reliance on the Class 32 Infill Exemption is unsupported because the Project has significant air quality and noise impacts that render the Exemption facially inapplicable. The Class 32 Exemption may only be used for that "would not result in any significant effects relating to traffic, noise, air quality, or water quality."<sup>90</sup> As discussed above, the CEQA Analysis admits that the Project will have a significant, unmitigated cancer risk on infants that requires the use of Tier 4 mitigation to reduce to less than significant levels.<sup>91</sup> The comments of local residents and noise consultant Mr. Watry demonstrate that the Project is likely to have significant construction noise impacts that have not been adequately mitigated by application of SCA NOI-1 through SCA NOI-8. The Project therefore has significant air quality and noise impacts that render the Class 32 Infill Exemption facially inapplicable to the Project.

Second, the Project's significant cancer risk is an exception to the Class 32 Exemption. CEQA Guidelines Section 15300.2 prohibits categorical exemptions for projects with significant cumulative impacts or significant impacts due to unusual circumstances.<sup>92</sup> The CEQA Analysis admits that the Project will have a significant, unmitigated cancer risk on infants that requires the use of Tier 4 mitigation to reduce to less than significant levels. The concurrent current construction of two 35+ story buildings within a block of each other may also be considered an unusual circumstance resulting in a significant cumulative cancer risk to local sensitive receptors. These exceptions to the Class 32 Infill Exemption render it inapplicable to the Project.

Finally, the Project's CEQA Analysis and Conditions of Approval apply over 40 mitigation measures to the Project in order to reduce impacts to less than significant levels.<sup>93</sup> The CEQA Analysis explains that these Standard Conditions of

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<sup>89</sup> CEQA Analysis, p. 55; Appendix A, HRA, p. C-7.

<sup>90</sup> 14 CCR § 15332(d).

<sup>91</sup> CEQA Analysis, p. 55; Appendix A, HRA, p. C-7.

<sup>92</sup> 14 CCR § 15300.2(b), (c).

<sup>93</sup> See CEQA Analysis, Attachment A, *Standard Conditions of Approval and Mitigation Monitoring and Reporting Program*; Staff Report, Attachment B, *Conditions of Approval*, e.g. Nos. 13 and 14.



Approval and Mitigation Monitoring and Reporting Program ("SCA/MMRP") are applied to the Project pursuant to 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."<sup>94</sup> The CEQA Analysis further explains that "[t]he SCAs are *measures that would minimize potential adverse effects* that could result from implementation of the Proposed Project."<sup>95</sup> Proposed Condition of Approval No. 14 applies all mitigation measures identified in the SCA/MMRP to the Project. Condition of Approval No. 13 applies SCA AIR-3 to the Project.

Mitigated categorical exemptions are prohibited under CEQA. An agency may not rely on a categorical exemption if to do so would require the imposition of mitigation measures to reduce potentially significant effects to less than significant levels.<sup>96</sup> The SCAs are mitigation measures designed to reduce the Project's potentially significant environmental impacts and impacts on public health that will otherwise result from the Project without mitigation. Therefore, the City may not rely on a categorical exemption to approve the Project. The City's improper attempt to include mitigation measures in a categorical exemption is contrary to law, and deprives the public of its statutory rights to participate and comment on the sufficiency of the mitigation measures proposed to be applied to the Project.

## V. CONCLUSION

For the reasons stated herein, we urge the City Council to vacate the Planning Commission's approval of the Project, and remand the Project to Staff to prepare a revised environmental analysis in an EIR, as required by CEQA. The new analysis must identify and implement all feasible mitigation measures available to reduce the Project's potentially significant site-specific impacts to less than significant levels before the City reconsiders approving the Project.

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<sup>94</sup> CEQA Analysis, p. A-1.

<sup>95</sup> *Id.* (emphasis added).

<sup>96</sup> *SPAWN*, 125 Cal.App.4th at 1102; *Azusa Land Recl. Co. v. Main San Gabriel Basin Watermaster ("Azusa")* (1997) 52 Cal. App.4th 1165, 1198-1201.



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Thank you for your attention to these comments. Please include them in the City's record of proceedings for the Project.

Sincerely,

A handwritten signature in dark ink, appearing to read "Christina M. Caro", written over a light-colored rectangular background.

Christina M. Caro

CMC:ljl

Attachments

1218-002j



# EXHIBIT A



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March 20, 2019

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Via Email Only

Mike Rivera ([mrivera@oaklandnet.com](mailto:mrivera@oaklandnet.com))

Re: Agenda Item 1: 1750 Broadway (PLN18369)

Dear Chair Myres, Honorable Members of the Planning Commission, Mr. Rivera:

These comments are submitted on behalf of East Bay Residents for Responsible Development ("East Bay Residents") regarding Agenda Item No. 1, 1750 Broadway (PLN18369) ("Project"), and the CEQA Checklist/Exemption Report ("CEQA Analysis") prepared by the City of Oakland ("City") pursuant to the California Environmental Quality Act ("CEQA").<sup>1</sup> The Project to construct a 37-story building consisting of 307 market-rate residential units, approximately 5,000 square feet of retail space, and a five-level parking garage for 170 parking spaces. The Project site is located at 1750 Broadway in the City of Oakland ("City"), between 17th and 19th Streets (APN: 008 062301300), and is proposed by Applicant Rubicon Point Partners ("Applicant"). Required Project approvals include Design

<sup>1</sup> Pub. Resources Code ("PRC") §§ 21000 et seq.; 14 Cal. Code Regs. ("CCR" or "CEQA Guidelines") §§ 15000 et seq.  
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Review for new building construction, a Major Conditional Use Permit for buildings containing floor area over 200,000 square feet ("Major CUP"), and approval of a CEQA document for the Project.<sup>2</sup>

The CEQA Analysis evaluates the Project's potential environmental impacts and consistency with the City's General Plan Land Use and Transportation Element and its EIR ("LUTE EIR"); the 2007-2014 Housing Element, 2015-2023 Housing Element and their EIRs ("Housing Element EIRs"); and the City's 2011 Renewal Plan Amendments / Redevelopment Plan and EIR ("Redevelopment Plan").<sup>3</sup> The CEQA Analysis asserts that the Project is exempt from further review pursuant to a number of CEQA exemptions, including the Class 32 infill exemption under CEQA Guidelines Section 15332, the streamlining exemptions for urban infill development projects under CEQA Guidelines Sections 15183 and 15183.3. In the alternative, the CEQA Analysis asserts that it is a CEQA Addendum prepared pursuant to CEQA Guidelines Sections 15162, 15163, and 15164.<sup>4</sup> However, as explained more fully below, and in the comments of other local residents and members of the public regarding the Project, the Planning Commission ("Commission") cannot approve the Project until further environmental review is conducted pursuant to CEQA.

We reviewed the CEQA Analysis in conjunction with our technical consultants,<sup>5</sup> and have identified a number of deficiencies in the City's analysis, as well new and more severe impacts than previously analyzed in the LUTE EIR, Housing Element EIRs, and Redevelopment Plan. Furthermore, there are mitigation measures not previously analyzed that would further reduce significant impacts. Specifically, the CEQA Analysis fails to accurately analyze the Project's public health risks to the surrounding community from exposure to toxic air contaminants ("TACs") generated during Project construction and by other local cumulative projects, and fails to require adequate mitigation to reduce those impacts to less than significant levels. The City also failed to analyze the Project's impacts on public transit, in violation of CEQA and local land use requirements. The CEQA Analysis also improperly relies on a mitigated categorical exemption.

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<sup>2</sup> March 20, 2019 Planning Commission Staff Report ("Staff Report"), p. 1.

<sup>3</sup> CEQA Analysis, p. 3.

<sup>4</sup> CEQA Analysis, p. 3.

<sup>5</sup> See Exhibit B, Comments of Daniel T. Smith, traffic engineer.  
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Therefore, the City lacks substantial evidence to support the exemption conclusions in its CEQA Analysis, and an EIR is required.<sup>6</sup>

East Bay Residents urges the Commission to continue this hearing, and remand the Project to City Staff to prepare an EIR for the Project. The Project should not be rescheduled for a full public hearing before the Commission until these issues have been addressed. East Bay Residents reserves the right to submit supplemental comments at any later hearings and proceedings related to the Project.<sup>7</sup>

#### I. STATEMENT OF INTEREST

East Bay Residents is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards and environmental and public service impacts of the Project. The association includes City of Oakland residents Jason Gumataotao, Kal Karn, and James O'Brien, labor organizations UA Plumbers and Pipefitters Local 342, International Brotherhood of Electrical Workers Local 595, Sheet Metal Workers Local 104, Sprinkler Fitters Local 483, their members and families, and other individuals that live and/or work in the City of Oakland and Alameda County.

Individual members of East Bay Residents and the its affiliated labor organizations live, work, recreate and raise their families in Alameda County, including the City of Oakland. They would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work on the Project itself. Accordingly, they will be first in line to be exposed to any health and safety hazards that exist onsite. East Bay Residents has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live there.

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<sup>6</sup> PRC § 21094.5(a); 14 CCR § 15164(e); see *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal. 3d 506, 515.

<sup>7</sup> Gov. Code § 65009(b); PRC § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield ("Bakersfield")* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

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## II. OVERVIEW OF CEQA REQUIREMENTS

CEQA has two basic purposes, neither of which is satisfied by the CEQA Analysis. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental impacts of a project before harm is done to the environment.<sup>8</sup> The EIR is the "heart" of this requirement.<sup>9</sup> The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."<sup>10</sup>

To fulfill this function, the discussion of impacts in an EIR must be detailed, complete, and "reflect a good faith effort at full disclosure."<sup>11</sup> An adequate EIR must contain facts and analysis, not just an agency's conclusions.<sup>12</sup> CEQA requires an EIR to disclose all potential direct and indirect, significant environmental impacts of a project.<sup>13</sup>

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring imposition of mitigation measures and by requiring the consideration of environmentally superior alternatives.<sup>14</sup> If an EIR identifies potentially significant impacts, it must then propose and evaluate mitigation measures to minimize these impacts.<sup>15</sup> CEQA imposes an affirmative obligation on agencies to avoid or reduce environmental harm by adopting feasible project alternatives or mitigation measures.<sup>16</sup> Without an adequate analysis and description of feasible mitigation measures, it would be impossible for agencies relying upon the EIR to meet this obligation.

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<sup>8</sup> 14 Cal. Code Regs. § 15002(a)(1) ("CEQA Guidelines"); *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal.App.4th 1344, 1354 ("Berkeley Jets"); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

<sup>9</sup> *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 84.

<sup>10</sup> *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

<sup>11</sup> CEQA Guidelines § 15151; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 721-722.

<sup>12</sup> See *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 568.

<sup>13</sup> Pub. Resources Code § 21100(b)(1); CEQA Guidelines § 15126.2(a).

<sup>14</sup> CEQA Guidelines § 15002(a)(2) and (3); *Berkeley Jets*, 91 Cal.App.4th at 1354; *Laurel Heights Improvement Ass'n v. Regents of the University of Cal.* (1998) 47 Cal.3d 376, 400.

<sup>15</sup> Pub. Resources Code §§ 21002.1(a), 21100(b)(3).

<sup>16</sup> *Id.*, §§ 21002-21002.1.



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Under CEQA, an EIR must not only discuss measures to avoid or minimize adverse impacts, but must ensure that mitigation conditions are fully enforceable through permit conditions, agreements or other legally binding instruments.<sup>17</sup> A CEQA lead agency is precluded from making the required CEQA findings unless the record shows that all uncertainties regarding the mitigation of impacts have been resolved; an agency may not rely on mitigation measures of uncertain efficacy or feasibility.<sup>18</sup> This approach helps "insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug."<sup>19</sup>

Following preliminary review of a project to determine whether an activity is subject to CEQA, a lead agency is required to prepare an initial study to determine whether to prepare an EIR or negative declaration, identify whether tiering or another appropriate process can be used for analysis of the project's environmental effects, or determine whether a previously prepared CEQA document could be used for the project, among other purposes.<sup>20</sup> The initial study must accurately describe the project, identify the environmental setting, identify environmental effects and show "some evidence" to support those conclusions, and a discussion of ways to mitigate the significant effects of the project, if any.<sup>21</sup> CEQA requires an agency to analyze the potential environmental impacts of its proposed actions in an EIR except in certain limited circumstances.<sup>22</sup> A negative declaration may be prepared instead of an EIR when, after preparing an initial study, a lead agency determines that a project "would not have a significant effect on the environment."<sup>23</sup> If the project has potentially significant environmental effects but those effects can be reduced to a level of insignificance by mitigation measures that the project's

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<sup>17</sup> CEQA Guidelines § 15126.4(a)(2).

<sup>18</sup> *Kings County Farm Bur. v. County of Hanford* (1990) 221 Cal.App.3d 692, 727-28 (a groundwater purchase agreement found to be inadequate mitigation because there was no record evidence that replacement water was available).

<sup>19</sup> *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935.

<sup>20</sup> CEQA Guidelines §§ 15060, 15063(c).

<sup>21</sup> CEQA Guidelines § 15063(d) (emphasis added).

<sup>22</sup> See, e.g., Pub. Resources Code § 21100.

<sup>23</sup> *Quail Botanical Gardens v. City of Encinitas* (1994) 29 Cal.App.4th 1597; Pub. Resources Code § 21080(c).



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proponent has agreed to undertake, the lead agency may prepare a mitigated negative declaration ("MND").<sup>24</sup>

#### **A. Subsequent CEQA Review.**

When a previously approved project for which an EIR or an MND has been prepared is modified, CEQA requires the lead agency to conduct subsequent or supplemental environmental review when one or more of the following events occur:

- (a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report;
- (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report; or
- (c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.<sup>25</sup>

In assessing the need for subsequent or supplemental environmental review, the lead agency must determine, on the basis of substantial evidence in light of the whole record, if one or more of the following events have occurred:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant effects or a substantial increase in the severity of previously identified effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified

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<sup>24</sup> PRC § 21080 (c)(2); 14 CCR § 15064(f)(2).

<sup>25</sup> Pub. Resources Code § 21166; CEQA Guidelines § 15162.  
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as complete or the negative declaration was adopted, shows any of the following:

- (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
- (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
- (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.<sup>26</sup>

Only where *none* of the conditions described above calling for preparation of a subsequent or supplemental EIR have occurred may the lead agency consider preparing a subsequent negative declaration, an addendum or no further documentation.<sup>27</sup> In any case, the decision must be supported by substantial evidence.<sup>28</sup> Here, the County's decision not to prepare a subsequent CEQA document for the Project is not supported by substantial evidence.

#### B. CEQA Infill Streamlining Exemptions

The City seeks to rely on narrow CEQA exemptions that allow approval of projects without an EIR in very narrow circumstances, CEQA Section 21094.5<sup>29</sup> and CEQA Guidelines Sections 15183 and 15183.3 (Qualified Infill)<sup>30</sup> (collectively, the

<sup>26</sup> CEQA Guidelines §§ 15162(a)(1)-(3).

<sup>27</sup> CEQA Guidelines § 15162(b).

<sup>28</sup> *Id.* §§ 15162 (a), 15164(e), and 15168(c)(4).

<sup>29</sup> Pub. Res. Code § 21094.5.

<sup>30</sup> 14 Cal. Code Regs. § 15183.3.

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"Infill Exemption"). The Infill Exemption provides that, if an EIR was previously certified for a planning level decision of a city or county, subsequent CEQA review may be limited to evaluating a project's effects on the environment that are either (A) specific to the project or to the project site and were not addressed as significant effects in the prior environmental impact report or (B) where substantial new information shows the effects will be more significant than described in the prior environmental impact report.<sup>31</sup> The Infill Exemption allows a lead agency to forego preparation of an EIR if neither of these situations occur, or if the lead agency determines that uniformly applicable development policies or standards adopted by the agency will substantially mitigate the new effects. A lead agency's determination pursuant to this section must be supported by substantial evidence.<sup>32</sup>

### C. Categorical Exemptions.

CEQA identifies certain classes of projects which are exempt from the provisions of CEQA called categorical exemptions.<sup>33</sup> Categorical exemptions apply to certain classes of activities that generally do not have a significant effect on the environment.<sup>34</sup> Public agencies utilizing such exemptions must support their determination with substantial evidence.<sup>35</sup> CEQA exemptions are narrowly construed and "[e]xemption categories are not to be expanded beyond the reasonable scope of their statutory language."<sup>36</sup> Erroneous reliance by a lead agency on a categorical exemption constitutes a prejudicial abuse of discretion and a violation of CEQA.<sup>37</sup> "[I]f the court perceives there was substantial evidence that the project might have an adverse impact, but the agency failed to secure preparation of an EIR, the agency's action must be set aside because the agency abused its discretion by failing to follow the law."<sup>38</sup>

CEQA contains several exceptions to categorical exemptions. In particular, a categorical exemption shall not be used for an activity where there is a reasonable

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<sup>31</sup> Pub. Res. Code § 21094.5(a); 14 Cal. Code Regs. § 15183.3(a), (c).

<sup>32</sup> Pub. Res. Code § 21094.5(a).

<sup>33</sup> PRC § 21084(a); 14 CCR §§ 15300, 15354.

<sup>34</sup> *Id.*

<sup>35</sup> PRC § 21168.5.

<sup>36</sup> *Mountain Lion Found. v. Fish & Game Com.* (1997) 16 Cal.4th 105, 125; *McQueen*, 2 Cal.App.3d at 1148.

<sup>37</sup> *Azusa*, 52 Cal.App.4th at 1192.

<sup>38</sup> *Dunn-Edwards Corp. v. Bay Area Air Quality Mgmt. Dist.* (1992) 9 Cal.App.4th 644, 656).  
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possibility that the activity will have a significant effect on the environment due to "unusual circumstances,"<sup>39</sup> or where there is a reasonable possibility that the activity will have a significant effect on the environment, including (1) when "the cumulative impact of successive projects of the same type in the same place, over time is significant."<sup>40</sup> An agency may not rely on a categorical exemption if to do so would require the imposition of mitigation measures to reduce potentially significant effects.<sup>41</sup>

### **III. THE CITY MAY NOT RELY ON PREVIOUS ENVIRONMENTAL ANALYSIS FOR PROJECT APPROVAL**

#### **A. The Project is Not Consistent with CEQA Addendum and Infill Streamlining Exemption Requirements.**

The City's reliance on CEQA Addendum and Infill Streamlining Exemptions to approve the Project without preparing an EIR is misplaced for several reasons. First, the CEQA Analysis does not simply provide "minor changes or additions are necessary" to the EIR as is allowed under the Addendum provision. Rather, it includes an entirely new substantive analysis for a large development project which was not specifically analyzed in the LUTE EIR, Housing Element EIR, or Redevelopment Plan. The City must discontinue this practice, which clearly violates CEQA. Moreover, as explained further below, the Project will result in new or more severe significant impacts than analyzed in the previous EIRs that require mitigation that is not included in the CEQA Analysis or Standard Conditions of Approval ("SCAs"). CEQA requires that the City's decision to forego preparation of an EIR, and reliance on an Addendum, must be supported by substantial evidence.<sup>42</sup> In this case, the City's decision not to prepare a subsequent or supplemental EIR for the Project is not supported by substantial evidence because of these unanalyzed and/or unmitigated impacts.

The City also relies on narrow CEQA exemptions that are inapplicable or not supported by substantial evidence. Specifically, the City relies on CEQA Guidelines

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<sup>39</sup> 14 CCR § 15300.2(c).

<sup>40</sup> 14 CCR § 15300.2(b).

<sup>41</sup> *Salmon Pro. & Watershed Network v. County of Marin* ("SPAWN") (2004) 125 Cal.App.4th 1098, 1198-1201.

<sup>42</sup> *Id.* §§ 15162 (a), 15164(e), and 15168(c)(4).  
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Sections 15183 (Community Plan)<sup>43</sup> and 15183.3 (Qualified Infill)<sup>44</sup> for Project approval. The exemptions apply only when a Project does not have impacts peculiar to the proposed project that are new or more significant than previously analyzed or can be substantially mitigated by uniformly applicable development policies or standards. The Project fails to meet these requirements because the Project's health risks to local sensitive receptors from exposure to diesel particulate matter ("DPM") emissions, a toxic air contaminant ("TAC"), during construction may be highly significant. The City also failed to analyze the Project's impacts on public transit, in violation of CEQA and local land use requirements.

For these reasons, the City may not rely on the CEQA Analysis for Project approval, and must provide detailed analysis of the Project's impacts in a subsequent or supplemental EIR.

**A. The Project Has Significant, Unmitigated Health Risks from Construction Emissions.**

The CEQA Analysis includes a health risk assessment ("HRA") which admits that the Project will have potentially significant individual and cumulative impacts during Project construction from cancer risk to nearby sensitive receptors, as follows:<sup>45</sup>

**MAXIMUM HEALTH RISKS FROM PROJECT CONSTRUCTION**

Health Risk at MEIR	Maximum Cancer Risk (in a million)	Chronic Risk (Hazard Index)	Maximum PM <sub>2.5</sub> concentration
<b>Uncontrolled Scenario</b>			
Residential Receptor - Infant	114	0.073	0.337
Residential Receptor - Child	23	0.073	0.337
Residential Receptor - Adult	3	0.073	0.337
<b>With Tier 4 Equipment</b>			
Residential Receptor - Infant	4.5	0.003	0.014
Residential Receptor - Child	0.9	0.003	0.014
Residential Receptor - Adult	0.13	0.003	0.014

<sup>43</sup> CEQA Guidelines Section 15183.

<sup>44</sup> CEQA Guidelines Section 15183.3.

<sup>45</sup> CEQA Analysis, HRA, p. C-7.



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Project-level Threshold	10	1.0	0.3
Significant?	No	No	No

The CEQA Analysis demonstrates that the Project's unmitigated TAC emissions will exceed BAAQMD's CEQA significance threshold of 10 in one million for Project impacts for both children (23 in one million) and infants (114 in one million). The impact on infants also exceeds BAAQMD's cumulative cancer risk threshold of 100 in one million. These are significant impacts which require mitigation under CEQA.

The CEQA Analysis fails to adequately mitigate these cancer risks because the City's reliance on Tier 4 construction equipment to mitigate these impacts to less than significant levels is not expressly required by either SCA AIR-3 or Conditions of Approval No. 13, the Construction Mitigation Plan ("CMP"). SCA AIR-3 requires *either* an HRA or a Construction Emissions Minimization Plan. However, the CMP does not expressly require Tier 4. It just vaguely says that the City and Applicant will agree to effective mitigation later. Condition of Approval No. 3 requires a CMP to address construction emissions, but does not require Tier 4 equipment. This is not adequate to support CEQA Analysis' conclusions that cancer risk will be mitigated by use of Tier 4. Therefore, there is no binding mitigation required for the Project that will effectively mitigate its significant cancer risks to less than significant levels, and the City's significance conclusions regarding health risk are unsupported.

**B. The CEQA Analysis Lacks Substantial Evidence to Demonstrate that the Project Will Not Have Significant Impacts on Public Transit.**

The CEQA Analysis concludes that the Project will be adequately served by public transit, but fails to include an analysis of the Project's impacts on public transit that identifies current levels of impacted use of local public transit.<sup>46</sup> The City cannot rely on its prior EIRs to provide this missing analysis because the prior EIRs on which the CEQA Analysis purports to tier failed to address current overburdened Bay Area transit conditions. For example, the 1998 LUTE EIR, on which the CEQA Analysis relies, concluded that infill projects like the Project would

<sup>46</sup> See Exhibit A, Smith Comments, pp. 1-2.  
4585-001acp



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less than significant land use and transportation impacts due to proximity to public transit.<sup>47</sup>

There is abundant evidence demonstrating that public transit in the City of Oakland, including in the transit corridors surrounding the Project site, are already at or above existing capacity.<sup>48</sup> Thus, it is unsupported for the City to conclude that the Project will not cause any new or more severe impacts on transit, or that the Project will be adequately served by existing transit. The City cannot rely on CEQA exemptions or a CEQA Addendum in the absence of this evidence. It is incumbent on the City to analyze, mitigate, or provide feasible alternatives for the Project's potentially significant impacts on public transit.

#### IV. THE CITY MAY NOT RELY ON A CATEGORICAL EXEMPTION BECAUSE THE PROJECT HAS SIGNIFICANT IMPACTS THAT REQUIRE MITIGATION

Mitigated categorical exemptions are prohibited under CEQA. An agency may not rely on a categorical exemption if to do so would require the imposition of mitigation measures to reduce potentially significant effects to less than significant levels.<sup>49</sup> As discussed above, there is substantial evidence in the City's own HRA and CEQA Analysis demonstrating that, prior to mitigation, the Project will have a significant individual and cumulative cancer risk from exposure of sensitive receptors to TAC emissions during Project construction.<sup>50</sup> This renders the City's reliance on the Class 32 Infill Exemption improper for three reasons.

<sup>47</sup> CEQA Analysis, p. 5.

<sup>48</sup> See e.g. Train strain: BART working on capacity issues as ridership rises to record levels, available at <https://www.bart.gov/news/articles/2013/news20130117>; January 2018, THE TRANSBAY CORRIDOR

CORE CAPACITY PROGRAM, available at

[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=2ahUKEwiOktKQ95HhAhVRHTQIHSAKCVcQFjABegQICBAC&url=https%3A%2F%2Fwww.bart.gov%2Fsites%2Fdefault%2Ffiles%2Fdocs%2FBART%2520Core%2520Capacity%2018%2520TIRCP%2520Appendix.pdf&usq=AOvVaw2\\_kPRW6dowt2i6FqKohQ01](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=2ahUKEwiOktKQ95HhAhVRHTQIHSAKCVcQFjABegQICBAC&url=https%3A%2F%2Fwww.bart.gov%2Fsites%2Fdefault%2Ffiles%2Fdocs%2FBART%2520Core%2520Capacity%2018%2520TIRCP%2520Appendix.pdf&usq=AOvVaw2_kPRW6dowt2i6FqKohQ01).

<sup>49</sup> SPAWN, 125 Cal.App.4th at 1102; *Azusa Land Recl. Co. v. Main San Gabriel Basin Watermaster* ("Azusa") (1997) 52 Cal. App.4th 1165, 1198-1201.

<sup>50</sup> CEQA Analysis, p. 55; Appendix A, HRA, p. C-7.

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First, the City's reliance on the Class 32 Infill Exemption is unsupported because the Exemption only applies to projects that "would not result in any significant effects relating to traffic, noise, air quality, or water quality."<sup>51</sup> The CEQA Analysis admits that the Project will have a significant, unmitigated cancer risk on infants that requires the use of Tier 4 mitigation to reduce to less than significant levels.<sup>52</sup> Thus, the Class 32 Infill Exemption is facially inapplicable.

Second, the Project's significant cancer risk is an exception to the Class 32 Exemption. CEQA Guidelines Section 15300.2 prohibits categorical exemptions for projects with significant cumulative impacts or significant impacts due to unusual circumstances.<sup>53</sup> The CEQA Analysis admits that the Project will have a significant, unmitigated cancer risk on infants that requires the use of Tier 4 mitigation to reduce to less than significant levels. The concurrent current construction of two 35+ story buildings within a block of each other may also be considered an unusual circumstance resulting in a significant cumulative cancer risk to local sensitive receptors. These exceptions to the Class 32 Infill Exemption render it inapplicable to the Project.

Finally, the Project's CEQA Analysis and Conditions of Approval apply over 40 mitigation measures to the Project in order to reduce impacts to less than significant levels.<sup>54</sup> The CEQA Analysis explains that these Standard Conditions of Approval and Mitigation Monitoring and Reporting Program ("SCA/MMRP") are applied to the Project pursuant to 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."<sup>55</sup> The CEQA Analysis further explains that "[t]he SCAs are *measures that would minimize potential adverse effects* that could result from implementation of the Proposed Project."<sup>56</sup> Proposed Condition of Approval No. 14 applies all mitigation measures identified in the SCA/MMRP to the Project. Condition of Approval No. 13 applies SCA AIR-3 to the

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<sup>51</sup> 14 CCR § 15332(d).

<sup>52</sup> CEQA Analysis, p. 55; Appendix A, HRA, p. C-7.

<sup>53</sup> 14 CCR § 15300.2(b), (c).

<sup>54</sup> See CEQA Analysis, Attachment A, *Standard Conditions of Approval and Mitigation Monitoring and Reporting Program*; Staff Report, Attachment B, *Conditions of Approval*, e.g. Nos. 13 and 14.

<sup>55</sup> CEQA Analysis, p. A-1.

<sup>56</sup> *Id.* (emphasis added).



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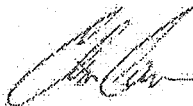
Project. These are mitigation measures designed to reduce the Project's potentially significant environmental impacts and impacts on public health that will otherwise result from the Project without mitigation. Therefore, the City may not rely on a categorical exemption to approve the Project. The City's improper attempt to include mitigation measures in a categorical exemption is contrary to law, and deprives the public of its statutory rights to participate and comment on the sufficiency of the mitigation measures proposed to be applied to the Project.

## V. CONCLUSION

For the reasons stated above, and in the comments of other members of the public, the City must prepare and circulate a legally adequate EIR for the Project which fully discloses and mitigates the Project's potentially significant impacts that are specific to the Project and which were not addressed in the LUTE EIR, Housing Element EIR, and Redevelopment Plan before the Project can be approved. East Bay Residents urges the Planning Commission to remand the Project to Staff to prepare an EIR before the Project is presented for further public hearing.

Thank you for your consideration of these comments.

Sincerely,



Christina M. Caro

CMC:acp

Attachments



EXHIBIT A





## SMITH ENGINEERING & MANAGEMENT

March 20, 2018

Ms. Christina Caro  
Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080-7037

**Subject: 1750 Broadway Project Transportation Analysis** P19018

Dear Ms. Caro:

Per your request, I reviewed the CEQA Checklist Exemption Report (the "CCER") for the 1750 Broadway Project (the "Project") in Oakland (the "City"). My review is with respect to transportation and circulation considerations.

My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and 50 years professional consulting practice in these fields. I have both prepared and reviewed the Transportation and Traffic sections of environmental documents pursuant to the California Environmental Quality Act ("CEQA") including ones for projects involving residential and mixed use developments. My professional resume is attached hereto.

Technical comments on the FEIR follow:

### **The CCER Lacks an Analysis of the Project's Impacts on Public Transit**

The City's Transportation Impact Review Guidelines dated April 14, 2017 at page 10 clearly require a transit analysis as follows:

"Transit trips shall be assigned to transit routes based on the project's the travel demand and mode split analyses. The frequency and load factors for affected transit routes should be documented per guidance in Section 5.5. Transit trips shall also be assigned as pedestrian trips for roadway segments between the project site and the affected transit stops and stations."

TRAFFIC • TRANSPORTATION • MANAGEMENT

5311 Lowry Road, Union City, CA 94587 tel: 510.489.9477 fax: 510.489.9478



Ms. Christina Caro  
Adams Broadwell Joseph & Cardozo  
March 20, 2019  
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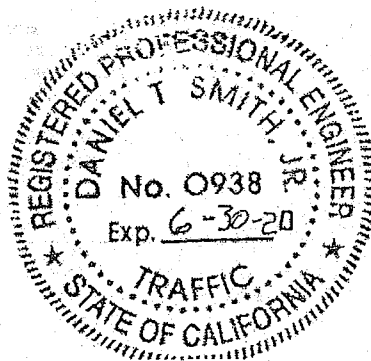
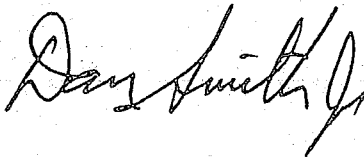
The Project is located immediately adjacent to the 19<sup>th</sup> Street BART Station. The Project would be reasonably expected to generate a substantial number of trips using BART. BART's peak period capacity problems in the Oakland wye, Transbay Tube and Embarcadero and Montgomery stations has been well documented. The CCER clearly must conduct a transit analysis and disclose and attempt to mitigate the impacts to those system components. However, the CCER has utterly failed to do so, treating transit like a dumping ground for trips not traveling by auto, bike or walking. Hence the transportation analysis in the CCER is inadequate. Moreover, since there is reasonable expectation of significant impact, the conditions for a CEQA exemption are not met.

### Conclusion

This completes my current comments on the CCER Analysis on the 1750 Broadway Project. It is evident that the Project would generate sufficient transit ridership as to have impacts on capacity-challenged portions of the BART system. Hence the conditions for CEQA exemption are not met.

Sincerely,

Smith Engineering & Management  
A California Corporation



Daniel T. Smith Jr., P.E.  
President



Ms. Christina Caro  
Adams Broadwell Joseph & Cardozo  
March 20, 2019  
Page 3

## SANITIZING ENGINEERING & MANAGEMENT

**DANIEL T. SMITH, Jr.**  
President

### EDUCATION

Bachelor of Science, Engineering and Applied Science, Yale University, 1967  
Master of Science, Transportation Planning, University of California, Berkeley, 1968

### PROFESSIONAL REGISTRATION

California No. 31913 (Civil)  
California No. 938 (Traffic)

Nevada No. 7968 (Civil) Washington No. 29337 (Civil)  
Arizona No. 22131 (Civil)

### PROFESSIONAL EXPERIENCE

Smith Engineering & Management, 1993 to present, President.  
DKS Associates, 1979 to 1993, Founder, Vice President, Principal Transportation Engineer.  
DeLano, Cahier & Company, 1968 to 1979, Senior Transportation Planner.  
Personal specialties and project experience include:

**Life/Status Consulting.** Provides consultation, investigations and expert witness testimony in highway design, transit design and traffic engineering matters including consultations involving transportation access issues, traffic accidents involving highway design or traffic engineering factors, land use and development matters involving access and transportation impacts, parking and other traffic and transportation matters.

**Urban Corridor Studies/Alternatives Analysis.** Principal-in-charge for Santa Route (SR) 102 Feasibility Study, a 35-mile freeway alignment study north of Sacramento. Consultant on I-280 Interstate Transfer/Express Program, San Francisco, an A.A.E.H.S. for completion of I-205, demolition of Benbow/Elmer freeway, substitute light rail and commuter rail projects. Principal-in-charge, SR 236 corridor freeway/expressway design/environmental study, Hayward (Calif.) Project manager, Sacramento Northeast Area multi-modal transportation corridor study, Transportation Planner for I-59N West Terminal Study, and Harbor Drive Traffic Study, Portland, Oregon. Project manager for design of surface segment of Woodward Corridor LRT, Detroit, Michigan. Directed staff on I-80 National Strategic Corridor Study (Sacramento-San Francisco), US 101-Sacramento freeway operations study, SR 92 freeway operations study, I-580 freeway operations study, SR 153 alignment studies, Sacramento RTD light rail systems study, Transan Corridor LRT A.A.E.H.S., Fremont-Warm Springs BART extension plan/LEIR, SRs 70/99 freeway alternatives study, and Richmond Parkway (SR 93) design study.

**Area Transportation Plans.** Principal-in-charge for transportation element of City of Los Angeles General Plan Framework, shaping various largest city two decades into 21st century. Project manager for the transportation element of 300-acre Mission Bay development in downtown San Francisco. Mission Bay involves 7 million sq ft office/commercial space, 8,500 dwelling units, and community facilities. Transportation features include relocation of commuter rail station, extension of Muni-Metro LRT, a multi-modal terminal for LRT, commuter rail and local bus, removal of a quarter mile elevated freeway, replacement by new ramps and a boulevard, an internal roadway network overcrossing constraints imposed by an internal tidal basin, freeway structures and rail facilities, and concept plans for 20,000 structured parking spaces. Principal-in-charge for circulation plan to accommodate 9 million sq ft of office/commercial growth in downtown Bellevue (Wash.). Principal-in-charge for 64-acre, 3 million sq ft multi-use complex for HMC adjacent to San Jose International Airport. Project manager for transportation element of Sacramento Capitol Area Plan for the state governmental complex, and for Downtown Sacramento Riverfront Redevelopment Plan, on parking program for downtown Walnut Creek, on downtown transportation plan for San Mateo and redevelopment plan for downtown Mountain View (Calif.) for traffic circulation and safety plans for California cities of Davis, Pleasant Hill and Hayward, and for Salem, Oregon.



Ms. Christina Caro  
Adams Broadwell Joseph & Cardozo  
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**Transportation Centers.** Project manager for Daly City Intermodal Study which developed a \$7 million surface bus terminal, traffic access, parking and pedestrian circulation improvements at the Daly City BART station plus development of functional plans for a new BART station at Colma. Project manager for design of multi-modal terminal (commuter rail, light rail, bus) at Mission Bay, San Francisco. In Santa Clarita Long Range Transit Development Program, responsible for plan to relocate system's existing timed-transfer hub and development of three satellite transfer hubs. Performed airport ground transportation system evaluations for San Francisco International, Oakland International, Sea-Tac International, Oakland International, Los Angeles International, and San Diego Lindberg.

**Campus Transportation.** Campus transportation planning assignments for UC Davis, UC Berkeley, UC Santa Cruz and UC San Francisco Medical Center campuses; San Francisco State University; University of San Francisco; and the University of Alaska and others. Also developed master plans for institutional campuses including medical centers, headquarters complexes and research & development facilities.

**Special Event Facilities.** Evaluations and design studies for football/baseball stadiums, indoor sports arenas, horse and motor racing facilities, theme parks, fairgrounds and convention centers, ski complexes and destination resorts throughout western United States.

**Parking.** Parking programs and facilities for large area plans and individual sites including downtowns, special event facilities, university and institutional campuses and other large site developments; numerous parking feasibility and operations studies for parking structures and surface facilities; also, resident preferential parking.

**Transportation System Management & Traffic Restraint.** Project manager on FHWA program to develop techniques and guidelines for neighborhood street traffic limitation. Project manager for Berkeley, (Calif.), Neighborhood Traffic Study, pioneered application of traffic restraint techniques in the U.S. Developed residential traffic plans for Menlo Park, Santa Monica, Santa Cruz, Mill Valley, Oakland, Palo Alto, Piedmont, San Mateo County, Pasadena, Santa Ana and others. Participated in development of photo/radar speed enforcement device and experimented with speed humps. Co-author of Institute of Transportation Engineers reference publication on neighborhood traffic control.

**Bicycle Facilities.** Project manager to develop an FHWA manual for bicycle facility design and planning, on bikeway plans for Del Mar, (Calif.), the UC Davis and the City of Davis. Consultant to bikeway plans for Eugene, Oregon, Washington, D.C., Buffalo, New York, and Skokie, Illinois. Consultant to U.S. Bureau of Reclamation for development of hydraulically efficient, bicycle safe drainage inlets. Consultant on FHWA research on effective retrofits of undercrossing and overcrossing structures for bicyclists, pedestrians, and handicapped.

#### **MEMBERSHIPS**

Institute of Transportation Engineers Transportation Research Board

#### **PUBLICATIONS AND AWARDS**

*Residential Street Design and Traffic Control*, with W. Homburger et al. Prentice Hall, 1989.

Co-recipient, Progressive Architecture Citation, *Mission Bay Master Plan*, with I.M. Pei WRT Associated, 1984.

*Residential Traffic Management, State of the Art Report*, U.S. Department of Transportation, 1979.

*Improving The Residential Street Environment*, with Donald Appleyard et al., U.S. Department of Transportation, 1979.

*Strategic Concepts in Residential Neighborhood Traffic Control*, International Symposium on Traffic Control Systems, Berkeley, California, 1979.

*Planning and Design of Bicycle Facilities: Pitfalls and New Directions*, Transportation Research Board, Research Record 570, 1976.

Co-recipient, Progressive Architecture Award, *Livable Urban Streets, San Francisco Bay Area and London*, with Donald Appleyard, 1979.



# EXHIBIT B



## **Rivera, Mike**

---

**From:** Rivera, Mike  
**Sent:** Friday, March 8, 2019 3:38 PM  
**To:** 'Chris Relf'  
**Subject:** 1750 Broadway. Public Comments Received

Hi Chris,

FYI:

-----Original Message-----

**From:** Joseph Hornof [mailto:hornof@earcom.com]  
**Sent:** Wednesday, March 6, 2019 12:40 PM  
**To:** Ranelletti, Darin <DRanelletti@oaklandca.gov>  
**Subject:** Please help us save our affordable housing

Dear Mr Ranelletti,

Greetings from down the street. I live at 1770 Broadway, on the corner of 19th St. Our building is historic, dating back to 1912.

We have 48 apartments at affordable rent. Some of my neighbors have been here for many years. Some of us provide vital services to our community.

For over a year, we've been tracking the development proposed next door at 1750 Broadway through the Planning Commission. We've spoken at meetings and submitted our concerns but it feels as if we are being ignored.

The process has not been transparent. Contrary to previous reports they published, the developers finally had their first discussions with us last week. They sprang the meeting with 30 hours notice, which limited the number of us who could attend.

The next Planning Commission meeting was postponed to Wednesday March 20. The developer is presenting their CEQA report. 1770 Broadway is referenced a scant half-dozen times in their 400 pages of reports. Some of our significant concerns are not addressed. Once again, it feels like we hardly exist.

One area which omits us is the shadow study. A shadow study is required for our building as it is an historic resource. The function of this resource should be considered. It's more than a facade; it contains apartments. I believe this study will show that we will lose all of our natural sunlight, permanently putting us in an unhealthy environment.

There's a larger problem which will arise before that. At the community meeting, we learned that construction is scheduled to last

28-36 months. Three years is significantly longer than other projects. The noise from this construction will render our apartments unlivable during that period. We're speaking from experience. We've been impacted by the construction at 17th St for over a year; construction across 19th St. is just starting up. 1750 Broadway will be right against our walls and wrap around our building.

Safety is another issue. Will their crane haul material over our heads? The size of this building is frightening. If anything should slip, it could come crashing into our light well and into our apartments. This puts us in a position of tremendous risk.



Those are some of our many concerns. We'd appreciate if we could talk to you about this.

Thanks for your time and attention,

-Joe

Joseph Hornof  
1770 Broadway #112  
Oakland, CA 94612  
510.763.1488  
hornof@earcom.com



Re: Case Files PLN18369/ZP170064; 1750 Broadway  
December 5, 2018

Dear Members of the Design Review Committee,

Please forgive me - I'm having a hard time trying to learn how this process works. This is a follow-up to my public comment from 11/28/18, prior to the meeting scheduled last week.

It was only by chance that I learned this meeting was rescheduled. A public notice was not posted on the premises of 1750 Broadway. That sign still reads 11/28. Why does the City of Oakland website post only the agendas for these meetings, but no minutes or reports?

Yesterday I received a phone message from Christopher Relf of Rubicon Partners, the developers of this proposed project. I didn't list my phone number on the comment I submitted last week, but I would like to thank him for reaching out. I didn't get home in time to return his call and I'm not sure how to respond. I don't have the authority, expertise or resources to negotiate and enforce the mitigating measures that should be required for a project of this scale.

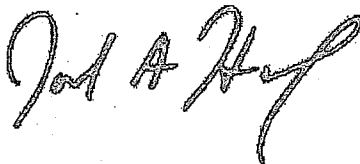
That's why I'm writing the Planning Commission, right? Isn't that your job? I'm sorry, I'm still trying to figure out how this works.

Tonight a neighbor with better eyes than me pointed out #7 in the background summary: Demonstrate communication with the affected tenant of existing facility. Once again, I appreciate Mr. Relf's phone call, but I am not the only affected tenant of a singular existing facility. There are 48 apartments in our building, along with retail on the ground floor, with neighbors up and down and across our street.

At a minimum, this communication should include:

- An informational packet including details of demolition and construction plans, timelines, how the completed building will affect our quality of life. Is this tantamount to eviction? Should we plan on moving out? What mitigation measures will be offered? Some of the residents in my building do not have access to the Internet. One is worried about living under such a big building in an area prone to earthquakes. If someone drops a coffee cup off this tower, it's plunging straight into our lightwell. The residents of my building will be literally, physically impacted.
- A community meeting to speak directly with Rubicon Partners and representation from the City of Oakland Planning Commission who can guide us and provide necessary oversight. Our neighbors at East Bay Paratransit could provide a conference room to host this. This is a humongous project. It deserves more than a kangaroo court - public safety is at stake. If the Planning Commission wishes to place due diligence upon my sole shoulders, I would consider that negligent.

Thank you for your consideration,



Joseph Hornof  
1770 Broadway Apt 112  
Oakland, CA 94612

Attachment E



# EXHIBIT C





# WILSON IHRIG

ACOUSTICS, NOISE & VIBRATION

CALIFORNIA  
WASHINGTON  
NEW YORK

1 April 2019

Christina Caro, Esq.  
Adams Broadwell Joseph & Cardozo  
601 Gateway Blvd, Suite 1000  
South San Francisco, California 94080

Subject: *1750 Broadway Project – CEQA Checklist / Exemption Report*  
Review and Comment on Construction Noise Analysis

Dear Ms. Caro,

Per your request, I have reviewed the subject matter document with respect to construction noise.

To make my comments more concrete, I will focus on the effects of noise on occupants of the neighboring property at 1770 Broadway, a mixed-use building with retail at street-level and four stories of residences above. The 1770 Broadway building houses numerous residents who are likely to be adversely impacted by the Project's construction noise adjacent to their homes. On March 6, 2019, Mr. Joseph Hornof, a resident of 1770 Broadway, wrote to the City of Oakland expressing his concern about noise from the redevelopment of 1750 Broadway:

**At the community meeting, we learned that construction is scheduled to last 28-36 months. Three years is significantly longer than other projects. The noise from this construction will render our apartments unlivable during that period. We're speaking from experience. We've been impacted by the construction at 17<sup>th</sup> St for over a year; construction across 19<sup>th</sup> St is just starting up. 1750 Broadway will be right against our walls and wrap around our building.<sup>1</sup>**

## Introduction

The *1750 Broadway Project – CEQA Checklist / Exemption Report* ("CCER") is a derivative project-level document that references several previous program-level environmental impact reports, namely:

1. *Oakland General Plan Land Use and Transportation Draft Environmental Impact Report*, ER No. 97-18, State Clearinghouse No. 97062089, October 31, 1997. ("LUTE EIR")

<sup>1</sup> Email from Joseph Hornof to Darin Ranelletti ([DRanelletti@oaklandca.gov](mailto:DRanelletti@oaklandca.gov)), March 6, 2019.





2. *City of Oakland House Element Draft Environmental Impact Report*, State Clearinghouse No. 2009092065, August 2010. ("*Housing Element EIR*")
3. *Proposed Amendments to the Central District Urban Renewal Plan Draft Environmental Impact Report*, State Clearinghouse No. 2010102024, March 2011. ("*Renewal Plan EIR*")

The *LUTE EIR* correctly, in my opinion, identified construction noise in Downtown Oakland as a significant impact, as noted in the CCER on p. 5. The CCER also notes on p. 5 that the *LUTE EIR* concluded that construction noise impacts were significant and unavoidable. The City therefore adopted a Statement of Overriding Consideration as part of the *LUTE EIR* approval process.

Interestingly, both the *Housing Element EIR* and the *Renewal Plan EIR* subsequently concluded the opposite - that construction noise would be a less-than-significant impact with the implementation of mitigation measures and/or SCAs (Standard Conditions of Approval) [CCER at p. 6 and 7]. However, in my opinion, neither of these documents substantiated that the mitigation measures suggested nor the SCAs would, in fact, reduce construction noise to levels at or below the thresholds of significance for construction noise that are clearly referenced in all three program-level EIRs, and the CCER fails to include evidence demonstrating that the noise-related SCAs that are applied to the Project (*SCA NOI-1* through *SCA NOI-8*) will be feasibly implemented by the Applicant.<sup>2</sup> Furthermore, the suggested mitigation measures contained in the SCAs are, in many instances, likely to be ineffective at reducing actual construction noise. Moreover, the SCAs do not include all feasible construction noise mitigation measures that would markedly improve the lives of the residents of 1770 Broadway during the lengthy demolition and re-construction of 1750 Broadway.

### Review of EIR Construction Noise Analyses

All three program-level EIRs contain the City of Oakland Construction Noise Standards at Receiving Property Line (Oakland Planning Code § 17.120.050; Table 1 in *Guidelines*), reproduced below. As noted in Mr. Hornof's email, the scheduled construction for 1750 Broadway is 140 to 180 days (based on a 5-day week), so the residential standards applicable at the property lines are:<sup>3</sup>

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<sup>2</sup> Subsequent to all three EIRs, the City of Oakland published *CEQA Thresholds of Significance Guidelines* (October 28, 2013). I note that even though the Guidelines were established in 2013, the document itself notes that they "have been in general use since at least 2002" [Guidelines at p. 1]. Specifically, the Noise Level Standards for Temporary Construction or Demolition Activities in the Guidelines appear in all three of the program-level EIRs.

<sup>3</sup> *SCA NOI-2* (formerly *SCA 29: Noise Control*) includes this provision: "The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determined an extension is necessary and all available noise reduction controls are implemented." Without a detailed construction schedule – which is not provided in the CCER – it is impossible to assess whether this SCA is being enforced in a meaningful way. Moreover, this SCA fails to establish how long the breaks between "noisy phases" will be. Based on my experience performing noise consulting, in the construction world time is money. I question how fiscally viable it is to take meaningful pauses to provide nearby residents





Weekdays (7 a.m. to 7 p.m.) 65 dBA

Weekends (9 a.m. to 8 p.m.) 55 dBA

The three program-level EIRs all contain reference noise levels for construction equipment and typical *average* ( $L_{eq}$ ) levels for the various phases. Below are the typical average noise levels at distances of 25 and 50 ft cited in the *Housing Element EIR* and the *Renewal EIR* (Table 2):

<b>TABLE 1</b> <b>City of Oakland Construction Noise Standards</b> <b>at Receiving Property Line, dBA<sup>1</sup></b>		
Receiving Land Use	Maximum Allowable Noise Level (dBA)	
	Weekdays 7 a.m.-7 p.m.	Weekends 9 a.m.-8 p.m.
<b>Less than 10 days</b>		
Residential	80	65
Commercial, Industrial	85	70
<b>More than 10 Days</b>		
Residential	65	55
Commercial, Industrial	70	60
Notes: 1) If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise		

<b>TABLE 2</b> <b>Typical Average (<math>L_{eq}</math>) Construction Noise Levels<sup>‡</sup>, dBA</b>				
Phase	Housing Elem. EIR		Renewal Plan EIR	
	25 ft	50 ft	25 ft <sup>†</sup>	50 ft
Ground Clearing	88	82	90	84
Excavation	92	86	95	89
Foundations	83	77	84	78
Structural Erection	89	83	90	85
Exterior Finishing	92	86	95	89

<sup>‡</sup> The maximum noise levels will necessarily be higher, likely by 3 to 6 dB.

<sup>†</sup> Calculated using 6 dB / doubling of distance consistent with the EIRs referenced in the CCER.

a respite from the noise, and the record for the Project does not provide evidence demonstrating that the Applicant has committed to limit "the noisiest phases of construction" to less than 10 days. As such, I believe the correct noise standard for this situation is the "More than 10 Days" standard.



Assuming that all of the construction work is done on weekdays so that the applicable limit is 65 dBA, the construction noise level would need to be reduced anywhere from 18 to 30 dB based on the levels at 25 ft. Note that these are average levels as opposed to the City of Oakland standard which is a maximum level, and that these are at distances of 25 and 50 ft whereas 1750 Broadway construction will be as close as 3 ft from 1770 Broadway. At times, the maximum level will be on the order of 5 to 10 dBA higher at the property line, at which point the noise level will likely exceed the standard by over 30 dB. These are significant noise impacts that the CCER fails to disclose, and incorrectly concludes will be mitigated to less than significant levels.

The mitigation measures required by SCA NOI-1 through SCA NOI-8<sup>4</sup> include best-practices and should certainly be enforced. However, the measures contained in SCA NOI-2 (SCA 63) – Noise Control are unlikely to provide the 18 to 30 dB reduction necessary to meet the City of Oakland Construction Noise Standards at the Receiving Property Line, as the CCER asserts they will. I note that neither the CCER nor the supporting EIRs provide any quantitative assessment of the efficacy of the noise control measures at reducing noise levels. For example, SCA NOI-2 – Construction Noise, provides that:

- 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).<sup>5</sup>

*Construction equipment was not commonly equipped with mufflers prior to the 1970s, so requiring a muffler was a meaningful noise mitigation measure at that time. However, all equipment operating today in urban settings is commonly muffled from the factory. I am not aware of high-performance mufflers for construction equipment, and I have not heard of them being installed specifically for a project. I suggest you ask the City of Oakland if they have data substantiating that the requirement for high-performance mufflers has resulted in lower noise levels on any project site.*

*Intake silencers and ducts should be utilized, but those only apply to a limited amount of equipment on-site.*

*Acoustically-attenuating shields or shrouds may be effective for operations that are small in scale and limited in occurrences. I note here the qualification in SCA NOI-2 "wherever feasible". In my own experience with large-scale construction projects, the time and hassle associated with moving and positioning shields and shrouds typically make them infeasible.*

- 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 wherever possible 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

<sup>4</sup> CCER, p. 41, explains that SCA NOI-1 through NOI-8 will be applied to the Project.

<sup>5</sup> See SCA NOI-2 – Construction Noise.





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.<sup>6</sup>

*This requirement is good and should be enforced, but with the exception of hand-held jackhammers, it is likely that the construction equipment on which the noise level estimates are based were hydraulically actuated. Furthermore, much of the noise from impact tools comes from the impact itself – causing both the tool and the structure to radiate noise – which is unaffected by the actuation of the equipment.*

- 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 other measures as determined by the City to provide equivalent noise reduction.<sup>7</sup>

*Again, this is a reasonable best-practice that should be enforced. However, given the small size of the project site and its close proximity to 1770 Broadway, this will likely have only a marginal effect on reducing the overall construction noise level.*

In summary, SCA NOI-2 therefore fails to ensure that construction noise will be adequately mitigated.

SCA NOI-3 (SCA 64) – Extreme Construction Noise states that it applies to situations in which the noise levels are expected to exceed 90 dBA, which the *Housing Element EIR* and *Renewal Plan EIR* both indicate will be the case at 1770 Broadway. This does contain at least one mitigation measure which could noticeably reduce noise levels at 1770 Broadway, but is qualified by “if feasible”:

- Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings.<sup>8</sup>

*Because 1770 Broadway overlooks the site and the 1750 Broadway project will essentially be built right up to the property line, building along the property line will be ineffective because it will not break the line of sight.*

- 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.<sup>9</sup>

*There is no indication that pile driving is necessary for this project. If there is, this measure should be implemented, but it should also be noted that impact pile drivers typically generate 107 dBA at 25 ft, much higher than the EIR construction noise estimates.*

- Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site.<sup>10</sup>

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<sup>6</sup> Ibid

<sup>7</sup> Ibid

<sup>8</sup> See SCA NOI-3 – Extreme Construction Noise

<sup>9</sup> Ibid

<sup>10</sup> Ibid





*This could be effective for the fifth and final phase of construction, Exterior Finishing, but cannot be implemented prior to that phase.*

- 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.<sup>11</sup>

*This is the mitigation measure that should be implemented in this situation. Although this text mentions 'sound blankets', SCA NOI-3 also states "Potential attenuation measures include, but are not limited to, the following:". Below, I discuss other ways that the noise insulation of 1770 Broadway and other buildings (as applicable) could be improved. I am not aware of the standard for "feasibility" in this context, but the measures I discuss below have been implemented on construction projects Wilson Ihrig has worked on.*

In summary, SCA NOI-3 does provide for mitigation that could reduce construction noise by a meaningful amount, on the order of 15 to 20 dB, assuming it is deemed feasible. If not, then the construction noise impact would remain significant. Even if it is, 20 dB of attenuation might still not be sufficient to reduce noise levels to less than significant levels.

SCA NOI-1 and SCA NOI-4 through SCA NOI-8 provide non-specific measures to reduce construction noise levels. Therefore, these SCAs cannot be relied upon to reduce construction noise impacts to less than significant levels.

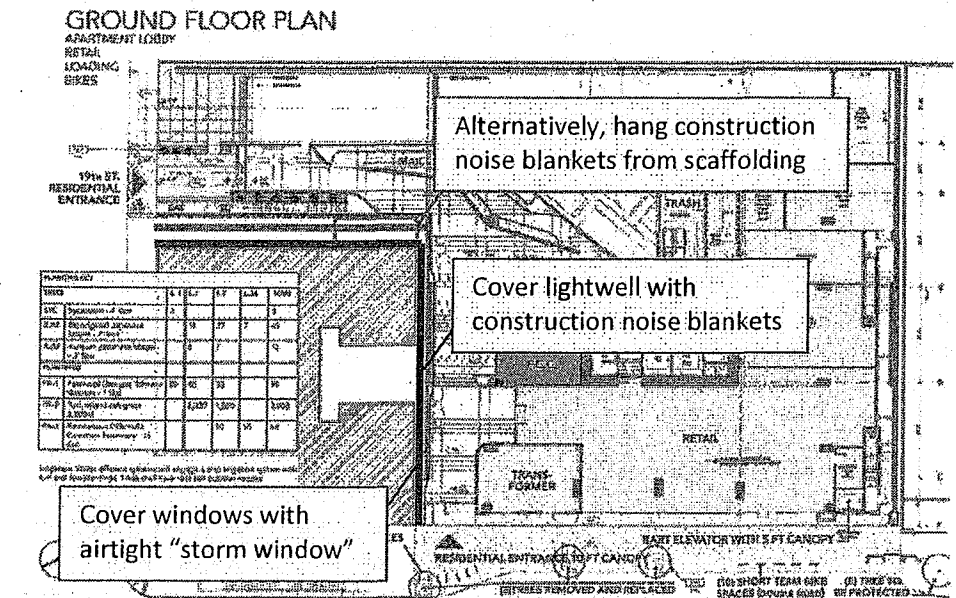
### Discussion of Receiver-Based Noise Mitigation Measures

In my opinion, unless major steps are taken to reduce noise levels at neighboring receivers are taken, the Project remains likely to generate substantial construction noise that results in a substantial increase in ambient noise levels in the Project vicinity above levels existing without the project. The impacts of this noise on the residents of 1770 Broadway will be compounded by concurrent construction noise from the nearby 1900 Broadway project, which residents have also commented on. Given that the residents of 1770 Broadway will be living next to the large-scale 1750 Broadway construction site for 28 to 36 months, it seems reasonable to implement mitigation that will provide meaningful reductions in noise levels inside 1770 Broadway. Both measures I suggest would require modifications to and subsequent remediation to the building at 1770 Broadway. Please refer to Figure 1 during this discussion.

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<sup>11</sup> *Ibid*

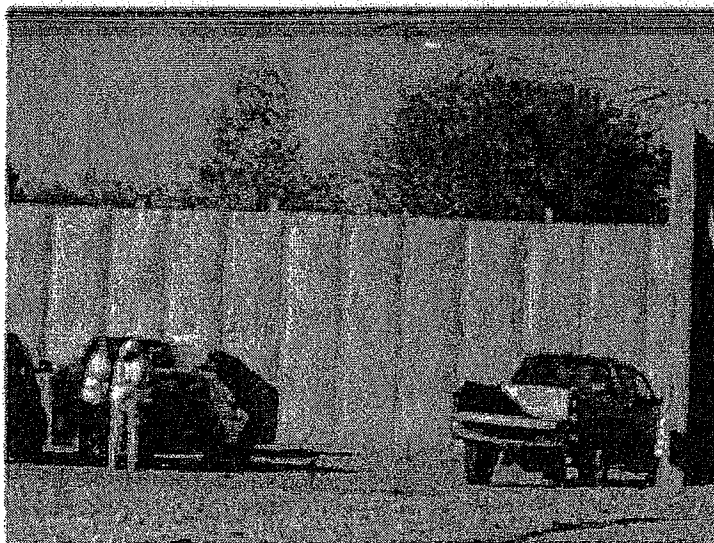




**FIGURE 1 RECOMMENDED NOISE MITIGATION AT 1770 BROADWAY**

# 1 Close off lightwell with sound-blocking construction blankets

Many of the apartments at 1750 Broadway have windows that open onto a lightwell. The lightwell itself is a reverberant space that would amplify construction sound that enters it. For this reason, we recommend that sound attenuating blankets such as those shown in Plate 1 be hung from the 1770 Broadway building such that the lightwell is sealed.



**PLATE 1 CONSTRUCTION NOISE CONTROL BLANKETS**



The particular blanket shown is a BBC-13X-2" blanket provided by Acoustical Surfaces, Inc.<sup>12</sup> This blanket, when properly installed, can realistically provide on the order of 20 dB of attenuation within the lightwell.

## 2 Cover windows facing construction with airtight "storm windows"

From Streetview in Google Maps, it appears that 1770 Broadway is currently fitted with single-pane, vertical slider windows. Some appear to be aluminum-framed while others appear to be wood-framed. None of the windows look to be particularly effective at blocking noise, and this is consistent with both the age of the building and the fact that the apartments are characterized by "affordable" by Mr. Hornof.

As the sides of the concrete buildings are relatively flat, a second window could be furred out from the building façade. I note that this would require some television satellite dishes be relocated. Even a relatively inexpensive second slider could provide 5 to 10 dB of extra attenuation provided that the air-gap is on the order of 3" and the furring and new window frame are all well-sealed with caulk. Any affected apartment that has adequate ventilation without having to open windows facing the construction site could be given the option of having a solid plate glass or plexiglass window installed over the building's window. This would perform even better for noise reduction.

Alternatively, the windows in 1770 Broadway could simply be replaced with high-performing, double-pane, acoustical windows. This may prove to be more cost-effective since there would be no labor to remediate the buildings.

## 3 Alternatively hang construction noise blankets from scaffolding

If space allows, an alternative to fitting windows on the east side of 1770 Broadway with "storm windows" would be to construct scaffolding and then hang construction noise control blankets from it.

## Conclusion

In summary, I do not believe that the CCER, or any of the various program-level EIRs cited in the CCER, substantiate that the construction noise for the 1750 Broadway project will be reduced to levels below the City of Oakland Construction Noise Standards at Receiving Property Line. As such, construction noise would remain a significant impact unless further mitigation is adopted.

While implementing the SCAs would demonstrate that the Applicant was making some efforts at reducing the many months of construction noise for the residents of 1770 Broadway, I believe that it is reasonable and feasible to provide the additional, effective mitigation recommended herein, namely, sealing the lightwell with construction noise control blankets, fitting the windows facing the

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<sup>12</sup> [https://www.acousticalsurfaces.com/curtan\\_stop/sound\\_blankets.htm](https://www.acousticalsurfaces.com/curtan_stop/sound_blankets.htm)





WILSON IHRIG  
ACOUSTICS, NOISE & VIBRATION

1750 Broadway Oakland Project  
Review of Construction Noise Analysis  
DRAFT

construction site with acoustically-sealing "storm windows", and/or constructing scaffolding and hanging construction noise control blankets from it.

\* \* \* \* \*

Please contact me if you have any question about this review and comments on construction noise from the 1750 Broadway project.

Very truly yours,

WILSON IHRIG

Derek L. Watry  
Principal

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## **DEREK L. WATRY**

### *Principal*

Since joining Wilson Ihrig in 1992, Derek has gained experienced in many areas of practice including environmental, construction, forensic, architectural, and industrial. For all of these, he has conducted extensive field measurements, established acceptability criteria, and calculated future noise and vibration levels. In the many of these areas, he has prepared CEQA and NEPA noise technical studies and EIR/EIS sections. Derek has a thorough understanding of the technical, public relations, and political aspects of environmental noise and vibration compliance work. He has helped resolve complex community noise issues, and he has also served as an expert witness in numerous legal matters.

### **Education**

- M.S. Mechanical Engineering, University of California, Berkeley
- B.S. Mechanical Engineering, University of California, San Diego
- M.B.A. Saint Mary's College of California

### **Project Experience**

#### ***12<sup>th</sup> Street Reconstruction, Oakland, CA***

Responsible for construction noise control plan from pile driving after City received complaints from nearby neighbors. Attendance required at community meetings.

#### ***525 Golden Gate Avenue Demolition, San Francisco, CA***

Noise and vibration monitoring and consultation during demolition of a multi-story office building next to Federal, State, and Municipal Court buildings for the SFDPPW.

#### ***911 Emergency Communications Center, San Francisco, CA***

Technical assistance on issues relating to the demolition and construction work including vibration monitoring, developing specification and reviewing/recommending appropriate methods and equipment for demolition of Old Emergency Center for the SFDPPW.

#### ***Central Contra Costa Sanitary District, Grayson Creek Sewer, Pleasant Hill, CA***

Evaluation of vibration levels due to construction of new sewer line in hard soil.

#### ***City of Atascadero, Review of Walmart EIR Noise Analysis, Atascadero, CA***

Review and Critique of EIR Noise Analysis for the Del Rio Road Commercial Area Specific Plan.

#### ***City of Fremont, Ongoing Environmental Services On-Call Contract, Fremont, CA***

Work tasks primarily focus on noise insulation and vibration control design compliance for new residential projects and peer review other consultant's projects.

#### ***City of Fremont, Patterson Ranch EIR, Fremont, CA***

Conducted noise and vibration portion of the EIR.

#### ***City of King City, Silva Ranch Annexation EIR, King City, CA***

Conducted the noise portion of the EIR and assessed the suitability of the project areas for the intended development. Work included a reconnaissance of existing noise sources and receptors in and around the project areas, and long-term noise measurements at key locations.





***Conoco Phillips Community Study and Expert Witness, Rodeo, CA***

Investigated low frequency noise from exhaust stacks and provided expert witness services representing Conoco Phillips. Evaluated effectiveness of noise controls implemented by the refinery.

***Golden Gate Park Concourse Underground Garage, San Francisco, CA***

Noise and vibration testing during underground garage construction to monitor for residences and an old sandstone statue during pile driving for the City of San Francisco.

***Laguna Honda Hospital, Clarendon Hall Demolition, San Francisco, CA***

Project manager for performed vibration monitoring during demolition of an older wing of the Laguna Honda Hospital.

***Loch Lomond Marina EIR, San Rafael, CA***

Examined traffic noise impacts on existing residences for the City of San Rafael. Provided the project with acoustical analyses and reports to satisfy the requirements of Title 24.

***Mare Island Dredge and Material Disposal, Vallejo, CA***

EIR/EIS analysis of noise from planned dredged material off-loading operations for the City of Vallejo.

***Napa Creek Vibration Monitoring Review, CA***

Initially brought in to peer review construction vibration services provided by another firm, but eventually was tapped for its expertise to develop a vibration monitoring plan for construction activities near historic buildings and long-term construction vibration monitoring.

***San Francisco DPW, Environmental Services On-Call, CA***

Noise and vibration monitoring for such tasks as: Northshore Main Improvement project, and design noise mitigation for SOMA West Skate Park.

***San Francisco PUC, Islais Creek Clean Water Program, San Francisco, CA***

Community noise and vibration monitoring during construction, including several stages of pile driving. Coordination of noise and ground vibration measurements during pile driving and other construction activity to determine compliance with noise ordinance. Coordination with Department of Public Works to provide a vibration seminar for inspectors and interaction with Construction Management team and nearby businesses to resolve noise and vibration issues.

***San Francisco PUC, Richmond Transport Tunnel Clean Water Program, San Francisco, CA***

Environmental compliance monitoring of vibration during soft tunnel mining and boring, cut-and-cover trenching for sewer lines, hard rock tunnel blasting and site remediation. Work involved long-term monitoring of general construction activity, special investigations of groundborne vibration from pumps and bus generated ground vibration, and interaction with the public (homeowners).

***Santa Clara VTA, Capitol Expressway Light Rail (CELR) Bus Rapid Transit (BRT) Update EIS, CA***

Reviewed previous BRT analysis and provide memo to support EIS.





***Shell Oil Refinery, Martinez, CA***

Identified source of community noise complaints from tonal noise due to refinery equipment and operations. Developed noise control recommendations. Conducted round-the-clock noise measurements at nearby residence and near to the property line of the refinery and correlated results. Conducted an exhaustive noise survey of the noisier pieces of equipment throughout the refinery to identify and characterize the dominant noise sources that were located anywhere from a quarter to three-quarters of a mile away. Provided a list of actions to mitigate noise from the noisiest pieces of refinery equipment. Assisted the refinery in the selection of long-term noise monitoring equipment to be situated on the refinery grounds so that a record of the current noise environment will be documented, and future noise complaints can be addressed more efficiently.

***Tyco Electronics Corporation, Annual Noise Compliance Study, Menlo Park, CA***

Conducted annual noise compliance monitoring. Provided letter critiquing the regulatory requirements and recommending improvements.

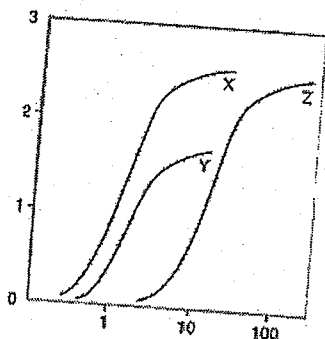
***University of California, San Francisco Mission Bay Campus Vibration Study, CA***

Conducted measurements and analysis of ground vibration across site due to heavy traffic on Third Street. Analysis included assessment of pavement surface condition and propensity of local soil structure.



# EXHIBIT D





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Environmental Consulting, Inc.

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March 31, 2019

Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080

Attn: Ms. Christina Caro

**Subject: Comment Letter on 1750 Broadway Project Application  
PLN18369**

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Dear Ms. Caro:

At the request of Adams Broadwell Joseph & Cardozo (ABJC), Clark and Associates (Clark) has reviewed materials related to the March 20, 2019 City of Oakland Conditions of Approval (File No. PLN18369) for the 1750 Broadway Project.

The City's Conditions of Approval, specifically Standard Condition of Approval (SCA) AIR-3, are insufficient to protect the residents of the surrounding community from the increased health risk from diesel particulate matter (DPM) emitted during construction activities on site. According to the City's summary, the SCAs are designed to, and will, avoid or substantially reduce a project's environmental effects.

SCA-AIR3 a, states that the project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to diesel particulate matter (DPM) from construction methods by two specific conditions, i or (emphasis added) ii. The City's Conditions of Approval allow the proponent which method to use and fails to bind the proponent to perform both to ensure that sensitive receptors are protected.

The findings of the HRA performed by the proponent on the project concluded that the unmitigated cancer risk from DPM for infants, children, and adult residential receptors were calculated to be 114, 23, and 3 in one-million, respectively. If mitigations measures, which included primarily the



use of Tier 4 equipment are implemented, the risks from DPM are reduced to 4.5, 0.9, and 0.13 in one-million, respectively.

SCA AIR-3 a. ii. states "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." This condition does not bind the proponent to the use of Tier 4 equipment, rather it offers the proponent the opportunity to use the "most effective VDECS" available. The wording of the SCA allows the Proponent to determine that "available" equipment could include certified equipment that does not meet the Tier 4 requirement. The reduction in DPM assumed by use of Tier 4 equipment includes reductions of emissions of up to 93% during the construction phase (0.26 tons to 0.019 tons of DPM emitted). Assumptions regarding the effectiveness of the VDCES in the SCA and therefore the potential health risk to receptors in the area, cannot be confirmed until all the equipment to be utilized is on-site and construction is implemented. This approach therefore fails to substantiate the City's conclusion that the Project's health risks from exposure to DPM emissions will be less than significant, and fails to ensure that the public health will be protected by offering the proponents the choice of how to approach VDCES on-site.

In addition to the concerns of the SCA regarding binding the Proponents to the findings of the HRA and the use of Tier 4 equipment, the City has failed to consider the impacts of the concurrent construction projects in the immediate area on the community (see Attachment A). A review of the Health Risk Assessment prepared for the 1750 Broadway project identifies one specific sensitive receptor located at 1770 Broadway (immediately east of the proposed project). This sensitive receptor is also the one identified in the 1900 Broadway project approved by the City. Since the projects will be performed concurrently and within 300 feet of each other, it is reasonable to add the construction emissions from each project to estimate the impacts on the residents of 1770 Broadway.

For the 1750 Broadway project identified the Maximum Exposed Individual (MEI) was calculated to be exposed to  $0.366 \text{ ug/m}^3$  of PM<sub>2.5</sub> (DPM) annually during construction in the unmitigated scenario. The 1900 Broadway project identified that the Maximum Exposed Individual (MEI) was exposed to  $0.019 \text{ ug/m}^3$  of PM<sub>2.5</sub> (DPM) annually during construction in the unmitigated



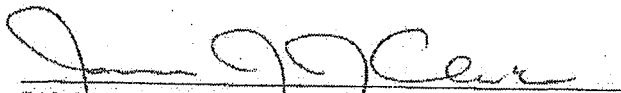
scenario. The combined annual exposure concentration is therefore  $0.385 \text{ ug/m}^3$  DPM from both projects. The resulting health risk for infants, children, and adults at the 1770 Broadway address would therefore be 120 in 1,000,000; 24 in 1,000,000; and 1.5 in 1,000,000, respectively. The combined risk would therefore exceed the project goals of 100 in 1,000,000 during any construction phase.

For the mitigated exposure scenarios, the 1750 Broadway project identified the Maximum Exposed Individual (MEI) was calculated to be exposed to  $0.015 \text{ ug/m}^3$  of PM2.5 (DPM) annually during construction. The 1900 Broadway project identified that the Maximum Exposed Individual (MEI) was exposed to  $0.001 \text{ ug/m}^3$  of PM2.5 (DPM) annually during construction. The combined annual exposure concentration is therefore  $0.016 \text{ ug/m}^3$  DPM from both projects. The resulting health risk for infants, children, and adults at the 1770 Broadway address would therefore be 5 in 1,000,000; 1 in 1,000,000; and 0.07 in 1,000,000, respectively.

### Conclusion

The facts identified and referenced in this comment letter lead me to reasonably conclude that the Project could result in significant unmitigated impacts if the conditions of approval are not binding.

Sincerely,

  
JAMES J. J. CLARK, Ph.D.



**Attachment A: DPM Health Risk Calculation**



$$\text{Risk}_{\text{inh-res}} = \text{Dose}_{\text{air}} * \text{CPF} * \text{ASF} * \text{ED/AT}$$

$$\text{Risk}_{\text{inh-res}} = \text{Dose}_{\text{air}} * \text{CPF} * \text{ASF} * \text{ED/AT}$$

Variable	Description	Units	Value
Dose <sub>air</sub>	Daily Inhalation dose	mg/kg-day	Calculated

Variable	Description	Units	Value
$Dose_{air}$	Daily inhalation dose	mg/kg-day	Calculated
$C_{air}$	Concentration in air	$\mu\text{g}/\text{m}^3$	0.385
{BR/BW}	Daily Breathing rate normalized to body weight	L/kg body weight-day	Calculated
A	Inhalation absorption fraction	Unitless	1
EF	Exposure frequency (days/365 days)	Unitless	Calculated
$10^{-6}$	micrograms to milligrams conversion, liters to cubic meters conversion	Unitless	Calculated

[illegible]



$$\text{Risk}_{\text{inh-res}} = \text{Dose}_{\text{air}} * \text{CPF} * \text{ASF} * \text{ED/AT}$$

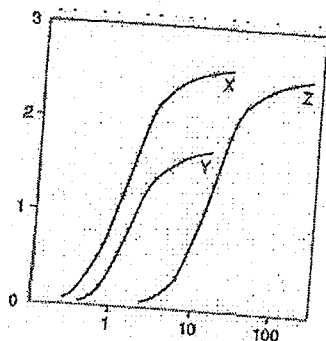
$$\text{Risk}_{\text{inh-res}} = \text{Dose}_{\text{air}} * \text{CPF} * \text{ASF} * \text{ED/AT}$$

$$\text{Dose}_{\text{air}} = C_{\text{air}} * \{BR/BW\} * A * EF * 10^{-6}$$

## Residential Exposures

[illegible]





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***James J. J. Clark, Ph.D.***

*Principal Toxicologist*

**Toxicology/Exposure Assessment Modeling**

**Risk Assessment/Analysis/Dispersion Modeling**

**Education:**

Ph.D., Environmental Health Science, University of California, 1995

M.S., Environmental Health Science, University of California, 1993

B.S., Biophysical and Biochemical Sciences, University of Houston, 1987

**Professional Experience:**

Dr. Clark is a well recognized toxicologist, air modeler, and health scientist. He has 20 years of experience in researching the effects of environmental contaminants on human health including environmental fate and transport modeling (SCREEN3, AEROMOD, ISCST3, Johnson-Ettinger Vapor Intrusion Modeling); exposure assessment modeling (partitioning of contaminants in the environment as well as PBPK modeling); conducting and managing human health risk assessments for regulatory compliance and risk-based clean-up levels; and toxicological and medical literature research.

Significant projects performed by Dr. Clark include the following:

**LITIGATION SUPPORT**

**Case:** James Harold Caygle, et al, v. Drummond Company, Inc. Circuit Court for the Tenth Judicial Circuit, Jefferson County, Alabama. Civil Action. CV-2009

**Client:** Environmental Litigation Group, Birmingham, Alabama

Dr. Clark performed an air quality assessment of emissions from a coke factory located in Tarrant, Alabama. The assessment reviewed include a comprehensive review of air quality standards, measured concentrations of pollutants from factory, an inspection of the facility and detailed assessment of the impacts on the community. The results of the assessment and literature have been provided in a declaration to the court.



**Case Result: Settlement in favor of plaintiff.**

**Case: Rose Roper V. Nissan North America, et al. Superior Court of the State Of California for the County Of Los Angeles – Central Civil West. Civil Action. NC041739**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to multiple chemicals, including benzene, who later developed a respiratory distress. A review of the individual's medical and occupational history was performed to prepare an exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to respiratory irritants. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: O'Neil V. Sherwin Williams, et al. United States District Court Central District of California**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to petroleum distillates who later developed a bladder cancer. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Summary judgment for defendants.**

**Case: Moore V., Shell Oil Company, et al. Superior Court of the State Of California for the County Of Los Angeles**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to chemicals while benzene who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.



**Case Result: Settlement in favor of plaintiff.**

**Case: Raymond Saltonstall V. Fuller O'Brien, KILZ, and Zinsser, et al. United States District Court Central District of California**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to benzene who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Richard Boyer and Elizabeth Boyer, husband and wife, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-7G.**

**Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.**

Dr. Clark performed a toxicological assessment of a family exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**



**Case: JoAnne R. Cook, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-9R**

**Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.**

Dr. Clark performed a toxicological assessment of an individual exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Patrick Allen And Susan Allen, husband and wife, and Andrew Allen, a minor, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-W**

**Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.**

Dr. Clark performed a toxicological assessment of a family exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Michael Fahey, Susan Fahey V. Atlantic Richfield Company, et al. United States District Court Central District of California Civil Action Number CV-06 7109 JCL.**



**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to refined petroleum hydrocarbons who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Constance Acevedo, et al., V. California Spray-Chemical Company, et al.,  
Superior Court of the State Of California, County Of Santa Cruz. Case No. CV  
146344**

Dr. Clark performed a comprehensive exposure assessment of community members exposed to toxic metals from a former lead arsenate manufacturing facility. The former manufacturing site had undergone a DTSC mandated removal action/remediation for the presence of the toxic metals at the site. Opinions were presented regarding the elevated levels of arsenic and lead (in attic dust and soils) found throughout the community and the potential for harm to the plaintiffs in question.

**Case Result: Settlement in favor of defendant.**

**Case: Michael Nawrocki V. The Coastal Corporation, Kurk Fuel Company, Pautler  
Oil Service, State of New York Supreme Court, County of Erie, Index Number  
I2001-11247**

**Client: Richard G. Berger Attorney At Law, Buffalo, New York**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to refined petroleum hydrocarbons who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the



known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Judgement in favor of defendant.**

#### **SELECTED AIR MODELING RESEARCH/PROJECTS**

##### **Client – Confidential**

Dr. Clark performed a comprehensive evaluation of criteria pollutants, air toxins, and particulate matter emissions from a carbon black production facility to determine the impacts on the surrounding communities. The results of the dispersion model will be used to estimate acute and chronic exposure concentrations to multiple contaminants and will be incorporated into a comprehensive risk evaluation.

##### **Client – Confidential**

Dr. Clark performed a comprehensive evaluation of air toxins and particulate matter emissions from a railroad tie manufacturing facility to determine the impacts on the surrounding communities. The results of the dispersion model have been used to estimate acute and chronic exposure concentrations to multiple contaminants and have been incorporated into a comprehensive risk evaluation.

##### **Client – Los Angeles Alliance for a New Economy (LAANE), Los Angeles, California**

Dr. Clark is advising the LAANE on air quality issues related to current flight operations at the Los Angeles International Airport (LAX) operated by the Los Angeles World Airport (LAWA) Authority. He is working with the LAANE and LAX staff to develop a comprehensive strategy for meeting local community concerns over emissions from flight operations and to engage federal agencies on the issue of local impacts of community airports.



**Client – City of Santa Monica, Santa Monica, California**

Dr. Clark is advising the City of Santa Monica on air quality issues related to current flight operations at the facility. He is working with the City staff to develop a comprehensive strategy for meeting local community concerns over emissions from flight operations and to engage federal agencies on the issue of local impacts of community airports.

**Client: Omnitrans, San Bernardino, California**

Dr. Clark managed a public health survey of three communities near transit fueling facilities in San Bernardino and Montclair California in compliance with California Senate Bill 1927. The survey included an epidemiological survey of the effected communities, emission surveys of local businesses, dispersion modeling to determine potential emission concentrations within the communities, and a comprehensive risk assessment of each community. The results of the study were presented to the Governor as mandated by Senate Bill 1927.

**Client: Confidential, San Francisco, California**

Summarized cancer types associated with exposure to metals and smoking. Researched the specific types of cancers associated with exposure to metals and smoking. Provided causation analysis of the association between cancer types and exposure for use by non-public health professionals.

**Client: Confidential, Minneapolis, Minnesota**

Prepared human health risk assessment of workers exposed to VOCs from neighboring petroleum storage/transport facility. Reviewed the systems in place for distribution of petroleum hydrocarbons to identify chemicals of concern (COCs), prepared comprehensive toxicological summaries of COCs, and quantified potential risks from carcinogens and non-carcinogens to receptors at or adjacent to site. This evaluation was used in the support of litigation.

**Client – United Kingdom Environmental Agency**

Dr. Clark is part of team that performed comprehensive evaluation of soil vapor intrusion of VOCs from former landfill adjacent residences for the United Kingdom's Environment



Agency. The evaluation included collection of liquid and soil vapor samples at site, modeling of vapor migration using the Johnson Ettinger Vapor Intrusion model, and calculation of site-specific health based vapor thresholds for chlorinated solvents, aromatic hydrocarbons, and semi-volatile organic compounds. The evaluation also included a detailed evaluation of the use, chemical characteristics, fate and transport, and toxicology of chemicals of concern (COC). The results of the evaluation have been used as a briefing tool for public health professionals.

#### **EMERGING/PERSISTENT CONTAMINANT RESEARCH/PROJECTS**

**Client: Ameren Services, St. Louis, Missouri**

Managed the preparation of a comprehensive human health risk assessment of workers and residents at or near an NPL site in Missouri. The former operations at the Property included the servicing and repair of electrical transformers, which resulted in soils and groundwater beneath the Property and adjacent land becoming impacted with PCB and chlorinated solvent compounds. The results were submitted to U.S. EPA for evaluation and will be used in the final ROD.

**Client: City of Santa Clarita, Santa Clarita, California**

Dr. Clark is managing the oversight of the characterization, remediation and development activities of a former 1,000 acre munitions manufacturing facility for the City of Santa Clarita. The site is impacted with a number of contaminants including perchlorate, unexploded ordinance, and volatile organic compounds (VOCs). The site is currently under a number of regulatory consent orders, including an Imminent and Substantial Endangerment Order. Dr. Clark is assisting the impacted municipality with the development of remediation strategies, interaction with the responsible parties and stakeholders, as well as interfacing with the regulatory agency responsible for oversight of the site cleanup.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive evaluation of perchlorate in environment. Dr. Clark evaluated the production, use, chemical characteristics, fate and transport, toxicology, and remediation of perchlorate. Perchlorates form the basis of solid rocket fuels and have recently been detected in water supplies in the United States. The results of this research



were presented to the USEPA, National GroundWater, and ultimately published in a recent book entitled *Perchlorate in the Environment*.

**Client – Confidential, Los Angeles, California**

Dr. Clark is performing a comprehensive review of the potential for pharmaceuticals and their by-products to impact groundwater and surface water supplies. This evaluation will include a review if available data on the history of pharmaceutical production in the United States; the chemical characteristics of various pharmaceuticals; environmental fate and transport; uptake by xenobiotics; the potential effects of pharmaceuticals on water treatment systems; and the potential threat to public health. The results of the evaluation may be used as a briefing tool for non-public health professionals.

**PUBLIC HEALTH/TOXICOLOGY**

**Client: Brayton Purcell, Novato, California**

Dr. Clark performed a toxicological assessment of residents exposed to methyl-tertiary butyl ether (MTBE) from leaking underground storage tanks (LUSTs) adjacent to the subject property. The symptomology of residents and guests of the subject property were evaluated against the known outcomes in published literature to exposure to MTBE. The study found that residents had been exposed to MTBE in their drinking water; that concentrations of MTBE detected at the site were above regulatory guidelines; and, that the symptoms and outcomes expressed by residents and guests were consistent with symptoms and outcomes documented in published literature.

**Client: Confidential, San Francisco, California**

Identified and analyzed fifty years of epidemiological literature on workplace exposures to heavy metals. This research resulted in a summary of the types of cancer and non-cancer diseases associated with occupational exposure to chromium as well as the mortality and morbidity rates.

**Client: Confidential, San Francisco, California**

Summarized major public health research in United States. Identified major public health research efforts within United States over last twenty years. Results were used as a briefing tool for non-public health professionals.



**Client: Confidential, San Francisco, California**

Quantified the potential multi-pathway dose received by humans from a pesticide applied indoors. Part of team that developed exposure model and evaluated exposure concentrations in a comprehensive report on the plausible range of doses received by a specific person. This evaluation was used in the support of litigation.

**Client: Covanta Energy, Westwood, California**

Evaluated health risk from metals in biosolids applied as soil amendment on agricultural lands. The biosolids were created at a forest waste cogeneration facility using 96% whole tree wood chips and 4 percent green waste. Mass loading calculations were used to estimate Cr(VI) concentrations in agricultural soils based on a maximum loading rate of 40 tons of biomass per acre of agricultural soil. The results of the study were used by the Regulatory agency to determine that the application of biosolids did not constitute a health risk to workers applying the biosolids or to residences near the agricultural lands.

**Client – United Kingdom Environmental Agency**

Oversaw a comprehensive toxicological evaluation of methyl-*tertiary* butyl ether (MtBE) for the United Kingdom's Environment Agency. The evaluation included available data on the production, use, chemical characteristics, fate and transport, toxicology, and remediation of MtBE. The results of the evaluation have been used as a briefing tool for public health professionals.

**Client – Confidential, Los Angeles, California**

Prepared comprehensive evaluation of *tertiary* butyl alcohol (TBA) in municipal drinking water system. TBA is the primary breakdown product of MtBE, and is suspected to be the primary cause of MtBE toxicity. This evaluation will include available information on the production, use, chemical characteristics, fate and transport in the environment, absorption, distribution, routes of detoxification, metabolites, carcinogenic potential, and remediation of TBA. The results of the evaluation were used as a briefing tool for non-public health professionals.

**Client – Confidential, Los Angeles, California**

Prepared comprehensive evaluation of methyl *tertiary* butyl ether (MTBE) in municipal drinking water system. MTBE is a chemical added to gasoline to increase the octane



rating and to meet Federally mandated emission criteria. The evaluation included available data on the production, use, chemical characteristics, fate and transport, toxicology, and remediation of MTBE. The results of the evaluation have been used as a briefing tool for non-public health professionals.

**Client – Ministry of Environment, Lands & Parks, British Columbia**

Dr. Clark assisted in the development of water quality guidelines for methyl tertiary-butyl ether (MTBE) to protect water uses in British Columbia (BC). The water uses to be considered includes freshwater and marine life, wildlife, industrial, and agricultural (e.g., irrigation and livestock watering) water uses. Guidelines from other jurisdictions for the protection of drinking water, recreation and aesthetics were to be identified.

**Client: Confidential, Los Angeles, California**

Prepared physiologically based pharmacokinetic (PBPK) assessment of lead risk of receptors at middle school built over former industrial facility. This evaluation is being used to determine cleanup goals and will be basis for regulatory closure of site.

**Client: Kaiser Venture Incorporated, Fontana, California**

Prepared PBPK assessment of lead risk of receptors at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

**RISK ASSESSMENTS/REMEDIAL INVESTIGATIONS**

**Client: Confidential, Atlanta, Georgia**

Researched potential exposure and health risks to community members potentially exposed to creosote, polycyclic aromatic hydrocarbons, pentachlorophenol, and dioxin compounds used at a former wood treatment facility. Prepared a comprehensive toxicological summary of the chemicals of concern, including the chemical characteristics, absorption, distribution, and carcinogenic potential. Prepared risk characterization of the carcinogenic and non-carcinogenic chemicals based on the exposure assessment to quantify the potential risk to members of the surrounding community. This evaluation was used to help settle class-action tort.



**Client: Confidential, Escondido, California**

Prepared comprehensive Preliminary Endangerment Assessment (PEA) of dense non-aqueous liquid phase hydrocarbon (chlorinated solvents) contamination at a former printed circuit board manufacturing facility. This evaluation was used for litigation support and may be used as the basis for reaching closure of the site with the lead regulatory agency.

**Client: Confidential, San Francisco, California**

Summarized epidemiological evidence for connective tissue and autoimmune diseases for product liability litigation. Identified epidemiological research efforts on the health effects of medical prostheses. This research was used in a meta-analysis of the health effects and as a briefing tool for non-public health professionals.

**Client: Confidential, Bogotá, Columbia**

Prepared comprehensive evaluation of the potential health risks associated with the redevelopment of a 13.7 hectares plastic manufacturing facility in Bogotá, Colombia. The risk assessment was used as the basis for the remedial goals and closure of the site.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive human health risk assessment of students, staff, and residents potentially exposed to heavy metals (principally cadmium) and VOCs from soil and soil vapor at 12-acre former crude oilfield and municipal landfill. The site is currently used as a middle school housing approximately 3,000 children. The evaluation determined that the site was safe for the current and future uses and was used as the basis for regulatory closure of site.

**Client: Confidential, Los Angeles, California**

Managed remedial investigation (RI) of heavy metals and volatile organic chemicals (VOCs) for a 15-acre former manufacturing facility. The RI investigation of the site included over 800 different sampling locations and the collection of soil, soil gas, and groundwater samples. The site is currently used as a year round school housing approximately 3,000 children. The Remedial Investigation was performed in a manner



that did not interrupt school activities and met the time restrictions placed on the project by the overseeing regulatory agency. The RI Report identified the off-site source of metals that impacted groundwater beneath the site and the sources of VOCs in soil gas and groundwater. The RI included a numerical model of vapor intrusion into the buildings at the site from the vadose zone to determine exposure concentrations and an air dispersion model of VOCs from the proposed soil vapor treatment system. The Feasibility Study for the Site is currently being drafted and may be used as the basis for granting closure of the site by DTSC.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive human health risk assessment of students, staff, and residents potentially exposed to heavy metals (principally lead), VOCs, SVOCs, and PCBs from soil, soil vapor, and groundwater at 15-acre former manufacturing facility. The site is currently used as a year round school housing approximately 3,000 children. The evaluation determined that the site was safe for the current and future uses and will be basis for regulatory closure of site.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive evaluation of VOC vapor intrusion into classrooms of middle school that was former 15-acre industrial facility. Using the Johnson-Ettinger Vapor Intrusion model, the evaluation determined acceptable soil gas concentrations at the site that did not pose health threat to students, staff, and residents. This evaluation is being used to determine cleanup goals and will be basis for regulatory closure of site.

**Client - Dominguez Energy, Carson, California**

Prepared comprehensive evaluation of the potential health risks associated with the redevelopment of 6-acre portion of a 500-acre oil and natural gas production facility in Carson, California. The risk assessment was used as the basis for closure of the site.

**Kaiser Ventures Incorporated, Fontana, California**

Prepared health risk assessment of semi-volatile organic chemicals and metals for a fifty-year old wastewater treatment facility used at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.



**ANR Freight - Los Angeles, California**

Prepared a comprehensive Preliminary Endangerment Assessment (PEA) of petroleum hydrocarbon and metal contamination of a former freight depot. This evaluation was as the basis for reaching closure of the site with lead regulatory agency.

**Kaiser Ventures Incorporated, Fontana, California**

Prepared comprehensive health risk assessment of semi-volatile organic chemicals and metals for 23-acre parcel of a 1,100-acre former steel mill. The health risk assessment was used to determine clean up goals and as the basis for granting closure of the site by lead regulatory agency. Air dispersion modeling using ISCST3 was performed to determine downwind exposure point concentrations at sensitive receptors within a 1 kilometer radius of the site. The results of the health risk assessment were presented at a public meeting sponsored by the Department of Toxic Substances Control (DTSC) in the community potentially affected by the site.

**Unocal Corporation - Los Angeles, California**

Prepared comprehensive assessment of petroleum hydrocarbons and metals for a former petroleum service station located next to sensitive population center (elementary school). The assessment used a probabilistic approach to estimate risks to the community and was used as the basis for granting closure of the site by lead regulatory agency.

**Client: Confidential, Los Angeles, California**

Managed oversight of remedial investigation most contaminated heavy metal site in California. Lead concentrations in soil excess of 68,000,000 parts per billion (ppb) have been measured at the site. This State Superfund Site was a former hard chrome plating operation that operated for approximately 40-years.

**Client: Confidential, San Francisco, California**

Coordinator of regional monitoring program to determine background concentrations of metals in air. Acted as liaison with SCAQMD and CARB to perform co-location sampling and comparison of accepted regulatory method with ASTM methodology.



**Client: Confidential, San Francisco, California**

Analyzed historical air monitoring data for South Coast Air Basin in Southern California and potential health risks related to ambient concentrations of carcinogenic metals and volatile organic compounds. Identified and reviewed the available literature and calculated risks from toxins in South Coast Air Basin.

**IT Corporation, North Carolina**

Prepared comprehensive evaluation of potential exposure of workers to air-borne VOCs at hazardous waste storage facility under SUPERFUND cleanup decree. Assessment used in developing health based clean-up levels.

**Professional Associations**

American Public Health Association (APHA)

Association for Environmental Health and Sciences (AEHS)

American Chemical Society (ACS)

California Redevelopment Association (CRA)

International Society of Environmental Forensics (ISEF)

Society of Environmental Toxicology and Chemistry (SETAC)

**Publications and Presentations:**

**Books and Book Chapters**

Sullivan, P., J.J. J. Clark, F.J. Agardy, and P.E. Rosenfeld. (2007). *Synthetic Toxins In The Food, Water and Air of American Cities*. Elsevier, Inc. Burlington, MA.

Sullivan, P. and J.J. J. Clark. 2006. *Choosing Safer Foods, A Guide To Minimizing Synthetic Chemicals In Your Diet*. Elsevier, Inc. Burlington, MA.

Sullivan, P., Agardy, F.J., and J.J.J. Clark. 2005. *The Environmental Science of Drinking Water*. Elsevier, Inc. Burlington, MA.

Sullivan, P.J., Agardy, F.J., Clark, J.J.J. 2002. *America's Threatened Drinking Water: Hazards and Solutions*. Trafford Publishing, Victoria B.C.

Clark, J.J.J. 2001. "TBA: Chemical Properties, Production & Use, Fate and Transport, Toxicology, Detection in Groundwater, and Regulatory Standards" in *Oxygenates in the Environment*. Art Diaz, Ed.. Oxford University Press: New York.

Clark, J.J.J. 2000. "Toxicology of Perchlorate" in *Perchlorate in the Environment*. Edward Urbansky, Ed. Kluwer/Plenum: New York.

Clark, J.J.J. 1995. Probabilistic Forecasting of Volatile Organic Compound Concentrations At The Soil Surface From Contaminated Groundwater. UMI.



Baker, J.; **Clark, J.J.J.**; Stanford, J.T. 1994. Ex Situ Remediation of Diesel Contaminated Railroad Sand by Soil Washing. Principles and Practices for Diesel Contaminated Soils, Volume III. P.T. Kostecki, E.J. Calabrese, and C.P.L. Barkan, eds. Amherst Scientific Publishers, Amherst, MA. pp 89-96.

#### **Journal and Proceeding Articles**

- Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008) A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. Organohalogen Compounds, Volume 70 (2008) page 002254.
- Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008) Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. Organohalogen Compounds, Volume 70 (2008) page 000527
- Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** (2007). "Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." *Environmental Research*. 105:194-199.
- Rosenfeld, P.E., **Clark, J. J.**, Hensley, A.R., and Suffet, I.H. 2007. "The Use Of An Odor Wheel Classification For The Evaluation of Human Health Risk Criteria For Compost Facilities" *Water Science & Technology*. 55(5): 345-357.
- Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** 2006. "Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006, August 21 – 25, 2006. Radisson SAS Scandinavia Hotel in Oslo Norway.
- Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2005. "The Value Of An Odor Quality Classification Scheme For Compost Facility Evaluations" The U.S. Composting Council's 13<sup>th</sup> Annual Conference January 23 - 26, 2005, Crowne Plaza Riverwalk, San Antonio, TX.
- Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2004. "The Value Of An Odor Quality Classification Scheme For Urban Odor" WEFTEC 2004. 77th Annual Technical Exhibition & Conference October 2 - 6, 2004, Ernest N. Morial Convention Center, New Orleans, Louisiana.
- Clark, J.J.J.** 2003. "Manufacturing, Use, Regulation, and Occurrence of a Known Endocrine Disrupting Chemical (EDC), 2,4-Dichlorophenoxyacetic Acid (2,4-D) in California Drinking Water Supplies." National Groundwater Association Southwest Focus Conference: Water Supply and Emerging Contaminants. Minneapolis, MN. March 20, 2003.



- Rosenfeld, P. and J.J.J. Clark. 2003. "Understanding Historical Use, Chemical Properties, Toxicity, and Regulatory Guidance" National Groundwater Association Southwest Focus Conference: Water Supply and Emerging Contaminants. Phoenix, AZ. February 21, 2003.
- Clark, J.J.J., Brown A. 1999. Perchlorate Contamination: Fate in the Environment and Treatment Options. In Situ and On-Site Bioremediation, Fifth International Symposium. San Diego, CA, April, 1999.
- Clark, J.J.J. 1998. Health Effects of Perchlorate and the New Reference Dose (RfD). Proceedings From the Groundwater Resource Association Seventh Annual Meeting, Walnut Creek, CA, October 23, 1998.
- Browne, T., Clark, J.J.J. 1998. Treatment Options For Perchlorate In Drinking Water. Proceedings From the Groundwater Resource Association Seventh Annual Meeting, Walnut Creek, CA, October 23, 1998.
- Clark, J.J.J., Brown, A., Rodriguez, R. 1998. The Public Health Implications of MtBE and Perchlorate in Water: Risk Management Decisions for Water Purveyors. Proceedings of the National Ground Water Association, Anaheim, CA, June 3-4, 1998.
- Clark J.J.J., Brown, A., Ulrey, A. 1997. Impacts of Perchlorate On Drinking Water In The Western United States. U.S. EPA Symposium on Biological and Chemical Reduction of Chlorate and Perchlorate, Cincinnati, OH, December 5, 1997.
- Clark, J.J.J.; Corbett, G.E.; Kerger, B.D.; Finley, B.L.; Paustenbach, D.J. 1996. Dermal Uptake of Hexavalent Chromium In Human Volunteers: Measures of Systemic Uptake From Immersion in Water At 22 PPM. Toxicologist. 30(1):14.
- Dodge, D.G.; Clark, J.J.J.; Kerger, B.D.; Richter, R.O.; Finley, B.L.; Paustenbach, D.J. 1996. Assessment of Airborne Hexavalent Chromium In The Home Following Use of Contaminated Tapwater. Toxicologist. 30(1):117-118.
- Paulo, M.T.; Gong, H., Jr.; Clark, J.J.J. (1992). Effects of Pretreatment with Ipratroprium Bromide in COPD Patients Exposed to Ozone. American Review of Respiratory Disease. 145(4):A96.
- Harber, P.H.; Gong, H., Jr.; Lachenbruch, A.; Clark, J.; Hsu, P. (1992). Respiratory Pattern Effect of Acute Sulfur Dioxide Exposure in Asthmatics. American Review of Respiratory Disease. 145(4):A88.
- McManus, M.S.; Gong, H., Jr.; Clements, P.; Clark, J.J.J. (1991). Respiratory Response of Patients With Interstitial Lung Disease To Inhaled Ozone. American Review of Respiratory Disease. 143(4):A91.
- Gong, H., Jr.; Simmons, M.S.; McManus, M.S.; Tashkin, D.P.; Clark, V.A.; Detels, R.; Clark, J.J. (1990). Relationship Between Responses to Chronic Oxidant and Acute



Ozone Exposures in Residents of Los Angeles County. American Review of Respiratory Disease. 141(4):A70.

Tierney, D.F. and J.J.J. Clark. (1990). Lung Polyamine Content Can Be Increased By Spermidine Infusions Into Hyperoxic Rats. American Review of Respiratory Disease. 139(4):A41.



# ATTACHMENTS





## WHITE PAPER: AN INDUSTRY PERSPECTIVE ON THE CALIFORNIA AIR RESOURCES BOARD PROPOSED OFF-ROAD DIESEL REGULATIONS

### OVERVIEW & HISTORY

The California Air Resources Board (CARB) is currently considering regulations to reduce Particulate Matter (PM) and NOx emissions from off-road diesel equipment operated by the construction and many other industries in the state.

The Board first announced its intention to promulgate these regulations in 2000. The Board's original plan called for an 18-year timeline to meet the state's goals of reducing particulate matter emissions only. Now, after seven years of delays in developing these rules, that timeline has been reduced to 13 years. In addition, the regulation of NOx emissions has been added to the rule – which significantly alters the technology needed for companies to be in compliance.

Throughout this process, the construction industry voluntarily has begun to retrofit and replace older, high-polluting equipment with new, cleaner burning engines. In addition, the industry has demonstrated a willingness to work with CARB to develop a fair regulation that achieves the state's air quality goals while providing contractors adequate time to meet the standards. Despite these efforts, the rules before the Board in their current form are not viable from an economic or technological perspective and cut off access to critical funding for retrofitting older equipment under the Carl Moyer Program. In addition, they threaten to seriously reduce the buying power of the \$43 billion in bonds to build roads, schools, housing and improve the state's flood control system approved by voters in November.

The industry maintains its commitment to working with CARB, environmental organizations, the Legislature and other stakeholders to find a feasible solution that achieves the state's air quality goals while allowing contractors to meet the standards in a reasonable timeframe. By maintaining the original 18-year timeline for implementation of these rules, we have the opportunity to ensure California's economy, workforce, businesses, infrastructure and environment all win.



## MOVING TOWARD THE GOAL

The Construction Industry Air Quality Coalition (CIAQC) has been keenly aware of the concern over PM, NOx and visible emissions from construction equipment for many years. The public has also expressed a desire for cleaner burning, heavy duty, off-road construction equipment working in their neighborhoods.

The industry shares this concern and has taken action to proactively replace or retrofit older, higher-polluting off-road diesel equipment with cleaner models. A critical part of the industry's efforts is funding available through the state's Carl Moyer program for re-powering older construction engines.

The equipment most suitable for re-power includes scrapers, haul trucks, bulldozers, loaders, water pulls, water trucks, excavators, motor graders and trucks that transport cranes. Replacement engines for smaller equipment such as skid steers, backhoes and a host of other lower horsepower units are simply not available.

Since these funds became available, CIAQC has been encouraging construction companies to pursue an aggressive engine re-powering program. Over the past six years, twenty construction companies in the South Coast and San Diego Districts have re-powered 1,020 machines at a cost of \$89 million. Carl Moyer Program provided \$71.0 million with the remaining \$18 million being provided by the machine owners themselves.

This single industry effort is the largest voluntary emission reduction program in the history of California and represents about 30 percent of the total funding statewide and about 10 percent of the total engines modified. It has resulted in a reduction of 3,797 tons per year of NOx and 126 tons per year of PM emissions. This accounts for 25 percent of the PM and 20 percent of the NOx program emissions reduced statewide.

The Legislature has recently committed \$140 million a year, for the next five years, to continue the Carl Moyer Program. Under CARB's proposed rule, however the industry would lose access to these funds almost immediately. While these funds will not make a significant dent (the 1,020 engines re-powered in Southern California accounted for just one-half of one percent of all the engines in the state construction fleet) in meeting the fleet emission targets under the proposed rules, they are nonetheless an important and essential tool in improving air quality.

## CONSTRUCTION-RELATED OFF-ROAD DIESEL EMISSIONS

Before discussing the specifics of these regulations, it is important to note both the air quality goals CARB has set for the state and the level of construction related off-road diesel emissions.



These proposed regulations are part of CARB's strategy to reach its overall goal of reducing PM from all diesel fueled engines in California by 75 percent by year 2010, and by 85 percent by year 2020.

Construction-related off-road diesel emissions in California represent 24 percent of the total PM emissions from mobile sources across the state. They represent less than one percent of total man-made PM emissions from all sources.

NOx emissions from construction engines represent about 19 percent of all emissions from off-road sources. They are about 9 percent of all man-made NOx emissions statewide.

### **FLEET TECHNOLOGY & SIZE**

Estimating the exact number of off-road diesel construction vehicles in operation in California today is difficult because this type of equipment is built to last for decades and there is no vehicle registration program for this machinery. CARB estimates that there are approximately 165,000 pieces of heavy-duty off-road construction equipment in California. CIAQC believes the number may actually exceed 200,000. Whatever the exact number, it is likely that the total fleet will expand over the next decade as the state begins to issue contracts for the transportation, school, housing, and flood protection bonds approved by voters in November.

There are four levels of diesel engines in operation in California today, from the oldest and highest polluting Tier 0 engines to the newer and cleaner Tier 3 models. Cleaner burning Tier 4 engines – which will be the only engines that meet both NOx and PM requirements under CARB's proposed rules – are not expected to come online in significant numbers until 2014. Based on a sampling of a cross-section of construction firms, CIAQC believes that 55 to 65 percent of the statewide fleet are Tier 0 engines (which are responsible for up to 70 percent of all PM emissions), 35 to 40 percent are Tier 1, approximately 7 percent are Tier 2 and less than 1 percent are Tier 3.

### **THE ECONOMICS OF RETROFITTING, RE-POWERING & REPLACING**

Currently there are five possible ways to modify the emission level of engines to achieve CARB's goals by 2020:

- Institute updated engine standards for newly manufactured equipment
- Require the use of cleaner burning diesel fuel
- Retrofit existing engines with emission control devices
- Re-power older machines with new lower-emitting engines
- Retire old equipment and reduce fleet size and workforce

The first two of these options are already in effect in California, the technology is in development for the third and the fourth is possible for certain categories of equipment.



New engine standards for newly manufactured equipment and new fuel standards have already been adopted and agreed to by the engine manufacturers (Tier 4 engines represent the cleanest version of these). Ultra-low sulfur fuel was mandated for use in California beginning in June 2006. Research and development is underway to build particulate filters and catalysts called Verified Diesel Emission Control Systems (VDECS), which can be used to retrofit existing engines, but only one model is certified for use today. Finally, for long lasting heavy-duty off-road equipment the option of re-powering with new engines rather than rebuilding an old engine can be economically feasible.

In order to achieve the emission reduction goals established by CARB, 77 percent of all Tier 0 equipment (approximately 75,000 engines) would have to be re-powered to Tier 3 by 2010 and 90 percent by 2020. The cost of re-powering a single engine averages about \$300 per horsepower. This means a dual engine, 1000-hp scraper will cost \$300,000 to re-power with Tier 3 engines. In addition, nearly all of this equipment will also require after-treatment (retrofitting) with VDECS in order to meet the 2020 goal. The cost for retrofitting with a certified VDECS device is approximately \$100 per horsepower, or more than \$50,000 for a 500-hp engine, not including the cost of expensive ongoing maintenance costs and ash disposal.

It also appears unlikely that most existing equipment can be re-powered with Tier 3 engines due to the sophistication of the technology and challenges with integrating the transmission and hydraulic systems with the engine. If a Tier 2 re-power is used instead of a Tier 3, level 3 VDECS must also be used in order to meet the year 2020 standard. This would require an additional expenditure of \$25,000 to \$50,000 per engine.

Replacing the equipment altogether is also very expensive, with a new scraper costing in excess of \$1,000,000. In addition, Tier 4 engines are the clear choice for contractors replacing their equipment, but they will not be available in significant numbers until 2014.

CIAQC believes the full cost to achieve the targets under the current timeframe set by CARB through replacing, re-powering and retrofitting would be at least \$9 billion.

In addition, this equipment is the primary asset-base of most construction companies, and is often used as collateral in financing the start-up of construction contracts. Therefore, regulations requiring early retirement of the equipment by a date certain, or a prohibition on resale, can reduce the value of the equipment and severely impact company finances and borrowing ability. As companies struggle to replace their primary assets, many will be forced to downsize or cease to operate altogether, which means the significant loss of high-wage construction jobs.



## THE LIMITS OF TECHNOLOGY

In addition to the enormous financial burden the Board's proposed regulations will place on contractors, there are also several significant technological barriers to meeting the standards. First, there are currently no devices on the market to reduce both PM and NOx emissions that meet CARB's standards. This means construction companies will have to invest in and "touch" many pieces of equipment twice with costly retrofits to comply with the rule.

The annual emission goals established by CARB in would also require the use of level 3 VDECS to retrofit virtually every piece of equipment. Most manufacturers have not developed a device to reduce emissions to that level. In fact, there is currently only one level 3 VDECS available for retrofitting heavy-duty off-road construction equipment and no certainty that it will ever be work reliably for many engine families. This system is also "active," requiring a burner to achieve the proper exhaust temperature and special handling to dispose of the ash material created by the PM filter. And, its cost exceeds the assumption used by CARB in evaluating the economic impact of their proposed rule.

In addition, the Board's process for VDECS certification is lengthy and costly. Some engine families may simply not be large enough to warrant the investment in producing an effective VDECS. Those engines would be unable to meet the new standards even if they are the newest available models.

Another challenge is the availability of a sufficient number of engines to re-power or replace the state's existing fleet and meet the goal. Not only are not enough engines or equipment in existence, the capacity to produce them does not exist. To compound the situation, most new engines are used in the production of new equipment. The equipment **manufacturers have been clear that they are interested in selling new equipment, not new engines** – which will seriously diminish the opportunities for contractors to re-power their machines.

Given these facts, CIAQC has proposed several alternatives for consideration by CARB. First, by implementing this rule based on an 18-year timeline, as it originally said it would, CARB would allow technology and manufacturing to meet the demands for cleaner engine production.

Second, building on the success of the Carl Moyer program, CIAQC has offered a "fleet averaging" formula that would provide an incentive to every contractor to achieve emission reductions as quickly as possible. A fleet average would allow contractors to operate older specialty equipment by reducing emissions from other equipment ahead of schedule. A project based fleet average calculation would also accommodate the needs of smaller contractors who may be unable to meet vigorous compliance schedules.

Since most contractors know the size of their year 2000 fleets, each would be able to calculate their own baseline for purposes of establishing an 85 percent emission reduction



target. It would offer each contractor maximum flexibility in re-powering, retrofitting or replacing equipment to meet the goal.

A critical part of making this alternative work also involves allowing contractors to use actual emission levels in determining compliance. Under the proposed rules, CARB requires the use of "certified" levels set by the Board which can be two to three times higher than actual levels.

## **THE CRITICAL ISSUES**

Put simply, the rules CARB has put forward are not viable or achievable. There are five primary reasons for this – unattainable annual limits, inadequate clean engine supply, limited clean engine technology, prohibitive cost and the fact that construction is a low-margin business.

### **Unattainable Annual Limits**

Given the available resources and technology, the annual emission limits in the draft proposal released by CARB cannot be achieved by the contractors in the State of California. Even the most progressive firms, who have been re-powering and updating their fleets in anticipation of the regulation, cannot meet the annual goals set forward in the draft rule.

### **Inadequate Clean Engine Supply**

There is an inadequate supply of engines or new equipment to meet the demand these regulations would place on the market. These rules require the purchase of more than 165,000 new pieces of equipment by 2020. Virtually all Tier 0 and Tier 1 engines will need to be replaced with Tier 2, 3 and 4 engines in 13 years. The Board consumed valuable and necessary time when they waited seven years to develop these rules and now the market is not able to meet the equipment demands. To put this into perspective, currently 10,000 new pieces of equipment are sold in California every year. Under these regulations, that number would have to grow to 15,000 each year for the next 13 years.

### **Limited Clean Engine Technology**

The addition of NOx reductions to the proposed rule will force companies to re-power more engines (a very costly alternative), and make PM reductions a low priority. First, no retrofit device is available to achieve the NOx emission reduction requirements. This means companies will be forced to re-power or replace equipment – which significantly increased costs. The NOx requirement also makes it impossible for contractors to qualify for the Carl Moyer funding that has propelled the significant voluntary emissions reductions already achieved by the construction industry.

### **Prohibitive Cost**

CARB has significantly underestimated cost of these rules. By assuming an unrealistic "natural" turnover for construction fleets and a lower number of machines covered under this rule, CARB's economic analysis of its proposal does not accurately reflect the real



burden of this proposal. In effect, CARB has inaccurately assumed that the construction industry will spend billions on repowering, replacing and retrofitting equipment in the next 13 years without any new regulation. CARB estimates that the cost of the draft rule is only \$3 billion dollars. CIAQC estimates the total real cost to the industry to be at least \$9 billion. These costs are likely to be passed on to consumers, including the state as it contracts to build the roads, schools, housing and flood control systems voters authorized \$43 billion in bonds to construct.

#### **Construction Is A Low-Margin Business**

Contractors do not have the financial resources to fund the program. Construction is a fiercely competitive business and contracts can be won or lost by only a few thousand dollars. Most contractors hope to achieve a profit of 2.5 percent to 7 percent and can on average, do so in three out of five years. After labor, materials, insurance, fuel and overhead, a very small portion of the \$60 billion spent on construction every year in California is available for fleet upgrades. To meet these requirements, many businesses will need to downsize, which means construction workers will be laid off and capacity to build projects will decrease.

#### **WORKING TOGETHER TO IMPROVE AIR QUALITY**

The industry is committed to working with CARB to develop a solution to this to ensure the state's air quality standards are achieved through the implementation of a viable and achievable rule. By making critical changes related to time, turnover, tender and technology, the Board can make it possible for the construction industry to meet its emissions reduction targets.

#### **TIME: Restoring CARB'S Original Implementation Timeline**

**CARB's original plan called for an 18-year timeline to meet the 85 percent PM reductions.** Delays by the Board in developing a rule have reduced that schedule to 13 years. By adopting a strategy that virtually eliminates Tier 0 and Tier 1 equipment from the fleet, and relies heavily on a Tier 4 inventory, that will not become available from the manufacturers until 2014 for the higher horsepower equipment, there is simply not enough time or Tier 4 equipment before 2020, to replace the existing fleet.

#### **TURNOVER: Lower CARB's Turnover Estimate to Realistic Levels**

CIAQC estimates the statewide fleet natural turnover at between 2 and 3 percent, significantly below CARB's estimate. To achieve the CARB 2020 fleet makeup, approximately 140,000 pieces of equipment have to be repowered, retrofitted or replaced. That's means more than 1,000 pieces of equipment, every month, for the next 13 years, that will need to be repowered, retrofitted or replaced. There is not enough manufacturing capacity for that much new equipment or engines for the California market. The major supplier of construction equipment, Caterpillar, ships less than 2,000 pieces of new construction equipment to California each year. Without that new equipment and engines it will be impossible to meet the NOx reductions required by this proposal.



**TENDER: Help Alleviate the Cost Burden to Construction Companies**

This proposal not only will inflict a \$9 billion cost on the construction industry, but it will also end the availability of Carl Moyer funding for re-powering existing equipment. These funds have been an extremely important tool for accelerating the turnover of this equipment and without it many contractors will simply be unable to afford to retrofit or replace their equipment. These tremendous costs will lead many companies to downsize or go out of business completely which means the significant loss of high wage jobs for construction workers and increased costs for all construction projects, including to state and local government for building infrastructure.

**TECHNOLOGY: Re-evaluate the Conflict Between NOx and PM Reduction**

There is no retrofit device that will reduce both NOx and PM. As a consequence, the strategies proposed by CARB inherently conflict with any rational decisions that would be made by a construction company. Since most of the current fleet will have to be eliminated, no one wants to invest more money in equipment that they will have to dispose of before its useful life is completed. Having to repower one year, and retrofit two years later, and then replace completely five years after that simply makes no economic sense. As a result, it is likely that many small companies will disappear, many large companies will shrink their fleets and the overall ability of the construction industry to meet construction demand will diminish. That means higher prices, longer construction periods and fewer companies to keep prices competitive.

CIAQC believes it is possible to resolve these issues in a way that satisfies CARB's air quality improvement strategy while keeping the industry economically viable, ensuring construction jobs are not lost and making certain the state's historic \$40 billion in infrastructure improvement builds as many roads, schools, houses and levees as possible. **We look forward to working together to protect our environment and to build a better future for the people of California.**

*This white paper was prepared by the members of the Construction Industry Air Quality Coalition's Task Force on Off-Road Regulation. Members of the task force include:*

*AGC America*

*American Road and Transportation Builders Association*

*Associated General Contractors of California*

*Associated General Contractors of San Diego*

*Building Industry Association of Southern California*

*California Alliance for Jobs*

*California Building Industry Association*

*California Construction and Industrial Materials Association*

*Engineering Contractors Association*

*Engineering & Utility Contractors Association*

*Engineering and General Contractors Association*

*Mobile Crane Operators Group*

*Southern California Contractors Association*

*The California Rental Association*





# **THE TRANSBAY CORRIDOR CORE CAPACITY PROGRAM**

California State Transportation Agency  
Transit and Intercity Rail Capital Program, 2018

Bay Area Rapid Transit District

January 2018





THE TRANSBAY CORRIDOR CORE CAPACITY PROGRAM



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THE TRANSBAY CORRIDOR CORE CAPACITY PROGRAM

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**SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT**  
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2017

January 5, 2018

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Bevan Duffy  
9TH DISTRICT

RE: BART's Transbay Core Capacity Project – New Rail Cars and Train Control  
Components – 2018 Transit and Intercity Rail Capital Program (TIRCP)

Dear Mr. Castro:

On behalf of the San Francisco Bay Area Rapid Transit District, I am pleased to submit BART's request for \$454 million in funding from the 2018 Transit and Intercity Rail Capital Program (TIRCP). Our project, BART's Transbay Core Capacity Project – New Rail Cars and Train Control Components, is an important element of a larger project to increase BART's system capacity. This larger project, BART's Transbay Core Capacity Project, which consists of multiple project elements and includes many funding partners, has regional and statewide significance in reducing greenhouse gas emissions, providing access to jobs and stimulating the economy, and providing mobility and regional and statewide transportation connections for all residents including those in disadvantaged communities.

The two components that comprise this TIRCP funding request include \$135.4 million to fund the acquisition of additional new BART cars, and \$318.6 million for BART's new state-of-the-art, communications-based train control system (CBTC), for a total of \$454 million. Both the additional cars and the train control system are needed to achieve up to 30% in additional capacity on the existing BART system without adding a second Transbay Tube from the East Bay to downtown San Francisco. In addition, this project will improve system reliability and greatly enhance the customer experience.

BART's current Transbay Corridor ridership exceeds capacity in the peak hours between the Embarcadero station in downtown San Francisco and stations in the East Bay. Within this corridor, riders in the peak hours often endure excruciatingly crowded conditions while some choose other modes because BART trains are so crowded. BART's ability to increase ridership – and the region's ability to steer growth to places served by transit – depend upon additional BART capacity in the Transbay Corridor.



Mr. Ezequiel Castro

January 5, 2018

Page 2

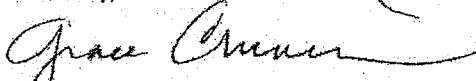
For the past few years, BART has worked diligently to design and identify costs of the project components of the Transbay Core Capacity Project, as well as identify potential funding sources. Funds will be provided by a combination of federal, state, regional and local sources, including BART's own capital allocations (funding transferred from BART's operating budget to its capital budget) and funding provided by the successful passage of a general obligation bond for BART, called Measure RR, in November 2016. In its Plan Bay Area 2040, adopted in July 2017, the Metropolitan Transportation Commission (MTC) identified the BART Transbay Core Capacity Project as a critical regional need, and has included this project in its Core Capacity Challenge grant program. BART is also working closely with the federal government on a New Starts grant through the Capital Investment Grant (CIG) program. In addition, BART has requested funding from various local county sales tax measures. The funds requested through the TIRCP program will close the remaining funding gaps and allow BART to achieve the biggest capacity boost possible while renovating and maintaining the core BART system.

Embedded in this grant proposal is a request for \$250,000 to directly engage local community-based organizations in Disadvantaged Communities to solicit input on the potential impacts, both positive and negative, of BART's Transbay Core Capacity Project. BART has long-standing and successful experience working with members of low-income, minority, limited English speaking, faith-based, environmental, disability rights and social justice communities and organizations, and hopes to build upon that work in soliciting input on this important project.

We appreciate your consideration of this application, and would be happy to answer any questions or provide additional materials if needed. As BART's General Manager, I have reviewed the materials submitted and approved the cost estimates provided in this application, including the amounts and fund sources cited.

Please do not hesitate to contact me or Duncan Watry, Program Manager – Core Capacity, at (510) 287-4840, or [dwatry@bart.gov](mailto:dwatry@bart.gov).

Sincerely,



Grace Crunican  
General Manager

Attachments



BEFORE THE BOARD OF DIRECTORS OF THE  
SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT

In the Matter of Authorizing the Filing of  
Applications, Providing Supporting  
Documents, and Executing Funding  
Agreements with the United States  
Government, the State of California, and  
other Entities

Resolution No. 5223

WHEREAS, the San Francisco Bay Area Rapid Transit District ("BART") is eligible to receive Federal and/or State funding for certain transportation planning related activities through the U.S. Department of Transportation and the California Department of Transportation; and

WHEREAS, pursuant to Board Resolutions Nos. 4372, 4373, 4898 and the Annual Budget Resolution, the BART General Manager is authorized to file funding applications and execute funding agreements with the United States Government and the State of California and with any other entity; and

WHEREAS, a Fund Transfer Agreement is needed to be executed with the California Department of Transportation before such funds can be claimed through the Transportation Planning Grant Programs; and

WHEREAS, funding agreements from the United States Government or the State of California will impose certain obligations upon the applicant, including the provision by the applicant of the project's local share of costs; and

WHEREAS, it would be in the best interests of the District for the General Manager to have standing authorization to apply, on behalf of the District, for funds from entities and to file necessary documents and execute funding agreements.

NOW, THEREFORE, BE IT RESOLVED by the BART Board of Directors:

1. That the BART General Manager, or her/his designee, is authorized to execute and file all applications on behalf of the BART for funds for District projects and activities with any agency of the United States Government or the State of California or any other entity.
2. That the BART General Manager, or her/his designee, is authorized to execute and file with such applications any assurance or other document required by the funding entity for the subject project.
3. That the BART General Manager, or her/his designee, is authorized to furnish such additional information as the funding entity may require in connection with the application or funding agreement for the subject project.

Adopted October 24, 2013

70070v1

SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT  
CERTIFIED A TRUE COPY

  
KENNETH A. DURON, DISTRICT SECRETARY



4. That the BART General Manager, or her/his designee, is authorized to execute all funding agreements on behalf of BART with any agency of the United States Government or the State of California or any other entity
5. That the BART General Manager is authorized to execute and file applications on behalf of BART for funds for BART District projects and activities with any private entity, but execution of funding agreements with a private entity requires approval of the BART Board of Directors.

This Resolution supersedes Board Resolution No. 4898 dated October 9, 2003.



## 2 Program Narrative

### Transbay Corridor Core Capacity Program

<b>Applicant Name</b>	San Francisco Bay Area Rapid Transit (BART) District
<b>Program Purpose and Need</b>	The Transbay Corridor Core Capacity (Core Capacity) Program will increase the number of trains operating through the Transbay Tube in the peak period, and increase train lengths, to reduce crowding and maximize throughput capacity in the most heavily used part of the existing BART system. This will lead to increased ridership and reduced GHG emissions throughout the Bay Area and specifically within the Transbay Corridor.
<b>Program Location</b>	BART is located in the San Francisco Bay Area, in the counties of San Francisco, Alameda, Contra Costa, San Mateo, and Santa Clara. Specifically, the Core Capacity Program is focused in the Transbay Corridor, connecting the East Bay with San Francisco and the Peninsula. See <i>Section 2.3.2.1. Program Background</i> for a map of BART.
<b>Program Mode</b>	Heavy Rail
<b>Multi-Agency Coordination</b>	BART is coordinating with MTC to complete the Core Capacity Program. The program is included in MTC's adopted RTP, and MTC has been working with BART to assemble funding from various sources. A letter confirming this in <i>Appendix A. Letters of Support</i> . BART is also coordinating with other regional and local transportation agencies. See <i>Section 2.3.3.3 Rail and Transit Integration</i> .
<b>Green House Gas (GHG) Reductions</b>	<p>The Program increases BART ridership, thus reducing VMT and GHG emissions in the Bay Area. Additionally, increased BART capacity supports planned increases in housing and employment density around BART stations, allowing the Bay Area to meet requirements of the California Global Warming Solutions Act of 2006 (AB 32). Specifically, the Core Capacity Program will have the following benefits:</p> <ul style="list-style-type: none"> <li>◦ 4,748,924 metric tons of carbon dioxide-equivalent removed over Program period</li> <li>◦ .010460 metric ton carbon dioxide-equivalent removed per dollar of TIRCP funding requested</li> </ul>
<b>Funding</b>	BART is requesting \$454 million in TIRCP funds to help fund two elements of the Core Capacity Program, 306 new rail vehicles and the new communication-based train control system (CBTC). These elements are referred to as the TIRCP Scope. Additionally, \$250,000 (included in the CBTC amount) is proposed for community outreach to communities who may be affected by the Program. BART has identified the CBTC as a usable segment, and can be fully funded with State support. See <i>Section 2.1 Program Costs</i> for more information.
<b>BART Point of Contact</b>	<p>Duncan Watry, Program Manager – Core Capacity  BART – Planning, Development &amp; Construction  300 Lakeside Drive, 21<sup>st</sup> floor  Oakland, CA 94612  (510) 287-4840  dwatry@bart.gov</p>



## 2.1 Program Costs

The overall Core Capacity Program includes four elements – a new communication-based train control system, 306 additional rail vehicles, an additional rail vehicle storage and maintenance facility, and five additional traction power substations. BART is seeking TIRCP funding for two of these elements:

- A portion of the 306 new vehicles, and
- the communication-based train control system (CBTC).

Due to the integrated nature of the Program, the application shows combined total benefits for the overall Program (all four elements). However, benefits described in this application regarding GHG emissions, ridership, and more can be attributed to either the planned integration of the new vehicles or the CBTC system, the Program elements for which BART is currently requesting TIRCP funding. This is noted in the text when necessary.

Table 2-1 presents the total costs of the Program and the amount requested from TIRCP. BART is requesting \$454 million for portions of both the new vehicles and CBTC system in two TIRCP funding cycles. The Program is currently at the 30% design stage, and cost estimates reflect this level of design, including appropriate level of contingency.

Table 2-1. Core Capacity Program Costs and TIRCP Scope Request

Program Scope	Total Program Cost (\$ millions)	TIRCP Scope Request (\$ millions)
Vehicles	\$1,618.4	\$1,315.4
Communication-Based Train Control (Including \$250,000 for Post-Award Community Outreach)	\$1,150.5	\$318.6
<b>TIRCP SCOPE TOTALS</b>	<b>\$2,768.9</b>	<b>\$454.0</b>
Hayward Maintenance Center Phase II	\$228.0	
Traction Power	\$94.0	
Program Management	\$6.6	
Program Contingency	\$309.7	
Financing Costs	\$103.5	
<b>TOTAL</b>	<b>\$3,510.6</b>	<b>\$454.0</b>

### 2.1.1 Community Outreach Funding

Additionally, the TIRCP requested amount includes \$250,000 for post-award outreach to the disadvantaged communities that BART serves, seeking input on the potential impact of the Core Capacity Program, both positive and negative. A detailed breakdown of the proposed outreach is included in *Section 2.5.3 Proposed Community Outreach Plan*.



### 2.1.2 TIRCP Funding Cycle

The \$454 million requested in this TIRCP application covers both the five-year funding cycle from FY 2018 through FY 2022 (\$358.6 million) – and the second round of programmed funding from FY 2023 through 2027 (\$95.6 million).

### 2.1.3 Useable Segment Request

As documented in the *Program Benefits* portion of this application, and additionally in the *Statement of Work*, for the many benefits outlined in this application to occur, a scaled request of \$318.6 million is being submitted as a usable segment. This scaled down funding request would cover the necessary cost to complete the Communications Based Train Control system, which is the Program element necessary to realizing the majority of ridership, greenhouse gas, and community impact benefits described in detail in this application. As with the full \$454 million request, this \$318.6 million scaled request can be broken out over the two four-year funding cycles.

Table 2-2. Core Capacity Program Costs and TIRCP Usable Segment Request

Program Scope	Total Program Cost (\$ millions)	TIRCP Usable Segment Request (\$ millions)
Vehicles	\$1,618.4	
Communication-Based Train Control (including \$250,000 for Post-Award Community Outreach)	\$1,150.5	\$318.6
<b>TIRCP SCOPE TOTALS</b>	<b>\$2,768.9</b>	<b>\$318.6</b>
Hayward Maintenance Center Phase II	\$228.0	
Traction Power	\$94.0	
Program Management	\$6.6	
Program Contingency	\$209.7	
Financing Costs	\$103.5	
<b>TOTAL</b>	<b>\$3,510.6</b>	<b>\$318.6</b>

This usable segment of the Program (CBTC system) can be fully completed with funding through State of California Programs in 2018. As can be seen in Table 3-4. *Core Capacity Funding Plan 2017*, all funding elements have been secured (with the exception of Santa Clara VTA and FTA CIG and GANs) other than the State of California funding sources. These state sources include:

- TIRCP Usable Segment Request (Current Request) - \$318.6 million
- SB1 Local Partnership Program (January 2018) - \$50 million
- SB1 Congested Corridor Program (January 2018) - \$100 million

The Santa Clara VTA portion of funding (\$101.6 million) is not going to the Transbay Corridor portion of the Core Capacity Program, and only will be applied to the Santa Clara VTA extension of the BART system. Hence, the CBTC system can be implemented fully in the existing system (where ridership, GHG



emissions, and other benefits are realized) without Santa Clara VTA funds. Additionally, the FTA CIG amount of \$25.9 million that is allocated to the CBTC system can be fully shifted to be funded by BART Capital Allocation funds if CIG funding is not approved by the FTA. **With the usable segment request of \$318.6 million in TIRCP funds and \$150 million in additional state program funding, the entire CBTC system is funded completely and can move forward without delay.**



## 2.2 BART Eligibility

BART is a public agency that operates the largest passenger/urban rail transit service in the San Francisco Bay Area. BART assumes responsibility and accountability for the use and expenditure of program funds. BART will comply with all relevant federal and state laws, regulations, policies, and procedures.

## 2.3 Core Capacity Program Benefits

The following section gives a brief overall introduction to the Transbay Corridor Core Capacity Program, including benefits derived. A more detailed discussion regarding the Program benefits, referencing the primary and secondary evaluation criteria outlined in the TIRCP Guidelines, is found below in *Section 2.3.3. Program Benefits* below.

### 2.3.1 Program Summary

The BART Core Capacity Program will relieve crowding, increase ridership, and decrease greenhouse gas (GHG) emissions by increasing the frequency and capacity of trains operating on the system. The Core Capacity Program will allow the number of trains operating through the Transbay Tube to increase from 23 to 30 per hour, and peak hour train lengths to be increased from an average of 8.9 to 10 cars, maximizing throughput capacity in the most heavily used part of the BART system. The Program includes four elements:

- Install new communication-based train control system;
- Expand the rail car fleet by 306 cars;
- Provide additional rail vehicle storage at the Hayward Maintenance Complex (HMC); and
- Install five new traction power substations.

*Figure 2-1. Crowding on BART in Transbay Tube*



These four Program elements will allow BART to decrease current headways on each line from 15 minutes to 12 minutes. Expansion of the rail car fleet will allow for trains of 10 cars, making additional capacity in the system. The overall increase in peak hour capacity created by the Core Capacity Program will be about 45%. (See *Appendix C. Ridership Modeling and Methodology* for more information. Decreased headways and increased capacity result in an estimated increased average weekday ridership of 202,972 riders beyond current levels and will decrease

GHG emissions by at least 4,748,924 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>) over a 50-year period. Additionally, the new train control system, which will replace systems that are at the end of their service life, will enhance system reliability and safety.



Additional benefits include the reduction of vehicle miles traveled (VMT) on Bay Area roadways by making transit more attractive to existing and new riders. Specifically, this increased transit ridership will reduce VMT by an average of 525,263,200 miles per year. Increased frequency and quality of service (system reliability and reduced crowding for riders) will assist in retaining existing and attracting new riders to the system.

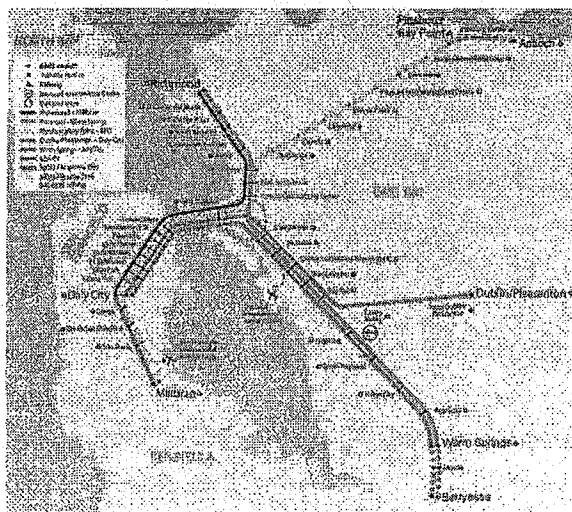
The many Disadvantaged Communities (DACs) and other designated communities located along the BART system and within the BART service catchment area, will also benefit from increased frequency, greater capacity and reduced crowding. Nearly all of the 46 BART stations have been designated by MTC as Priority Development Areas (PDAs). These PDAs are a key part of the region's strategy to meet requirements of the California Global Warming Solutions Act of 2006 (AB 32). The additional transit capacity resulting from this program will enable these areas to grow, which will help the Bay Area to realize its Sustainable Communities Strategy outlined in Plan Bay Area 2040 (*Appendix F*).

## 2.3.2 Detailed Program Description

### 2.3.2.1 Program Background

In 2016, the Bay Area became the fifth largest metropolitan region in the US.<sup>1</sup> In 2010, the nine-county region was home to more than 7.6 million people and 3.7 million jobs. Some 300,000 jobs are located in San Francisco's central business district alone, the fourth largest central business district in the country.<sup>2</sup> The Bay Area's economy is healthy and growing, driven in part by the technology sector that is vital to growing the nation's overall economy. Downtown San Francisco is undergoing large construction projects that will increase office space and enable the city to add more jobs. By 2040, the region expects 9.3 million residents and 4.5 million jobs<sup>3</sup> to be located here.

Figure 2-2. BART System Map



<sup>1</sup> Census – San Jose-San Francisco – Oakland, CA Combined Statistical Area

<sup>2</sup> As of 2010, American Community Survey 2006-2010

<sup>3</sup> <https://mtc.ca.gov/sites/default/files/2-The Bay Area In 2040.pdf>

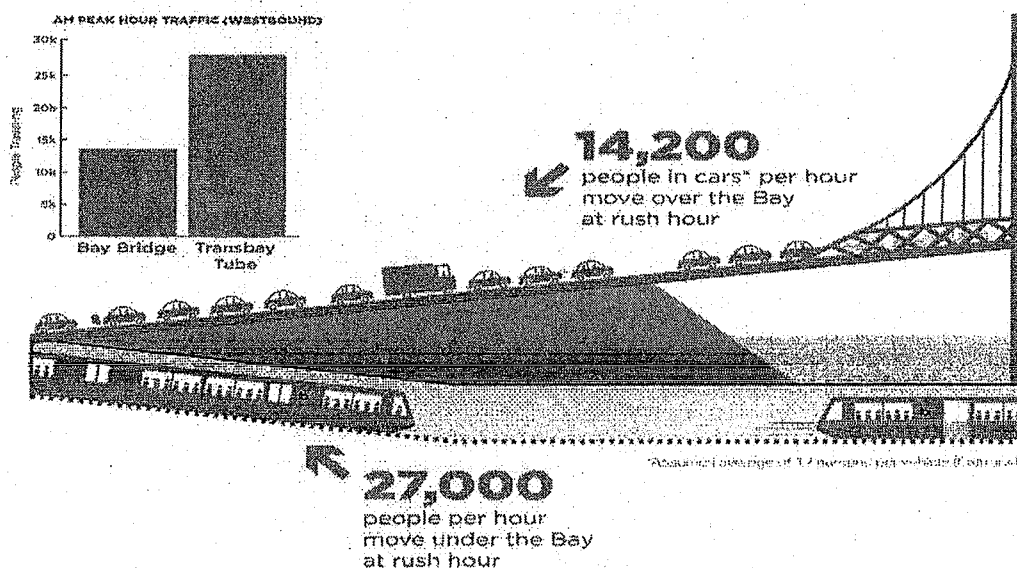


The Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) seek to manage this future growth by steering new development to PDAs in San Francisco, Oakland, and other parts of the region that are served by BART and other transit operators.

As the Bay Area's second largest transit network, BART currently operates and maintains 46 stations and 112 miles of revenue track, serving over 440,000 passengers every weekday in the counties of Alameda, Contra Costa, San Francisco, and San Mateo.<sup>4</sup> For more information on BART, please see *Section 3.1 About BART*.

The Transbay Corridor is the only connection between many East Bay residential areas and jobs in San Francisco. It is the region's most heavily used transportation link, carrying more than 40,000 trips per hour in the peak, two-thirds of which are made on BART's two tracks crossing under the Bay. Virtually all the remaining trips are in cars and buses that utilize the heavily congested San Francisco-Oakland Bay Bridge (Interstate 80).

Figure 2-3. BART's Peak Hour Transbay Market Share



On the main trunk of the BART system, from the Oakland wye (junction in downtown Oakland where trains of all routes merge) through the Transbay Tube to Daly City, BART currently operates a maximum of 23 trains per hour in each direction. Train lengths vary, but currently average 8.9 cars per train in the peak. Between the East Bay and San Francisco, peak hour trains are crowded and ridership has been growing. As the system expands – extensions into Santa Clara County and eastern Contra Costa will open in 2018 – and as the core continues to attract development, tens of thousands of new riders are expected.

<sup>4</sup> [https://www.bart.gov/sites/default/files/docs/Role%20of%20BART%20in%20Region%20-%20Final%20Web%20Oct%202016\\_1.pdf](https://www.bart.gov/sites/default/files/docs/Role%20of%20BART%20in%20Region%20-%20Final%20Web%20Oct%202016_1.pdf)



Figure 2-4. Crowding on BART Platform

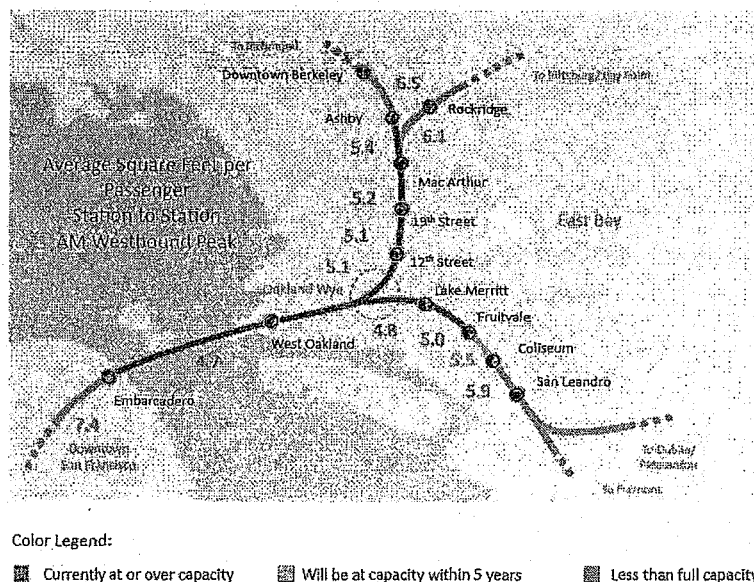
BART's existing Transbay Corridor ridership exceeds capacity in the peak between the Embarcadero station in San Francisco and the Downtown Berkeley, Rockridge, and Bay Fair stations in the East Bay. Within this corridor, riders in the peak hour currently have an average of 5.2 square feet of space each, which is an uncomfortable level for passengers. The Transit Capacity and Quality of Service Manual published through the Transit Cooperative Research Program (TCRP)



establishes 5.4 square feet of space per passenger as a comfortable loading level on U.S. rail transit systems.<sup>5</sup> The Federal Transit Administration (FTA) has adopted this as the threshold level of crowding for funding Core Capacity projects with Capital Investment Grant funds.

The most crowded part of the BART corridor is the five-mile-long Transbay Tube between the Embarcadero and West Oakland stations, where the average rider has just 4.7 square feet of space, far less than the FTA threshold. Current BART riders endure uncomfortably crowded conditions, while some commuters choose other modes to avoid the crush-load conditions on some BART trains. BART's ability to increase ridership — and the region's ability to steer growth to places served by transit — depend upon additional BART capacity in the Transbay Corridor.

Figure 2-5. Square Feet per Passenger in Transbay Corridor

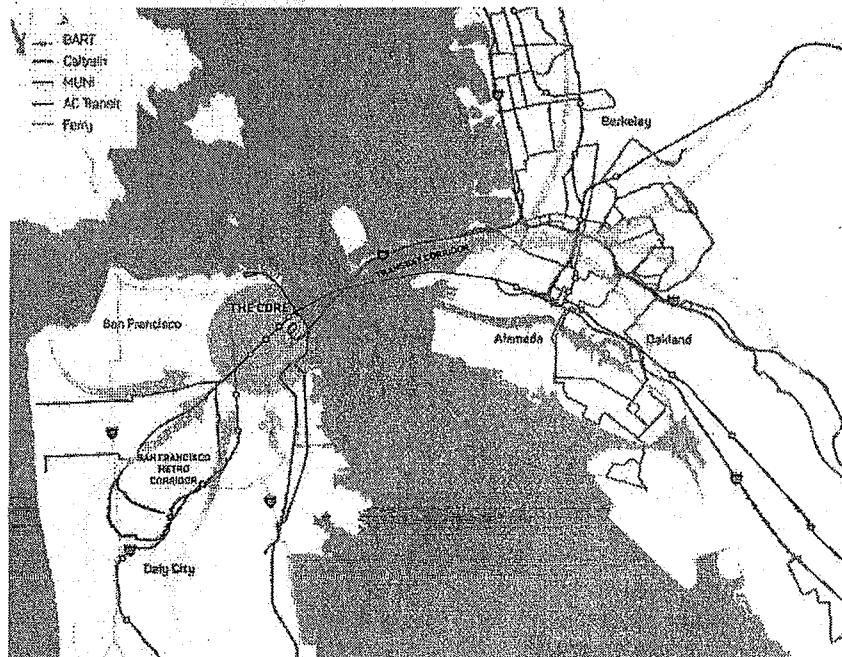


<sup>5</sup> TCRP Report 165



The issue of transit overcrowding through the Transbay Corridor extends beyond the BART system. To better understand the Core Capacity needs of the Transbay Corridor, the Metropolitan Transportation Commission (MTC) undertook the Bay Area Core Capacity Transit Study (CCTS) as a collaborative effort to identify and prioritize investments that will improve travel on public transit to and from the San Francisco Core.<sup>6</sup> The study looked at short, medium and long-term investments that could help steadily upgrade the overall transportation system and keep pace with anticipated population growth for the next quarter century. Both the BART car expansion and the BART train control system modernization were included in the study's list of prerequisite projects. Please find the MTC CCTS, which was completed in 2017, in *Appendix G. MTC Core Capacity Study*. In addition, both projects are included in MTC's Core Capacity Challenge grant program.

Figure 2-6. MTC's Core Capacity Transit Study Area



#### 2.3.2.2 Detailed Program Description

As summarized above, the Core Capacity Program includes four elements:

- A communications-based train control (CBTC) system, which will allow trains to be spaced more closely together, reducing headways. (TIRCP scope)
- Acquisition of 306 new rail cars, allowing for increased capacity per train. (TIRCP scope)
- Construction of Hayward Maintenance Complex Phase 2, which will create storage yard capacity for 250 rail cars. (Non-TIRCP scope)

<sup>6</sup> <https://mtc.ca.gov/our-work/plans-projects/other-plans/core-capacity-transit-study>



- Five new traction power substations, supplementing BART's existing traction power in those places where there is not sufficient power to operate 30 trains per hour. (Non-TIRCP scope)

The Core Capacity Program will relieve current levels of crowding during the peak while creating the opportunity for ridership growth. Based on current ridership, the space per passenger in the corridor will be increased from the current average of 5.2 square feet to a more comfortable 7.6 square feet.

Table 2-3 lists the current and proposed train frequencies by line after the Core Capacity Program is implemented.

Table 2-3. Headways by Line

BART Line	Current Peak Period Frequency (minutes)	Peak Period Frequency after Transbay Corridor Core Capacity Program (minutes)	Increase in frequency
Yellow	7.5	6	25%
Green	15	12	25%
Red	15	12	25%
Orange	15	12	25%
Blue	15	12	25%
Combined Transbay	2.5	2	25%

As discussed previously, BART is requesting TIRCP funds for two Program elements included in the Core Capacity Program, new vehicles and the CBTC system. These TIRCP Scope elements are discussed in more detail in the following page.

The TIRCP investment will not improve private infrastructure. Additionally, the Core Capacity Program will not be competing for funding from other greenhouse gas reduction programs.



### 306 Additional Vehicles – TIRCP Scope

In order to achieve 30 regularly scheduled ten-car trains per peak hour service, BART will require a total fleet of 1,081 vehicles. BART currently has 775 new rail vehicles on order, which will allow for the complete replacement of its aged fleet

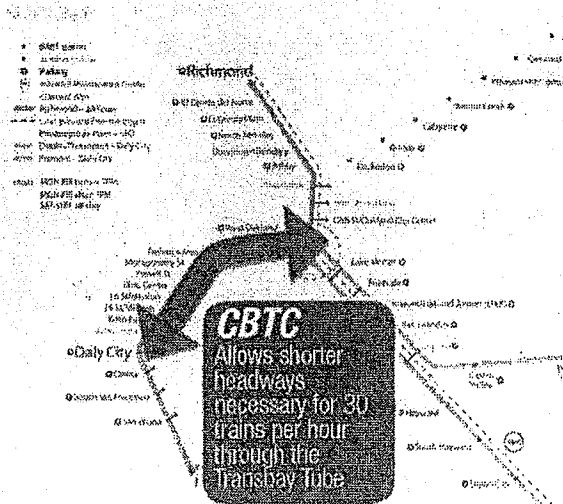
of 669 vehicles and an expansion of the fleet by 106 vehicles. When this order is completed, BART will need 306 more vehicles to achieve the total requirement of 1,081. These 306 will need to be fully compatible with the 775 now on order.

Figure 2-7: Fleet of the Future BART Vehicle



### Train Control Modernization Project (TCMP) – TIRCP Scope

BART's Train Control Modernization Project (TCMP) will replace the existing train control systems with a new communication-based train control (CBTC) system, allowing BART to achieve the shorter headways needed to operate 30 regularly scheduled trains per hour on the trunk line between Daly City and the Oakland Wye. The new CBTC system will be based on a moving-block signaling approach throughout the existing 112-mile system plus the Berryessa extension south of Warm Springs now under construction. The new CBTC system will be installed within or adjacent to the existing BART trackway and wayside facilities. Existing signaling equipment will be overlaid with the most current electronics, software,



computer systems, and cabling. New zone controllers, interlocking controllers and wayside radio transponder tags will be installed throughout the trackside alignment, train control rooms and central control facilities. Cars and maintenance vehicles will be outfitted with processor-based controllers, transponders, communication equipment and location sensors.

Installation activities will include trenching for new cabling, concrete pads for electronic equipment along the trackway, as well as new racks, servers, computers, communication equipment and cable trays within the wayside train control rooms and central control facilities. These activities will take place within existing BART right-of-way.



### 2.3.3 Program Benefits - Primary Evaluation Criteria

The Core Capacity Program meets each of the TIRCP's primary evaluation criteria in specific and measurable ways. The estimated useful life of the Program, for the dominant asset type of the CBTC system, is 50 years. This is discussed in more detail in *Section 2.3.3.1. Reduction of Greenhouse Gas Emissions*.

#### 2.3.3.1 Reduction of Greenhouse Gas Emissions

For detailed methodology and results of the GHG analysis, please see *Appendix B. GHG Emissions Modeling and Methodology*. The excel version of the GHG emissions model is included in this application and is named "CoreCapacity\_calc." Results of this analysis and some inputs are shown in this section.

Consistent with California Air Resources Board's (ARB) *Greenhouse Gas Quantification Methodology for the California State Transportation Agency Transit and Intercity Rail Capital Program Greenhouse Gas Reduction Fund FY 2016-17* (TIRCP GHG Guidance), CO<sub>2</sub>e emissions reductions for the first operational year (Yr1 - 2027) and the final operational year (YrF - 2076) of portions of the Core Capacity Program were estimated based on Program operating data. GHG emissions reductions rely on the increased ridership estimates detailed in *Section 2.3.3.2. Increased Ridership* and *Appendix C. Ridership Modeling and Methodology*.

Table 2-3 summarizes the lifetime CO<sub>2</sub>e reductions, which were quantified assuming a 50-year Program life. The Core Capacity Program life of 50 years is based on the expected service life of all elements of the BART Core Capacity Program, with the main element being the CBTC system.

Results are presented in terms of TIRCP and total GGRF funds requested per metric ton CO<sub>2</sub>e reduced and lifetime CO<sub>2</sub>e reductions per TIRCP and total GGRF funds requested.

Table 2-4. GHG Model Results

Pollutant	Results
Total GHG Reductions	4,748,924 MTCO <sub>2</sub> e
Total GHG Emission Reductions/Total GGRF Funds Requested (MTCO <sub>2</sub> e/\$)	.010460 MTCO <sub>2</sub> e /\$
Passenger VMT Reductions (miles)	525,263,200 VMT
Reactive Organic Gases (ROG)	162,199 ROG
Oxides of Nitrogen (NO <sub>x</sub> )	891,662 NO <sub>x</sub>
Fine Particulate Matter (PM <sub>2.5</sub> )	27,476 PM <sub>2.5</sub>
Diesel Particulate Matter (DPM)	55,666 DPM

Based on the total GHG reductions over the lifetime of the Program (4,748,924 MTCO<sub>2</sub>e), the following equivalencies are shown for the Core Capacity Program<sup>7</sup>:

- Over 500 million gallons of gasoline

<sup>7</sup> These equivalencies were calculated based on the EPA Greenhouse gas equivalencies calculator: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>



- Over 5 billion pounds of coal
- Over 500 thousand homes' energy use for 1 year
- Nearly 11 million barrels of oil

Additionally, GHG reductions from the Core Capacity Program is equivalent to carbon sequestered by:

- Nearly 125 million seedlings grown for 10 years
- Over 5 million acres of US forests in one year

#### Additional GHG Emissions Analysis

The ARB TIRCP Calculator quantifies GHG emissions associated with electricity consumption based on emission factors for the statewide grid average power mix. Because BART's GHG emissions from electricity generation will likely be lower in the future based upon plans to purchase a higher percentage of energy from renewable sources, the total program GHG benefits are likely understated.

BART currently receives 4% of its electricity supply from renewable sources, but that will increase dramatically with two recently approved 20-year renewable energy power purchase agreements. BART expects these agreements to provide about 75% of BART's electricity needs beginning in 2025 and has a goal to get 100% of its electricity from renewable sources by 2045.

The Core Capacity Program will begin operation in 2027, after these purchasing changes will take effect. To show a more precise GHG benefit that includes these purchasing changes, the GHG emissions output from the TIRCP tool was adjusted to reflect the additional GHG savings realized by operating the trains using power generated by a lower percentage of fossil fuels (Table 2.5). The GHG emissions from energy use were scaled by the percentage of fossil fuels used in 2025 (25%) by the percentage of fossil fuels used currently (96%). This is equal to a factor of .26 and is reflected in the table below.

Table 2-5. GHG Benefits Adjusted for Renewable Energy Assumptions

	Total Project MTCO <sub>2</sub> e	Explanation
Total Project GHG Benefit	4,748,924	TIRCP Tool Output
Total Project GHG Benefit with no energy usage from new rail cars	8,376,045	TIRCP Tool Output
Calculated GHG emissions from new rail car energy usage	3,627,121	(8,376,045 - 4,748,924)
Adjusted emissions from energy usage assuming 75% renewables	944,563	(3,627,121 * 25% / 96%)
Adjusted total GHG Reduction	7,431,482	(8,376,045 - 944,563)

Accordingly, increased Program emissions reported by the ARB TIRCP Calculator overstate actual GHGs associated with added electricity consumption. Given BART's future renewable energy goals, the Program cost effectiveness reported is most likely conservative. For more information on BART's Strategic Energy Plan, please see Section 2.3.4.10. *Other Air Quality Benefits.*



### 2.3.3.2 Ridership Benefits

For detailed methodology and results of the ridership increase from the Core Capacity Program, please see *Appendix C. Ridership Modeling and Methodology*. Results of this analysis and some inputs are shown here.

The Core Capacity Program, and specifically the CBTC system, is expected to increase ridership by increasing service frequency throughout the system. The methodology described in *Appendix C. Ridership Modeling and Methodology* details how the following increases in ridership were developed, as well as constraints on ridership increases. This ridership increase was a main input to the GHG emissions modeling described in the previous section.

For the BART Core Capacity TIRCP application, an updated ridership estimate was determined based on the increased frequency described above for the Program once complete. To predict the ridership benefits of the Core Capacity Program, the June 2016 level of 435,973 riders per day was established as the constrained baseline. The capacity of the system through the Transbay Tube will stay constrained until the completion of the Core Capacity Program in FY 2027.

Table 2-6. Capacity Constrained Ridership Increase from Core Capacity Program

Program Milestone	Date	Capacity Constrained Ridership
Base Ridership – At Capacity	2016	435,973
Core Capacity Program Complete	2027	
Projected Ridership – At Capacity	2037	638,945

Completion of the Core Capacity Program will allow BART to increase the peak hour capacity through **Transbay Tube by 45 percent during the peak period**. Assuming current ridership trends continue, the capacity constrained ridership after the completion of the Core Capacity Program will be about 45 percent higher than the current capacity constrained ridership. This leads to an average weekday systemwide capacity constrained ridership of 638,945 with the Core Capacity Program. This is an increase of 202,972 average weekday riders due to increased capacity alone. Under the most likely ridership increase scenario, which is based on increased frequency, shown in *Appendix C. Ridership Modeling and Methodology*, this 638,945 capacity limit is expected to be reached in 2037.

Additionally, this increase in average weekday riders could, at a minimum, increase ticket revenue by over \$400,000 per weekday.

This ridership analysis did not include other factors that could affect increases in ridership, including decreased crowding, new vehicles, and overall access to transportation.

### 2.3.3.3 Rail and Transit Integration

BART provides the backbone transit system throughout the Bay Area. Every BART station provides local bus connections, with some BART stations providing major intermodal transit connections to a



substantial number of other transit services such as Caltrain, MUNI light rail and bus, AC Transit, SamTrans, Golden Gate Transit, ACE commuter rail, WETA ferries, and bus services to and from Solano and Napa counties (Figure 2-8).

Capitol Corridor, which provides rail service from the Sacramento Valley to San Jose, connects with BART at both the Richmond and Coliseum stations, and in 2017, over 160,000 riders transferred between systems at these two stations. The Richmond BART station also provides connections to Amtrak's San Joaquin and California Zephyr services. In addition, BART provides direct service to both the San Francisco and the Oakland International Airports. Over 125 private and publicly funded shuttle services – from medical, university, senior center, employment and high tech services – provide rides to and from BART stations throughout the system, and many BART riders increasingly rely on the emerging Transportation Network Companies (TNCs) such as Uber and Lyft for “last mile” trips.

Table 2-7 lists major transfer points to rail systems and with multiple bus systems, although bus to BART transfers occur at virtually every station in the system.

Table 2-7. BART Major Transfer Points

BART Stations	Other System Connections
<b>Embarcadero (Transbay Terminal)</b>	MUNI light rail Muni bus and cable car AC Transit WETA ferries SamTrans Golden Gate Transit Future California High-Speed Rail WestCAT SolTrans
	Amtrak buses Greyhound
<b>Richmond</b>	Capital Corridor AC Transit Amtrak San Joaquin and Zephyr Golden Gate Transit
<b>Oakland Civic Center and 19<sup>th</sup> Street</b>	AC Transit
<b>Oakland Coliseum</b>	Oakland International Airport Capitol Corridor AC Transit
<b>El Cerrito del Norte</b>	AC Transit SolTrans (Solano County) Napa Valley Transit WestCAT Golden Gate Transit
<b>Dublin/Pleasanton</b>	AC Transit County Connection MAX BART Express



	San Joaquin RTD Stanislaus Regional Transit Livermore-Amador Valley Transit (LAVTA)
<b>Berryessa (opens 2018)</b>	VTA light rail and bus
<b>Millbrae</b>	Caltrain SamTrans Future California High Speed Rail
<b>Fremont</b>	ACE (via AC Transit) AC Transit VTA
<b>Powell</b>	MUNI light rail (central subway) MUNI bus and cable car
<b>San Jose Diridon (Future)</b>	Caltrain ACE Amtrak Intercity Capitol Corridor VTA Light Rail and Bus Future California High Speed Rail

BART and 21 other Bay Area transit systems use the regional the Clipper Card fare collection system, facilitating transfers from one system to another. In a regular month in 2017, approximately 24% of all BART's riders transferred to or from another Bay Area operator. On an average weekday, approximately 67,000 riders use a shared trip as part of their journey to work or school. Looking at Clipper usage data from February 2017, BART can identify riders that use their Clipper Card on more than one transit system in a regular month. Of the 21 transit operators that were using Clipper at that time, all services that connect with BART have riders that use Clipper on both systems. For the major transit operators that connect to BART, 60% of AC Transit riders, 47% of SF MUNI riders, 42% of Caltrain riders, and 47% of SamTrans riders also use Clipper Card on BART in a regular month. For the smaller bus operators and the San Francisco Bay Ferry system, the proportion of their riders that utilize Clipper on both the bus/ferry and the BART system range as high as 85%.

Starting January 1, 2018, BART instituted fare changes that included a 50-cent per trip surcharge on the magnetic stripe tickets, in part as an incentive to move riders to using the Clipper card. BART has also completed the installation of Clipper card vending machines at all BART stations. It is anticipated that these changes will substantially increase the percentage of riders using Clipper cards. Seamless ticketing between systems will further encourage riders to use transit to access the BART system.

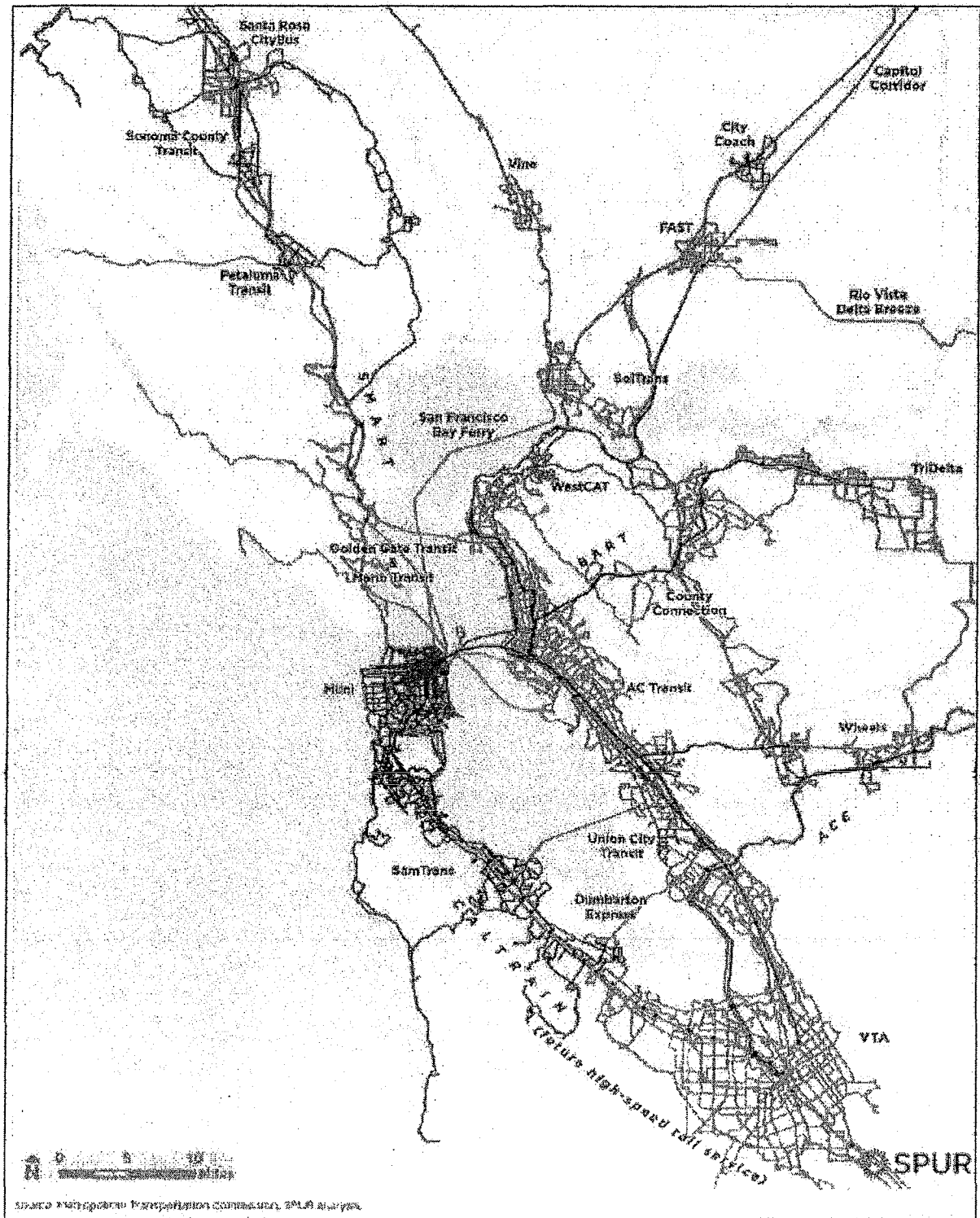
Transit agencies that are either currently connected to the BART system or have plans for integration will benefit from growth in BART capacity through the Core Capacity Program, as BART provides its passengers with connections to destinations throughout the Bay Area.







Figure 2-8. BART Connections in Bay Area

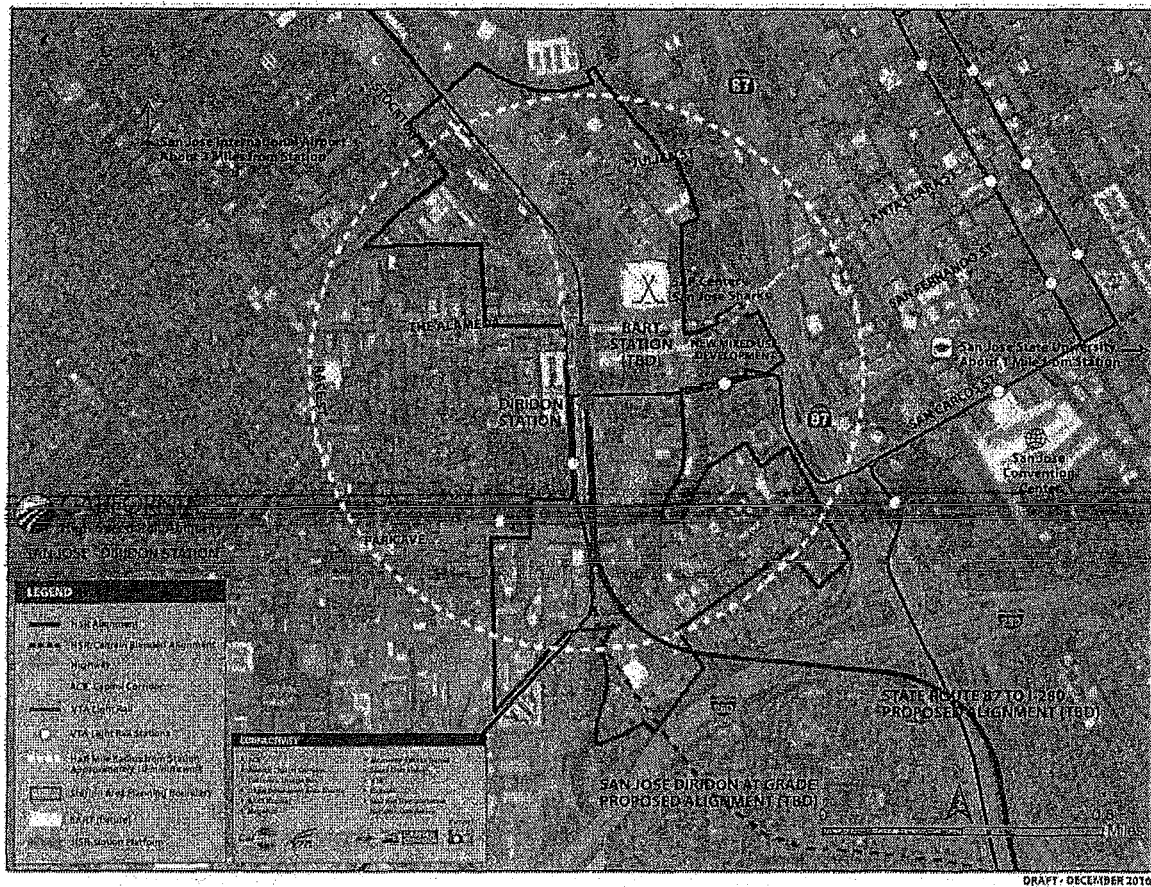




## California High-Speed Rail Connections

Increasing BART capacity is particularly important for accommodating those travelers who will use the California High-Speed Rail System, which is currently under construction in the Central Valley and will connect San Jose to north of Bakersfield in 2025, according to the California High-Speed Rail 2016 Business Plan.<sup>8</sup> The success of the high-speed rail system is highly dependent on connections to those transit systems that provide regional and local access. BART interfaces will occur at the downtown San Francisco Transbay Terminal, the San Jose Diridon Station, and the Millbrae BART station (Figures 2-9, 2-10, 2-11). Once built, the California High-Speed Rail system is estimated to bring 24,100 daily entries and exits to the SF Transbay Terminal and 2,500 to the Millbrae station. These new trips would yield approximately 3,300 daily transfers to BART.

Figure 2-9. Proposed Diridon Station and BART Connection<sup>9</sup>



<sup>8</sup> [http://hsr.ca.gov/docs/about/business\\_plans/2016\\_BusinessPlan.pdf](http://hsr.ca.gov/docs/about/business_plans/2016_BusinessPlan.pdf)

<sup>9</sup> [http://www.hsr.ca.gov/docs/newsroom/maps/San\\_Jose\\_StationMap.pdf](http://www.hsr.ca.gov/docs/newsroom/maps/San_Jose_StationMap.pdf)



THE TRANSBAY CORRIDOR CORE CAPACITY PROGRAM

Figure 2-10. Proposed Transbay Transit Center

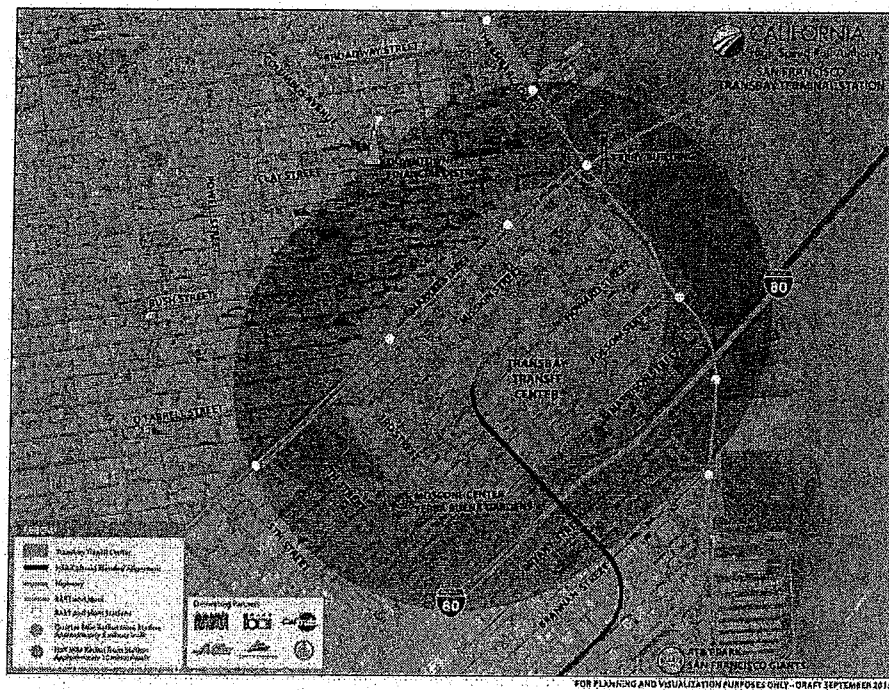
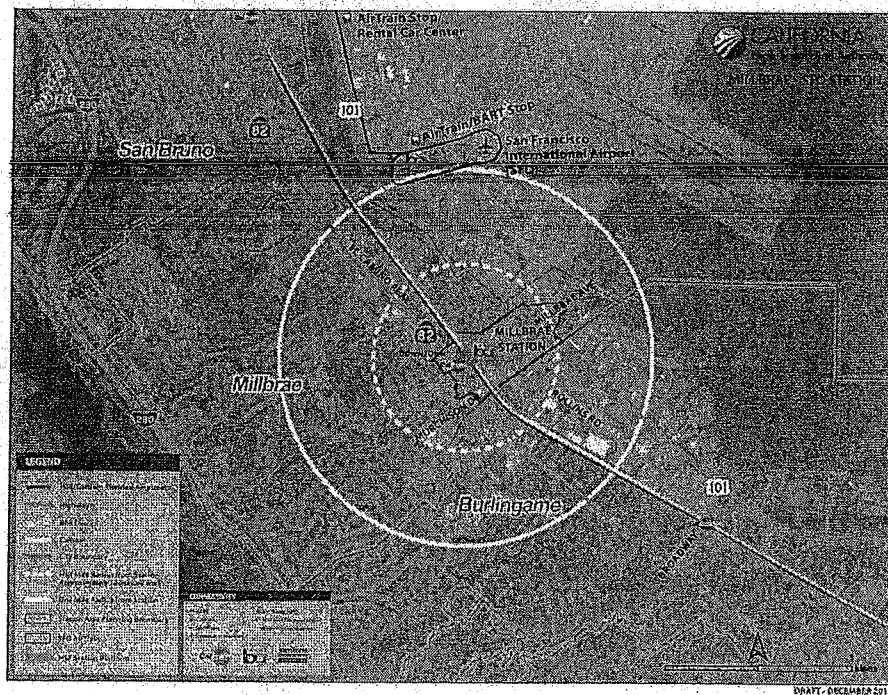


Figure 2-11. Proposed Millbrae Station<sup>10</sup>



<sup>10</sup> [http://www.hsr.ca.gov/programs/station\\_communities/millbrae-SFO.html](http://www.hsr.ca.gov/programs/station_communities/millbrae-SFO.html)



#### 2.3.3.4 Improve Safety

BART's existing train control system, originally built over 40 years ago, is reaching the end of its useful life. The new CBTC system will be a proven technology, ensuring that BART can operate more trains closer together, while maintaining the highest level of safety in train operation. Many systems worldwide have now converted to CBTC, such as the London Underground, the Paris Metro, portions of the New York City subway, and others, and BART will be following this path using fully tested and certified technology.

Currently in the evening peak, the BART platforms at Embarcadero and Montgomery tend to become extremely crowded, particularly when there is a service disruption. Extreme crowding on the platform can lead to unsafe conditions when people are too close to the platform edge. More frequent and longer trains will relieve crowding on BART platforms.

Additionally, the new rail cars will be part of BART's Fleet of the Future and will include many new safety features. BART's new car design includes tripod poles that are strategically placed to give riders additional support, especially during times of peak hour crowding (Figure 2-12), while also ensuring room for people in wheelchairs and those with luggage or strollers. Seats are positioned slightly higher providing room to stow backpacks, luggage and strollers. Specially designated bicycle parking is included as well.

Figure 2-12. Interior of New BART Car, Tripod Poles



To address the needs of customers with vision and hearing impairments, the new BART cars include interior and exterior digital displays, inter-car barriers, clear, automated announcements, and pole markings to improve contrast. For customers with mobility impairments, the new BART cars include differently-colored priority seating, floor markings for wheelchair areas, seats that are higher off the floor making it easier to sit down and stand up, and intercoms located near doors.



Additionally, though not included in the TIRCP request, but a part of the overall Program, the Hayward Maintenance Complex (HMC) facility will ensure that the new cars will receive the maintenance and servicing necessary to operate safely and efficiently throughout their lifetime.

#### 2.3.4 Additional Core Capacity Benefits - Secondary Evaluation Criteria

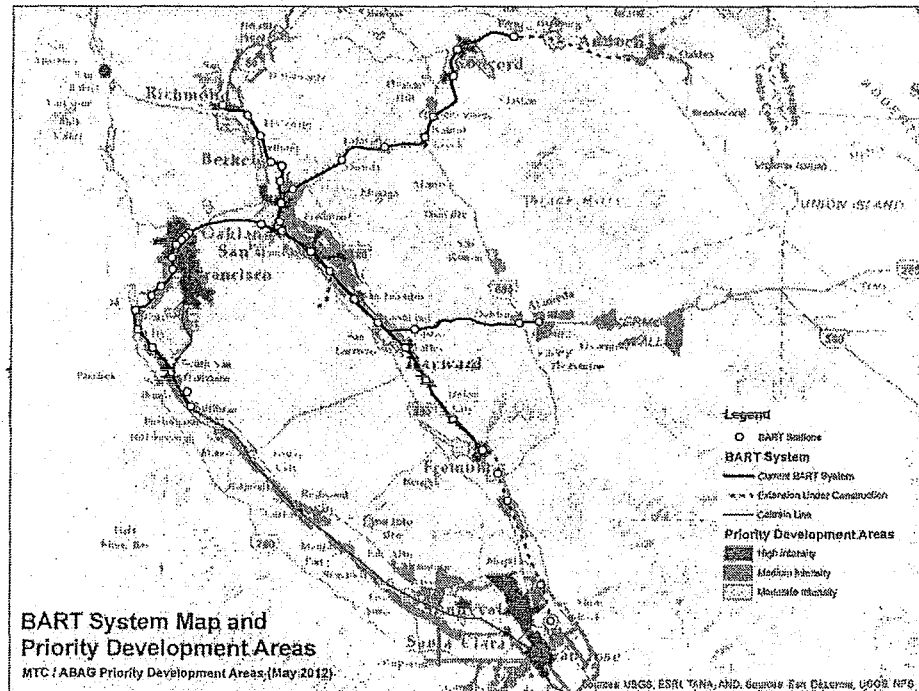
##### 2.3.4.1 Reduced VMT through Growth in Ridership

As stated in previously, the increased capacity from the Core Capacity Program will increase BART peak period ridership by approximately 45 percent. Based on this ridership increase, an average trip length of 13.5 miles, and an adjustment factor for transit dependency of 291.5<sup>11</sup>, the ARB TIRCP Calculator estimates that implementation of the Program will reduce regional VMT by an average of 525 million miles per year. Over the 50-year life of the project, this equates to approximately 26 billion vehicle miles reduced as result of the Program. For more details on reduction in VMT, please see *Appendix B. GHG Emissions Modeling and Methodology*.

##### 2.3.4.2 Housing Development

Figure 2-13. BART System Map and Priority Development Areas

A key aspect of Plan Bay Area (Appendix F. Plan Bay Area 2040), which contains the Bay Area's strategy for reducing GHG emissions, is to concentrate new housing and jobs in designated **Priority Development Areas (PDAs)** that are served by BART and other transit operators (Figure 2-13). Plan Bay Area 2040 is both a transportation plan



and a housing plan, and makes the case that the Bay Area currently has a housing crisis, with a need for a tremendous amount of additional affordable and other housing to support a growing population. Additionally, Plan Bay Area's Sustainable Communities Strategy calls for a 33 percent increase in the

<sup>11</sup> The 291.5 is based on average ratio of systemwide annual trips to systemwide average weekday trips included in the BART ridership forecast (2018-2040).

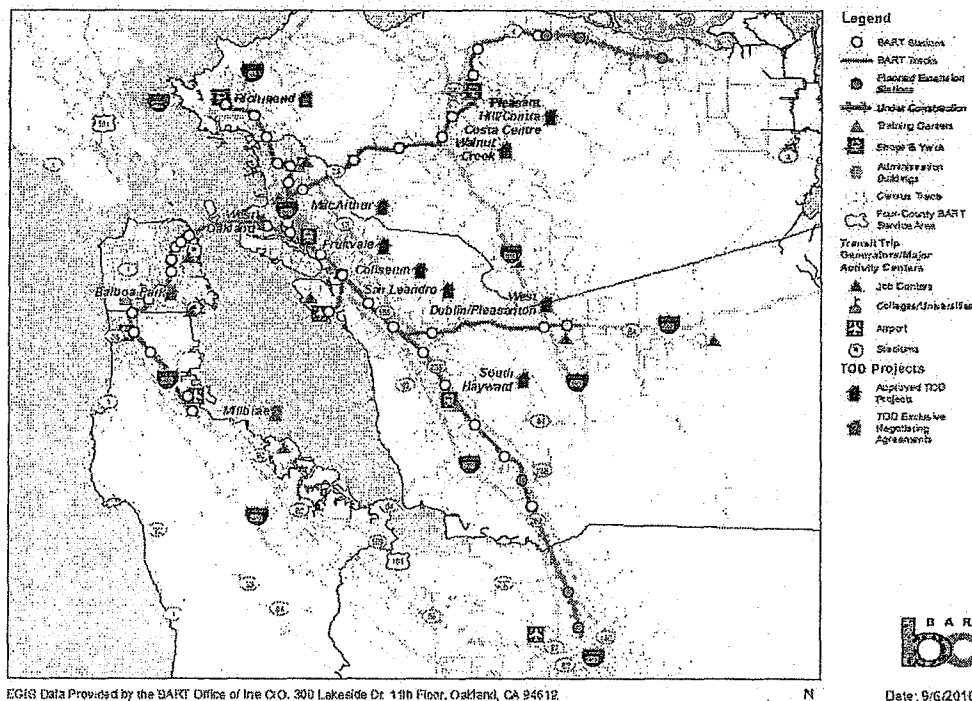


share of housing units located in PDAs that are well served by transit, many of which are centered around BART stations.

While BART is not directly responsible for building housing, sustaining high quality transit service is essential to supporting the regional plan for concentrating housing in places best served by transit. BART proactively supports Transit Oriented Development (TOD) on its property and around its stations. Twenty-two TOD projects are currently underway on BART-owned property near stations, representing over \$3 billion in private investment. These projects will add 6,917 new housing units within walking distance of BART stations (Figure 2-14). In general, BART's TOD Policy encourages and supports high quality TOD, including new housing within walking distance of BART stations.

In 2016, the BART Board of Directors adopted an affordable housing policy and performance targets setting a goal of 35 percent affordable housing on its station sites which could result in an additional 7,000 affordable units over the next ten years. In addition, the BART Board also adopted TOD land use strategies, which ensure that TOD opportunities are explicitly accounted for in the acquisition of new properties, the location of new station sites, and the design and construction of station facilities. It is estimated that the TOD Policy will offset GHG emissions by 24% versus conventional development. This means that if BART produces 20,000 units on its property versus elsewhere in Alameda and Contra Costa counties, households will drive approximately 24% less. Additionally, by supporting TOD in these areas, BART is contributing to the region's Sustainable Communities Strategy goal of reducing per capita GHG emissions in 2035 by 16 percent.

Figure 2-14. Station Modernization Program: Transit Oriented Development (TOD) Projects





In addition to new housing units, the 22 TOD projects in which BART is currently engaged will bring 292,100 square feet of retail and 467,000 square feet of commercial space within walking distance of BART stations in the Bay Area. These developments will support local job growth that is transit accessible, reducing VMT for commuting purposes.

#### 2.3.4.3 *Attractiveness of Transit*

The new rail vehicles supported by TIRCP funds will help bolster the attractiveness of transit by reducing crowding on BART trains. Overcrowding can significantly impact both train and passenger on-time performance. BART statistics show that increasing the number of passengers per car decreases train on-time performance and passenger on-time performance, as boardings take more time and some riders delay their trips to wait for a less crowded train. The new rail cars have three doors (current BART trains have only two) which decreases the time for riders to on- and off-board the trains. Efficient on- and off-boarding improves on-time performance as well as the overall customer experience.

Additionally, newly designed cars include features that make it more pleasant for people to ride, including:

- Easy to clean, wipeable seats.
- 50 percent more doors, making getting on and off the train faster and easier.
- Improved cooling system that distributes air directly to the ceilings, making it more comfortable for standees on hot days.
- Micro plug doors that seal out noise, making rides more quiet and pleasant.
- Digital displays and recorded announcements for announcing train stops and train destinations.

In addition, the new train control system will greatly improve system reliability. BART estimates that up to 40% of current system delays are due to train control issues. Better reliability results in enhanced confidence in the system which leads to increased ridership. Research has shown that travelers are **more sensitive to travel time reliability than they are to travel time itself.**

#### 2.3.4.4 *Expanding Existing Rail and Public Transit Systems*

The Core Capacity Program expands service on the existing BART system by increasing both frequency and train lengths. The Program does not extend the existing system or expand the number of stations served by BART, but it does expand the potential ridership, as discussed in the *Primary Program Benefits* discussed above.

#### 2.3.4.5 *Acceleration of Later Phases*

Not Applicable

#### 2.3.4.6 *Connectivity, Integration, and Coordination*

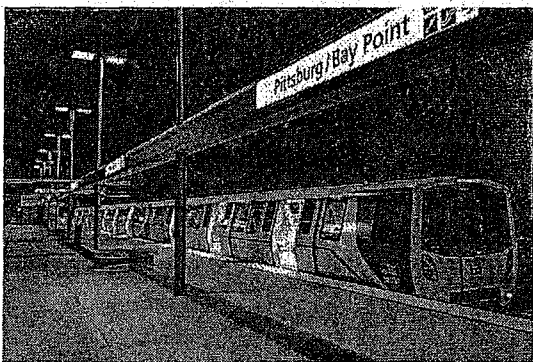
Please see *Section 2.3.3.3. Rail and Transit Integration* for details on connectivity, integration, and coordination with other transit and regional organization.



#### 2.3.4.7 Clean Vehicle Technology

The newly designed rail cars are electric-powered and include state-of-the-art clean vehicle technology features. The new cars are 10 percent more efficient than those currently in service, largely due to improvements to the regenerative braking system. They are designed to be extremely lightweight, with most of the exterior constructed out of aluminum. Aluminum is abundant, does not rust, and when properly finished, reflects heat and light, keeping the train cars cool and reducing air conditioning costs. Aluminum is also lightweight but strong, and fairly easy to work with, reducing the energy investment during the manufacturing process. Additionally, aluminum is easily and readily recyclable, making it very low impact when the cars are eventually retired and dismantled. Because the new BART cars are so lightweight (weighing 15,000–20,000 pounds less than a Washington Metro rail car, for example), they will use significantly less energy over their lifetimes.

Figure 2-15. BART Fleet of the Future Car



In addition to the natural heat and light reflection properties of aluminum, each car will be equipped with a white roof that will deflect heat and light away from the interior of the train. The white roof will help lessen the load on the interior cooling system, keeping passengers comfortable and decreasing energy consumption. To reduce heating and cooling energy, as well as wear and tear on the doors, the new cars will be equipped with a door sensor that will only activate if

there is motion in front of the door. At the outset, this feature will be deactivated, but eventually this feature will be activated in off-peak hours. In addition, the new cars will be equipped with an LED lighting system to sense the amount of available sunlight in each car and adjust lighting intensity automatically, saving additional energy.

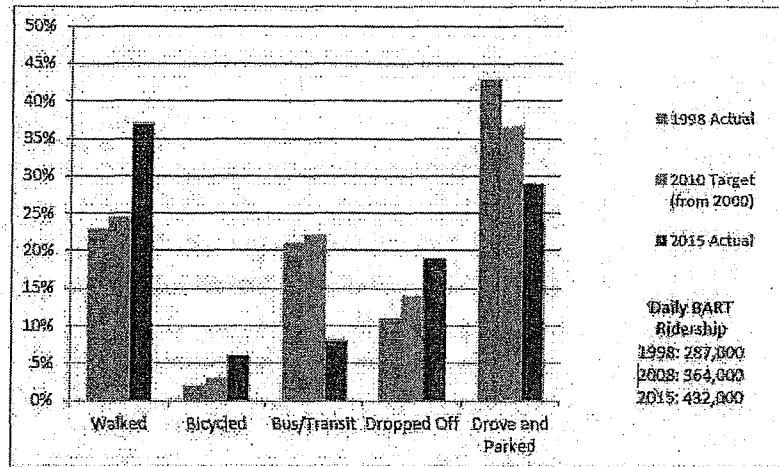
For more information on future renewable energy purchasing, please see *Section 2.3.4.10. Other Air Quality Impacts*.

#### 2.3.4.8 Active Transportation

BART proactively supports projects and programs that encourage and support riders to access the BART system by walking and bicycling. BART regularly uses existing revenues and grant funds to improve pedestrian walkways, lighting and signage, and to provide secure bicycle parking at or near its stations. In 2015, over 40 percent of BART riders accessed stations by bicycling and walking (Figure 2-16). By increasing ridership, the Program will likely result in a proportional increase in bicycling/walking trips to BART stations.

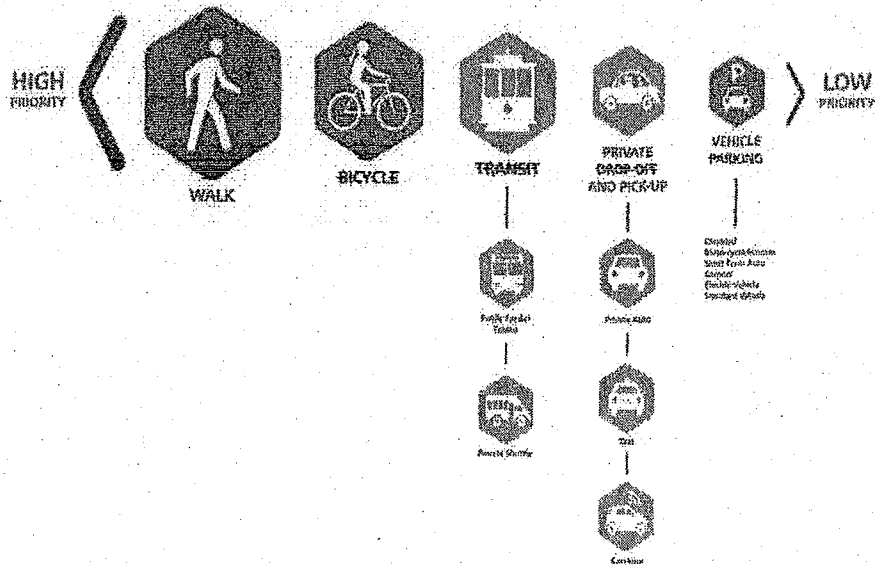


Figure 2-16. BART Station Access Mode Share



To encourage alternative access modes, BART recently revised its Station Access Policy, which prioritizes investments to improve active transportation mode share and safety. With a clear focus on improved access, BART anticipates that the percentage of riders who use active transportation to reach BART will be even greater in the future. Figure 2-17 depicts BART's station access investment priorities, with walking and bicycling receiving the highest investments of all access types.

Figure 2-17. BART Station Access Investment Priorities



In addition, the newly designed train cars include bicycle racks, making it easier for riders to get to their destinations by bicycle once they have arrived at their stop. This improvement will help facilitate growth in bicycle station access.



#### 2.3.4.9 Improve Public Health

The Core Capacity Program will improve public health by increasing ridership and improving regional air quality. By making BART service more comfortable, reliable, and convenient, the Program will support ridership growth that displaces automobile travel. Reducing the number of miles driven by vehicles in the Bay Area improves air quality by reducing criteria pollutant emissions, which will improve respiratory health and other impacts throughout the region. Reductions in criteria pollutants is particularly important for communities located along high-traffic roadways. Since 30 percent of BART stations are located within a disadvantaged community, and many more stations serve DACs (are within a half mile), the public health benefits of the Program are largely concentrated in these areas.

Overall, the increase in BART riders accessing the stations by modes other than automobile supports an active lifestyle. Please see *Section 2.3.3.1 Reduction of Greenhouse Gas Emissions* for details on quantified GHG emissions benefits and reductions in VMTs due to the Core Capacity Program.

#### 2.3.4.10 Other Air Quality Impacts

Overall, BART is working diligently to decrease the GHG emissions of its system primarily through sourcing the electricity portfolio needed to run the system to more zero or low-carbon sources. Specifically, GHG benefits realized by the new 306 vehicles and CBTC system (funded by TIRCP) will be amplified by BART's separate efforts to decrease GHG emissions from the existing system.

BART's wholesale electricity portfolio policy can be found in *Appendix H. BART Strategic Energy Plan* and zero and low carbon sourcing is already underway. In 2016, about 27% of BART's contract power was zero or low carbon as compared to 13% in 2015. Because of this increase in power purchasing from zero or low carbon sources, BART generated 119,795 MT CO<sub>2</sub>e of emissions (or 1.61 kg CO<sub>2</sub>e/BVM) in 2016, a decrease of 7.7% from 2015 unnormalized.

**While most transit agencies receive their power from local utilities under standard rates, has statutory authority to procure its own power supply. BART has adopted a Strategic Energy Plan that includes renewable energy procurement goals of 75 percent by 2017 and 100 percent by 2020. Please see *Appendix H* for BART's Strategic Energy Plan.**

BART has recently signed two important agreements for procuring its energy supply. The first agreement is with NextEra Energy for energy generated from a new 61.7 MW wind project location in Kern County, California. The second agreement, with Recurrent Energy, will supply energy generated from a new 45 MW solar project also to be located in Kern County, California. In the near term, these projects will meet approximately 90% of BART's energy needs when they come online in 2021. As BART's energy needs increase between 2021-2026, due to the addition of new services and the upgraded train control system, the projects will then meet approximately 75% of BART's energy needs. In the long term, these agreements will put BART well on the path of achieving 100% of its electric power from eligible renewable sources by 2045.



### 2.3.5 Tracking and Reporting Metrics

According to the most recent California ARB's Funding Guidelines<sup>12</sup>, CalSTA is required to report on project outcomes for all TIRCP projects. As such, BART will provide tracking information for both TIRCP Scope components, vehicle purchases and the new CBTC system.

The Core Capacity TIRCP Scope includes projects that cover both "Capital Improvements that Result in New or Expanded Transit Service or Increase of Mode Share on Existing Transit Service" as well as "New Vehicles for Existing Transit Service." Table 2-8 outlines the metrics and reporting methods that BART will undertake as a part of TIRCP funding requirements.

Table 2-8. TIRCP Scope Metrics and Evaluation

Project	Metric	Unit	Evaluation Method
Vehicles	Tracking dates of data submission	mm/dd/yyyy	N/A
	Fuel/energy consumption or vehicle miles traveled	Gallons/year by fuel type, kWh/year,	Evaluation of fueling, utility, mileage, or
	Change in fuel/energy consumption or annual vehicle miles traveled	scf/year, or vehicle miles traveled/year	other operating records
CBTC	Tracking dates of data submission	mm/dd/yyyy	N/A
	Days of operation per year	Days/year	Evaluation of service schedule
	Average daily ridership	Unlinked trips/day	Ridership survey, ticket and transit pass sales, automatic passenger counter, driver counts, etc.

<sup>12</sup> [https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/2017\\_draft\\_funding\\_guidelines.pdf](https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/2017_draft_funding_guidelines.pdf)



## 2.4 Program Impacts

The following section describes how the Core Capacity Program could impact other transit services and other potential projects in the corridor.

For a full discussion of the Program's benefits and specifically how the BART Core Capacity Program will be tied into planned high-speed rail access, please see *Section 2.3 Program Benefits*.

### 2.4.1 Program Impacts on Other Transit Services

The Core Capacity Program will not impact the operation of other transit services, with the possible exception of the construction related to the additional 5 traction power substations (TPSS). See *Statement of Work* for more details on the TPSS. The installation of the TPSS at the BART Civic Center Station has the potential to temporarily impact MUNI light rail services in the Market Street tunnel. During the design phase, BART will work closely with MUNI to avoid and/or mitigate any service impacts due to this construction. The TPSS at Civic Center Station is not included in the TIRCP scope for the Core Capacity Program.

Because the Core Capacity Program is expected to increase ridership throughout the system, it is expected to also have a positive impact on the ridership numbers of connecting transit services. However, this increase in ridership has neither been quantified nor included in the GHG reduction model. Please see *Section 2.3.3.3 Rail and Transit Integration* for more information on connections to other transit systems, including the multiple connections with the planned California High-speed Rail system.

### 2.4.2 Program Impacts on Planned Projects

The Core Capacity Program will not impact other planned or underway projects within the Bay Area. VTA's project to extend BART to San Jose and Santa Clara will utilize fully compatible vehicles and the same train control system to allow for a seamless operation.

The BART service to Antioch, anticipated to open by June 2018, is a connecting rail service, designed, built and operated by BART, which uses a different technology (diesel multiple unit), and will connect with the existing BART system at the Pittsburg/Bay Point BART station. Therefore, the Core Capacity Program will not impact this service.



## 2.5 Disadvantaged Communities, Low Income Communities, and/or Low Income Households

The many disadvantaged communities (DACs), low income communities, and other minority or at risk communities located along the BART system will benefit from the increased frequency, greater capacity and reduced crowding gained from the Core Capacity Program. This section provides an overview of these benefits, while *Appendix D. Outreach to Disadvantaged and Low Income Communities* describes outreach to these communities in detail. Additionally, *Appendix I. BART Rider Demographics* details the demographics of BART users in detail.

### 2.5.1 Qualifications for ARB Funding

According to the California Air Resource Board's Funding Guidelines<sup>13</sup>, the Core Capacity Program is classified as a Transit project, as it will achieve GHG reductions by reducing passenger vehicle miles travelled (VMT) through operational improvements, including increased service frequency and safety. Additionally, the Core Capacity Program qualifies for ARB funds because of the following criteria:

- The Program serves multiple disadvantaged communities along the BART system. See Figure 2-18 for a map showing DACs along the BART alignment.
- BART has and will continue to host community meetings, as part of the planning process to engage local residents and community groups for input on community and household needs, and will continue to provide documentation showing how the input will be considered and addressed.
- The Program provides improved transit service for stations and stops within multiple AB 1550 communities on the BART system.

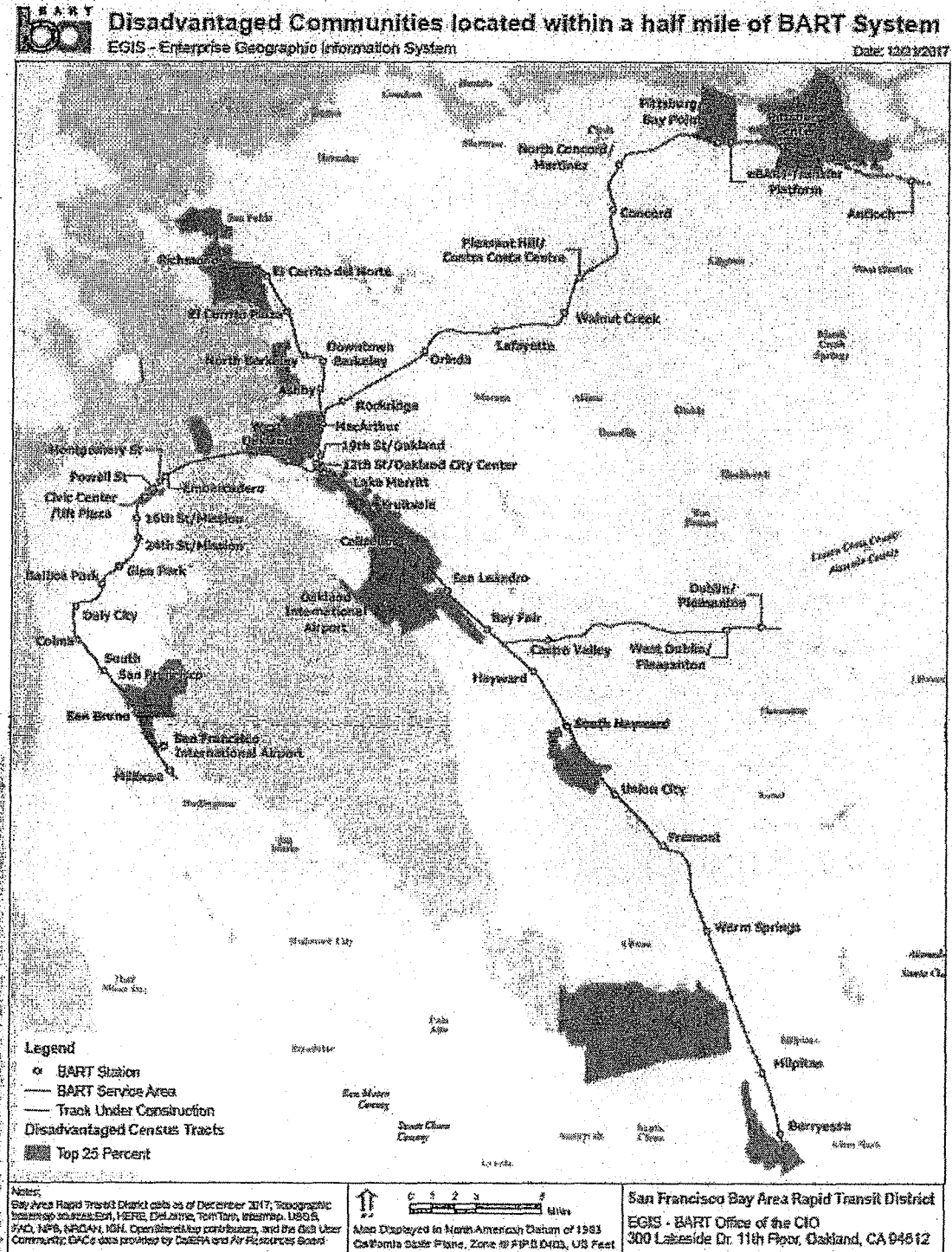
Specifically, designated disadvantaged communities located along/within a half mile the BART line and **to the Core Capacity Program can be seen in Figure 2-18. The Core Capacity Corridor includes 9 BART stations located directly within disadvantaged communities. Additionally, for the most overburdened section of the Core Capacity corridor from West Oakland to Embarcadero Station, the West Oakland Station is also located in a disadvantaged community. In total, at least 15 of the over 50 existing and planned BART stations are located in disadvantaged communities. This is equal to 30% of all stations.**

<sup>13</sup> [https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/2017\\_draft\\_funding\\_guidelines.pdf](https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/2017_draft_funding_guidelines.pdf)



# THE TRANSBAY CORRIDOR CORE CAPACITY PROGRAM

Figure 2-18. Disadvantaged Communities located within half mile of BART System

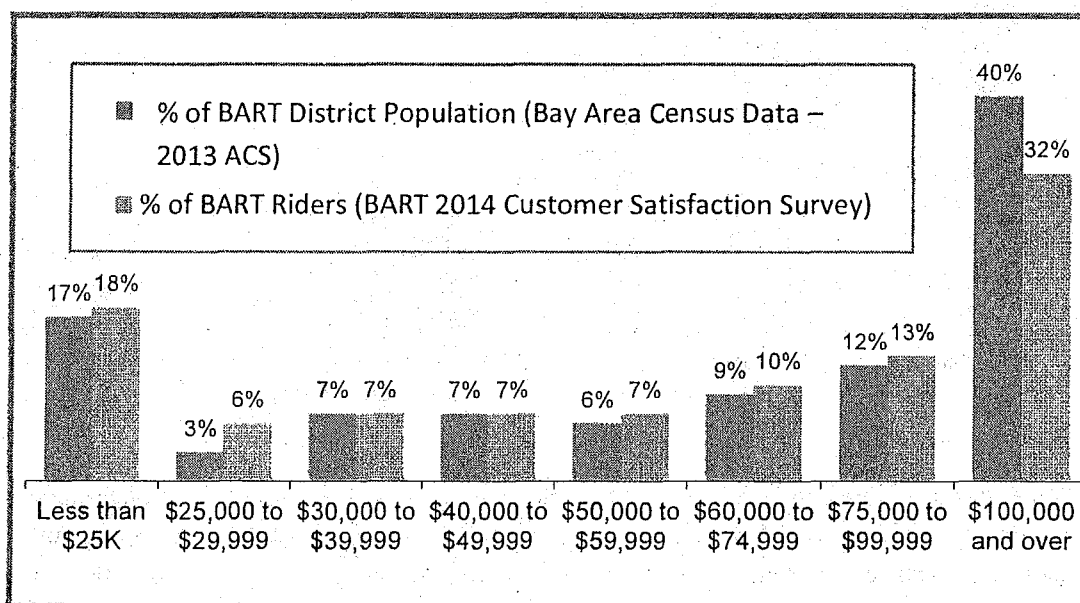




### 2.5.2 Program Benefits to Disadvantaged or Low-Income Communities

BART riders come from across the income spectrum and from the full diversity of the region's racial and ethnic groups in rough proportion to their representation in the population of the BART district as a whole (Figure 2-19). Additionally, BART offers an essential travel option for people with disabilities, for youth and seniors, for those living in households without access to a car, and for whom daily driving would be an unaffordable expense. As the spine of the regional transit system, BART helps to make the Bay Area more affordable for lower-income households and is accessible to all. For more information on BART's impacts, please see *Appendix E. Role of BART in the Region*.

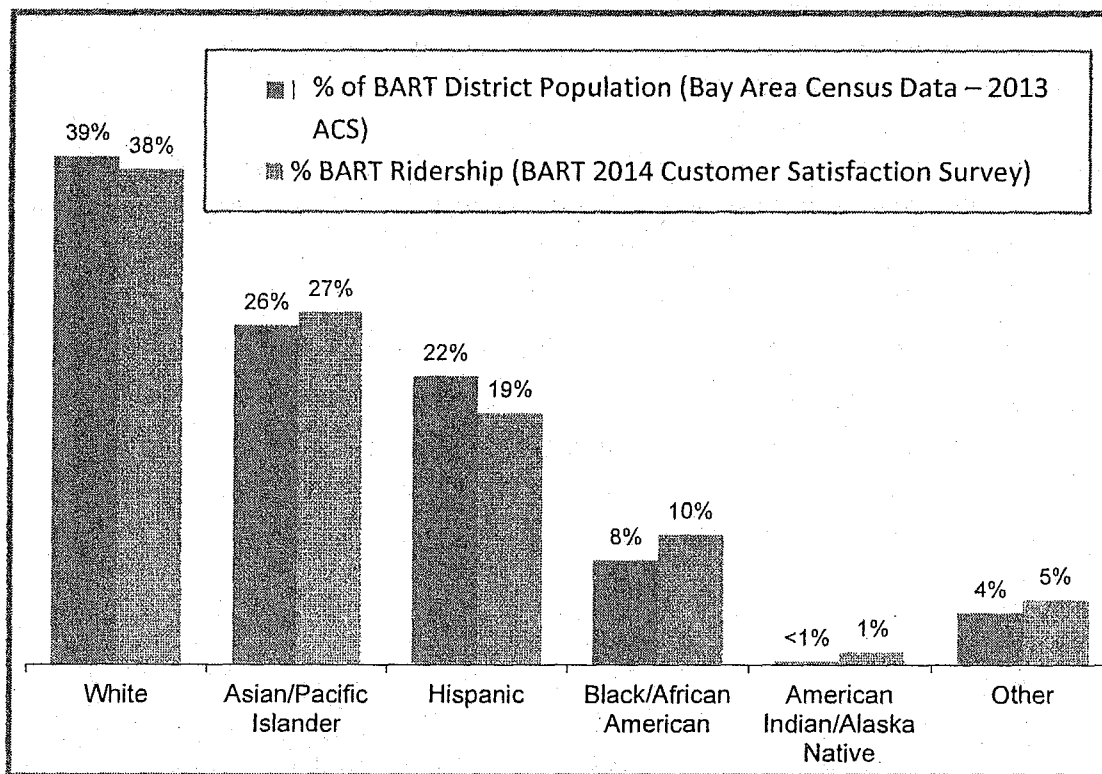
Figure 2-19. BART Riders and District Population by Income



Likewise, riders are as racially and ethnically diverse as the Bay Area's population. By serving diverse populations, BART helps to knit the region together as one community. Figure 2-20 compares the racial/ethnicity composition of the region (based on 2013 data) with that of BART riders (based on BART's 2014 Customer Satisfaction Survey), showing that they are very similar.



Figure 2-20. BART Riders and District Population by Race/Ethnicity



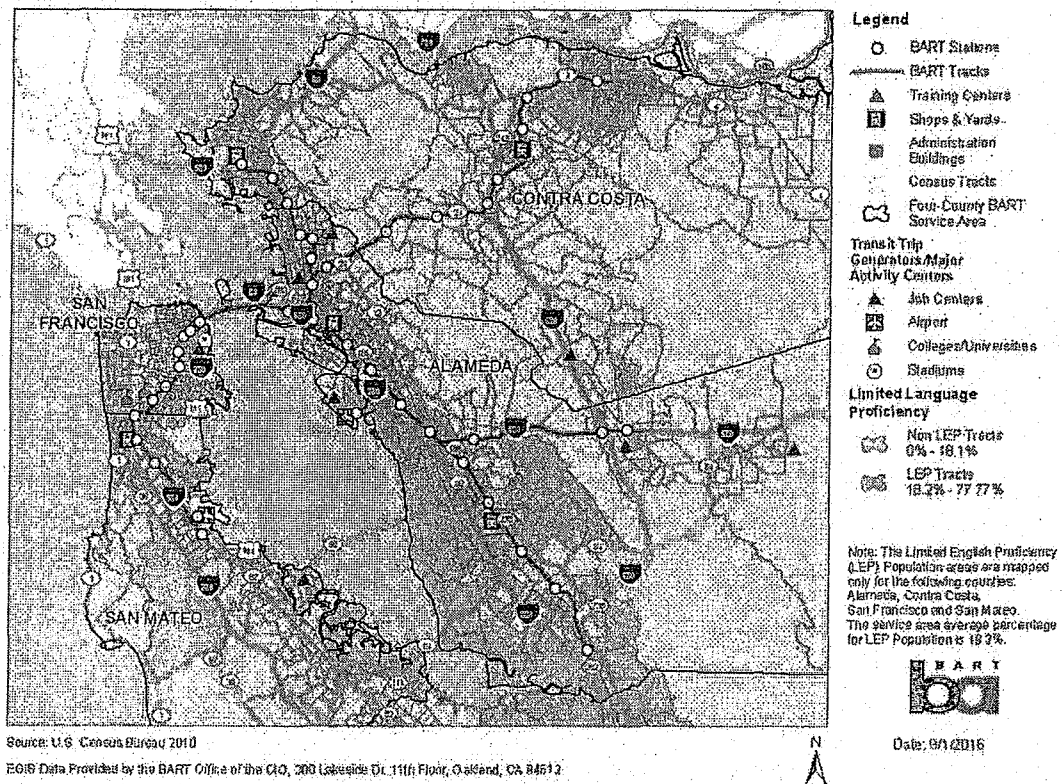
BART has a long and successful history of interacting and working with social justice, environmental, community-based, faith-based, disability rights and other groups in the BART service area. BART has solicited input and sought ideas on a wide variety of both programs and projects – from the design of new rail cars, to station area improvements or development, to changes in fares and their potential impact. BART has successfully implemented a number of community-based grants such as Caltrans' Environmental Justice grants, MTC's Community-based Transportation Planning grants, as well as the successful Better BART outreach campaign in 2016.

BART's outreach efforts are designed to ensure meaningful access and participation by minority, low income, and Limited English Proficient (LEP) populations and the two projects included in the Core Capacity Program provides benefits to these groups.

Figures 2-21 and 2-22 show the direct overlap of both LEP communities as well as Low Income Communities with the BART system.



Figure 2-21. Limited English Proficiency (LEP) Population and BART System



### 2.5.3 Summary of Outreach to Disadvantaged Communities

BART's Public Participation Plan (PPP) was developed in 2011 and followed extensive outreach throughout the BART service area and guides the organizations ongoing public participation endeavors (Appendix J). The PPP ensures that BART utilizes effective means of providing information and receiving public input on transportation decisions from low income, minority and limited English proficient (LEP) populations.

As recommended in the PPP, BART has implemented a variety of outreach techniques for projects related to the Core Capacity Program. In 2014, BART launched its "Fleet of the Future" outreach campaign to obtain public feedback on the design of BART's new vehicles. A series of ten events were held at BART stations and in local communities throughout the San Francisco Bay Area. Approximately 17,500 people attended the events and a total of 7,666 surveys were collected. BART staff consulted regularly with members of the disability community including its the BART Accessibility Task Force (BATF), on the design and functionality of the new BART trains. The BATF provided hands-on feedback on all aspects of the car design.

Outreach related to the 2014 BART Vision Plan engaged over 2,000 people in exploring the tradeoffs involved in considering how BART can meet its future needs. The public helped BART staff narrow down future projects and investments BART should focus on by determining which ones are most important to



the public and fit best into BART's goals of serving the Bay Area for years to come. A total of ten in-station events were held and a total of 2,551 surveys were collected.

BART's Title VI/Environmental Justice Advisory and Limited English Proficiency Advisory committees meet regularly to assist BART on all issues of policy with a focus on meeting the needs of minority and disadvantaged communities and riders. In November 2017, both committees received a presentation on the Core Capacity Program.

In 2017, BART also partnered with MTC to conduct outreach on its Core Capacity Transit Study (*Appendix G*), a collaborative effort to improve public transportation to and from the San Francisco core. Outreach activities consisted of two public meetings to identify investments and improvements to increase transit capacity to the San Francisco Core. Approximately 80 people participated in the public meetings.

#### **Outreach to Disadvantage or Low-Income Communities**

- The PPP outlines strategies to engage disadvantage and low-income communities, including:  
Translation of flyers and other meeting materials and interpretation services
- Outreach to Community Based Organizations (CBOs)
- Providing notification using Ethnic Media
- Hosting meetings in accessible locations

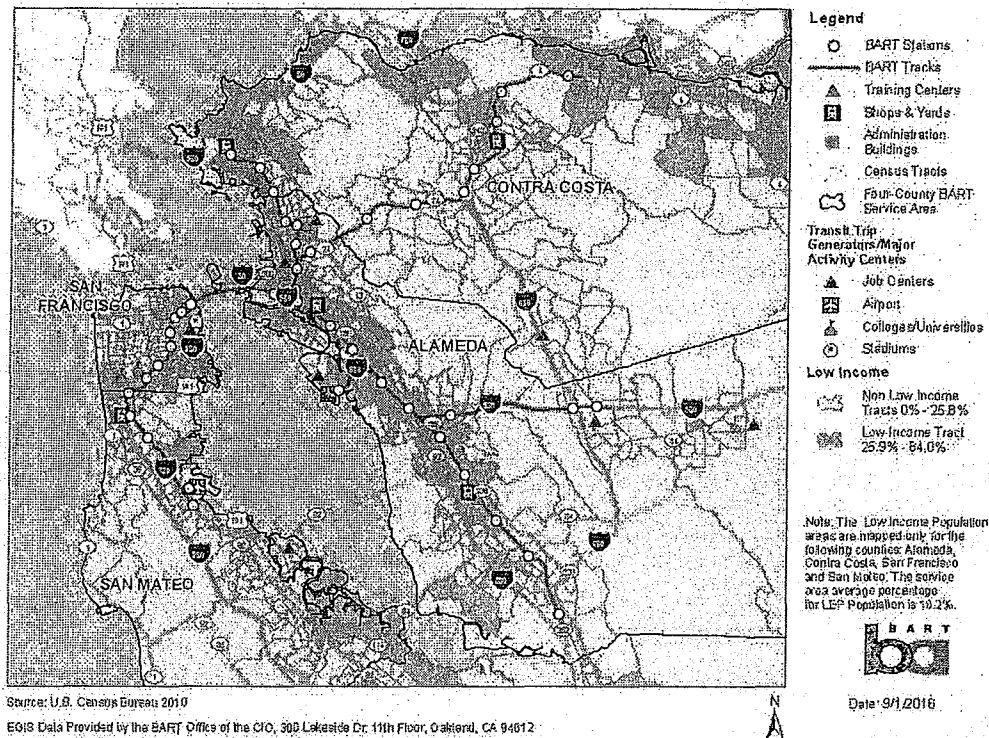
#### **Additional Outreach Activities**

*Appendix D. Outreach to Disadvantaged and Low Income Communities* provides a detailed overview of public outreach activities undertaken by projects under the Core Capacity Program from 2010 – 2017. Outreach activities include:

- Fleet of the Future New Train Car Model
- ~~BART Vision – Future BART~~
- Embarcadero-Montgomery Capacity Implementation and Modernization Study
- Better BART
- MTC Plan Bay Area
- MTC Core Capacity Transit Study
- Hayward Maintenance Complex Noise Study



Figure 2-22 Low-Income Tracts and BART System



#### 2.5.4. Proposed Additional Outreach to Disadvantaged and Low Income Communities

Because of BART's extensive community work, BART is in an excellent position to implement a new round of outreach, specifically focused on garnering input on the changes proposed by the BART Core Capacity Program in its entirety, and to measure potential impacts, both positive and negative, on the increased capacity achieved by this Program as well as any impacts caused by construction activities.

Included in this application for state funding, BART proposes to implement a \$250,000 outreach program working directly with community-based organizations in key Disadvantaged Communities (as identified by the CalEnviro Screen 3.0) located within BART station areas or along BART lines. BART proposes to pass through a portion of these grant funds directly to 4-5 local community-based groups to conduct outreach meetings, workshops and focus groups that will provide input on potential local impacts of the project. The targeted DACs could include the communities of South Hayward, Richmond, Antioch, San Bruno, Oakland Coliseum and West Oakland, as illustrated on Figure 2-18.

To maximize the participation of community members, BART will work with the selected local community groups to structure the meetings and focus groups in a such a way as to meet the needs of the participants. For example, meetings may be held in the evening or on a weekend, and babysitting services and culturally appropriate food and drink may be provided. In all cases, translators and materials in a variety of languages will be provided. BART proposes to allow the local community groups



with which it engages to take the lead on determining the best and appropriate methods for engaging their communities.

To augment this outreach, BART proposes to provide survey instruments to gather input from BART riders and members of the public to solicit further input on this project. This survey could take the form of paper and/or online surveys. As is routine, BART will provide this survey in multiple languages.

In addition, BART will use its significant media network to advertise community meetings and workshops as well as the survey. BART utilizes in-station messaging, media advisories, direct mail and email, and social media to inform and involve residents, riders and the general public. The following details the preliminary budget for the post-award outreach activities.

Table 2-9. Outreach Program Cost

Outreach Program Component	Cost
Grant pass through (\$20,000 for each of 5 groups or \$25,000 for 4)	\$100,000
Materials (surveys, translations, other media, etc.)	\$90,000
Program oversight (legal review, contract administration)	\$50,000
Draft/Final report	\$10,000
<b>Total</b>	<b>\$250,000</b>

Table 2-10. Outreach Program Schedule

Outreach Program Component	Schedule
Finalize program design	Fall 2018
Contact community groups/set up pass through agreements	Winter 2019 – Spring 2019
Develop materials	Spring 2019
Conduct workshops, focus groups and surveys	Summer 2019 – Summer 2020
Assess outcomes/prepare draft report	Summer 2020
<b>Issue Final Report</b>	<b>Fall 2020</b>

## 2.6 BART Management Capability

Since the 1950s when planners, politicians and engineers designed and built the original BART system, BART has amassed a proven track record of successfully delivering large-scale, complex projects, including system extensions, new stations to existing lines, a billion dollar earthquake safety retrofit projects, major system upgrades, and other state-of-good repair projects.

As a recent example, in March of 2017, BART service was extended south 5.4 miles from the Fremont Station to a new station in the Warm Springs district of Fremont in southern Alameda County (the “Warm Springs Extension”). The Warm Springs Extension alignment is mostly at-grade; however, it runs beneath Fremont Central Park in a mile-long cut and cover subway. The project funding plan for the \$890 million extension included substantial contributions from a variety of local and State sources and surplus revenues from the SFO Extension. The project had no federal funding. The project was implemented via two major contracts: the \$137 million Fremont Central Park Subway contract which



was begun in August 2009 and completed on schedule and within budget in April 2013 and the \$299 million design-build Line, Track, Station and Systems ("LTSS") contract which was begun in October 2011. The project was completed approximately \$100 million under budget.

BART has also successfully added new rail services using non-BART technology, further demonstrating the agency's engineering and project management expertise. Both the Oakland Airport Connector (opened in 2014) which provides rail service from the Oakland Coliseum BART station to the Oakland International Airport, and a new rail service extension called the eBART/East Contra Costa Rail Extension (set to open May 2018) which extends ten miles from the Pittsburg/Bay Point BART line to the City of Antioch, and operates using non-BART technology (cable-propelled people mover, and diesel multiple unit, respectively).

## 2.7 Program Implementation and Management

As a rail provider for over 40 years, BART has fully demonstrated its capacity, knowledge and skills to successfully deliver highly complex, major construction and procurement projects. BART will manage the Core Capacity Program using an integrated approach that makes use of BART's existing organization and specialized skills and resources to deliver each Program element while integrating the relevant components, delivery schedules, funding streams, testing and commissioning requirements, and maintenance and operation considerations.

A centralized Program Management Team has been established and will have the following functions:

- Program controls and monitoring
- Program coordination among the four Program elements
- Program funding and funding timelines

**A Program Management Coordinating Committee (PMCC), consisting of the Program Management Team and the project managers for each element, meets regularly (currently weekly).**

Delivery of each individual element will be the responsibility of separate Program teams, one for each element. Each Program team will establish the appropriate delivery mechanism for its element in coordination with the management framework and schedule established for the overall program. The elements will be delivered by separate contracts. Tentative decisions on delivery method are:

- Vehicles: Negotiated procurement
- HMC Phase 2: Design-bid-build
- CBTC: Design-build TPSS: Five new TPSS will be delivered by contractors hired as part of BART's traction power refurbishment program. A sixth TPSS, within the HMC Phase 2, will be delivered by the contractor delivering the HMC storage facility.

The BART divisions most directly involved in delivery are:

- Planning, Development and Construction (PD&C)
- Operations, primarily Rolling Stock & Shops, Maintenance & Engineering (M&E)



PD&C will be responsible for delivering three elements – HMC Phase 2, CBTC, and traction power – with M&E playing a strong technical support role for traction power. Rolling Stock & Shops will be responsible for the vehicles element. Ancillary departments at BART will provide support throughout design, procurement, construction, manufacturing, delivery, and testing.

Recurring meetings and regular reports will be used to track, communicate and resolve issues as they arise. Program reporting will include the communication of scope, time, and cost requirements to management and appropriate members of the delivery team in accordance with the Program controls framework.

Regular reporting for the program and each Program element will use existing web-based project and financial management tools such as PeopleSoft and Oracle Business Intelligence Enterprise Edition (OBIEE). PMs can develop progress report data once a project is initiated in BART's online database. The format and content of these reports is set by each Assistant General Manager (AGM) and may differ by department.

**Program Contracting & Contract Oversight:** BART follows federal guidelines on all procurement processes, from contractors to equipment, as laid out in its detailed Procurement Manual. The manual explains delegation of authority, legal review requirements, procurement protests, and other contract oversight. This Manual can be provided upon request.

**Change-order Management:** All executed construction contracts under BART shall contain requirements regarding contract adjustments in the contract general provisions. Approval authority and limitations established by the District act and by the Board of Directors are explained in detail under BART's Delegation of Authority Management Procedure.

**Risk Management:** BART has implemented a risk management strategy for the program that establishes a formal, systematic approach to identifying, assessing, evaluating, documenting and managing risks that could jeopardize the success of the project.

Upon request, BART can provide a Program Management Plan as well as a Risk and Contingency Management Plan for further details.

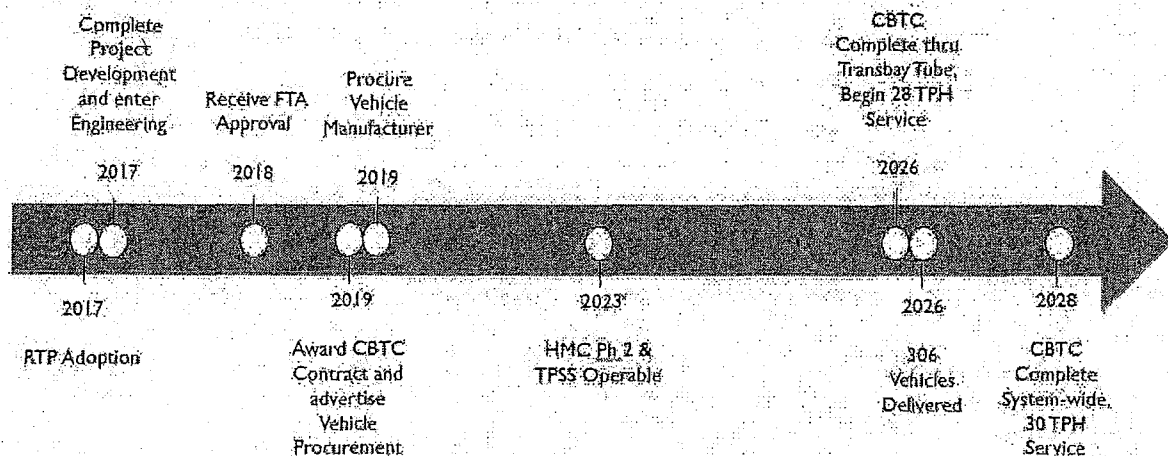
## 2.8 Program Readiness

The overall Core Capacity Program is currently at 30% design and the CEQA and NEPA processes have been completed. The procurement process for CBTC is underway, with BART currently reviewing responses to a Request for Qualifications (RFQ). Final vehicle specifications for the latest round of cars are nearly complete and by mid-2018 BART expects to initiate the vehicle procurement.

The Program has been sequenced to deliver all four component projects concurrently to minimize the overall Program duration and bring the Program benefits to fruition as quickly as possible. As shown in Figure 2-23, CBTC contains the longest schedule duration in the Program. Accordingly, the Program critical path extends through the CBTC implementation schedule.



Figure 2-23. Core Capacity Program Delivery Schedule Summary



The Core Capacity Program is expected to be fully operational by 2028, with the deployment of CBTC system wide, followed by a 2-year closeout period. BART is just over one year away from giving notice to proceed (NTP) to a CBTC supplier. The actual delivery schedule will be negotiated as part of that contract negotiation. The CBTC schedule anticipates that the CBTC system will be ready to demonstrate 28 train per hour (TPH) capacity through the Transbay Tube by 2026 and begin 30 TPH peak service by 2028. By the time 30 TPH Transbay service is achieved, the new order of 306 additional vehicles will be delivered, HMC Phase 2 will be completed, and the new traction power substations will be operational.

The program schedule also shows that BART is currently receiving a delivery of 775 replacement and expansion vehicles. BART recognizes that the delivery of these new cars, along with the schedule for retiring the existing legacy fleet, will require vehicle storage issues to be addressed before HMC Phase 2 becomes operational. While this is an important issue for BART to address, it is outside the scope of and not on the critical path for the Core Capacity Program or the TIRCP scope.

For a detailed look at the entire Core Capacity Program timeline, please see *Section 3.7 Program Schedule*.

#### 2.8.1 Environmental Review

In September of 2017, BART received confirmation that its Core Capacity Program qualified for a Categorical Exclusion (CE) from NEPA. The September 2017 CE confirmation letter from FTA is found in *Appendix K. Categorical Exclusion*. The rail vehicle acquisition, traction power improvements and CBTC system are statutorily excluded from the California Environmental Quality Act, and the BART Board adopted the project and certified the statutory exemption in November 2016. HMC Phase 2 was cleared through CEQA with a Negative Declaration (2011) and two addenda to the Negative Declaration (2013 and 2016).



### 2.8.2 Agreements with Key Partners

The TIRCP Scope components, additional cars and the CBTC system, do not require any third party involvement to begin implementation. Both the additional traction power stations as well as the maintenance facility will require some coordination with key partners. These partners and their applicable agreements are shown in Table 2-11.

Table 2-11. Agreements with Key Partners

Program Element	Third Party	Agreement, Coordination, Permit	Anticipated Date of Agreement or Permit
Traction Power	Caltrans (2 Agreements)	Agreement	September 2018
Traction Power	SFMTA	Coordination	Existing Maintenance Agreement
Traction Power	City and County of SF (2 Agreements)	Agreement	Existing Master Agreement
Traction Power	City of Oakland	Coordination	Spring 2018
Traction Power	City of Richmond	Coordination	Spring 2018
Traction Power	City of Concord	Coordination	Spring 2018
Traction Power	City of Hayward	Coordination	Existing

#### 2.8.2.1 Program Funding Partners

The implementation of BART's Core Capacity Program will involve funding from a number of federal, state and local partners. Please see *Section 3.8 Funding of the Statement of Work* for detailed descriptions of each Funding Partner.



### 3 Statement of Work

The following *Statement of Work* provides additional detail on the Core Capacity Program, and specifically the TIRCP Scope. Some of the information in this section is covered in the *Program Narrative* above, however, is copied again below for completeness.

The following Core Capacity Program documents can be made available upon request:

- Capital Cost Methodology and Estimate Report
- Basis of Schedule Report
- Financial Plan
- Project Management Plan
- Conceptual Engineering Documents

#### 3.1 About BART

The BART system currently consists of 112 route miles of heavy rail transit serving 46 stations in San Francisco, in the East Bay, and on the Peninsula. An additional 10 route miles and 2 stations south of the Warm Springs station and an additional 10 miles and 2 stations east of Pittsburg /Bay Point are under construction. The existing system operates as five lines designated by different colors – Yellow, Green, Red, Orange and Blue. Four of these lines – all but the Orange Line – merge into a single double-track alignment connecting San Francisco and Oakland through the Transbay Tube.

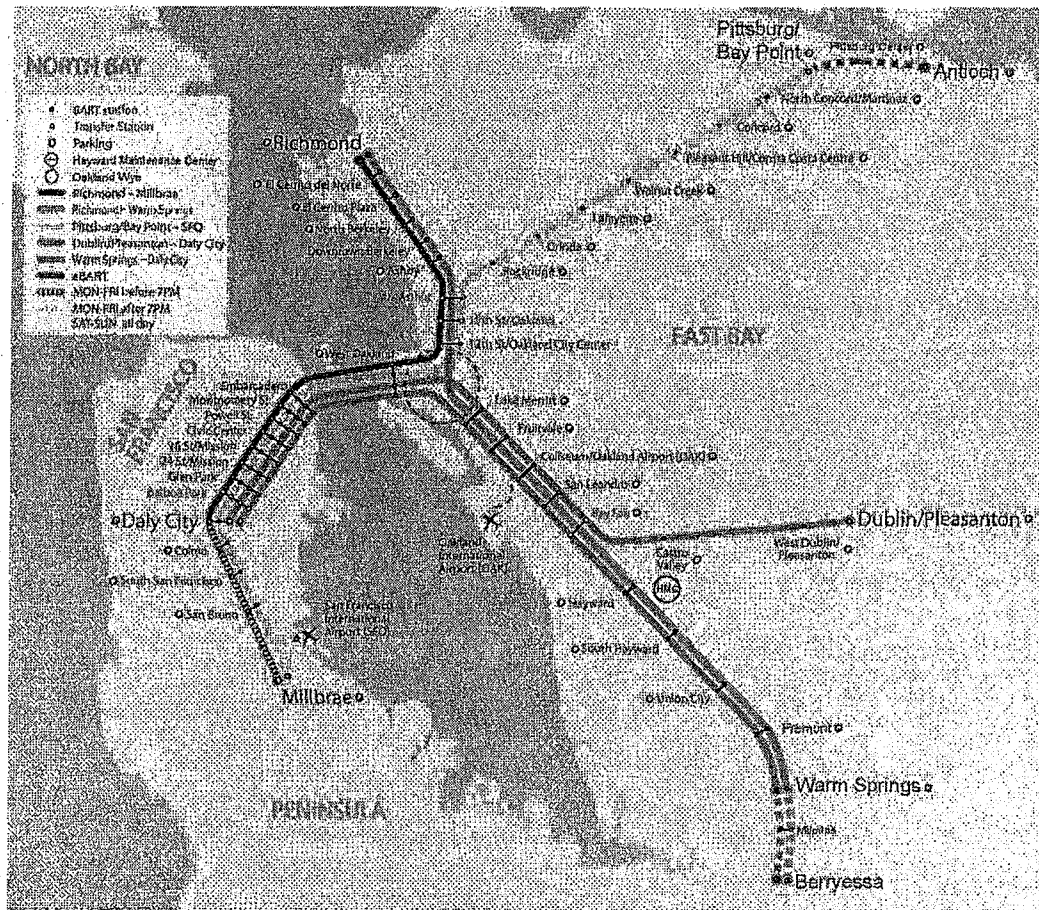
The Transbay Corridor Core Capacity Program is a comprehensive and coordinated package of investments that will increase capacity between San Francisco and the East Bay by more than 30 percent. The program will allow BART to operate 30 ten-car trains per hour on the main trunk of the existing system, between Daly City and the Oakland Wye, maximizing throughput in the most heavily **used part of its system.**

BART currently operates a maximum of 23 trains per hour in the peak direction on the main trunk of the system, from the Oakland Wye to Daly City, with train lengths averaging 8.9 cars per train. Peak period peak direction trains are crush-loaded, and the program goal is to reduce the level of crowding and allow for continued ridership growth.

The Metropolitan Transportation Commission (MTC) adopted an update to its Regional Transportation Plan, Plan Bay Area 2040, on July 26, 2017. The update includes the capital projects and service assumptions that make up the Transbay Corridor Core Capacity Program.



Figure 3-1. Current BART Map



### 3.2 Program Scope

In order to achieve 30 regularly scheduled ten-car trains per hour service, BART will require the following program elements:

- Train Control Modernization Project (TCMP) to convert to a communication-based train control (CBTC) system with the capacity to handle 30 trains per hour in each direction (TIRCP Scope)
- Expansion of the rail car fleet by 306 new cars, sufficient to operate 30 regularly scheduled ten-car trains in each direction during the peak (TIRCP Scope)
- Expansion of the Hayward Maintenance Complex (HMC) to provide additional storage capacity for the vehicles to be acquired for the Transbay Corridor Core Capacity Program (Not TIRCP Scope)
- Added traction power facilities with the ability to support 30 ten-car trains per hour in each direction (Not TIRCP Scope)



For detailed descriptions of the TIRCP Scope Core Capacity elements, please see *Section 2.3.2. Detailed Program Description*. As mentioned previously, the TIRCP Scope and funding request includes the additional vehicles and the Communications Based Train Control system only.

Below, please find detailed descriptions of the non-TIRCP Scope Program elements.

#### Hayward Maintenance Complex Phase 2

Though not part of the TIRCP request, the Hayward Maintenance Complex and new Traction Power Substations are also vital elements of the overall Core Capacity Program.

The current storage capacity across all BART's yards and tail tracks is 893 vehicles. To accommodate the additional 306 new vehicles, and to maintain functional yards with room to properly position trains, BART will construct the Hayward Maintenance Complex Phase 2 (HMC Phase 2) to provide storage for 25 ten-car trains, or 250 additional rail vehicles. The yard will be constructed with access to the existing yard and electrified so that it may serve as a fully operational vehicle storage facility. The HMC offers the only practical site to expand storage within the BART system to accommodate the additional cars that are part of the Core Capacity Program. HMC Phase 2 provides for additional storage capacity only and is not part of the TIRCP funding request.

#### New Traction Power Substations

Traction power substations (TPSS) provide the electricity to run BART trains on the main lines, storage tracks, and yard and shop tracks. These substations transform 34.5 kV AC to 1,000 V DC for distribution through BART's electrified third rail. More frequent trains, newer and heavier vehicles, and the train performance profiles made possible by CBTC will put added loads on BART's existing traction power system. The TPSS are not part of the TIRCP funding request.

**BART has conducted multiple simulations to assess the electrical power requirements associated with increasing service on the trunk line between Daly City and the Oakland Wye, with continuing service at increased frequencies on each of the branches. The simulation assumed 30 trains per hour on the trunk line, and took into consideration the electrical draw profile of BART's new vehicles, as well as the performance profile of the new CBTC system necessary to operate trains this frequently. The simulation revealed five locations where the traction power requirement for the higher-frequency service exceeds the capacity available from BART's existing traction power system, and where the installation of new traction power substations will be required:**

1. Richmond – RYE Gap Breaker Conversion
2. Pleasant Hill – David Avenue and Minert Road
3. Oakland – Vicinity of MacArthur Station
4. Downtown San Francisco – Civic Center Station
5. Downtown San Francisco – Montgomery Station

BART is currently undertaking a major replacement and upgrading of its existing traction power system, aimed at returning the traction power system to a state of good repair. While distinct from the Core



Capacity Program in terms of purpose and funding, the replacement and upgrade will occur concurrently with the Core Capacity Program, requiring close coordination.

The successful planning, financing, procurement, design, construction, manufacturing, testing and commissioning of each of each program element are key milestones to achieving the goal of increased Transbay capacity. A detailed schedule with Core Capacity Program milestones can be found in *Section 3.2.4. Program Schedule.*

### 3.2.1 Program Location

BART is located in the San Francisco Bay Area, and specifically San Francisco, Alameda, Contra Costa, San Mateo, and Santa Clara Counties. The Core Capacity Program is located in the Transbay Corridor, connecting the East Bay with the San Francisco Peninsula.

The TIRCP scope of the Program will relieve crowding through the Transbay Tube, as well as additional locations throughout the East Bay. The location of the TIRCP Scope is denoted by heavy dashed line in Figure 3-2.

Figure 3-2. Transbay Corridor Core Capacity Program

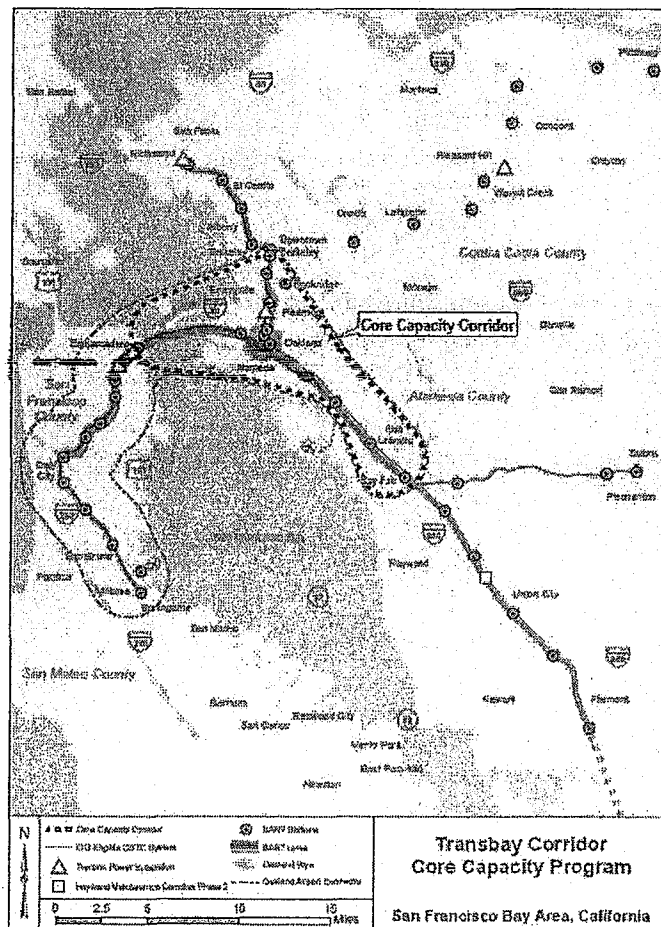




Figure 3-2 also shows the location of the non-TIRCP scope Core Capacity elements, including the five planned traction power substations and the Hayward Maintenance Complex (Phase 2).

For additional maps showing disadvantaged communities, low income communities, and other designated communities along the BART alignment, please see *Section 2.5.1. Program Benefits to Disadvantaged and Low-Income Communities*. Additionally, for more information on GHG reducing features of the Program, as well as land use density, housing development along the BART system, and more – please see multiple sections in the *Project Benefits Section*.

Table 3-1 lists census tracts and corresponding zip codes, cities, and counties where disadvantaged communities are within a half mile of the BART alignment.

Table 3-1. Disadvantaged Communities Located within a half mile of BART Alignment

County	City	ZIP	Census Tract
Alameda	Berkeley	94710	6001422000
Alameda	Emeryville	94608	6001401000
Alameda	Emeryville	94608	6001401400
Alameda	Emeryville	94608	6001401500
Alameda	Emeryville	94608	6001425104
Alameda	Hayward	94544	6001438203
Alameda	Oakland	94601	6001406100
Alameda	Oakland	94601	6001406201
Alameda	Oakland	94601	6001407200
Alameda	Oakland	94601	6001407300
Alameda	Oakland	94601	6001407400
Alameda	Oakland	94603	6001409100
Alameda	Oakland	94603	6001409200
Alameda	Oakland	94603	6001409300
Alameda	Oakland	94603	6001409400
Alameda	Oakland	94606	6001405401
Alameda	Oakland	94606	6001406000
Alameda	Oakland	94607	6001401600
Alameda	Oakland	94607	6001401700
Alameda	Oakland	94607	6001401800
Alameda	Oakland	94607	6001402200
Alameda	Oakland	94607	6001402400
Alameda	Oakland	94607	6001402500
Alameda	Oakland	94607	6001403000
Alameda	Oakland	94607	6001403300
Alameda	Oakland	94607	6001410500
Alameda	Oakland	94612	6001402700
Alameda	Oakland	94621	6001408800
Alameda	Oakland	94621	6001408900
Alameda	Oakland	94621	6001409000
Alameda	Oakland	94621	6001409500



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Alameda	San Leandro	94577	6001432400
Alameda	San Leandro	94577	6001432501
Alameda	San Leandro	94578	6001433200
Alameda	Union City	94587	6001440301
Contra Costa	Antioch	94509	6013305000
Contra Costa	Pittsburg	94565	6013309000
Contra Costa	Pittsburg	94565	6013310000
Contra Costa	Pittsburg	94565	6013311000
Contra Costa	Pittsburg	94565	6013312000
Contra Costa	Pittsburg	94565	6013313101
Contra Costa	Pittsburg	94565	6013313102
Contra Costa	Pittsburg	94565	6013314103
Contra Costa	Pittsburg	94565	6013314104
Contra Costa	Richmond	94801	6013365002
Contra Costa	Richmond	94801	6013375000
Contra Costa	Richmond	94801	6013376000
Contra Costa	Richmond	94801	6013377000
Contra Costa	Richmond	94804	6013379000
Contra Costa	Richmond	94804	6013380000
Contra Costa	Richmond	94804	6013381000
Contra Costa	Richmond	94804	6013382000
Contra Costa	San Pablo	94806	6013368001
San Francisco	San Francisco	94102	6075012502
San Francisco	San Francisco	94103	6075017601
San Francisco	San Francisco	94107	6075017801
San Francisco	San Francisco	94130	6075017902
San Mateo	San Bruno	94066	6081604200
San Mateo	South San Francisco	94080	6081602300
Santa Clara	Alviso	95002	6085504602
Santa Clara	San Jose	95112	6085500100
Santa Clara	San Jose	95112	6085501102
Santa Clara	San Jose	95116	6085501401
Santa Clara	San Jose	95131	6085504318
Santa Clara	San Jose	95133	6085503601

A KMZ file has also been provided separately for the Program with the transit route/Program location represented by lines and stops represented by points. It is included in this application separately and named ProgramLocation\_KMZ. For maps and descriptions of the Program outcomes of reduced GHG emissions, surrounding landuse density, housing and employment centers, transit oriented development, and more, please see multiple sections in the Program Narrative. Additional data regarding BART station locations and communities of interest can be provided as needed.



### 3.2.2 Program Costs and TIRCP Funds Requested

Core Capacity Program Costs are shown below in Table 3-2. All cost estimates described and shown in this application are escalated to the year of proposed delivery.

Table 3-2. Total Program Cost

Program Scope	Total Cost (\$ millions)	TIRCP Requested Amount (\$ millions)
Vehicles	\$1,618.4	\$135.4
Communication-Based Train Control (Including \$250,000 for Post-Award Community Outreach)	\$1,150.5	\$318.6
<b>TIRCP SCOPE TOTALS</b>	<b>\$2,768.9</b>	<b>\$454.0</b>
Hayward Maintenance Center Phase II	\$228.0	
Traction Power	\$94.0	
Program Management	\$6.6	
Program Contingency	\$309.7	
Financing Costs	\$103.5	
<b>TOTAL</b>	<b>\$3,510.6</b>	<b>\$454.0</b>

### 3.2.3 Program Operating Plan

BART has completed a detailed Operating and Maintenance Cost Estimate Report that shows the next 20 years of operation and evaluates what the costs are associated with increased Core Capacity Program operations by using a model that was originally based on FTA guidance. The model looks at Build versus No Build alternatives for the next 20 years and the Build Alternative is driven by key factors for this project, such as car miles, number of stations, ridership, number of vehicles, etc. Key factors determine the BART departmental costs and allow for projecting increases in those operating costs over the next 20 years. BART revises departmental budgets annually, and those revisions include a 5-year forecast including any necessary budget adjustments.

Additionally, there is a ramp up period associated with the Core Capacity Program. With the arrival of additional cars, BART will initially increase the length of trains while keeping headways the same. At that point, BART will begin to ramp up frequency until the system hits 28 trains per hour. Depending on demand, in 2026 BART will evaluate whether to ramp up to 30 trains per hour at that time.

Because BART will be retiring older cars and accepting new cars as the Core Capacity Program moves forward, BART is looking at adjusting its staffing resources from an emphasis on maintenance and overhaul to material expeditors and strategic maintenance professionals. The timing of this transition is such that much of the BART staff doing maintenance will transition to focus on the "fleet of the future"



as older vehicles are pulled offline. This transition will require a retraining of existing maintenance professionals rather than hiring new professionals.

In general, BART tailors its operating plan, including train frequencies and train lengths, to the demand for service. With actual and projected near-term increases in ridership demand, BART will deliver service and capacity increases through new BART line extensions (to Berryessa and Antioch) and the new vehicle “fleet of the future”, all of which are anticipated to be online within a year.

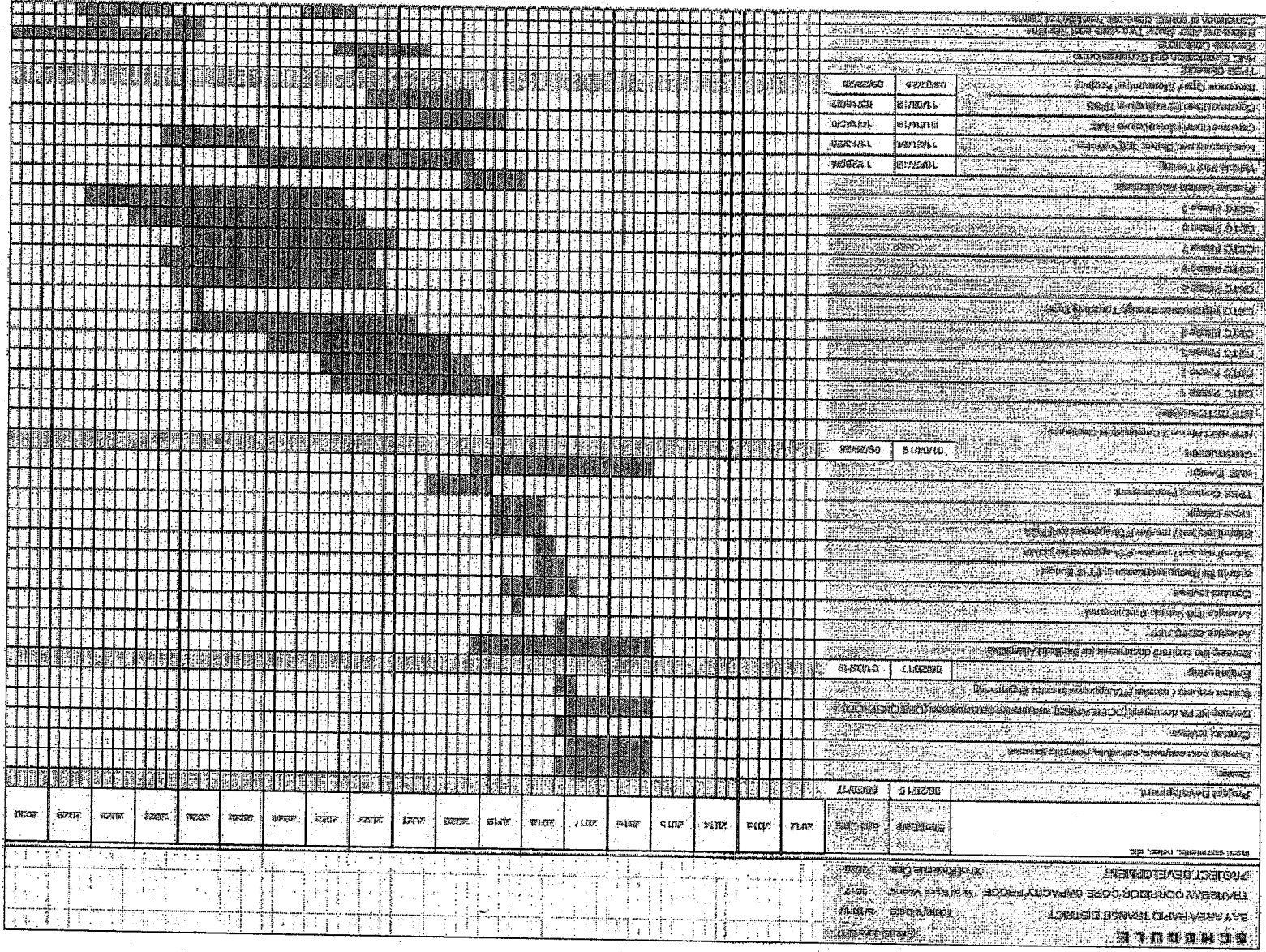
#### 3.2.4 Program Schedule

BART has developed a schedule to coordinate delivery of the four program elements and achieve 28 trains per hour (TPH) through the Transbay Tube by 2026 and 30 TPH beginning in 2028. For high-level view of the Core Capacity Program schedule, please see *Section 2.7. Program Readiness*.

The Program has been sequenced to deliver all four component projects concurrently to minimize the overall Program duration and bring the benefits to fruition as quickly as possible. CBTC contains the longest schedule duration in the Program. Accordingly, the Program critical path extends through the CBTC implementation schedule.



Figure 3-3. Core Capacity Program Schedule





### 3.2.5 Current Program Status

The Federal Transit Administration (FTA) approved the Core Capacity Program into the Capital Investment Grant (CIG) pipeline in August 2015, and anticipates approval for entry into Engineering in January, 2018. Program design is currently at the 30 percent level. BART has initiated a design-build procurement for the communications-based train control system and is developing specifications to procure the 306 new vehicles. With approval into Engineering, BART will continue to advance HMC Phase 2 and the traction power substations beyond the 30 percent design stage.

The Program will take place entirely within publicly owned transportation right-of-way, the vast majority of which is already owned by BART. BART will seek a cooperative agreement from Caltrans for the installation of a TPSS on the sole piece of property not owned by BART. The TPSS on Caltrans property is not included in this request.

### 3.2.6 Procurement Progress

Table 3-3 summarizes the current procurement status.

Table 3-3. Procurement Status

Program Element	Procurement Status
Vehicles	RFP scheduled for release in September 2018.
HMC Phase 2	Construction contract documents are under development. Awards are expected in August 2018 for track, March 2019 for storage yard construction, and April 2019 for flyover construction.
Communications Based Train Control	Request for design-build qualifications released August 15, 2017. BART anticipates issuing NTP to the selected bidder in February, 2019.
Traction Power	The fabrication and installation of traction power substations will be procured following completion of the design phase, now underway. BART anticipates entering into a contract in 2019.

### 3.2.7 Funding

Table 3-4 on the following page summarizes the funding sources that BART intends to use for the entire Core Capacity Program. This section presents the various capital funding sources that BART is assembling. For the total TIRCP Scope elements, 30 percent of funding is fully committed. For more details on committed funds, see *Section 3.8.2 Committed and Planned Funds*.



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Table 3-4. Core Capacity Funding Plan 2017

	Committed (\$ millions)					Budgeted/Planned (\$ millions)								Totals (\$ millions)		
	Exchange Account	TCP	BART Capital Allocation	AATC funds	Measure RR	FTA CIG and GANs	RM3	TIRCP	CMAA	Santa Clara VTA	BART Refund	SB1 Local Partner	SB1 Cong Corr	Total Program Cost	Total Committed	Total Planned
Vehicles (TIRCP SCOPE)	\$ 179.0		\$ 121.0			\$ 411.4	\$ 500.0	\$ 135.4	\$ 271.6					\$ 1,618.4	\$ 300.0	\$ 1,318.4
Communication Based Train Control (TIRCP SCOPE)		\$ 53.7	\$ 83.4	\$ 17.3	\$ 400.0	\$ 25.9		\$ 318.6		\$ 101.6		\$ 50.0	\$ 100.0	\$ 1,150.5	\$ 554.4	\$ 596.1
Hayward Maintenance Center Phase II					\$ 35.0	\$ 193.0								\$ 228.0	\$ 35.0	\$ 193.0
Traction Power					\$ 13.4	\$ 80.6								\$ 94.0	\$ 13.4	\$ 80.6
Program Management			\$ 6.3	\$ 0.3										\$ 6.6	\$ 6.6	
Program Contingency			\$ 4.1	\$ 30.5		\$ 236.6			\$ 28.4	\$ 10.2				\$ 309.8	\$ 34.6	\$ 275.1
Total (without financing)	\$ 179.0	\$ 53.7	\$ 214.8	\$ 48.1	\$ 448.4	\$ 947.4	\$ 500.0	\$ 454.0	\$ 300.0	\$ 111.8		\$ 50.0	\$ 100.0	\$ 3,407.2	\$ 944.0	\$ 2,463.2
Financing Costs						\$ 103.5								\$ 103.5		\$ 103.5
Refunds						\$ 49.1					\$ (49.1)			\$ 0.0		\$ 0.0
Total Program	\$ 179.0	\$ 53.7	\$ 214.8	\$ 48.1	\$ 448.4	\$ 1,100.0	\$ 500.0	\$ 454.0	\$ 300.0	\$ 111.8	\$ (49.1)	\$ 50.0	\$ 100.0	\$ 3,510.6	\$ 944.0	\$ 2,566.6



This TIRCP application includes a request for only two portions of the overall project, Vehicles (\$135.4 million) and the Communication-Based Train Control (\$318.6 million) system, for a total \$454 million. As stated previously, BART is requesting \$454 million in TIRCP funds to be broken out in FY 2019 – FY 2023 and the second round of programmed funding, FY 2026 – FY 2030. As discussed in *Section 3.8.6. Program Scalability*, the scalable amount of \$318.6 million can also be broken out by fiscal year.

Other sources of funding for the TIRCP Scope components include:

- Exchange Account
- TCP – MTC Administered Transit Capital Priorities
- BART Capital Allocation
- AATC Funds – Advanced Automatic Train Control Grant Funds
- BART Measure RR
- FTA CIG – Federal Transit Administration Capital Investment Grants
- RM3 – Regional Measure 3, Bridge Tolls
- CMAs – Congestion Management Agency Funds
- Santa Clara VTA
- SB1 – Local Partnership and Congested Corridor

### 3.2.8 Committed and Planned Funds

According to the TIRCP guidelines, nearly 28% of the total Core Capacity Program funds are committed at the time of this application. Additionally, of the TIRCP Scope of requested funds, 30% of funds are committed at this time. The Usable Segment (CBTC only) portion of this request would be considered 100% funded if all State Program funds that will be requested in 2018 are granted. For specifics on the committed funds for the usable segment, please see *Section 3.8.5. Usable Segment & Program Scalability*.

As stated above, the Core Capacity Program is estimated to cost \$3,510.7 million. BART is seeking \$454 million or nearly 13 percent of the total Program cost in TIRCP funds. Due to program requirements, some of the funding sources anticipated may only be used for certain elements of the overall program. Measure RR funds, for example, may not be used to acquire rail vehicles. Funds from the CMAs are likely to be designated for vehicles and thus may not be available for other program elements.

See Table 3-4 for a breakdown of funding sources and what is committed versus planned. The following sources of funding are designated as committed, according to TIRCP guidelines:

**BART Capital Allocation:** BART Capital Allocation funds in the Program have been included in BART's Short-Range Transit Plan (SRTP). These are considered committed funds because they are BART-controlled, though a board resolution is needed to fully allocate.

**TCP & Exchange Account:** An estimated \$179 million has been committed towards the additional vehicles and \$39.1 million is budgeted towards communication-based train control. The \$179 million in



TCP funds shown for the vehicles would be funded out of the Exchange Account, which is an account set up by agreement between MTC and the BART to fund BART railcar procurement.

**AATC:** All AATC funds are currently in hand and fully committed to the CBTC portion within the Core Capacity Program.

**Measure RR:** Measure RR is a committed funding source and \$448.4 million in bond proceeds is targeted for elements of the Core Capacity Program, as specified in the ballot measure. It is considered committed for the TIRCP request.

For more details on all funding sources, see *Section 3.8.3 Funding Sources in Detail*.

### 3.2.9 Funding Sources in Detail

Each funding source is described below in detail.

#### 3.2.9.1 FTA Capital Investment Grants

BART expects to request \$1.1 billion from the FTA's discretionary CIG program for those parts of the Core Capacity Program that are considered to be eligible under this program. Funding is dependent upon meeting FTA criteria for project justification and local financial commitment, and upon meeting readiness requirements. It also depends on future appropriations by Congress and future authorizing legislation following expiration of the FAST Act in 2020.

BART is seeking a substantial amount of funding from the FTA's CIG Program. The Program rates very well on the FTA's project justification criteria. Some 44 percent of the non-CIG share is already committed. In September 2017, BART requested that the Program be recommended for funding in the President's FY2019 budget scheduled for release in February 2018, in anticipation of a Full Funding Grant Agreement (FFGA) in 2019. A copy of the request letter is provided in *Appendix L*. BART recognizes that the President has proposed to phase out the CIG program, and has recommended that there be no new FFGAs. BART is also aware that the House and Senate appropriations committees have both directed, in their reports on FY2018 appropriations, that the administration continue to advance CIG projects in accordance with the FAST Act. Resolution of these differences is expected to occur in the coming months.

#### 3.2.9.2 MTC-administered TCP

The MTC-administered Transit Capital Priorities (TCP) process includes funds from several federal and regional programs, including but not limited to, Surface Transportation Program (STP), Congestion Mitigation and Air Quality (CMAQ), Section 5307, and AB 664 Bridge Tolls. MTC administered TCP contributions towards the Core Capacity Program would be drawn from federal sources. An estimated \$179 million has been committed by MTC towards the additional vehicles and \$39.1 million is budgeted towards communication-based train control.

The TCP program draws upon an array of funding sources to cover MTC's programming commitments. Decisions on which funding source to use for each project in the program are made during the program



development process depending on project eligibility, cash flow needs, availability of funds, and the needs of other projects in the program.

The \$179 million in TCP funds shown for the vehicles would be funded out of the Exchange Account, which is an account set up by agreement between MTC and the BART to fund BART railcar procurement. Details of the Exchange Account agreement and how it functions can be provided upon request. MTC approved a resolution on September 27, 2017 that made a specific commitment to the railcar project from the funds currently in the Exchange Account.

#### 3.2.9.3 *Advanced Automatic Train Control (AATC) Grant Funds*

Advanced Automatic Train Control (AATC) refers to Settlement Agreement Funds derived from litigation between BART and GE Transportation Systems, whose predecessor corporation was retained by BART in 1998 to develop a new train control system. BART spent approximately \$92M on the project, but no product was received and installed. The subsequent settlement agreement resolved the matter. \$48.1 million of the unspent balances, as listed below, are settlement funds now available to BART to use on a subsequent train control project:

- Old Section 5307 & 5309 - AATC grants unspent balances applied to this Program - \$14.1 million
- Assembly Bill 664 (AB664) Bridge Tolls - AB664 designated MTC to allocate certain bridge tolls for projects that relieve congestion on the southern bridges (Bay Bridge, San Mateo Bridge, and Dumbarton Bridge) of the Bay Area. These funds are split 70 percent for East Bay and 30 percent for West Bay projects. In the past, BART has used AB664 bridge toll funding primarily to match federal formula grants. In the future, MTC plans to allocate BART's share of AB 664 funding toward new rail cars. Previous allocations used for local match to AATC grants are available to the Program - \$1.0 million
- ~~BART Local Match - Previously allocated for local match to AATC grants available to this Program~~ - \$2.2 million
- Litigation funds - AATC settlement proceeds - \$30.8 million.

#### 3.2.9.4 *BART Capital Allocations*

BART has made a commitment to fund three projects that are needed for system reliability and for system capacity increases to meet future ridership demand: new rail cars, HMC, and train control modernization. Incremental fare revenue from the January 1, 2014 and 2016 fare increases and subsequent fare increases scheduled for 2018 and 2020 are directly allocated to a separate account to fund these projects. To fund these capital contributions, the latest Short Range Transit Plan (SRTP) assumes additional fare increase allocations through FY26. The BART Capital Allocation funds for the Core Capacity program (\$214.8 million) include \$49.1 million that will be advanced for Program expenses and repaid with CIG apportionments.

BART Capital Allocations towards the Program have been included in the SRTP, which will be adopted by Board Resolution. However, Capital Allocations follow an annual budgetary process which is subject to Board approval. Therefore, a board resolution would be required to commit remaining Capital Allocation funds to the CIG-eligible portion of the program.



### 3.2.9.5 BART Measure RR

Measure RR is a general obligation bond measure which was passed by the voters in the BART District in November 2016. The measure provides \$3.5 billion to fund the system's most critical investments for maintaining the system in a state-of-good-repair and crowding relief. BART staff is currently working to implement the Measure RR investments as quickly as possible, balancing the need for reinvestment with the need to minimize service disruption.

Measure RR is a committed funding source and \$448.4 million in bond proceeds is targeted for elements of the Core Capacity Program, as specified in the ballot measure. It is considered committed for the TIRCP request.

### 3.2.9.6 Regional Measure 3 (RM3) Bridge Tolls

In 2018, MTC expects to go to the region's voters with a ballot measure, called Regional Measure 3, to raise tolls on the seven state-owned bridges in the San Francisco Bay Area. The \$4.5 billion measure would provide critical funding for highway, rail, transit, and bridge projects that will constrain or reduce congestion in the bridge corridors. As delineated in the authorizing legislation, SB 595 (Ch. 650, 2017), BART would receive \$500 million in Regional Measure 3 funding for the expansion of the BART fleet.

### 3.2.9.7 Congestion Management Agency (CMA) Funds

The three BART district counties are expected to contribute \$100 million each, \$300 million in total, toward the purchase of the 306 rail vehicles. The source of these funds will be determined by the Counties, and may include money from:

- **Alameda County Measure BB Sales Tax:** This 2014 measure will generate nearly \$8 billion over 30 years for essential transportation improvements. Funds began flowing to municipalities and transit agencies in July 2015.
- **Contra Costa Sales Tax:** The Contra Costa Transportation Authority (CCTA) is expected to propose a transportation sales tax measure to voters in 2018 or 2020. The Measure is expected to authorize \$100M of this new funding for additional BART cars.
- **San Francisco County Transportation Authority (SFCTA):** The San Francisco County Transportation Authority (SFCTA) is exploring several revenue-generating measures for transportation projects and programs for a ballot measure in 2018. It is anticipated that additional BART cars and/or a contribution to the train control system would be a designated recipient of at least \$100 million of these revenues.

### 3.2.9.8 Santa Clara VTA Contribution

Voters in Santa Clara County approved a sales tax measure in 2000 designed to fund transit service and the future extension of BART to Santa Clara, called Silicon Valley Rapid Transit (SVRT). The first phase of the SVRT program, a two-station extension to Berryessa, is now under construction and is scheduled to begin revenue service in June, 2018.

VTA and BART reached agreement in November 2001 regarding the relationship between the two organizations for the duration of the planning, building, and operating of the BART extension into Santa



Clara County. The agreement commits VTA to fund the purchase of new rail cars needed to serve the SVRT project. VTA has agreed to purchase 60 rail vehicles that will be operated during the first phase of the extension, the Silicon Valley Berryessa Extension (SVBX). Approximately \$178 million in VTA funds are anticipated for this purpose over the next 10 years.

VTA has also committed to funding the portion of the Train Control Modernization Program that will upgrade the SVRT segment to Communications-Based Train Control. VTA is thus expected to contribute \$111.8 million towards the Transbay Corridor Core Capacity Program over the next 10 years.

Under the terms of the Comprehensive Agreement between the two agencies, VTA will also pay the capital cost of any BART system improvements outside of Santa Clara County that are made necessary by SVRT.

#### 3.2.9.9 SB1 — Solutions for Congested Corridors Program (SCCP)

The purpose of the Solutions for Congested Corridors Program is to provide funding to achieve a balanced set of transportation, environmental, and community access improvements to reduce traffic congestion throughout the state. This statewide, competitive program makes \$250 million available annually for projects that implement specific transportation performance improvements and are part of a comprehensive corridor plan by providing more transportation choices while preserving the character of local communities and creating opportunities for neighborhood enhancement.

BART expects to submit a \$100 million funding request for the SCCP program in February 2018.

#### 3.2.9.10 SB1 — Local Partnership Program (LPP)

The purpose of the LLP is to provide local and regional transportation agencies that have passed sales tax measures, developer fees, or other imposed transportation fees with a continuous appropriation of ~~\$200 million annually to fund improvements to state highways, transit facilities and local roads, and the acquisition, retrofit or rehab of rolling stock, buses or other transit equipment, including facilities~~ The California Transportation Commission is responsible for guidelines development and administration of this program.

BART expects to submit a \$50 million funding request for the LPP program in January 2018.

#### 3.2.10 Funding Partners

##### Bay Area Rapid Transit District

BART owns and operates a heavy-rail rapid transit system serving the San Francisco Bay Area. The system connects San Francisco with cities in the East Bay, suburbs in northern San Mateo County, Oakland and SFO. BART was created in 1957 by the California State Legislature in response to Bay Area growth and transportation needs. It began service in 1972. BART operates five fixed-route rail lines in Alameda, Contra Costa, San Francisco, and San Mateo counties.

To comply with the Americans with Disabilities Act (ADA), BART has financial and administrative agreements with other transit operators to provide paratransit service comparable and complementary to the BART system.



Several Bay Area bus operators provide connecting (or “feeder”) service to BART. BART contributes to the operation of these feeder services by providing a share of its State Transit Assistance (STA) funds allocated by MTC, and funding from BART’s operating budget.

#### State of California

The State of California provides funds to BART. The state’s Traffic Congestion Relief Program (administered by the California Transportation Commission) and Proposition 1B (administered by Caltrans) direct capital funds to BART in addition to the state’s other funding programs, including State Transit Assistance (STA); Proposition 42’s dedication of state taxes to transportation, Transit and Intercity Rail Capital Program/Cap and Trade; and AB434 Transportation Fund for Clean Air.

#### Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) is the transportation planning, financing and coordinating agency for the nine-county San Francisco Bay Area. The Commission’s work is guided by a 21-member policy board. MTC is responsible for producing and updating the Regional Transportation Plan (RTP), a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle and pedestrian facilities. MTC’s current RTP, known as Plan Bay Area 2040, was adopted on July 26, 2017 and includes the Core Capacity Program within the fiscally constrained plan. As the designated recipient of federal transit formula funds in the Bay Area, MTC administers funding from several federal programs to the region’s transit agencies. In addition, the Commission is a programming agent for several state transit grant programs including State Transit Assistance.

#### Federal Transit Administration

The Federal Transit Administration (FTA) provides formula and discretionary grants to state and local governments to support capital investments in public transportation. One of the discretionary programs is the Section 5309 Capital Investment Grant (CIG) program which funds New Starts, Small Starts, and Core Capacity projects. Core Capacity projects are substantial corridor-based capital investments in existing fixed guideway systems that increase capacity by not less than 10 percent in corridors that are at capacity today or will be within five years.

The CIG program was authorized in the Fixing America’s Surface Transportation (FAST) Act of 2015 at \$2.3 billion per year through federal FY2020. Federal funding commitments are made on a discretionary basis via multi-year Full Funding Grant Agreements (FFGA), and are subject to annual appropriations by Congress. Projects must meet statutory requirements for project justification and local financial commitment, and must be deemed to be ready for a funding commitment.

BART is requesting up to \$1.1 billion in capital funding from FTA’s CIG program. Given the uncertainties of federal funding at this time, including the current administration’s proposals to potentially phase out the CIG program and competition from other projects nationally, BART is not expecting to receive that full amount at this time.



San Francisco County Transportation Authority

The San Francisco County Transportation Authority (Transportation Authority) was created in 1989 and is responsible for long-range transportation planning for the city. The Transportation Authority funds improvements for San Francisco's roadway and public transportation systems.

As the Congestion Management Agency (CMA) for San Francisco, the San Francisco County Transportation Authority is responsible for developing and adopting a Congestion Management Program (CMP) for San Francisco on a biennial basis. The CMP is the principal policy and technical document that guides the Transportation Authority's CMA activities and demonstrates conformity with congestion management law.

The SFCTA is exploring several revenue-generating measures for transportation projects and programs for a ballot measure in 2018. It is anticipated that additional BART cars and/or a contribution to the train control system would be a designated recipient of at least \$100 million of these revenues.

Alameda County Transportation Commission

The mission of the Alameda County Transportation Commission (Alameda CTC) is to plan, fund and deliver transportation programs and projects that expand access and improve mobility to foster a vibrant and livable Alameda County.

As the Congestion Management Agency for Alameda County, Alameda CTC develops and updates the legislatively required Congestion Management Plan, a plan that describes the strategies to assess, monitor and improve the performance of the county's multimodal transportation system; address congestion; and ultimately protect the environment with strategies to help reduce greenhouse gas emissions.

**The Alameda County sales tax, Measure BB, was passed by voters in Alameda County in 2014. Alameda CTC will consider amending the current expenditure plan to reallocate \$100 million from other projects to rail vehicles that are part of BART's Core Capacity Program.**

Contra Costa Transportation Authority

The Contra Costa Transportation Authority (CCTA) is a public agency formed by Contra Costa County voters in 1988 to manage the county's transportation sales tax program and to conduct countywide transportation planning.

CCTA is responsible for maintaining and improving the county's transportation system by planning, funding, and delivering critical transportation infrastructure projects and programs that connect communities, foster a strong economy, increase sustainability, and safely and efficiently get people where they need to go. CCTA is also the county's designated CMA, responsible for putting programs in place to keep traffic levels manageable.

A Contra Costa sales tax is expected to be presented to voters in Contra Costa County in 2018 or 2020. It is anticipated that the Measure would authorize \$100 million for rail vehicles as part of BART's Core Capacity Program.



Santa Clara Valley Transportation Authority

Santa Clara Valley Transportation Authority (VTA) is an independent special district that provides bus, light rail, and paratransit services within Santa Clara County. It also participates as a funding partner in regional rail service including Caltrain, Capital Corridor, and the Altamont Corridor Express. As the county's CMA, VTA is responsible for countywide transportation planning, including congestion management, design and construction of specific highway, pedestrian, and bicycle improvement projects, as well as promotion of transit oriented development.

VTA has committed to funding that portion of the Train Control Modernization Project that will lie within Santa Clara County. Some \$111.8 million in VTA funds are anticipated for this purpose over the next 10 years. VTA will also pay for the added operating and maintenance costs that result from shortening BART headways within Santa Clara County.

#### 3.2.11 Project Programming Request (PPR) Form

Please find separate PPR forms per TIRCP Scope (Vehicles and CBTC) on the following pages.



**PROJECT PROGRAMMING REQUEST**

DTP-0001 (Revised July 2013)

General Instructions

<input checked="" type="checkbox"/> New Project					<b>Date:</b> 1/8/18	
<b>District</b>	<b>EA</b>	<b>Project ID</b>	<b>PPNO</b>	<b>MPO ID</b>		
04						
<b>County</b>	<b>Route/Corridor</b>	<b>PM Bk</b>	<b>PM Ahd</b>	<b>Project Sponsor/Lead Agency</b>		
SF				SF Bay Area Rapid Transit District (BART)		
ALA				<b>MPO</b>	<b>Element</b>	
CC				MTC	Mass Transit	
<b>Project Manager/Contact</b>		<b>Phone</b>		<b>E-mail Address</b>		
Duncan Watry		510-287-4840		dwatry@bart.gov		
<b>Project Title</b>						
Transbay Corridor Core Capacity Program: Communication-Based Train Control (CBTC)						
<b>Location, Project Limits, Description, Scope of Work</b> <input checked="" type="checkbox"/> See page 2						
The Transbay Corridor Core Capacity Program is located in Alameda, Contra Costa, and San Francisco Counties but benefits the entire BART system beyond the Transbay Corridor. This TIRCP Scope element, the communication-based train control (CBTC) system, will replace the existing train control system with a new CBTC, allowing BART to achieve shorter headways and increased capacity, to operate 30 regularly scheduled trains per hour on the trunk line between Daly City and the Oakland Wye.						
<input checked="" type="checkbox"/> GHG Reductions <input checked="" type="checkbox"/> Integrated Service <input checked="" type="checkbox"/> Increase Ridership						
<b>Component</b>	<b>Implementing Agency</b>					
PA&ED	BART					
PS&E	BART					
Right of Way	BART					
Construction	BART					
<b>Purpose and Need</b> <input checked="" type="checkbox"/> See page 2						
BART's existing Transbay Corridor ridership exceeds capacity in the peak hours between Embarcadero station in San Francisco and many East Bay locations. The most crowded part of this corridor is the five-mile-long Transbay Tube, where average riders have just 4.7 square feet of space, far lower than the FTA threshold for normal crowding. Current BART riders endure this crowding, while many commuters choose other modes. BART's ability to increase ridership, and the region's ability to steer growth to places served by transit, depend upon additional BART capacity in the Transbay Corridor. BART's Core Capacity Program is absolutely necessary to realize the benefits listed here and below.						
<b>Project Benefits</b> <input checked="" type="checkbox"/> See page 2						
The new CBTC system will directly allow for increased capacity, decreased crowding, and encourage increased ridership. Specifically, the Core Capacity Program will increase average daily ridership by over 200,000 riders, decrease GHG emissions in the corridor by over 4 million metric tons of carbon dioxide-equivalent over the lifetime of the project, and support a more reliable and safer BART system for all users.						
<input checked="" type="checkbox"/> Supports Sustainable Communities Strategy (SCS) Goals <input checked="" type="checkbox"/> Disadvantaged Communities						
<b>Project Milestone</b>						<b>Proposed</b>
Project Study Report Approved						N/A
Begin Environmental (PA&ED) Phase						N/A
Circulate Draft Environmental Document						N/A
Draft Project Report						N/A
End Environmental Phase (PA&ED Milestone)						N/A
Begin Design (PS&E) Phase						06-2015
End Design Phase (Ready to List for Advertisement Milestone)						08-2017
Begin Right of Way Phase						N/A
End Right of Way Phase (Right of Way Certification Milestone)						N/A
Begin Construction Phase (Contract Award Milestone)						02-2019
End Construction Phase (Construction Contract Acceptance Milestone)						2027-2029
Begin Closeout Phase						2029
End Closeout Phase (Closeout Report)						2030

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**PROJECT PROGRAMMING REQUEST**

DTP-0001 (Revised July 2013)

Date: 1/8/18

District	County	Route	EA	Project ID	PPNO	
04	SF, ALA, CC					
Project Title: Transbay Corridor Core Capacity Program: Communication-Based Train Control (CBTC)						

Proposed Total Project Cost (\$1,000s)									Notes
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	
E&P (PA&ED)									See application narrative for additional details on funding sources.
PS&E		9,845	13,508					43,729	
R/W SUP (CT)									
CON SUP (CT)		601	25,900	26,145	43,212	39,774	218,178	353,810	
R/W									
CON		1,250	751,711					752,961	
TOTAL	20,376	11,696	791,119	26,145	43,212	39,774	218,178	1,150,500	

Fund No. 1:	TIRCP								Program Code
Proposed Funding (\$1,000s)									
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	Funding Agency
E&P (PA&ED)									State of California
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			318,600					318,600	
TOTAL			318,600					318,600	

Fund No. 2:	FTA TCP								Program Code
Proposed Funding (\$1,000s)									
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	Funding Agency
E&P (PA&ED)									MTC Administered Federal S5337 funds administered by MTC. Called Transit Capital Priorities Program.
PS&E	14,008	2,000						16,008	
R/W SUP (CT)									
CON SUP (CT)			1,250					1,250	
R/W									
CON			36,442					36,442	
TOTAL	14,008	2,000	37,692					53,700	

Fund No. 3:	BART Capital Allocation								Program Code
Proposed Funding (\$1,000s)									
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	Funding Agency
E&P (PA&ED)									BART
PS&E	6,368	7,845						14,213	BART funds allocated from the Operating Budget to the Capital Budget
R/W SUP (CT)									
CON SUP (CT)			6,595					6,595	
R/W									
CON		1,250	61,342					62,592	
TOTAL	6,368	9,095	67,937					83,400	



## PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised July 2013)

Date: 1/8/18

District	County	Route	EA	Project ID	PPNO	
04	SF, ALA, CC					
Project Title: Transbay Corridor Core Capacity Program: Communication-Based Train Control (CBTC)						

Fund No. 4: AATC Funds (Settlement)									Program Code
Proposed Funding (\$1,000s)									Funding Agency
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	
E&P (PA&ED)									Proceeds from the settlement of the AATC Project.
PS&E									
R/W SUP (CT)									
CON SUP (CT)		601						601	
R/W									
CON			16,699					16,699	
TOTAL		601	16,699					17,300	

Fund No. 5: Measure RR									Program Code
Proposed Funding (\$1,000s)									Funding Agency
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	
E&P (PA&ED)									Local Local \$3.5B bond measure for BART, approved by voters in 2016.
PS&E									
R/W SUP (CT)									
CON SUP (CT)			9,609			22,187	116,578	148,374	
R/W									
CON			251,626					251,626	
TOTAL			261,235			22,187	116,578	400,000	

Fund No. 6: Santa Clara VTA									Program Code
Proposed Funding (\$1,000s)									Funding Agency
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	
E&P (PA&ED)									Local VTA Funding to be use for Phase 9 of the project only (will start in FY23)
PS&E									
R/W SUP (CT)									
CON SUP (CT)							101,600	101,600	
R/W									
CON									
TOTAL							101,600	101,600	

Fund No. 7: SB1 Congested Corridor									Program Code
Proposed Funding (\$1,000s)									Funding Agency
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	
E&P (PA&ED)									State of California
PS&E			13,508					13,508	
R/W SUP (CT)									
CON SUP (CT)			8,446	26,145	24,954			59,545	
R/W									
CON			26,947					26,947	
TOTAL			48,901	26,145	24,954			100,000	



**PROJECT PROGRAMMING REQUEST**

DTP-0001 (Revised July 2013)

Date: 1/8/18

District	County	Route	EA	Project ID	PPNO	
04	SF, ALA, CC					
<b>Project Title:</b> Transbay Corridor Core Capacity Program: Communication-Based Train Control (CBTC)						

Fund No. 8: SB1 SLPP									Program Code
Proposed Funding (\$1,000s)									
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	Funding Agency
E&P (PA&ED)									State of California
PS&E									
R/W SUP (CT)									
CON SUP (CT)					18,258	17,587		35,845	
R/W									
CON			14,155					14,155	
<b>TOTAL</b>			14,155		18,258	17,587		50,000	

Fund No. 9: CORE CAPACITY CHALLENGE/NEW START									Program Code
Proposed Funding (\$1,000s)									
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	Funding Agency
E&P (PA&ED)									Federal Transit Administration Federal New Starts Grant
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			25,900					25,900	
<b>TOTAL</b>			25,900					25,900	



## PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised July 2013)

General Instructions

<input checked="" type="checkbox"/> New Project					Date: 1/8/18	
District	EA	Project ID	PPNO	MPO ID		
04						
County	Route/Corridor	PM Bk	PM Ahd	Project Sponsor/Lead Agency		
CC				SF Bay Area Rapid Transit District (BART)		
ALA				MPO	Element	
SF				MTC	Mass Transit	
Project Manager/Contact		Phone		E-mail Address		
Duncan Watry		510-287-4840		dwatry@bart.gov		
Project Title						
Transbay Corridor Core Capacity Program: 306 New Vehicles						
Location, Project Limits, Description, Scope of Work <input checked="" type="checkbox"/> See page 2						
The Transbay Corridor Core Capacity Program is located in Alameda, Contra Costa, and San Francisco Counties but benefits the entire BART system beyond the Transbay Corridor. This TIRCP Scope element, purchasing of 306 new vehicles, will assist in relieving current levels of crowding during the peak, while also creating opportunity for ridership growth. In order to achieve 30 regularly scheduled ten-car trains per peak hour service, BART will require a total fleet of 1,081 vehicles.						
<input checked="" type="checkbox"/> GHG Reductions <input checked="" type="checkbox"/> Integrated Service <input checked="" type="checkbox"/> Increase Ridership						
Component	Implementing Agency					
PA&ED	BART					
PS&E	BART					
Right of Way	BART					
Construction	BART					
Purpose and Need <input checked="" type="checkbox"/> See page 2						
BART's existing Transbay Corridor ridership exceeds capacity in the peak hours between Embarcadero station in San Francisco and many East Bay locations. The most crowded part of this corridor is the five-mile-long Transbay Tube, where average riders have just 4.7 square feet of space, far lower than the FTA threshold for normal crowding. Current BART riders endure this crowding, while many commuters choose other modes. BART's ability to increase ridership, and the region's ability to steer growth to places served by transit, depend upon additional BART capacity in the Transbay Corridor. BART's Core Capacity Program is absolutely necessary to realize the benefits listed here and below.						
Project Benefits <input checked="" type="checkbox"/> See page 2						
The expanded fleet of 306 cars will allow for increased capacity, decreased crowding, and encourage increased ridership. Specifically, the Core Capacity Program will increase average daily ridership by over 200,000 riders, decrease GHG emissions in the corridor by over 4 million metric tons of carbon dioxide-equivalent over the lifetime of the project, and support a more reliable and safer BART system for all users.						
<input checked="" type="checkbox"/> Supports Sustainable Communities Strategy (SCS) Goals <input checked="" type="checkbox"/> Disadvantaged Communities						
Project Milestone						Proposed
Project Study Report Approved						N/A
Begin Environmental (PA&ED) Phase						N/A
Circulate Draft Environmental Document						N/A
Draft Project Report						N/A
End Environmental Phase (PA&ED Milestone)						N/A
Begin Design (PS&E) Phase						4/3/2017 - Co
End Design Phase (Ready to List for Advertisement Milestone)						11/14/2024 -
Begin Right of Way Phase						N/A
End Right of Way Phase (Right of Way Certification Milestone)						N/A
Begin Construction Phase (Contract Award Milestone)						11/15/2024 -
End Construction Phase (Construction Contract Acceptance Milestone)						8/28/2026 - A
Begin Closeout Phase						8/28/2026 - E
End Closeout Phase (Closeout Report)						9/3/2030 - Er

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**PROJECT PROGRAMMING REQUEST**

DTP-0001 (Revised July 2013)

Date: 1/8/18

District	County	Route	EA	Project ID	PPNO	
04	CC, ALA, SF					
<b>Project Title:</b> Transbay Corridor Core Capacity Program; 306 New Vehicles						

Proposed Total Project Cost (\$1,000s)									Notes
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	
PS&E				90,000	90,000	110,000	110,000	400,000	See application narrative for additional details on funding sources.
CON				1,218,400				1,218,400	
<b>TOTAL</b>				1,308,400	90,000	110,000	110,000	1,618,400	

Fund No. 1: TIRCP									Program Code
Proposed Funding (\$1,000s)									
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	Funding Agency
PS&E				20,000	20,000	20,000	20,000	80,000	State of California
CON				55,400				55,400	
<b>TOTAL</b>				75,400	20,000	20,000	20,000	135,400	

Fund No. 2: Exchange Account (FTA-BART-MTC)									Program Code
Proposed Funding (\$1,000s)									
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	Funding Agency
PS&E									MTC & FTA FTA Preventive Maintenance funds awarded to BART; equivalent amt of BART funds placed in MTC administered bank account.
CON				179,000				179,000	
<b>TOTAL</b>				179,000				179,000	

Fund No. 3: BART Capital Allocation									Program Code
Proposed Funding (\$1,000s)									
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	Funding Agency
PS&E						20,000	20,000	40,000	BART Allocations made from BART's Operating Budget to Capital Budget due to surplus funds.
CON				81,000				81,000	
<b>TOTAL</b>				81,000		20,000	20,000	121,000	



## PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised July 2013)

Date: 1/8/18

District	County	Route	EA	Project ID	PPNO	
04	CC, ALA, SF					
Project Title: Transbay Corridor Core Capacity Program: 306 New Vehicles						

Fund No. 4: FTA - Core Capacity Challenge/New Start									Program Code
Proposed Funding (\$1,000s)									Funding Agency
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	
PS&E				20,000	20,000	20,000	20,000	80,000	Federal Sources
CON				331,400				331,400	FTA New Starts Capital Improvement Grant Program.
TOTAL				351,400	20,000	20,000	20,000	411,400	

Fund No. 5: RM3									Program Code
Proposed Funding (\$1,000s)									Funding Agency
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	
PS&E				20,000	20,000	20,000	20,000	80,000	MTC
CON				420,000				420,000	Regional Measure 3 Bridge Toll
TOTAL				440,000	20,000	20,000	20,000	500,000	

Fund No. 6: CMAs									Program Code
Proposed Funding (\$1,000s)									Funding Agency
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	
PS&E				30,000	30,000	30,000	30,000	120,000	Congestion Management Agency
CON				151,600				151,600	Alameda, Contra Costa, and SF Congestion Management Agency county sales taxes
TOTAL				181,600	30,000	30,000	30,000	271,600	

Fund No. 7:									Program Code
Proposed Funding (\$1,000s)									Funding Agency
Component	Prior	17/18	18/19	19/20	20/21	21/22	22/23+	Total	
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									



### 3.2.12 Usable Segment & Program Scalability

As documented in the *Program Benefits* portion of this application, and additionally in the *Statement of Work*, for the many benefits outlined in this application to occur, a scaled request of \$318.6 million is being submitted as a usable segment. This scaled down funding would cover the necessary cost to complete the Communications Based Train Control system, which is the Program element necessary to realizing the majority of ridership, greenhouse gas, and community impact benefits described in detail in this application. As with the full \$454 million request, this \$318.6 million scaled request can be broken out over the two four-year funding cycles.

Table 3-5. Core Capacity Program Costs and TIRCP Usable Segment Request

Program Scope	Total Program Cost (\$ millions)	TIRCP Usable Segment Request (\$ millions)
Vehicles	\$1,618.4	
Communication-Based Train Control (Including \$250,000 for Post-Award Community Outreach)	\$1,150.5	\$318.6
<b>TIRCP SCOPE TOTALS</b>	<b>\$2,768.9</b>	<b>\$318.6</b>
Hayward Maintenance Center Phase II	\$228.0	
Traction Power	\$94.0	
Program Management	\$6.6	
Program Contingency	\$309.7	
Financing Costs	\$103.5	
<b>TOTAL</b>	<b>\$3,510.6</b>	<b>\$318.6</b>

**This usable segment of the Program (CBTC system) can be fully completed with funding through State of California Programs in 2018.** As can be seen in Table 3-4. *Core Capacity Funding Plan 2017*, all funding elements have been secured (with the exception of Santa Clara VTA and FTA CIG and GANs) other than the State of California funding sources. These state sources include:

- TIRCP Usable Segment Request (Current Request) - \$318.6 million
- SB1 Local Partnership Program (January 2018) - \$50 million
- SB1 Congested Corridor Program (January 2018) - \$100 million

The Santa Clara VTA portion of funding (\$101.6 million) is not going to the Transbay Corridor portion of the Core Capacity Program, and only will be applied to the Santa Clara VTA extension of the BART system. Hence, the CBTC system can be implemented fully in the existing system (where ridership, GHG emissions, and other benefits are realized) without Santa Clara VTA funds. Additionally, the FTA CIG amount of \$25.9 million that is allocated to the CBTC system can be fully shifted to be funded by BART Capital Allocation funds if CIG funding is not approved by the FTA. With the usable segment request of \$318.6 million in TIRCP funds and \$150 million in additional state program funding, the entire CBTC system is funded completely and can move forward without delay.



## 4 Support Documentation

### 4.1 Cost Estimate Certification

All costs included in this TIRCP application are approved by the General Manager, as attested to in the authorization letter.

### 4.2 Letters of Support

The Core Capacity Program has broad support from State elected officials, regional organizations, and community based non-profits. In *Appendix A*, please find the following letters of support for BART application for TIRCP funds for the Core Capacity Program:

- Metropolitan Transportation Commission – Consistency with Regional Sustainable Communities Strategy Confirmation
- San Francisco County Transportation Authority

#### Elected Officials

- Senator Nancy Skinner, 9<sup>th</sup> Senate District, and Senator Scott Wiener, 11<sup>th</sup> Senate District
  - Rob Bonta, Assemblymember 18<sup>th</sup> District, Bill Quirk, Assemblymember 20<sup>th</sup> District, Steven Glazer, Senator 7<sup>th</sup> District, Timothy Grayson, Assemblymember 14<sup>th</sup> District, Philip Ting, Assemblymember 19<sup>th</sup> District, Kansen Chu, Assemblymember 25<sup>th</sup> District, David Chiu, Assemblymember 17<sup>th</sup> District
  - Acting Mayor London Breed, City of San Francisco, Office of the Mayor
- Community Organizations

- La Clinica de La Raza, Inc
- East Bay Asian Local Development Corporation
- The Unity Council
- Asian Health Services
- Low Income Investment Fund

#### Transportation and Policy Organizations

- Bay Area Council
- TransForm
- San Francisco Transit Riders

#### Environmental Organizations

- Greenbelt Alliance
- Coalition for Clean Air



## 5 Appendices

- A. Letters of Support
- B. GHG Emissions Modeling and Methodology
- C. Ridership Modeling and Methodology
- D. Outreach to Disadvantaged and Low Income Communities
- E. Role of BART in the Region
- F. Plan Bay Area 2040 (Sustainable Communities Strategy)
- G. MTC Core Capacity Study
- H. BART Strategic Energy Plan
- I. BART Rider Demographics
- J. BART Public Participation Plan
- K. Categorical Exclusion
- L. BART Request for FY 2019 Funding for Transbay Corridor Core Capacity Program





METROPOLITAN  
TRANSPORTATION  
COMMISSION

Bay Area Metro Center  
375 Beale Street, Suite 800  
San Francisco, CA 94105  
415.778.6700  
[www.mtc.ca.gov](http://www.mtc.ca.gov)

January 5, 2018

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Sonoma County and Cities

*Scott Haggerty, Vice Chair*  
Alameda County

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Cities of San Mateo County

*Tim Acunabrado*  
U.S. Department of Housing  
and Urban Development

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Cities of Santa Clara County

*Danion Connolly*  
Marin County and Cities

*Dave Corcoran*  
Santa Clara County

*Carol Dutra-Versari*  
Cities of Maricopa County

*Dorene M. Giannini*  
U.S. Department of Transportation

*Federick D. Glover*  
Contra Costa County

*Anita W. Hallock*  
San Francisco Bay Conservation  
and Development Commission

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San Francisco Mayor's Appointee

*Jane Kim*  
City and County of San Francisco

*Sara Llorente*  
San Jose Mayor's Appointee

*Alfredo Padilla*  
Santa Clara County and Cities

*Julie Pierce*  
Association of Bay Area Governments

*Brian Sartipi*  
California State  
Transportation Agency

*Libby Schopf*  
Oakland Mayor's Appointee

*Warren Shuman*  
San Mateo County

*James R. Sperling*  
Solano County and Cities

*Amy R. Worth*  
Cities of Contra Costa County

*Steve Heninger*  
Executive Director

*Alex Rockelstein*  
Deputy Executive Director, Policy

*Andrew D. Frenier*  
Deputy Executive Director, Operations

*Brad Paul*  
Deputy Executive Director,  
Local Government Services

Mr. Ezequiel Castro, Acting Chief  
Division of Rail and Mass Transportation  
Office of State Transit Programs and Plans (MS 39)  
P.O. Box 942874  
Sacramento, CA 94274-0001

RE: 2018 Transit and Intercity Rail Capital Program Application from BART –  
Consistency with Regional Sustainable Communities Strategy

Dear Mr. Castro:

The Metropolitan Transportation Commission (MTC) is the Metropolitan Planning Organization (MPO) for the nine-county Bay Area. Our current regional Sustainable Communities Strategy, *Plan Bay Area 2040*, was adopted in July 2017.

We have reviewed BART's planned application for the 2018 Transit and Intercity Rail Capital Program, *Transbay Core Capacity Project*, and confirm that it is consistent with *Plan Bay Area 2040*.

Please feel free to contact me with any questions.

Sincerely,

Anne Richman  
Director, Programming and Allocations

AR: CB

J:\PROJECT\Funding\Cap and Trade\TIRCP\TIRCP 2018\SCS Consistency Letters\BART.docx



December 29, 2017

Secretary Brian Kelly  
California State Transportation Agency  
915 Capitol Mall, Suite 350 B  
Sacramento, CA 95814

Subject: Letter of Support for 2018 Transit and Intercity Rail Capital Program Grant  
for BART's Core Capacity Project

Dear Secretary Kelly,


The San Francisco County Transportation Authority is pleased to support the San Francisco Bay Area Rapid Transit District's (BART's) 2018 Transit and Intercity Rail Capital Program (TIRCP) grant application for the **BART Core Capacity Project**.

This project proposes a comprehensive and coordinated package of investments including new rail cars, maintenance facility expansion, train control, and substations that will increase BART's capacity between San Francisco and Oakland by more than 30 percent. The program will allow BART to operate up to 30 ten-car trains per hour on the main trunk of the existing system between San Francisco and Oakland, maximizing throughput in the most heavily used part of the system. Furthermore, the additional vehicles and train control modernization will increase capacity throughout the BART system and allow for an increase in the number of cars per train. Improvements will decrease current train headways for much of the system from 15 minutes during peak periods to 12 minutes. By making BART a more attractive option, these improvements will encourage more drivers to get out of their cars, decreasing vehicle miles traveled, congestion, and greenhouse gas emissions.

Low income residents, many of them transit-dependent, will benefit from this project as the BART system passes through numerous disadvantaged communities. A significant portion of the Bay Area's priority development areas are centered around BART stations, and the additional transit capacity provided by this project will catalyze sustainable housing and job growth and help the region meet the ambitious climate protection, equitable access, economic vitality, and affordability goals laid out in the Bay Area's Sustainable Communities Strategy. This project is also a key recommendation of the Metropolitan Transportation Commission's Core Capacity Transit Study, underscoring its importance to communities across the entire Bay Area.

On behalf of the Transportation Authority, I respectfully urge funding support for this project to help minimize greenhouse gases and improve health and mobility for current and future transit riders.

Sincerely,



Tilly Chang  
Executive Director

cc: S. Heminger, A. Richman - MTC  
D. Heitman - BART  
MEL, AC, AL, AS, OQ



*Plan, Fund, Deliver*

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Tilly Chang  
EXECUTIVE DIRECTOR





OFFICE OF THE MAYOR  
SAN FRANCISCO

January 5, 2018

Brian Kelly, Secretary  
California State Transportation Agency  
915 Capitol Mall, Suite 350B.  
Sacramento, CA 95814

Dear Secretary Kelly:

I am pleased to submit a letter of support for BART's application for \$454 million in funding from the 2018 Transit and Intercity Rail Capital Program (TIRCP). The BART Transbay Core Capacity Project – New Rail Cars and Train Control Components is an important element of a larger project to increase BART's system capacity. This larger project, which consists of multiple project elements and includes many funding partners, has regional and statewide significance in increasing BART ridership, reducing greenhouse gas emissions, providing access to jobs and stimulating the economy, and providing mobility and regional and statewide transportation connections for all residents including those in disadvantaged communities.

Specifically, BART is requesting TIRCP funding for two project components, including \$135.4 million to fund a portion of the acquisition of 306 additional new BART cars, and \$318.6 million for BART's new state-of-the-art, communications-based train control system (CBTC), for a total of \$454 million. Both the additional cars and the train control system are needed to achieve up to 30% in additional capacity on the existing BART system without adding a second Transbay Tube from the East Bay to downtown San Francisco. These elements will improve system reliability and greatly enhance the customer experience by reducing crowding.

Additionally, BART is also proposing to spend \$250,000 of the requested funds to conduct outreach focused on disadvantaged and low income communities that may be affected by the Transbay Core Capacity Project. These outreach activities are designed to receive input, concerns, and suggestions on the potential impacts, both positive and negative, of the project on these communities.

BART's current Transbay Corridor ridership exceeds capacity in the peak hours between the Embarcadero station in downtown San Francisco and stations in the East Bay. Within this corridor, riders in the peak hours often endure excruciatingly crowded conditions while some choose other modes because BART trains are so crowded. BART's ability to increase ridership –





OFFICE OF THE MAYOR  
SAN FRANCISCO

and the region's ability to steer growth to places served by transit — depends upon additional BART capacity in the Transbay Corridor.

The Metropolitan Transportation Commission's (MTC) Plan Bay Area 2040, adopted in July 2017, identified the Transbay Core Capacity Project as a critical regional need, and included this project in its Core Capacity Challenge grant program. BART is also working closely with the Federal Transit Administration on a New Starts grant through the Capital Investment Grant program. In addition, BART has requested funding from various local county sales tax measures. Funds requested through the TIRCP program will close the remaining funding gap for the absolutely necessary Transbay Core Capacity Project, while still reserving funds to renovate and maintain the core BART system overall.

We appreciate your consideration of this application, and would be happy to answer any questions or provide additional materials as needed.

Sincerely,

A handwritten signature in cursive script, reading "London Breed".

London Breed  
Acting Mayor  
City and County of San Francisco



CAPITOL OFFICE  
STATE CAPITOL  
ROOM 2059  
SACRAMENTO, CA 95814  
TEL (916) 851-4009  
FAX (916) 851-4009

DISTRICT OFFICE  
1515 CLAY STREET  
SUITE 2202  
OAKLAND, CA 94612  
TEL (916) 286-1333  
FAX (510) 286-3885

SENATOR.SKINNER@SENATE.CA.GOV

# California State Senate

SENATOR  
NANCY SKINNER  
MAJORITY WHIP  
NINTH SENATE DISTRICT



CHAIR  
PUBLIC SAFETY  
BUDGET & FISCAL REVIEW  
SUBCOMMITTEE 5:  
PUBLIC SAFETY & LABOR

COMMITTEES  
ENERGY, UTILITIES &  
COMMUNICATIONS  
ENVIRONMENTAL QUALITY  
TRANSPORTATION & HOUSING

December 21, 2017

The Honorable Brian Kelly  
Secretary, California State Transportation Agency  
915 Capitol Mall, Suite 350 B  
Sacramento, CA 95814

**RE: San Francisco Bay Area Rapid Transit District application to the State of California's 2018 Transit and Intercity Rail Capital Program**

Dear Secretary Kelly:

We are writing in support of the San Francisco Bay Area Rapid Transit (BART) District's application to the 2018 Transit and Intercity Rail Capital Program for funding for BART's Core Capacity Project.

BART's Core Capacity Project will address severe overcrowding and help accommodate future ridership growth. BART already averages over 420,000 passengers per weekday, but BART's capacity is limited by its existing infrastructure and total number of train cars. The Core Capacity Project would increase train frequency and capacity by: purchasing new train cars; expanding car storage and maintenance facilities; modernizing train control systems; and upgrading power infrastructure. BART estimates that additional train cars alone would provide 49 percent more seats systemwide, and that the Core Capacity Project would increase peak capacity between San Francisco and the East Bay by 31 percent.

Increased capacity and reduced overcrowding are essential to ensuring that BART remains a viable alternative to driving in the Bay Area. Longer, more frequent trains would not only allow BART to accommodate more riders, but would also make BART a more convenient transportation option. Additional people riding BART instead of driving would mean fewer vehicle miles traveled (VMT), decreased air pollution, reduced greenhouse gas emissions, improved public health, and better quality of life.

Non-riders and disadvantaged communities located along the BART system would also benefit from the Core Capacity Project. Increased capacity would reduce overcrowding at West Oakland Station, which is located in and serves a disadvantaged community. Reduced VMT would also help limit traffic-related air pollution in disadvantaged communities. Furthermore, many BART stations are surrounded by Priority Development Areas; this project would allow those areas to accommodate additional housing and jobs.

We strongly support BART's efforts to expand the system's capacity for the benefit of the whole Bay Area and urge you to prioritize BART's Core Capacity Project for 2018 TIRCP funding.

Sincerely,

Handwritten signature of Nancy Skinner in cursive script.

Senator Nancy Skinner  
9<sup>th</sup> Senate District

Handwritten signature of Scott Wiener in cursive script.

Senator Scott Wiener  
11<sup>th</sup> Senate District



STATE CAPITOL  
P.O. BOX 942849  
SACRAMENTO, CA 94249-0018  
(916) 319-2018  
FAX (916) 319-2118

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ELIHU M. HARRIS STATE BUILDING  
1515 CLAY STREET, SUITE 2204  
OAKLAND, CA 94612  
(510) 286-1670  
FAX (510) 286-1888

E-MAIL: Assemblymember.Bonta@assembly.ca.gov

# Assembly California Legislature



**ROB BONTA**  
ASSISTANT MAJORITY LEADER  
ASSEMBLYMEMBER, EIGHTEENTH DISTRICT

COMMITTEES  
APPROPRIATIONS  
COMMUNICATIONS AND CONVEYANCE  
GOVERNMENTAL ORGANIZATION  
HEALTH

December 21, 2017

The Honorable Brian Kelly  
Secretary, California State Transportation Agency  
915 Capitol Mall, Suite 350 B  
Sacramento, CA 95814

RE: San Francisco Bay Area Rapid Transit District application to the California Transit and Intercity Rail Capital Program

Dear Secretary Kelly:

We write today in support of the San Francisco Bay Area Rapid Transit District's (BART) application to the State of California's 2018 Transit and Intercity Rail Capital Program (TIRCP) for their Core Capacity Project.

With BART ridership growing significantly over the last decade, trains are becoming crowded. BART's Core Capacity Project, which provides new rail cars, in addition to an associated maintenance facility, train control system, and additional substations, will play an integral role in ensuring that transit remains a viable alternative to driving through this corridor and the overall system. Once complete, BART's Core Capacity Project will positively impact a crucial portion of the transportation system serving the Bay Area, as well as benefit the health and quality of life of residents by reducing greenhouse gas emissions and encouraging mass transit options.

In order to meet this increased need, the comprehensive and coordinated package of investments that is the Core Capacity Project will increase capacity between San Francisco and Oakland by more than 30 percent, encouraging drivers to leave their cars at home. This project, which will request \$454 million from the TIRCP over five years, will reduce vehicle miles traveled by improving the quality of service, reducing crowding for riders, and supporting continued growth of the BART system.

The many disadvantaged communities located along the BART system will also benefit from increased capacity and reduced crowding, as well as reduced greenhouse gas emissions from fewer drivers on the road. Several of the Bay Area's priority development areas are centered around BART stations, and this project supports additional transit capacity that will enable these areas to grow, which will help to realize the Bay Area's Sustainable Communities Strategy and other concurrent community, health, and environmental efforts in the region.





Page 2 of 2

December 21, 2017

BART application to the California Transit and Intercity Rail Capital Program

We support BART in their efforts to bring these additional benefits to the Bay Area. Thank you for your thoughtful consideration of this project.

Sincerely,

Rob Bonta

ROB BONTA

Assemblymember, 18th District

[Signature]

Bill Lirio

Karen Chen

Steven M. Glynn

D. G.

Bill Lirio

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



December 21, 2017

BART application to the California Transit and Intercity Rail Capital Program

Signatures on the previous page are as follows:

Rob Bonta  
Assemblymember, 18<sup>th</sup> District

Bill Quirk  
Assemblymember, 20<sup>th</sup> District

Steven Glazer  
Senator, 7<sup>th</sup> District

Timothy Grayson  
Assemblymember, 14<sup>th</sup> District

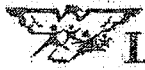
Philip Ting  
Assemblymember, 19<sup>th</sup> District

Kansen Chu  
Assemblymember, 25<sup>th</sup> District

David Chiu  
Assemblymember, 17<sup>th</sup> District

---





**La Clínica**

a californiah<sup>health</sup>center

**La Clínica de La Raza, Inc.**

Mailing Address: Post Office Box 22210 Oakland, CA 94623 • Tel 510-535-4000 • Fax 510-535-4189 • [www.laclinica.org](http://www.laclinica.org)

December 18, 2017

Subject: Bay Area Rapid Transit application to the California's Transit and Intercity Rail Capital Program

To whom it may concern:

On behalf of La Clínica de La Raza, I am writing in support of Bay Area Rapid Transit's (BART) application to the State of California's 2018 Transit and Intercity Rail Capital Program for the **Core Capacity Project**. Once complete, BART's Core Capacity Project will positively impact a crucial portion of the transportation system serving the Bay Area, as well as benefit the health and quality of life of residents by reducing greenhouse gas emissions and encouraging mass transit options.

With BART ridership growing significantly over the past decade, trains are becoming crowded. New rail cars, in addition to an associated maintenance facility, train control system, and additional substations will play an integral role in ensuring that transit remains a viable alternative to driving through this corridor and the overall system. In order to meet this increased need, the comprehensive and coordinated package of investments that is the Core Capacity Project will increase capacity between San Francisco and Oakland by more than 30 percent, encouraging drivers to leave their cars at home. This project will reduce vehicle miles traveled by improving the quality of service, reducing crowding for riders, and supporting continued growth of the BART system. The many disadvantaged communities (DACs) located along the BART system will benefit from increased capacity and reduced crowding, as well as reduced greenhouse gas emissions from less drivers on the road. Several of the Bay Area's priority development areas are centered around BART stations, and this project supports additional transit capacity that will enable these areas to grow, which will help to realize the Bay Area's Sustainable Communities Strategy and other concurrent community, health, and environmental efforts in the region.

La Clínica de La Raza fully support BART in their efforts to bring these additional benefits to the Bay Area. If you have any questions regarding La Clínica's support, please reach out to me directly. Thank you in advance for your consideration of this project.

Sincerely,

Jane Garcia

Chief Executive Officer

La Clínica de La Raza Fruitvale Village 510-535-4000 • San Antonio Neighborhood Health Center 510-238-8400 • Clínica Alta Vista 510-525-6300 • Family Optical 510-535-5500  
 La Clínica de La Raza Dental 510-535-4700 • Casa del Sol 510-535-6200 • La Clínica de La Raza WIC Program 510-535-4110  
 LCDLR Community Health Education 510-535-4130 • La Clínica Dental at Children's Hospital Oakland 510-428-3316 • La Clínica Pittsburg Medical 925-431-2100  
 La Clínica Pittsburg Dental 925-431-0250 • La Clínica Oakley 925-776-8200 • La Clínica Monument 925-363-2000 • La Clínica Vallejo 707-558-8100  
 La Clínica Vallejo Dental 707-558-2000 • La Clínica Vallejo Great Beginnings 707-645-7316 • La Clínica North Vallejo 707-641-1900  
 School-Based Health Centers: Hawthorne Elementary School 510-435-6440 • Havenscourt Middle School 510-639-4981 • Roosevelt Middle School 510-535-2893  
 Fremont High School 510-434-2001 • Oakland Tech High School 510-450-5421 • San Lorenzo High School 510-917-3167  
 Fuente Wellness Center 510-481-4544 • Youth Heart Health Center 510-879-1568





# EAST BAY ASIAN LOCAL DEVELOPMENT CORPORATION

BUILDING HEALTHY, VIBRANT AND SAFE NEIGHBORHOODS



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Dianne Rush-Woods

December 19, 2017

## SUBJECT: Bay Area Rapid Transit application to the California's Transit and Intercity Rail Capital Program

To whom it may concern:

On behalf of East Bay Asian Local Development Corporation (EBALDC), I am writing in support of Bay Area Rapid Transit's (BART) application to the State of California's 2018 Transit and Intercity Rail Capital Program for the **Core Capacity Project**. Once complete, BART's Core Capacity Project will positively impact a crucial portion of the transportation system serving the Bay Area, as well as benefit the health and quality of life of residents by reducing greenhouse gas emissions and encouraging mass transit options.

EBALDC's Healthy Neighborhood approach to community development relies on partnerships with agencies that are not typically part of grassroots community efforts. We have a long history of partnering with BART to build affordable housing (as we did at Madison Park, Lion Creek Crossings, and Fruitvale Transit Village), secure resources to improve pedestrian access to BART stations (as we did Prosperity Place), or secure resources to improve the actual BART Stations themselves (as we did through the Affordable Housing and Sustainable Communities program for the Lake Merritt/Oakland Chinatown BART station). All of these programmatic partnerships support the stronger use of public transit in our neighborhoods. These benefits should accrue in terms of increased BART ridership, but also should benefit existing residents and workers in the neighborhoods where BART has historically operated, and be a tool for improving equitable outcomes for our urban places.

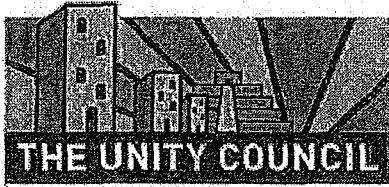
With BART ridership growing significantly over the past decade, trains are becoming crowded. New rail cars, in addition to an associated maintenance facility, train control system, and additional substations will play an integral role in ensuring that transit remains a viable alternative to driving through this corridor and the overall system. In order to meet this increased need, the comprehensive and coordinated package of investments that is the Core Capacity Project will increase capacity between San Francisco and Oakland by more than 30 percent, encouraging drivers to leave their cars at home. This project will reduce vehicle miles traveled by improving the quality of service, reducing crowding for riders, and supporting continued growth of the BART system. The many disadvantaged communities (DACs) located along the BART system will benefit from increased capacity and reduced crowding, as well as reduced greenhouse gas emissions from fewer drivers on the road. Several of the Bay Area's priority development areas are centered around BART stations, and this project supports additional transit capacity that will enable these areas to grow, which will help to realize the Bay Area's Sustainable Communities Strategy and other concurrent community, health, and environmental efforts in the region.

EBALDC fully supports BART in their efforts to bring these additional benefits to the Bay Area. If you have any questions regarding our support, please reach out to me directly. Thank you in advance for your consideration of this project. I am available at [jimoon@ebaldc.org](mailto:jimoon@ebaldc.org).

Sincerely,

Joshua Simon  
Executive Director





December 18, 2017

Subject: Bay Area Rapid Transit application to the California's Transit and Intercity Rail Capital Program

To whom it may concern:

On behalf of The Unity Council, I am writing in support of Bay Area Rapid Transit's (BART) application to the State of California's 2018 Transit and Intercity Rail Capital Program for the Core Capacity Project. Once complete, BART's Core Capacity Project will positively impact a crucial portion of the transportation system serving the Bay Area, as well as benefit the health and quality of life of residents by reducing greenhouse gas emissions and encouraging mass transit options.

The Unity Council is a community development/social equity development corporation founded in 1964. Our agency employs a comprehensive strategy to assist individuals and families build assets by focusing on economic, social, and neighborhood needs. We serve 8,000-10,000 clients annually and operate 11 different program lines in over six languages.

With BART ridership growing significantly over the past decade, trains are becoming crowded. New rail cars, in addition to an associated maintenance facility, train control system, and additional substations will play an integral role in ensuring that transit remains a viable alternative to driving through this corridor and the overall system. In order to meet this increased need, the comprehensive and coordinated package of investments that is the Core Capacity Project will increase capacity between San Francisco and Oakland by more than 30 percent, encouraging drivers to leave their cars at home. This project will reduce vehicle miles traveled by improving the quality of service, reducing crowding for riders, and supporting continued growth of the BART system. The many disadvantaged communities (DACs) located along the BART system will benefit from increased capacity and reduced crowding, as well as reduced greenhouse gas emissions from less drivers on the road. Several of the Bay Area's priority development areas are centered around BART stations, and this project supports additional transit capacity that will enable these areas to grow, which will help to realize the Bay Area's Sustainable Communities Strategy and other concurrent community, health, and environmental efforts in the region.

The Unity Council fully supports BART in their efforts to bring these additional benefits to the Bay Area. If you have any questions regarding our support, please reach out to me directly. Thank you in advance for your consideration of this project.

Sincerely,

  
Chris Iglesias  
Chief Executive Officer



The Unity Council  
Executive Office

1900 Fruitvale Ave, Suite 2A, Oakland, CA 94601  
Tel: 510-535-6900 • Fax: 510-534-7771 • [www.unitycouncil.org](http://www.unitycouncil.org)



# ASIAN HEALTH SERVICES

December 15, 2017

ASIAN MEDICAL CENTER  
818 WEBSTER ST  
OAKLAND, CA 94607  
OFFICE 510-986-6830  
OFFICE FAX 510-986-6890  
CLINIC 510-986-6800  
CLINIC FAX 510-986-6896

ROLLAND AND KATHRYN LOWE  
MEDICAL CENTER  
835 WEBSTER ST  
OAKLAND, CA 94607  
510-318-5800  
FAX 510-986-6861

FRANK KIANG MEDICAL CENTER  
250 EAST 18TH ST, 2ND FLOOR  
OAKLAND, CA 94606  
510-735-3888  
FAX 510-628-0568

AHS DENTAL CLINIC  
345 9TH ST #302  
OAKLAND, CA 94607  
510-986-6888  
FAX 510-986-6816

COLLEGE OF ALAMEDA  
DENTAL CLINIC  
555 RALPH APPEZZATO  
MEMORIAL PARKWAY BUILDING 218A  
ALAMEDA, CA 94501  
510-986-6812  
FAX 510-986-9216

ARC CLINIC  
510-986-0430  
FAX 510-986-0572

WILDCATS CLINIC  
OAKLAND HIGH SCHOOL  
510-874-7152  
FAX 510-874-3694

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WENDY CAI  
CONNIE CHANG  
JIRAYUT LATTHIVONGSKORN  
LINDA MINAMOTO  
RON SOME  
SHERILYN TRAN  
VINH TRINH  
STEPHEN YEE, MD

CHIEF EXECUTIVE OFFICER  
SHERRY HIROTA

Subject: Bay Area Rapid Transit application to the California's Transit and Intercity Rail Capital Program

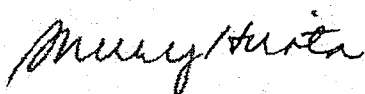
To whom it may concern:

On behalf of Asian Health Services, I am writing in support of Bay Area Rapid Transit's (BART) application to the State of California's 2018 Transit and Intercity Rail Capital Program for the **Core Capacity Project**. Once complete, BART's Core Capacity Project will positively impact a crucial portion of the transportation system serving the Bay Area, as well as benefit the health and quality of life of residents by reducing greenhouse gas emissions and encouraging mass transit options.

With BART ridership growing significantly over the past decade, trains are becoming crowded. New rail cars, in addition to an associated maintenance facility, train control system, and additional substations will play an integral role in ensuring that transit remains a viable alternative to driving through this corridor and the overall system. In order to meet this increased need, the comprehensive and coordinated package of investments that is the Core Capacity Project will increase capacity between San Francisco and Oakland by more than 30 percent, encouraging drivers to leave their cars at home. This project will reduce vehicle miles traveled by improving the quality of service, reducing crowding for riders, and supporting continued growth of the BART system. The many disadvantaged communities (DACs) located along the BART system will benefit from increased capacity and reduced crowding, as well as reduced greenhouse gas emissions from less drivers on the road. Several of the Bay Area's **priority development areas are centered around BART stations, and this project supports additional transit capacity that will enable these areas to grow, which will help to realize the Bay Area's Sustainable Communities Strategy and other concurrent community, health, and environmental efforts in the region.**

Asian Health Services fully support BART in their efforts to bring these additional benefits to the Bay Area. If you have any questions regarding Asian Health Services support, please reach out to me directly. Thank you in advance for your consideration of this project.

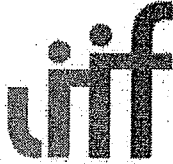
Sincerely,



Sherry Hirota

CEO, Asian Health Services





capital for healthy  
families & communities

12/22/17

Ezequiel Castro, Acting Chief  
Division of Rail and Mass Transportation  
Office of State Transit Programs and Plans (MS 39)  
P.O. Box 942874  
Sacramento, CA 94274-0001

Subject: Bay Area Rapid Transit District's application to California's Transit and Intercity Rail Capital Program

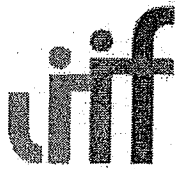
Dear Mr. Castro:

On behalf of the Low Income Investment Fund I am writing in support of Bay Area Rapid Transit's (BART) application to the State of California's 2018 Transit and Intercity Rail Capital Program for the **Transbay Corridor Core Capacity Project**. Once complete, BART's Core Capacity Project will positively impact a crucial portion of the transportation system serving the Bay Area, as well as benefit the health and quality of life of residents by reducing greenhouse gas emissions and encouraging mass transit options. It also will contribute to improving the quality of life for disadvantaged populations that rely solely on public transportation.

The Low Income Investment Fund is dedicated to creating pathways of opportunity to low income people and communities by investing capital in affordable housing, childcare, healthy food access, health centers, schools and more. Through our **equitable transit-oriented development (ETOD) program** we have dedicated over \$130 million to ETOD in the Bay Area to place affordable housing near transit centers like BART. However, our region is undergoing displacement at a rapid pace which is taking a huge toll on our transit infrastructure as people are commuting further and further away from their jobs.

With BART ridership growing significantly over the past decade, trains are becoming crowded. New rail cars, in addition to an associated maintenance facility, train control system, and additional substations will play an integral role in ensuring that transit remains a viable alternative to driving through this corridor and the overall system. In order to meet this increased need, the comprehensive and coordinated package of investments that is the Transbay Corridor Core Capacity Project will increase capacity between San Francisco and Oakland by more than 30 percent, encouraging drivers to leave their cars at home. This project will reduce vehicle miles traveled by improving the quality of service, reducing crowding for riders, and supporting continued growth of the BART system. The many disadvantaged communities (DACs) located along the BART system will benefit from increased capacity and reduced crowding, as well as reduced greenhouse gas emissions from less drivers on the road. Several of the Bay Area's priority development areas are centered around BART stations, and this project supports additional transit capacity that will enable these areas to grow, which will help to realize the Bay Area's Sustainable





capital for healthy  
families & communities

Communities Strategy and other concurrent community, health, and environmental efforts in the region.

Additionally, I am a committee member of BART's Title VI Environmental Justice/Civil Rights Advisory Committee which ensures that BART takes into account impacts on disadvantaged populations. This project is aligned with improving outcomes for disadvantaged populations and communities of color who do not have alternative methods of commuting and rely on BART. As displacement is rapidly increasing in the region, reliable transportation is critical for displaced people to maintain connected to their jobs and networks.

The Low Income Investment Fund fully supports BART in their efforts to bring these additional benefits to the Bay Area. If you have any questions about our support, please reach out to me directly. Thank you in advance for your consideration of this project.

Sincerely,

A handwritten signature in black ink, appearing to read 'L Valdez', is written over a horizontal line.

Lauren Valdez, MCP/MPH  
SPARCC Program Officer  
Low Income Investment Fund  
(415) 489-6115  
[lvaldez@liifund.org](mailto:lvaldez@liifund.org)





January 5, 2018

Brian Kelly, Secretary  
California State Transportation Agency  
915 Capitol Mall, Suite 350B  
Sacramento, CA 95814

**RE: Support for Bay Area Rapid Transit Application to Transit and Intercity Rail Capital Program**

Dear Secretary Kelly:

On behalf of the Bay Area Council, a public policy organization representing hundreds of the largest employers in the Bay Area, I'm pleased to express my strong support for Bay Area Rapid Transit's (BART) application to the Transit and Intercity Rail Capital Program (TIRCP). Their funding request will be used to invest in over 300 new rail cars and a new train control system as part of the BART Core Capacity Program to significantly add capacity in the severely congested Transbay corridor.

BART serves as the backbone of the Bay Area economy, moving over 400,000 Bay Area residents to and from work or school every day. Yet the system is bursting at the seams, and it is in desperate need of new rail cars and infrastructure improvements to accommodate its existing demand and support future economic growth. These new TIRCP funds will help BART address crucial safety, reliability, and crowding concerns, and increase capacity by up to 40 percent in the particularly strained San Francisco-Oakland Transbay corridor. This project will greatly improve regional quality of life and reduce greenhouse gas emissions by encouraging mass transit ridership over driving on the region's congested highways.

BART's Transbay Corridor Core Capacity Program will greatly increase capacity by investing in new rail cars and infrastructure improvements to ensure that BART will continue to support economic growth throughout the Bay Area.

For these reasons, the Bay Area Council supports BART's grant application for TIRCP funds to improve capacity and service in the Transbay corridor.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jim Wunderman'.

Jim Wunderman  
President & CEO





Ezequiel Castro, Acting Chief  
Division of Rail and Mass Transportation  
Office of State Transit Programs and Plans (MS 39)  
P.O. Box 942874  
Sacramento, CA 94274-0001

December 20, 2017

Subject: Bay Area Rapid Transit application to the California's Transit and Intercity Rail Capital Program

Dear Mr. Castro,

TransForm is writing in support of BART's application to the State of California's 2018 Transit and Intercity Rail Capital Program for the **Core Capacity Project**. The grant will allow BART to get closer to a "state of good repair", which will tremendously improve the transportation system of the Bay Area, as well as improve our environment, our air quality and public health by reducing greenhouse gas emissions and making mass transit more competitive to driving single occupancy vehicles.

TransForm is a nonprofit community development organization with over 20 years of experience building healthy, vibrant and safe neighborhoods in the greater Bay Area and throughout California. We have a successful history of planning transit-oriented development and promoting walkable communities with excellent transportation choices to connect people of all incomes to opportunity, keep California affordable and help solve our climate crisis. Our experience leads us to conclude that BART's application is exactly what programs like the Intercity Rail Capital Program should be for.

As a nonprofit organization whose primary goal is to improve public transit, TransForm fought hard to help win \$3.5B for BART through Measure RR in the November 2016 election. While that was a terrific start, it is far from what we need, and the entire state will benefit when BART—and the Bay Area economy—is performing optimally. Ridership on BART has significantly grown over the past decade. Trains and new rail cars, an improved maintenance facility, train control system, and additional substations are all long overdue and will play an integral role in ensuring that transit remains a viable alternative to driving as ridership continues to grow. In addition to maintaining existing capacity, this grant would help BART increase capacity by as much as 30%. As a daily rider myself, I can attest to how deeply this extra capacity is needed.

TransForm fully supports BART in their efforts to bring these additional benefits to the Bay Area. If you have any questions regarding our support, please reach out to me directly. Thank you in advance for your consideration of this project.

Sincerely

Joël Ramós  
Regional Planning Director

MAIN OFFICE: 436 14TH STREET, SUITE 600, OAKLAND, CA 94612 | T: 510.740.3150 |  
SACRAMENTO: 717 K STREET, SUITE 300, SACRAMENTO, CA 95814 | T: 916.441.0204 |  
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WWW.TRANSFORMCA.ORG





January 2, 2018

Ezequiel Castro, Acting Chief  
Division of Rail and Mass Transportation  
Office of State Transit Programs and Plans (MS 39)  
P.O. Box 942874  
Sacramento, CA 94274-0001

**Subject: Bay Area Rapid Transit application to California's Transit and Intercity Rail Capital Program**

Dear Mr. Castro,

On behalf of San Francisco Transit Riders I am writing in support of Bay Area Rapid Transit's (BART) application to the State of California's 2018 Transit and Intercity Rail Capital Program for the **Transbay Corridor Core Capacity Program**. Once complete, this program will positively impact a crucial portion of the transportation system serving the Bay Area, as well as benefit the health and quality of life of residents by reducing greenhouse gas emissions and encouraging mass transit options.

As the city's grassroots transit advocacy organization, San Francisco Transit Riders represent the interests of hundreds of thousands of daily transit riders. BART is a key piece in moving massive amounts of people into and around San Francisco's core, and we are supportive of any and all efforts to improve this crucial link in our transit network.

With BART ridership growing significantly over the past decade, trains are becoming crowded. New rail cars, in addition to the associated infrastructure, will play an integral role in ensuring that transit remains a viable alternative to driving through this corridor. In order to meet this increased need, the comprehensive and coordinated package of investments that is the Core Capacity Project will increase capacity between San Francisco and Oakland by more than 30 percent, encouraging drivers to leave their cars at home. This project will reduce vehicle miles traveled by improving the quality of service, reducing crowding for riders, and supporting continued growth of the BART system.

We fully support BART in their efforts to bring these additional benefits to the Bay Area. If you have any questions regarding SFTR's support, please reach out to me directly. Thank you in advance for your consideration of this project.

Sincerely,

Rachel Hyden

Executive Director, San Francisco Transit Riders

[rachel@sftransitriders.org](mailto:rachel@sftransitriders.org)

[www.sftransitriders.org](http://www.sftransitriders.org)



San Francisco Office  
312 Sutter Street, Suite 510  
San Francisco, CA 94108  
(415) 543-6771

December 18, 2017

California State Transportation Agency  
915 Capitol Mall, Suite 350B  
Sacramento, CA 95814

RE: Subject: BART application to the California's Transit and Intercity Rail Capital Program

To whom It May Concern:

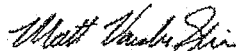
I am writing on behalf of Greenbelt Alliance to express my strong support of Bay Area Rapid Transit's (BART) application to the 2018 Transit and Intercity Rail Capital Program (TIRCP) for the **Core Capacity Project**. Once complete, BART's Core Capacity Project will positively impact a crucial portion of the transportation system serving the Bay Area, as well as benefit the health and quality of life of all Bay Area residents by reducing greenhouse gas emissions, encouraging mass transit options, and supporting climate-smart growth patterns.

Greenbelt Alliance is the San Francisco Bay Area's leading organization working to protect natural and agricultural landscapes from sprawl development and help our cities and towns implement smart land-use and transportation decisions. Such decisions allow our communities to grow in smart ways the protect our environment, improve public health, strengthen our economy, and improve the lives of residents across the income spectrum. We are the champions of the places that make the Bay Area special, with more than 10,000 supporters and a 60-year history of local and regional success.

BART's application for The Core Capacity project is a smart choice for the TIRCP program. New rail cars, in addition to an associated maintenance facility, train control system, and additional substations will play an integral role in ensuring that transit can be a viable alternative to driving as the Bay Area grows. We are excited that the project is expected to increase capacity between San Francisco and Oakland by more than 30 percent. Several of the Bay Area's priority development areas are centered around BART stations, and this project supports additional transit capacity that will enable these areas to grow, which will help to realize the Bay Area's Sustainable Communities Strategy and other concurrent community, health, and environmental efforts.

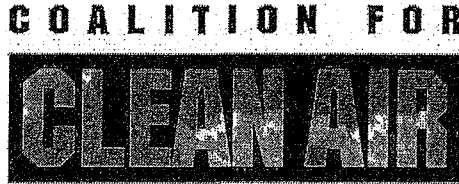
We fully support BART in their efforts to bring these additional benefits to the Bay Area. If you have any questions regarding Greenbelt Alliance's support, please reach out to me directly. Thank you in advance for your consideration of this project.

Sincerely,



Matt Vander Sluis  
Deputy Director





December 21, 2017

Ezequiel Castro, Acting Chief  
Division of Rail and Mass Transportation  
Office of State Transit Programs and Plans (MS 39)  
P.O. Box 942874  
Sacramento, CA 94274-0001

**Subject:** Bay Area Rapid Transit application to the California's Transit and Intercity Rail Capital Program

Dear Director Castro,

On behalf of the Coalition for Clean Air, I am writing in support of Bay Area Rapid Transit's (BART) application to the State of California's 2018 Transit and Intercity Rail Capital Program for the **Core Capacity Project**. Once complete, BART's Core Capacity Project will positively impact the health and quality of life in the Bay Area and beyond by reducing greenhouse gas emissions and other harmful air pollutants, as well as encouraging mass transit options throughout the region.

Founded in 1971, the Coalition for Clean Air is California's only statewide organization working **exclusively on air quality issues**. CCA has been at the forefront of many of California's landmark air quality and climate policies, including recent measures focusing the state's climate **investments on disadvantaged communities**. **Investing in transit reduces dependency on cars, cuts greenhouse gas emissions, improves air quality, and creates opportunities for gainful employment**. As such, transit must be among the top priorities for California's climate strategy.

With BART ridership growing significantly over the past decade, trains are becoming crowded. Yet, there is little ability to increase capacity with the current rail car fleet, train control system and other limitations. In order to meet this increased need, the comprehensive and coordinated package of investments that is the Core Capacity Project will increase capacity between San Francisco and Oakland by more than 30 percent, encouraging drivers to leave their cars at home. Reducing vehicle miles traveled will not just result in fewer greenhouse gas emissions, but also improve air quality, which will lead to improved community health. Additionally, these projects will create meaningful jobs, and provide a more affordable transportation option for all.

The Coalition for Clean Air fully supports BART in their efforts to bring these additional benefits to the Bay Area. If you have any questions regarding CCA's support, please reach out to me directly. Thank you in advance for your consideration of this project.

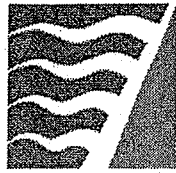


Sincerely,

*Bill Magavern*

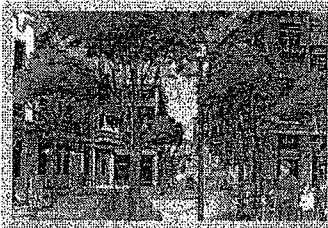
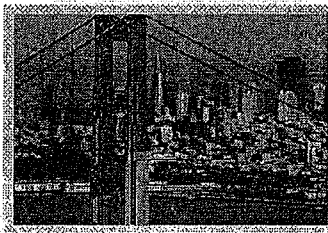
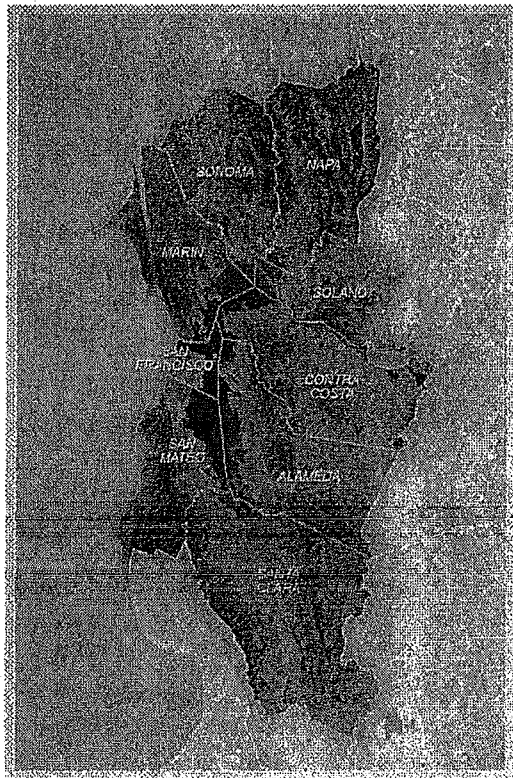
Bill Magavern  
Policy Director  
Coalition for Clean Air





BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

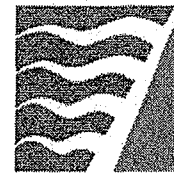
# California Environmental Quality Act Air Quality Guidelines



*Note: This May 2017 version of the Guidelines includes revisions made to the Air District's 2010 Guidelines to address the California Supreme Court's 2015 opinion in Cal. Bldg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist., 62 Cal.4th 369. The May 2017 CEQA Guidelines update does not address outdated references, links, analytical methodologies or other technical information that may be in the Guidelines or Thresholds Justification Report. The Air District is currently working to update any outdated information in the Guidelines. Please see the CEQA webpage at <http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa> for status updates on the Air District's CEQA Guidelines or contact Jaclyn Winkel at [jwinkel@baaqmd.gov](mailto:jwinkel@baaqmd.gov) for further information.*

May 2017





BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

## California Environmental Quality Act

# Air Quality Guidelines

Jack P. Broadbent  
Executive Officer/Air Pollution Control Officer

Jean Roggenkamp  
Deputy Air Pollution Control Officer

Jeffrey McKay  
Deputy Air Pollution Control Officer

Brian Bunger  
District Counsel

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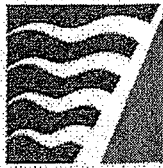
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Sigalle Michael  
Senior Environmental Planner

BAY AREA AIR QUALITY MANAGEMENT DISTRICT  
939 Ellis Street  
San Francisco, CA 94109  
415-749-5000

MAY 2017

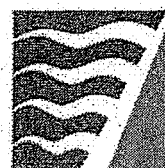




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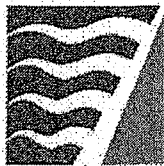
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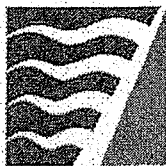




## ACRONYMS AND ABBREVIATIONS

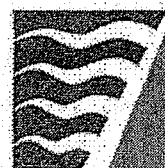
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AB	Assembly Bill
AB 1807	Tanner Air Toxics Act
AB 2588	Air Toxics Hot Spots Information and Assessment Act of 1987
ABAG	Association of Bay Area Governments
AMS	American Meteorological Society
APS	Alternative Planning Strategy
AQP	Air Quality Plan
ARB	California Air Resources Board
ATCM	air toxics control measures
BAAQMD	Bay Area Quality Management District
BACT	Best Available Control Technology
BMPs	Best Management Practices
CCA	Community Choice Aggregation
CAAQS	California Ambient Air Quality Standards
CALINE4	California Line Source Dispersion Model
CAP	criteria air pollutants
CARE	Community Air Risk Evaluation
CAPCOA	California Air Pollution Control Officers Association
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CalRecycle	The California Department of Resources Recycling and Recovery (formally the California Integrated Waste Management Board)
CFC	Chlorofluorocarbon
$\text{CH}_4$	methane
CHAPIS	Community Health Air Pollution Information System
CO	carbon monoxide
CO Protocol	Carbon Monoxide Protocol
$\text{CO}_2$	Carbon dioxide
$\text{CO}_2\text{e}$	carbon dioxide equivalent
CRA	California Resources Agency





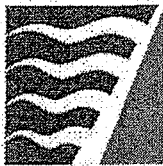
DOE	Department of Energy
du	dwelling units
EIR	Environmental Impact Report
EMFAC	On-Road Mobile-Source Emission Factors
EPA	U.S. Environmental Protection Agency
FAR	Floor Area Ratio
FCAA	Federal Clean Air Act
FCAAA	Federal Clean Air Act Amendments of 1990
GHG	greenhouse gas(es)
GRP	General Reporting Protocol
GVW	gross vehicle weight
GWP	global warming potential
H <sub>2</sub> S	hydrogen sulfide
HEPA	High Efficiency Particulate Arresting (filter)
HI	Hazard Index
HRA	health risk assessment
HVAC	Heating, Ventilation, and Air Conditioning System
IPCC	Intergovernmental Panel on Climate Change
ISR	Indirect Source Review
ksf	thousand square feet
kwh	Kilowatt hour
lb/acre-day	pound per disturbed acre per day
lb/day	pounds per day
lb/kwh	pounds per kilowatt hour
LCFS	Low-Carbon Fuel Standard
LVW	loaded vehicle weight
MACT	maximum available control technology
mg	million gallons
MMT	million metric tons
mph	miles per hour
MPO	Metropolitan Planning Organizations
MT	metric tons
MTC	Metropolitan Transportation Commission
N <sub>2</sub> O	nitrous oxide
NAAQS	National Ambient Air Quality Standards





NESHAP	national emissions standards for hazardous air pollutants
NH <sub>3</sub>	mercaptan, ammonia
NOA	Naturally Occurring Asbestos
NOP	Notice of Preparation
NO <sub>x</sub>	oxides of nitrogen
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research
PM	particulate matter
PM <sub>10</sub>	respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
PM <sub>2.5</sub>	fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less
ppm	parts per million
PUC	Public Utilities Commission
RoadMod	Roadway Construction Emissions Model
ROG	reactive organic gases
RTP	Regional Transportation Plan
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF <sub>6</sub>	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO <sub>2</sub>	sulfur dioxide
SP	Service Population
SSIM	Sustainable Systems Integration Model
TAC	toxic air contaminant
T-BACT	Toxic Best Available Control Technology
TBPs	Toxic Best Practices
tpy	tons per year
UC	University of California
URBEMIS	Urban Land Use Emissions Model
VMT	vehicle miles traveled
VT	vehicle trips
yd <sup>3</sup>	cubic yards
yr	Year





## 1. INTRODUCTION

### 1.1. PURPOSE OF GUIDELINES

The purpose of the Bay Area Air Quality Management District (BAAQMD or District) California Environmental Quality Act (CEQA) Guidelines is to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the San Francisco Bay Area Air Basin (SFBAAB). The Guidelines provides BAAQMD-recommended procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements. These revised Guidelines supersede the BAAQMD's previous CEQA guidance titled *BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans* (BAAQMD 1999).

Land development plans and projects have the potential to generate harmful air pollutants that degrade air quality and increase local exposure. The Guidelines contain instructions on how to evaluate, measure, and mitigate air quality impacts generated from land development construction and operation activities. The Guidelines focus on criteria air pollutant, greenhouse gas (GHG), toxic air contaminant, and odor emissions generated from plans or projects.

The Guidelines are intended to help lead agencies navigate through the CEQA process. The Guidelines for implementation of the Thresholds are for information purposes only to assist local agencies. Recommendations in the Guidelines are advisory and should be followed by local governments at their own discretion. These Guidelines may inform environmental review for development projects in the Bay Area, but do not commit local governments or the Air District to any specific course of regulatory action. The Guidelines offer step-by-step procedures for a thorough environmental impact analysis of adverse air emissions due to land development in the Bay Area.

#### 1.1.1. BAAQMD's Role in Air Quality

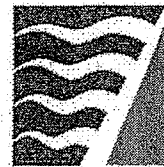
BAAQMD is the primary agency responsible for assuring that the National and California Ambient Air Quality Standards (NAAQS and CAAQS, respectively) are attained and maintained in the Bay Area. BAAQMD's jurisdiction includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara counties, and the southern portions of Solano and Sonoma counties, as shown in Figure 1-1. The Air District's responsibilities in improving air quality in the region include: preparing plans for attaining and maintaining air quality standards; adopting and enforcing rules and regulations; issuing permits for stationary sources of air pollutants; inspecting stationary sources and responding to citizen complaints; monitoring air quality and meteorological conditions; awarding grants to reduce mobile emissions; implementing public outreach campaigns; and assisting local governments in addressing climate change.

BAAQMD takes on various roles in the CEQA process, depending on the nature of the proposed project, including:

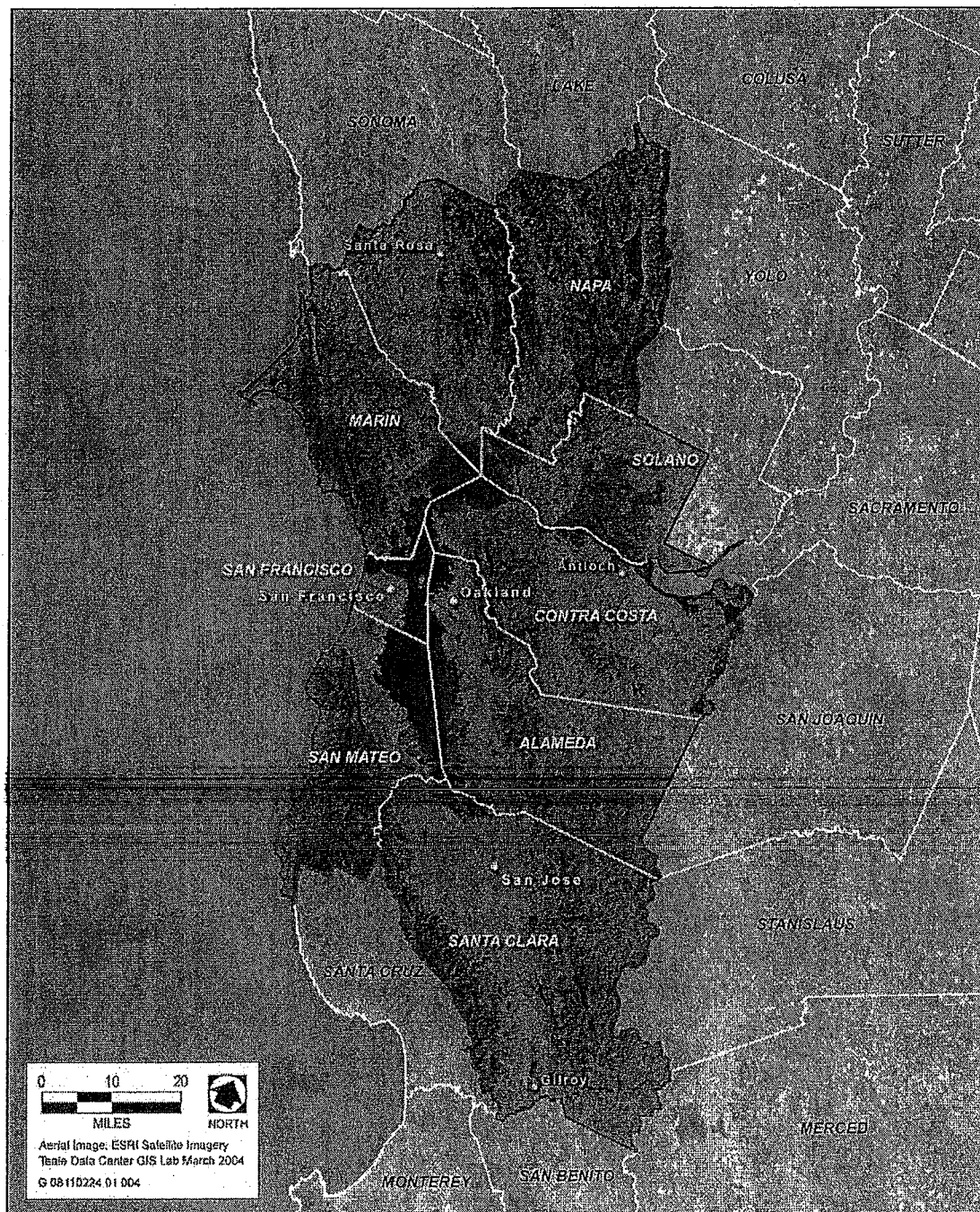
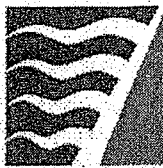
**Lead Agency** – BAAQMD acts as a Lead Agency when it has the primary authority to implement or approve a project, such as when it adopts air quality plans for the region, issues stationary source permits, or adopts rules and regulations.

**Responsible Agency** – BAAQMD acts as a Responsible Agency when it has limited discretionary authority over a portion of a project, but does not have the primary discretionary authority of a Lead Agency. As a Responsible Agency, BAAQMD may coordinate the environmental review process with the lead agency regarding BAAQMD's permitting process, provide comments to the Lead Agency regarding potential impacts, and recommend mitigation measures.







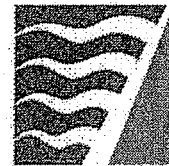


Source: ESRI Satellite 2009

Bay Area Air Quality Management District Jurisdictional Boundaries

Figure 1-1





**Commenting Agency** – BAAQMD may act as a Commenting Agency when it is not a Lead or Responsible Agency (i.e., it does not have discretionary authority over a project), but when it may have concerns about the air quality impacts of a proposed project or plan. As a Commenting Agency, BAAQMD may review environmental documents prepared for development proposals and plans in the region, such as local general plans, and provide comments to the Lead Agency regarding the adequacy of the air quality impact analysis, determination of significance, and mitigation measures proposed.

BAAQMD prepared the CEQA Guidelines to assist lead agencies in air quality analysis, as well as to promote sustainable development in the region. The CEQA Guidelines support lead agencies in analyzing air quality impacts and offers numerous mitigation measures and general plan policies to implement smart growth and transit oriented development, minimize construction emissions, and reduce population exposure to air pollution risks.

## 1.2. GUIDELINE COMPONENTS

The recommendations in the CEQA Guidelines should be viewed as minimum considerations for analyzing air quality impacts. Lead agencies are encouraged to tailor the air quality impact analysis to meet the needs of the local community and may conduct refined analysis that utilize more sophisticated models, more precise input data, innovative mitigation measures, and/or other features. The Guidelines contain the following sections:

**Introduction** – Chapter 1 provides a summary of the purpose of the Guide, and an overview of BAAQMD responsibilities.

**Thresholds of Significance** – Chapter 2 outlines the current thresholds or significance for determining the significance of air quality impacts.

**Screening Criteria** – Chapter 3 provides easy reference tables to determine if your project may have potentially significant impacts requiring a detailed analysis.

**Assessing and Mitigating Impacts** – Chapters 4 through 9 describe assessment methods and mitigation measures for operational-related, local community risk and hazards, local carbon monoxide (CO), odors, construction-related, and plan-level impacts.

**Appendix A** – Provides construction assessment tools.

**Appendix B** – Provides detailed air quality modeling instructions.

**Appendix C** – Outlines sample environmental setting information.

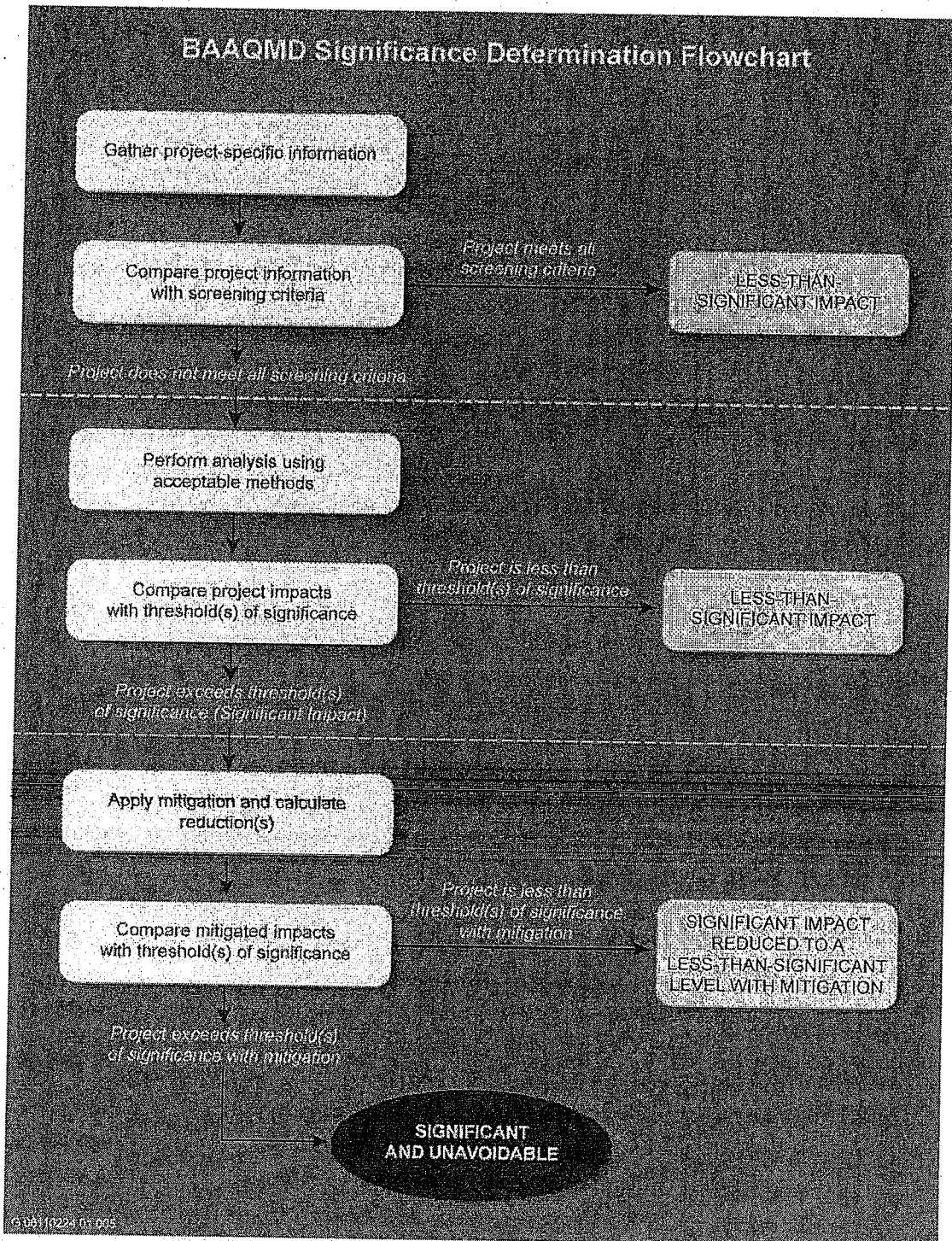
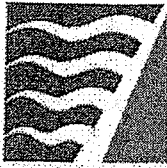
**Appendix D** – Contains justification statements for BAAQMD-adopted thresholds of significance.

**Appendix E** – Provides a glossary of terms used throughout this guide.

### 1.2.1. How To Use The Guidelines

Figure 2-1 illustrates general steps for evaluating a project or plan's air quality impacts. The first step is to determine whether the air quality evaluation is for a project or plan. Once identified, the project should be compared with the appropriate construction and operational screening criteria listed in Chapter 2. There are no screening criteria for plans.

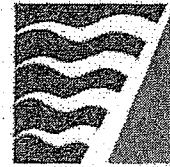




General Steps for Determining Significance of Air Quality Impacts

Figure 1-2





If the project meets the screening criteria and is consistent with the methodology used to develop the screening criteria, then its air quality impacts may be considered less than significant. Otherwise, lead agencies should evaluate potential air quality impacts of projects (and plans) as explained in Chapters 4 through 9. These Chapters describe how to analyze air quality impacts from criteria air pollutants, GHGs, local community risk and hazards, and odors associated with construction activity and operations of a project or plan.

If, after proper analysis, the project or plan's air quality impacts are found to be below the significance thresholds, then the air quality impacts may be considered less than significant. If not, the Lead Agency should implement appropriate mitigation measures to reduce associated air quality impacts. Lead agencies are responsible for evaluating and implementing all feasible mitigation measures in their CEQA document.

The mitigated project or plan's impacts are then compared again to the significance thresholds. If a project succeeded in mitigating its adverse air quality impacts below the corresponding thresholds, air quality impacts may be considered less than significant. If a project still exceeds the thresholds, the Air District strongly encourages the lead agency to consider project alternatives that could lessen any identified significant impact, including a no project alternative in accordance with CEQA Guidelines section 15126.6(e).

### 1.2.2. Early Consultation

The District encourages local jurisdictions and project applicants to address air quality issues as early as possible in the project planning stage. Addressing land use and site design issues while a proposed project is still in the conceptual stage increases opportunities to incorporate project design features to minimize land use compatibility issues and air quality impacts. By the time a project enters the CEQA process, it is usually more costly and time-consuming to redesign the project to incorporate mitigation measures. Early consultation may be achieved by including a formal step in the jurisdiction's development review procedures or simply by discussing air quality concerns at the planning counter when a project proponent makes an initial contact regarding a proposed development. Regardless of the specific procedures a local jurisdiction employs, the objective should be to incorporate features into a project that minimize air quality impacts before significant resources (public and private) have been devoted to the project.

The following air quality considerations warrant particular attention during early consultation between Lead Agencies and project proponents:

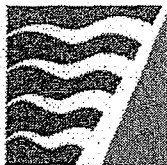
1. land use and design measures to encourage alternatives to the automobile, conserve energy and reduce project emissions;
2. land use conflicts and exposure of sensitive receptors to odors, toxics and criteria pollutants; and,
3. applicable District rules, regulations and permit requirements.





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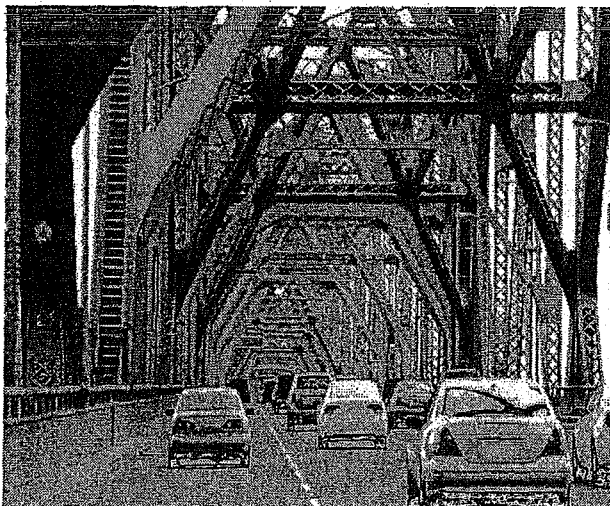
## PART I: THRESHOLDS OF SIGNIFICANCE & PROJECT SCREENING

### 2. THRESHOLDS OF SIGNIFICANCE

The SFBAAB is currently designated as a nonattainment area for state and national ozone standards and national particulate matter ambient air quality standards. SFBAAB's nonattainment status is attributed to the region's development history. Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The analysis to assess project-level air quality impacts should be as comprehensive and rigorous as possible.

Similar to regulated air pollutants, GHG emissions and global climate change also represent cumulative impacts. GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. Climate change impacts may include an increase in extreme heat days, higher concentrations of air pollutants, sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of **global climate change and its associated environmental impacts.**



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BAAQMD's approach to developing a *Threshold of Significance* for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move us towards climate stabilization. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. Refer to Table 2-1 for a summary of Air Quality CEQA Thresholds and to Appendix D for *Thresholds of Significance* documentation.



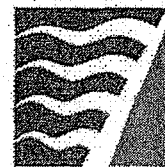


Table 2-1  
Air Quality CEQA Thresholds of Significance\*

Table 2-1 Air Quality CEQA Thresholds of Significance*			
Pollutant	Construction-Related	Operational-Related	
Project-Level			
Criteria Air Pollutants and Precursors (Regional)	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Maximum Annual Emissions (tpy)
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (exhaust)	82	15
PM <sub>2.5</sub>	54 (exhaust)	54	10
PM <sub>10</sub> /PM <sub>2.5</sub> (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
GHGs – Projects other than Stationary Sources	None	Compliance with Qualified GHG Reduction Strategy OR 1,100 MT of CO <sub>2</sub> e/yr OR 4.6 MT CO <sub>2</sub> e/SP/yr (residents+employees)	
GHGs –Stationary Sources	None	10,000 MT/yr	
Risk and Hazards for new sources and receptors (Individual Project)*	Same as Operational Thresholds**	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.3 µg/m <sup>3</sup> annual average  Zone of Influence: 1,000-foot radius from property line of source or receptor	
Risk and Hazards for new sources and receptors (Cumulative Threshold)*	Same as Operational Thresholds**	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM <sub>2.5</sub> : > 0.8 µg/m <sup>3</sup> annual average (from all local sources)  Zone of Influence: 1,000-foot radius from property line of source or receptor	
Accidental Release of Acutely Hazardous Air Pollutants*	None	Storage or use of acutely hazardous materials locating near receptors or new receptors locating near stored or used acutely hazardous materials considered significant	
Odors*	None	5 confirmed complaints per year averaged over three years	



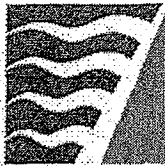


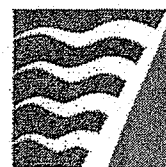
Table 2-1  
Air Quality CEQA Thresholds of Significance\*

Pollutant	Construction-Related	Operational-Related
<b>Plan-Level</b>		
Criteria Air Pollutants and Precursors	None	1. Consistency with Current Air Quality Plan control measures, and 2. Projected VMT or vehicle trip increase is less than or equal to projected population increase
GHGs	None	Compliance with Qualified GHG Reduction Strategy OR 6.6 MT CO <sub>2</sub> e/SP/yr (residents + employees)
Risks and Hazards*	None	1. Overlay zones around existing and planned sources of TACs (including adopted Risk Reduction Plan areas) and 2. Overlay zones of at least 500 feet from all freeways and high volume roadways
Accidental Release of Acutely Hazardous Air Pollutants	None	None
Odors*	None	Identify the location, and include policies to reduce the impacts, of existing or planned sources of odors
<b>Regional Plans (Transportation and Air Quality Plans)</b>		
GHGs, Criteria Air Pollutants and Precursors, and Toxic Air Contaminants	None	No net increase in emissions
CEQA = California Environmental Quality Act; CO = carbon monoxide; CO <sub>2</sub> e = carbon dioxide equivalent; GHGs = greenhouse gases; lb/day = pounds per day; MT = metric tons; NO <sub>x</sub> = oxides of nitrogen; PM <sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM <sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; ROG = reactive organic gases; SO <sub>2</sub> = sulfur dioxide; SP = service population; TACs = toxic air contaminants; TBP = toxic best practices; tons/day = tons per day; tpy = tons per year; yr = year; TBD: to be determined.		
*The receptor thresholds were the subject of litigation in <i>California Building Industry Association v. Bay Area Air Quality Management District</i> (2015) 62 Cal. 4th 369. The use of the receptor thresholds is discussed in section 2.8 of these Guidelines.		
** The Air District recommends that for construction projects that are less than one year duration, Lead Agencies should annualize impacts over the scope of actual days that peak impacts are to occur, rather than the full year.		

## 2.1. CRITERIA AIR POLLUTANTS AND PRECURSORS – PROJECT LEVEL

Table 2-2 presents the *Thresholds of Significance* for operational-related criteria air pollutant and precursor emissions. These represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. If daily average or annual emissions of operational-





related criteria air pollutants or precursors would exceed any applicable *Threshold of Significance* listed in Table 2-2, the proposed project would result in a cumulatively significant impact.

<b>Table 2-2</b> <b>Thresholds of Significance for Operational-Related</b> <b>Criteria Air Pollutants and Precursors</b>		
<b>Pollutant/Precursor</b>	<b>Maximum Annual Emissions (tpy)</b>	<b>Average Daily Emissions (lb/day)</b>
ROG	10	54
NO <sub>x</sub>	10	54
PM <sub>10</sub>	15	82
PM <sub>2.5</sub>	10	54

Notes: tpy = tons per year; lb/day = pounds per day; NO<sub>x</sub> = oxides of nitrogen; PM<sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM<sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; tpy = tons per year. Refer to Appendix D for support documentation.

## 2.2. GREENHOUSE GASES – PROJECT LEVEL

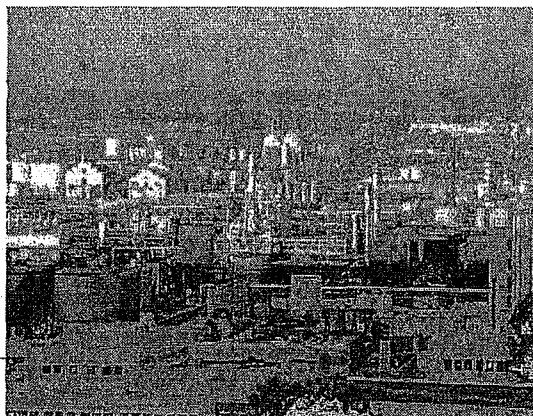
The *Thresholds of Significance* for operational-related GHG emissions are:

- For land use development projects, the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per year (MT/yr) of CO<sub>2</sub>e; or 4.6 MT CO<sub>2</sub>e/SP/yr (residents + employees). Land use development projects include residential, commercial, industrial, and public land uses and facilities.
- For stationary-source projects, the threshold is 10,000 metric tons per year (MT/yr) of CO<sub>2</sub>e. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an Air District permit to operate.

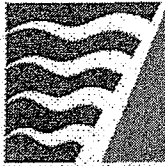
If annual emissions of operational-related GHGs exceed these levels, the proposed project would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact to global climate change.

## 2.3. LOCAL COMMUNITY RISK AND HAZARD IMPACTS – PROJECT LEVEL

The *Thresholds of Significance* for local community risk and hazard impacts are identified below, which apply to the siting of a new source. Local community risk and hazard impacts are associated with TACs and PM<sub>2.5</sub> because emissions of these pollutants can have significant health impacts at the local level. If emissions of TACs or fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less (PM<sub>2.5</sub>) exceed any of the *Thresholds of Significance*







listed below, the proposed project would result in a significant impact.

- Non-compliance with a qualified risk reduction plan; or
- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 would be a cumulatively considerable contribution; or
- An incremental increase of greater than 0.3 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) annual average  $\text{PM}_{2.5}$  would be a cumulatively considerable contribution.

#### Cumulative Impacts

A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000 foot radius from the fence line of a source plus the contribution from the project, exceeds the following:

- Non-compliance with a qualified risk reduction plan; or
- An excess cancer risk levels of more than 100 in one million or a chronic non-cancer hazard index (from all local sources) greater than 10.0; or
- $0.8 \mu\text{g}/\text{m}^3$  annual average  $\text{PM}_{2.5}$ .

A lead agency should enlarge the 1,000-foot radius on a case-by-case basis if an unusually large source or sources of risk or hazard emissions that may affect a proposed project is beyond the recommended radius.

## 2.4. LOCAL CARBON MONOXIDE IMPACTS – PROJECT LEVEL

Table 2-3 presents the *Thresholds of Significance* for local CO emissions, the 1- and 8-hour California Ambient Air Quality Standards (CAAQS) of 20.0 parts per million (ppm) and 9.0 ppm, respectively. By definition, these represent levels that are protective of public health. If a project would cause local emissions of CO to exceed any of the *Thresholds of Significance* listed below, the proposed project would result in a significant impact to air quality.

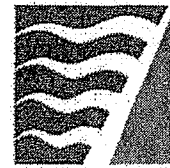
Table 2-3 Thresholds of Significance for Local Carbon Monoxide Emissions	
CAAQS Averaging Time	Concentration (ppm)
1-Hour	20.0
8-Hour	9.0
Refer to Appendix D for support documentation.	

## 2.5. ODOR IMPACTS – PROJECT LEVEL

The *Thresholds of Significance* for odor impacts are qualitative in nature. A project that would result in the siting of a new source should consider the screening level distances and the complaint history of the odor sources:

- Projects that would site a new odor source farther than the applicable screening distance shown in Table 3-3 from an existing receptor, would not likely result in a significant odor impact.





- A type of odor source with five (5) or more confirmed complaints in the new source area per year averaged over three years is considered to have a significant impact on receptors within the screening distance shown in Table 3-3.

Facilities that are regulated by the CalRecycle agency (e.g. landfill, composting, etc) are required to have Odor Impact Minimization Plans (OIMP) in place and have procedures that establish fence line odor detection thresholds. The Air District recognizes a Lead Agency's discretion under CEQA to use established odor detection thresholds as thresholds of significance for CEQA review for CalRecycle regulated facilities with an adopted OIMP. Refer to *Chapter 7 Assessing and Mitigating Odor Impacts* for further discussion of odor analysis.

## 2.6. CONSTRUCTION-RELATED IMPACTS – PROJECT LEVEL

### 2.6.1. Criteria Air Pollutants and Precursors

Table 2-4 presents the *Thresholds of Significance* for construction-related criteria air pollutant and precursor emissions. If daily average emissions of construction-related criteria air pollutants or precursors would exceed any applicable *Threshold of Significance* listed in Table 2-4, the project would result in a significant cumulative impact.



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**Table 2-4**  
**Thresholds of Significance for Construction-Related**  
**Criteria Air Pollutants and Precursors**

Pollutant/Precursor	Daily Average Emissions (lb/day)
ROG	54
NO <sub>x</sub>	54
PM <sub>10</sub>	82*
PM <sub>2.5</sub>	54*

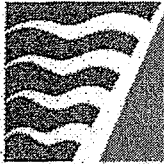
\* Applies to construction exhaust emissions only.

Notes: CO = carbon monoxide; lb/day = pounds per day; NO<sub>x</sub> = oxides of nitrogen; PM<sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM<sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; SO<sub>2</sub> = sulfur dioxide. Refer to Appendix D for support documentation.

### 2.6.2. Greenhouse Gases

The District does not have an adopted *Threshold of Significance* for construction-related GHG emissions. However, the Lead Agency should quantify and disclose GHG emissions that would occur during construction, and make a determination on the significance of these construction-generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals, as required by the Public Resources Code, Section 21082.2. The Lead Agency is encouraged to incorporate best management practices to reduce GHG emissions during construction, as feasible and applicable.





### 2.6.3. Local Community Risk and Hazards

The *Threshold of Significance* for construction-related local community risk and hazard impacts is the same as that for project operations. Construction-related TAC and PM impacts should be addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site receptors, as applicable. The Air District recommends that for construction projects that are less than one year duration, Lead Agencies should annualize impacts over the scope of actual days that peak impacts are to occur, rather than the full year.

## 2.7. THRESHOLDS OF SIGNIFICANCE FOR PLAN-LEVEL IMPACTS

The *Thresholds of Significance* for plans (e.g., general plans, community plans, specific plans, regional plans, congestion management plans, etc.) within the SFBAAB are summarized in Table 2-5 and discussed separately below.

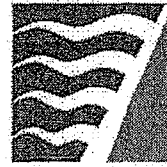
Table 2-5 Thresholds of Significance for Plans*	
Criteria Air Pollutants and Precursors	Construction: none  Operational: Consistency with Current AQP and projected VMT or vehicle trip increase is less than or equal to projected population increase.
GHGs	Construction: none  Operational: 6.6 MT CO <sub>2</sub> e/SP/yr (residents & employees) or a Qualified GHG Reduction Strategy. The efficiency threshold should only be applied to general plans. Other plans, e.g. specific plans, congestion management plans, etc., should use the project-level threshold of 4.6 CO <sub>2</sub> e/SP/yr.
Local Community Risk and Hazards	Land use diagram identifies special overlay zones around existing and planned sources of TACs and PM <sub>2.5</sub> , including special overlay zones of at least 500 feet (or Air District-approved modeled distance) on each side of <b>all freeways and high-volume roadways, and plan identifies goals, policies, and objectives to minimize potentially adverse impacts.</b>
Odors	Identify locations of odor sources in plan; identify goals, policies, and objectives to minimize potentially adverse impacts.
Regional Plans (transportation and air quality plans)	No net increase in emissions of GHGs, Criteria Air Pollutants and Precursors, and Toxic Air Contaminants. Threshold only applies to regional transportation and air quality plans.
* The receptor thresholds were the subject of litigation in <i>California Building Industry Association v. Bay Area Air Quality Management District</i> (2015) 62 Cal. 4th 369. The use of the receptor thresholds is discussed in section 2.8 of these Guidelines. Notes: AQP = Air Quality Plan; CO <sub>2</sub> e = carbon dioxide equivalent; GHGs = greenhouse gases; MT = metric tons; SP = service population; TACs = toxic air contaminants; yr = year; PM <sub>2.5</sub> = fine particulate matter Refer to Appendix D for support documentation.	

### 2.7.1. Criteria Air Pollutants and Precursor Emissions

Proposed plans (except regional plans) must show the following over the planning period of the plan to result in a less than significant impact:

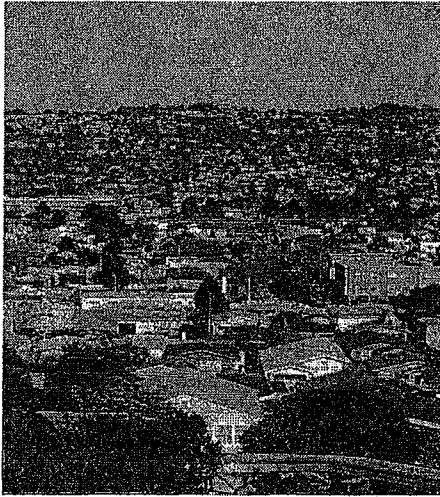
- Consistency with current air quality plan control measures.
- A proposed plan's projected VMT or vehicle trips (VT) (either measure may be used) increase is less than or equal to its projected population increase.





### 2.7.2. Greenhouse Gases

The *Threshold of Significance* for operational-related GHG impacts of plans employs either a GHG efficiency-based metric (per Service Population [SP]), or a GHG Reduction Strategy option, described in Section 4.3.



The *Thresholds of Significance* options for plan level GHG emissions are:

- A GHG efficiency metric of 6.6 MT per SP per year of carbon dioxide equivalent (CO<sub>2</sub>e). If annual maximum emissions of operational-related GHGs exceed this level, the proposed plan would result in a significant impact to global climate change.
- Consistency with an adopted GHG Reduction Strategy. If a proposed plan is consistent with an adopted GHG Reduction Strategy that meets the standards described in Section 4.3, the plan would be considered to have a less than significant impact. This approach is consistent with the plan elements described in the State CEQA Guidelines, Section 15183.5.

### 2.7.3. Local Community Risk and Hazards

The *Thresholds of Significance* for plans with regard to community risk and hazard impacts are:

1. The land use diagram must identify:
  - a. Special overlay zones around existing and planned sources of TACs and PM (including adopted risk reduction plan areas); and
  - b. Special overlay zones of at least 500 feet (or Air District-approved modeled distance) on each side of all freeways and high-volume roadways.
2. The plan must also identify goals, policies, and objectives to minimize potential impacts and create overlay zones around sources of TACs, PM, and hazards.

Although the Risk and Hazard Thresholds recommend evaluating the impacts of locating new development in areas subject to high levels of TACs and PM, the California Supreme Court determined in 2015 that, as a general rule, CEQA does not require this analysis. Section 2.8 below discusses the Supreme Court's decision with respect to the use of the Risk and Hazard Thresholds.

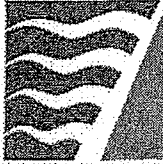
### 2.7.4. Odors

The *Thresholds of Significance* for plans with regard to odor impacts are to identify locations of odor sources in a plan and the plan must also identify goals, policies, and objectives to minimize potentially adverse impacts.

### 2.7.5. Regional Plans

The *Thresholds of Significance* for regional plans is to achieve a no net increase in emissions of criteria pollutants and precursors, GHG, and toxic air contaminants. This threshold applies only to regional transportation and air quality plans.





## 2.8 Receptor Thresholds

The Receptor Thresholds in these Guidelines address the analysis of exposing new receptors to existing sources of toxic air pollution and odors. These Thresholds were the subject of litigation brought by the California Building Industry Association. The California Supreme Court's decision in that litigation states that: "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents . . . Despite the statute's evident concern with protecting the environment and human health, its relevant provisions are best read to focus almost entirely on how projects affect the environment." The Supreme Court upheld "evaluating a project's potentially significant exacerbating effects on existing environmental hazards . . . Because this type of inquiry still focuses on the project's impacts on the environment—how a project might worsen existing conditions—directing an agency to evaluate how such worsened conditions could affect a project's future users or residents is entirely consistent with this focus and with CEQA as a whole."

The Supreme Court also determined that CEQA requires an analysis of exposing new receptors to existing environmental hazards "in several specific contexts involving certain airport (§ 21096) and school construction projects (§ 21151.8), and some housing development projects (§§ 21159.21, subds. (f), (h), 21159.22, subds. (a), (b)(3), 21159.23, subd. (a)(2)(A), 21159.24, subd. (a)(1), (3), 21155.1, subd. (a)(4), (6))." These provisions "constitute specific exceptions to CEQA's general rule requiring consideration only of a project's effect on the environment, not the environment's effects on project users."

The Supreme Court also indicated that nothing in CEQA prevents local agencies from considering the impact of locating new development in areas subject to existing environmental hazards. However, the Court of Appeal explained "CEQA cannot be used by a lead agency to require a developer or other agency to obtain an EIR or implement mitigation measures solely because the occupants or users of a new project would be subjected to the levels of emissions specified, an agency may do so voluntarily on its own project and may use the Receptor Thresholds for guidance." The Court of Appeal also explained that, under CEQA, the Receptor Thresholds should not be applied to "routinely assess the effect of existing environmental conditions on future users or occupants of a project." The courts did not address the extent to which agencies could rely on their police power, general plans, or other regulatory authority outside of CEQA to require mitigation to address existing environmental hazards. For more information on planning approaches to addressing the impacts of locating new development in areas subject to existing air pollution, please see "Planning Healthy Places."  
<http://www.baaqmd.gov/plans-and-climate/planning-healthy-places>

Under the appropriate circumstances described above, the District recommends the following Receptor Thresholds:



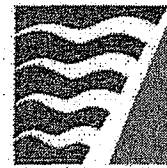
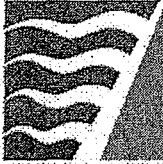


Table 2-6

## Receptor Thresholds

Risks and Hazards (Individual Project)	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM2.5 increase: >0.3 µg/m3 annual average <u>Zone of Influence:</u> 1,000-foot radius from property line of receptor
Risks and Hazards (Cumulative Threshold)	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM2.5: > 0.8 µg/m3 annual average (from all local sources) <u>Zone of Influence:</u> 1,000-foot radius from property line of receptor
Accidental Release of Acutely Hazardous Air Pollutants	New receptors locating near stored or used acutely hazardous materials considered significant
Odors	5 confirmed complaints per year averaged over three years





### 3. SCREENING CRITERIA

The screening criteria identified in this section are **not thresholds of significance**. The Air District developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether the proposed project could result in potentially significant air quality impacts. If all of the screening criteria are met by a proposed project, then the lead agency or applicant would not need to perform a detailed air quality assessment of their project's air pollutant emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration. In addition, the screening criteria in this section do not account for project design features, attributes, or local development requirements that could also result in lower emissions. For projects that are mixed-use, infill, and/or proximate to transit service and local services, emissions would be less than the greenfield type project that these screening criteria are based on.

If a project includes emissions from stationary source engines (e.g., back-up generators) and industrial sources subject to Air District Rules and Regulations, the screening criteria should not be used. The project's stationary source emissions should be analyzed separately from the land use-related indirect mobile- and area-source emissions. Stationary-source emissions are not included in the screening estimates given below and, for criteria pollutants, must be added to the indirect mobile- and area-source emissions generated by the land use development and compared to the appropriate Thresholds of Significance. Greenhouse gas emissions from permitted stationary sources should not be combined with operational emissions, but compared to a separate stationary source greenhouse gas threshold.

#### 3.1. OPERATIONAL-RELATED IMPACTS

##### 3.1.1. Criteria Air Pollutants and Precursors

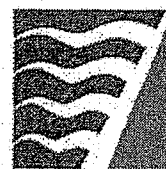
The screening criteria developed for criteria pollutants and precursors were derived using the default assumptions used by the Urban Land Use Emissions Model (URBEMIS). If the project has sources of emissions not evaluated in the URBEMIS program the screening criteria should not be used. If the project meets the screening criteria in Table 3-1, the project would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the *Thresholds of Significance* shown in Table 2-2. Operation of the proposed project would therefore result in a less-than-significant cumulative impact to air quality from criteria air pollutant and precursor emissions.

##### 3.1.2. Greenhouse Gases

The screening criteria developed for greenhouse gases were derived using the default emission assumptions in URBEMIS and using off-model GHG estimates for indirect emissions from electrical generation, solid waste and water conveyance. If the project has other significant sources of GHG emissions not accounted for in the methodology described above, then the screening criteria should not be used. Projects below the applicable screening criteria shown in Table 3-1 would not exceed the 1,100 MT of CO<sub>2</sub>e/yr GHG threshold of significance for projects other than permitted stationary sources.

If a project, including stationary sources, is located in a community with an adopted qualified GHG Reduction Strategy, the project may be considered less than significant if it is consistent with the GHG Reduction Strategy. A project must demonstrate its consistency by identifying and implementing all applicable feasible measures and policies from the GHG Reduction Strategy into the project.

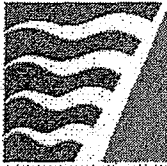




**Table 3-1**  
**Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes**

Land Use Type	Operational Criteria Pollutant Screening Size	Operational GHG Screening Size	Construction-Related Screening Size
Single-family	325 du (NOX)	56 du	114 du (ROG)
Apartment, low-rise	451 du (ROG)	78 du	240 du (ROG)
Apartment, mid-rise	494 du (ROG)	87 du	240 du (ROG)
Apartment, high-rise	510 du (ROG)	91 du	249 du (ROG)
Condo/townhouse, general	451 du (ROG)	78 du	240 du (ROG)
Condo/townhouse, high-rise	511 du (ROG)	92 du	252 du (ROG)
Mobile home park	450 du (ROG)	82 du	114 du (ROG)
Retirement community	487 du (ROG)	94 du	114 du (ROG)
Congregate care facility	657 du (ROG)	143 du	240 du (ROG)
Day-care center	53 ksf (NOX)	11 ksf	277 ksf (ROG)
Elementary school	271 ksf (NOX)	44 ksf	277 ksf (ROG)
Elementary school	2747 students (ROG)	-	3904 students (ROG)
Junior high school	285 ksf (NOX)	-	277 ksf (ROG)
Junior high school	2460 students (NOX)	46 ksf	3261 students (ROG)
High school	311 ksf (NOX)	49 ksf	277 ksf (ROG)
High school	2390 students (NOX)	-	3012 students (ROG)
Junior college (2 years)	152 ksf (NOX)	28 ksf	277 ksf (ROG)
Junior college (2 years)	2865 students (ROG)	-	3012 students (ROG)
University/college (4 years)	1760 students (NOX)	320 students	3012 students (ROG)
Library	78 ksf (NOX)	15 ksf	277 ksf (ROG)
Place of worship	439 ksf (NOX)	61 ksf	277 ksf (ROG)
City park	2613 acres (ROG)	600 acres	67 acres (PM10)
Racquet club	291 ksf (NOX)	46 ksf	277 ksf (ROG)
Racquetball/health	128 ksf (NOX)	24 ksf	277 ksf (ROG)
Quality restaurant	47 ksf (NOX)	9 ksf	277 ksf (ROG)
High turnover restaurant	33 ksf (NOX)	7 ksf	277 ksf (ROG)
Fast food rest. w/ drive thru	6 ksf (NOX)	1 ksf	277 ksf (ROG)
Fast food rest. w/o drive thru	8 ksf (NOX)	1 ksf	277 ksf (ROG)
Hotel	489 rooms (NOX)	83 rooms	554 rooms (ROG)
Motel	688 rooms (NOX)	106 rooms	554 rooms (ROG)
Free-standing discount store	76 ksf (NOX)	15 ksf	277 ksf (ROG)
Free-standing discount superstore	87 ksf (NOX)	17 ksf	277 ksf (ROG)
Discount club	102 ksf (NOX)	20 ksf	277 ksf (ROG)
Regional shopping center	99 ksf (NOX)	19 ksf	277 ksf (ROG)
Electronic Superstore	95 ksf (NOX)	18 ksf	277 ksf (ROG)
Home improvement superstore	142 ksf (NOX)	26 ksf	277 ksf (ROG)
Strip mall	99 ksf (NOX)	19 ksf	277 ksf (ROG)
Hardware/paint store	83 ksf (NOX)	16 ksf	277 ksf (ROG)
Supermarket	42 ksf (NOX)	8 ksf	277 ksf (ROG)
Convenience market (24 hour)	5 ksf (NOX)	1 ksf	277 ksf (ROG)
Convenience market with gas pumps	4 ksf (NOX)	1 ksf	277 ksf (ROG)
Bank (with drive-through)	17 ksf (NOX)	3 ksf	277 ksf (ROG)
General office building	346 ksf (NOX)	53 ksf	277 ksf (ROG)





**Table 3-1  
Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes**

Land Use Type	Operational Criteria Pollutant Screening Size	Operational GHG Screening Size	Construction-Related Screening Size
Office park	323 ksf (NOX)	50 ksf	277 ksf (ROG)
Government office building	61 ksf (NOX)	12 ksf	277 ksf (ROG)
Government (civic center)	149 ksf (NOX)	27 ksf	277 ksf (ROG)
Pharmacy/drugstore w/ drive through	49 ksf (NOX)	10 ksf	277 ksf (ROG)
Pharmacy/drugstore w/o drive through	48 ksf (NOX)	10 ksf	277 ksf (ROG)
Medical office building	117 ksf (NOX)	22 ksf	277 ksf (ROG)
Hospital	226 ksf (NOX)	39 ksf	277 ksf (ROG)
Hospital	334 beds (NOX)	84 ksf	337 beds (ROG)
Warehouse	864 ksf (NOX)	64 ksf	259 ksf (NOX)
General light industry	541 ksf (NOX)	121 ksf	259 ksf (NOX)
General light industry	72 acres (NOX)	-	11 acres (NOX)
General light industry	1249 employees (NOX)	-	540 employees (NOX)
General heavy industry	1899 ksf (ROG)	-	259 ksf (NOX)
General heavy industry	281 acres (ROG)	-	11 acres (NOX)
Industrial park	553 ksf (NOX)	65 ksf	259 ksf (NOX)
Industrial park	61 acres (NOX)	-	11 acres (NOX)
Industrial park	1154 employees (NOX)	-	577 employees (NOX)
Manufacturing	992 ksf (NOX)	89 ksf	259 ksf (NOX)

Notes: du = dwelling units; ksf = thousand square feet; NO<sub>x</sub> = oxides of nitrogen; ROG = reactive organic gases.  
Screening levels include indirect and area source emissions. Emissions from engines (e.g., back-up generators) and industrial sources subject to Air District Rules and Regulations embedded in the land uses are not included in the screening estimates and must be added to the above land uses.  
Refer to Appendix D for support documentation.  
Source: Modeled by EDAW 2009.

### 3.2. COMMUNITY RISK AND HAZARD IMPACTS

Please refer to Chapter 5 for discussion of screening criteria for local community risk and hazard impacts.

### 3.3. CARBON MONOXIDE IMPACTS

This preliminary screening methodology provides the Lead Agency with a conservative indication of whether the implementation of the proposed project would result in CO emissions that exceed the *Thresholds of Significance* shown in Table 2-3.

The proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria is met:

1. Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.





2. The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
3. The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

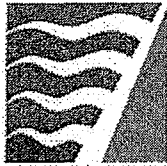
### 3.4. ODOR IMPACTS

Table 3-3 presents odor screening distances recommended by BAAQMD for a variety of land uses. Projects that would site a new odor source or a new receptor farther than the applicable screening distance shown in Table 3-3 from an existing receptor or odor source, respectively, would not likely result in a significant odor impact. The odor screening distances in Table 3-3 should not be used as absolute screening criteria, rather as information to consider along with the odor parameters and complaint history. Refer to *Chapter 7 Assessing and Mitigating Odor Impacts* for comprehensive guidance on significance determination.

Table 3-3 Odor Screening Distances	
Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
<b>Petroleum Refinery</b>	<b>2 miles</b>
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles
Refer to Appendix D for support documentation.	

Facilities that are regulated by CalRecycle (e.g. landfill, composting, etc.) are required to have Odor Impact Minimization Plans (OIMP) in place and have procedures that establish fence line odor detection thresholds. The Air District recognizes a Lead Agency's discretion under CEQA to use established odor detection thresholds as thresholds of significance for CEQA review for CalRecycle regulated facilities with an adopted OIMP.





### 3.5. CONSTRUCTION-RELATED IMPACTS

#### 3.5.1. Criteria Air Pollutants and Precursors

This preliminary screening provides the Lead Agency with a conservative indication of whether the proposed project would result in the generation of construction-related criteria air pollutants and/or precursors that exceed the *Thresholds of Significance* shown in Table 2-4.

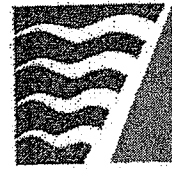
If all of the following *Screening Criteria* are met, the construction of the proposed project would result in a less-than-significant impact from criteria air pollutant and precursor emissions.

1. The project is below the applicable screening level size shown in Table 3-1; and
2. All *Basic Construction Mitigation Measures* would be included in the project design and implemented during construction; and
3. Construction-related activities would not include any of the following:
  - a. Demolition;
  - b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);
  - c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development);
  - d. Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement); or
  - e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

#### 3.5.2. Community Risk and Hazards

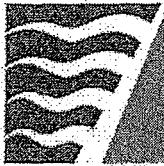
Chapter 5, *Assessing and Mitigating Local Community Risk and Hazard Impacts*, contains information on screening criteria for local risk and hazards.





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## PART II: ASSESSING & MITIGATING PROJECT LEVEL IMPACTS

### 4. OPERATIONAL-RELATED IMPACTS

Operational emissions typically represent the majority of a project's air quality impacts. After a project is built, operational emissions, including mobile and area sources, are anticipated to occur continuously throughout the project's lifetime. Operational-related activities, such as driving, use of landscape equipment, and wood burning, could generate emissions of criteria air pollutants and their precursors, GHG, TACs, and PM. Area sources generally include fuel combustion from space and water heating, landscape maintenance equipment, and fireplaces/stoves, evaporative emissions from architectural coatings and consumer products and unpermitted emissions from stationary sources. This chapter provides recommendations for assessing and mitigating operational-related impacts for individual projects. Recommendations for assessing and mitigating operational-related impacts at the plan-level are discussed in Chapter 9. Chapter 9 also contains guidance for assessing a project's consistency with applicable air quality plans.

When calculating project emissions to compare to the thresholds of significance, lead agencies should account for reductions that would result from state, regional, and local rules and regulations. The Air District also recommends for lead agencies to consider project design features, attributes, or local development requirements as part of the project as proposed and not as mitigation measures. For example, projects that are mixed-use, infill, and/or proximate to transit service and local services, or that provide neighborhood serving commercial and retail services would have substantially lower vehicle trip rates and associated criteria pollutant and GHG emissions than what would be reflected in standard, basin-wide average URBEMIS default trip rates and emission estimates. A project specific transportation study should identify the reductions that can be claimed by projects with the above described attributes. The Air District, in association with the California Air Pollution Control Officers Association (CAPCOA), is currently developing guidance for estimating reductions in standard vehicle trip rates and vehicle miles traveled (VMT) that can be claimed for these land use types that do not develop project specific transportation studies. This additional guidance will be posted to the District website in July 2010.

To estimate a project's carbon dioxide equivalent emissions from direct and indirect emission sources, BAAQMD recommends using the BAAQMD GHG Model (BGM). The Air District developed this model to calculate GHG emissions not included in URBEMIS such as indirect emissions from electricity use and waste and direct fugitive emissions of refrigerants. The BGM is discussed in more detail in Section 4.2 below.

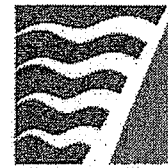
#### 4.1. CRITERIA AIR POLLUTANT AND PRECURSOR EMISSIONS

##### 4.1.1. Significance Determination

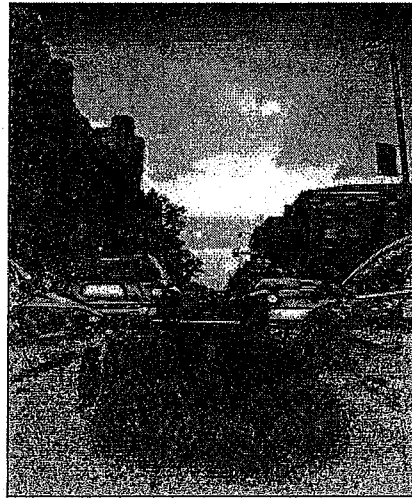
###### Step 1: Comparison of Project Attributes with Screening Criteria

The first step in determining the significance of operational-related criteria air pollutants and precursors is to compare the attributes of the proposed project with the applicable *Screening Criteria* listed in Chapter 3. This preliminary screening provides a conservative indication of whether operation of the proposed project would result in the generation of criteria air pollutants and/or precursors that exceed the *Thresholds of Significance* listed in Chapter 2. If all of the *Screening Criteria* are met, the operation of the proposed project would result in a less than significant impact to air quality. If the proposed project does not meet all the *Screening Criteria*, then project emissions need to be quantified.



**Step 2: Emissions Quantification**

If a proposed project involves the removal of existing emission sources, BAAQMD recommends subtracting the existing emissions levels from the emissions levels estimated for the new proposed land use. This net calculation is permissible only if the existing emission sources were operational at the time that the Notice of Preparation (NOP) for the CEQA project was circulated or in the absence of an NOP when environmental analysis begins, and would continue if the proposed redevelopment project is not approved. This net calculation is not permitted for emission sources that ceased to operate, or the land uses were vacated and/or demolished, prior to circulation of the NOP or the commencement of environmental analysis. This approach is consistent with the definition of baseline conditions pursuant to CEQA.



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**Land Use Development Projects**

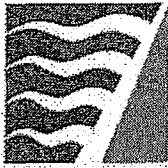
For proposed land use development projects, BAAQMD recommends using the most current version of URBEMIS (which to date is version 9.2.4) to quantify operational-related criteria air pollutants and precursors. URBEMIS is a modeling tool initially developed by the California Air Resources Board for calculating air pollutant emissions from land use development projects. URBEMIS uses EMFAC emission factors and ITE trip generation rates to calculate ROG, NO<sub>x</sub>, carbon monoxide, particulate matter, carbon dioxide, and total vehicle trips. URBEMIS is not equipped for calculating air quality impacts from stationary sources or plans. For land use projects, URBEMIS quantifies emissions from area sources (e.g., natural gas fuel combustion for space and water heating, wood stoves and fireplace combustion, landscape maintenance equipment, consumer products, and architectural coating) and operational-related emissions (mobile sources).

Appendix B contains more detailed instructions for using URBEMIS to model operational emissions.

**Stationary-Source Facilities**

A stationary source consists of a single emission source with an identified emission point, such as a stack at a facility. Facilities can have multiple emission point sources located on-site and sometimes the facility as a whole is referred to as a stationary source. Major stationary sources are typically associated with industrial processes, such as refineries or power plants. Minor stationary sources are typically land uses that may require air district permits, such as gasoline dispensing stations, and dry cleaning establishments. Examples of other District-permitted stationary sources include back-up diesel generators, boilers, heaters, flares, cement kilns, and other types of combustion equipment, as well as non-combustion sources such as coating or printing operations. BAAQMD is responsible for issuing permits for the construction and operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and California ambient air quality standards in the SFBAAB. Newly modified or constructed stationary sources subject to Air District permitting may be required to implement Best Available Control Technology (BACT), which may include the installation of emissions control equipment or the implementation of administrative practices that would result in the lowest achievable emission rate. Stationary sources may also be required to offset their emissions of criteria air pollutants and precursors to be permitted. This may entail shutting down or augmenting another stationary source at the same facility. Facilities also may purchase an emissions reduction credit to offset their emissions. Any stationary source emissions remaining after the application of BACT and





offsets should be added to the indirect and area source emissions estimated above to arrive at total project emissions.

URBEMIS is not equipped to estimate emissions generated by stationary sources. Instead emissions from stationary sources should be estimated using manual calculation methods in consultation with BAAQMD. When stationary sources will be subject to BAAQMD regulations, the regulation emission limits should be used as emission factors. If BAAQMD emission limits are not applicable, alternative sources of emission factors include: EPA AP-42 emission factors for particular industrial processes, manufacturer specifications for specific equipment, throughput data (e.g., fuel consumption, rate of material feedstock input) and other specifications provided by the project engineer. To the extent possible, BAAQMD recommends that the methodology used to estimate stationary-source emissions be consistent with calculations that would need to be performed to fulfill requirements of the permitting process and provided in the CEQA document.

### **Step 3: Comparison of Unmitigated Emissions with Thresholds of Significance**

Sum the estimated emissions for area, mobile, and stationary sources (if any) for each pollutant as explained above and compare the total average daily and annual emissions of each criteria pollutant and their precursors with the applicable *Thresholds of Significance* (refer to Table 2-2). If daily average or annual emissions of operational-related criteria air pollutants or precursors do not exceed any of the *Thresholds of Significance*, the project would result in a less than significant impact to air quality. If the quantified emissions of operational-related criteria air pollutants or precursors do exceed any applicable *Threshold of Significance*, the proposed project would result in a significant impact to air quality and CEQA requires implementation of all feasible mitigation measures.

### **Step 4: Mitigation Measures and Emission Reductions**

Where operational-related emissions exceed applicable *Thresholds of Significance*, lead agencies are responsible for implementing all feasible mitigation measures to reduce the project's air quality impacts. Section 4.2 contains numerous examples of mitigation measures and associated emission reductions that may be applied to projects. The project's mitigated emission estimates from mitigation measures included in the proposed project or recommended by the lead agency should be quantified and disclosed in the CEQA document.

### **Step 5: Comparison of Mitigated Emissions with Thresholds of Significance**

Compare the total average daily and annual amounts of mitigated criteria air pollutants and precursors with the applicable *Thresholds of Significance* (refer to Table 4-1). If the implementation of mitigation measures, including off-site mitigation, would reduce all operational-related criteria air pollutants and precursors to levels below the applicable *Thresholds of Significance*, the impact to air quality would be reduced to a less than significant level. Implementation of mitigation measures means that they are made conditions of project approval and included in a Mitigation Monitoring and Reporting Plan (MMRP). If mitigated levels of any criteria air pollutant or precursor would still exceed the applicable *Threshold of Significance*, the impact to air quality would remain significant and unavoidable.



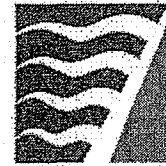


Table 4-1

Example Operational Criteria Air Pollutant and Precursor Emissions Analysis

Step	Emissions Source	Emissions (lb/day or tpy)*			
		ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2	Area Sources	A	A	A	A
	Mobile Sources	B	B	B	B
	Stationary Sources	C	C	C	C
	Total Unmitigated Emissions	A + B + C = D	A + B + C = D	A + B + C = D	A + B + C = D
	BAAQMD Threshold	54 lb/day or 10 tpy	54 lb/day or 10 tpy	82 lb/day or 15 tpy	54 lb/day or 10 tpy
3	Unmitigated Emissions Exceed BAAQMD Threshold?	Is D > Threshold? (If Yes, significant. Go to step 4. If No, less than significant)			
4	Mitigated Emissions	E	E	E	E
5	Mitigated Emissions Exceed BAAQMD Threshold?	Is E > Threshold? (If Yes, significant and unavoidable. If No, less than significant with mitigation incorporated)			

\* Letters "A", "B", and "C" are used to represent numeric values that would be obtained through modeling for area and mobile sources, and by manual calculations for stationary source-emissions. "D" represents the sum of "A", "B", and "C" (i.e., unmitigated emissions). "E" represents mitigated emissions.

Notes: lb/day = pounds per day; NO<sub>x</sub> = oxides of nitrogen; PM<sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM<sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; tpy = tons per year.

Refer to Appendix D for support documentation.

## 4.2. GREENHOUSE GAS IMPACTS

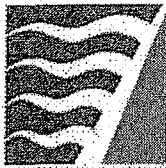
### 4.2.1. Significance Determination

#### Step 1: Comparison of Project Attributes with Screening Criteria

The first step in determining the significance of operational-related GHG emissions is to compare the attributes of the proposed project with the applicable *Screening Criteria* (Refer to Chapter 3). If all of the *Screening Criteria* are met, the operation of the proposed project would result in a less than significant impact to global climate change. If the proposed project does not meet all the *Screening Criteria*, then project emissions need to be quantified.

If a project is located in a community with an adopted qualified GHG Reduction Strategy (described in section 4.3), the project may be considered less than significant if it is consistent with the GHG Reduction Strategy. A project must demonstrate its consistency by identifying and implementing all applicable feasible measures and policies from the GHG Reduction Strategy into the project.

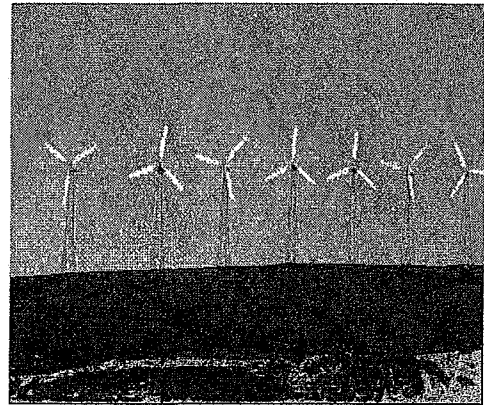




### **Step 2: Emissions Quantification**

For quantifying a project's GHG emissions, BAAQMD recommends that all GHG emissions from a project be estimated, including a project's direct and indirect GHG emissions from operations. Direct emissions refer to emissions produced from onsite combustion of energy, such as natural gas used in furnaces and boilers, emissions from industrial processes, and fuel combustion from mobile sources. Indirect emissions are emissions produced offsite from energy production and water conveyance due to a project's energy use and water consumption. See Table 4-2 for a list of GHG emission sources and types that should be estimated for projects.

Biogenic CO<sub>2</sub> emissions should not be included in the quantification of GHG emissions for a project. Biogenic CO<sub>2</sub> emissions result from materials that are derived from living cells, as opposed to CO<sub>2</sub> emissions derived from fossil fuels, limestone and other materials that have been transformed by geological processes. Biogenic CO<sub>2</sub> contains carbon that is present in organic materials that include, but are not limited to, wood, paper, vegetable oils, animal fat, and food, animal and yard waste.



The GHG emissions from permitted stationary sources should be calculated separately from a project's operational emissions. Permitted stationary sources are subject to a different threshold than land use developments. For example, if a proposed project anticipates having a permitted stationary source on site, such as a back-up generator, the GHG emissions from the generator should not be added to the project's total emissions. The generator's GHG emissions should be calculated separately and compared to the GHG threshold for stationary sources to determine its impact level.

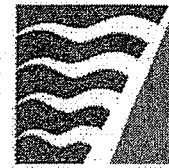
If a proposed project involves the removal of existing emission sources, BAAQMD recommends subtracting the existing emissions levels from the emissions levels estimated for the new proposed land use. This net calculation is permissible only if the existing emission sources were operational at the time that the Notice of Preparation (NOP) for the CEQA project was circulated (or in the absence of an NOP when environmental analysis begins), and would continue if the proposed redevelopment project is not approved. This net calculation is not permitted for emission sources that ceased to operate, or the land uses were vacated and/or demolished, prior to circulation of the NOP or the commencement of environmental analysis. This approach is consistent with the definition of baseline conditions pursuant to CEQA.

### **BAAQMD Greenhouse Gas Model**

BAAQMD recommends using URBEMIS to estimate direct CO<sub>2</sub> emissions from area and mobile sources. The same detailed guidance described for criteria air pollutants and precursors (Section 4.1 above) could be followed for quantifying GHG emissions as appropriate. URBEMIS estimates the modeled emissions output in units of short tons; the URBEMIS output may be converted to metric tons by multiplying the amount of short tons by 0.91.

To estimate a project's carbon dioxide equivalent emissions from direct and indirect emission sources, BAAQMD recommends using the BAAQMD GHG Model (BGM). The Air District developed this model to calculate GHG emissions not included in URBEMIS such as indirect emissions from electricity use and waste and direct fugitive emissions of refrigerants. The BGM





also adjusts for state regulations not included in URBEMIS, specifically California's low carbon fuel rules and Pavley regulations.

The BGM imports project inputs and emission results from URBEMIS to quantify carbon dioxide equivalent emissions from additional direct and indirect sources not included in URBEMIS, such as water supply, waste disposal, electricity generation and refrigerants. The BGM also contains a range of GHG reduction strategies/mitigation measures that may be applied to projects. The BGM also adjusts emission totals to reflect reductions from adopted state regulations such as Pavley and the low carbon fuel standard. This model is available without cost and may be downloaded at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES.aspx>. The BGM is run using Microsoft Excel. Refer to the BGM user's manual for detailed instructions on using the model.

Table 4-2 outlines the recommended methodologies for estimating a project's GHG emissions.

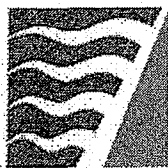
<b>Table 4-2</b> <b>Guidance for Estimating a Project's Operations GHG Emissions</b>			
Emission Source	Emission Type	GHG	Methodology
Area Sources (natural gas, hearth, landscape fuel, etc.)	Direct - natural gas and fuel combustion	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	URBEMIS and BGM
Transportation	Direct - fuel combustion	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	URBEMIS and BGM
Electricity consumption	Indirect - electricity	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	BGM
Solid waste landfill (non-biogenic emissions)*	Direct - landfill	CH <sub>4</sub>	BGM
Solid waste transport	Indirect - fuel combustion	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	BGM
Water consumption	Indirect - electricity	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	BGM
Wastewater (non-biogenic emissions)*	Indirect - electricity	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	BGM
Industrial process emissions	Direct	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, and refrigerants	BGM and BAAQMD permits**
Fugitive emissions	Direct	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, and refrigerants	BGM
* Biogenic CO <sub>2</sub> emissions should not be included in the quantification of GHG emissions for a project. ** Industrial processes permitted by the Air District must use the methodology provided in BAAQMD rules and regulations. Other industrial process emissions, such as commercial refrigerants, should use the BGM. CO <sub>2</sub> (carbon dioxide), CH <sub>4</sub> (methane), N <sub>2</sub> O (nitrous oxides), and refrigerants (HFCs and PFCs).			

In cases where users may need to estimate a project's GHG emissions manually, BAAQMD recommends using ARB's most current Local Government Operations Protocol (LGOP) as appropriate for guidance. The most current LGOP may be downloaded from ARB's website.

### **Step 3: Comparison of Unmitigated Emissions with Thresholds of Significance**

Sum the estimated GHG emissions from area and mobile sources and compare the total annual GHG emissions with the applicable *Threshold of Significance*. If annual emissions of operational-related GHGs do not exceed the *Threshold of Significance*, the project would result in a less than significant impact to global climate change. If annual emissions do exceed the *Threshold of Significance*, the proposed project would result in a significant impact to global climate change and will require mitigation measures for emission reductions.





#### **Step 4: Mitigation Measures and Emission Reductions**

Where operational-related emissions exceed applicable *Thresholds of Significance*, lead agencies are responsible for implementing all feasible mitigation measures to reduce the project's GHG emissions. Section 4.2 contains recommended mitigation measures and associated emission reductions. The Air District recommends using the BGM if additional reductions are needed. The air quality analysis should quantify the reduction of emissions associated with any proposed mitigation measures and include this information in the CEQA document.

#### **Step 5: Comparison of Mitigated Emissions with Thresholds of Significance**

Compare the total annual amount of mitigated GHGs with the applicable *Threshold of Significance*, as demonstrated in Table 4-3. If the implementation of project proposed or required mitigation measures would reduce operational-related GHGs to a level below either the 1,100 MT CO<sub>2</sub>e/yr or 4.6 MT CO<sub>2</sub>e/SP/yr *Threshold of Significance*, the impact would be reduced to a less than significant level. If mitigated levels still exceed the applicable *Threshold of Significance*, the impact to global climate change would remain significant and unavoidable.

**Table 4-3**  
**Example of Operational Greenhouse Gas Emissions Analysis**

Step	Emissions Source	Emissions (MT CO <sub>2</sub> e/yr)*
2	Area Sources	A
	Mobile Sources	B
	Indirect Sources	C
	Total Unmitigated Emissions	A + B + C = D
	BAAQMD Threshold	1,100 or 4.6 MT CO <sub>2</sub> e/yr/SP
3	Unmitigated Emissions Exceed BAAQMD Threshold?	Is D > 1,100/4.6? (If Yes, significant. Go to step 4. If No, less than significant)
4	Mitigated Emissions	E
5	Mitigated Emissions Exceed BAAQMD Threshold?	Is E > 1,100/4.6? (If Yes, significant and unavoidable. If No, less than significant with mitigation incorporated)
* Letters "A", "B", and "C" are used to represent numeric values that would be obtained through modeling for area and mobile sources, and by manual calculations for indirect source-emissions. "D" represents the sum of "A", "B", and "C" (i.e., unmitigated emissions). "E" represents mitigated emissions. Notes: CO <sub>2</sub> e = carbon dioxide equivalent; MT = metric tons; yr = year. Refer to Appendix D for support documentation.		

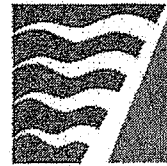
### **4.3. GREENHOUSE GAS REDUCTION STRATEGIES**

The Air District encourages local governments to adopt a qualified GHG Reduction Strategy that is consistent with AB 32 goals. If a project is consistent with an adopted qualified GHG Reduction Strategy that meets the standards laid out below, it can be presumed that the project will not have significant GHG emission impacts. This approach is consistent with the State CEQA Guidelines, Section 15183.5 (see text in box below).

#### ***§15183.5. Tiering and Streamlining the Analysis of Greenhouse Gas Emissions.***

*(a) Lead agencies may analyze and mitigate the significant effects of greenhouse gas emissions at a programmatic level, such as in a general plan, a long range development plan, or a separate plan to reduce greenhouse gas emissions. Later project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review.*





*Project-specific environmental documents may rely on an EIR containing a programmatic analysis of greenhouse gas emissions as provided in section 15152 (tiering), 15167 (staged EIRs), 15168 (program EIRs), 15175-15179.5 (Master EIRs), 15182 (EIRs Prepared for Specific Plans), and 15183 (EIRs Prepared for General Plans, Community Plans, or Zoning).*

*(b) Plans for the Reduction of Greenhouse Gas Emissions. Public agencies may choose to analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions or similar document. A plan to reduce greenhouse gas emissions may be used in a cumulative impacts analysis as set forth below. Pursuant to sections 15064(h)(3) and 15130(d), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.*

*(1) Plan Elements. A plan for the reduction of greenhouse gas emissions should:*

*(A) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;*

*(B) Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;*

*(C) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;*

*(D) Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;*

*(E) Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;*

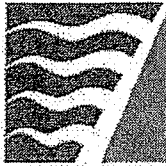
*(F) Be adopted in a public process following environmental review.*

*(2) Use with Later Activities. A plan for the reduction of greenhouse gas emissions, once adopted following certification of an EIR or adoption of an environmental document, may be used in the cumulative impacts analysis of later projects. An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project. If there is substantial evidence that the effects of a particular project may be cumulatively considerable notwithstanding the project's compliance with the specified requirements in the plan for the reduction of greenhouse gas emissions, an EIR must be prepared for the project.*

#### **Standard Elements of a GHG Reduction Strategy**

The Air District recommends the Plan Elements in the state CEQA Guidelines as the minimum standard to meet the GHG Reduction Strategy Thresholds of Significance option. A GHG Reduction Strategy may be one single plan, such as a general plan or climate action plan, or could be comprised of a collection of climate action policies, ordinances and programs that have been legislatively adopted by a local jurisdiction. The GHG Reduction Strategy should identify goals, policies and implementation measures that would achieve AB 32 goals for the entire community. Plans with horizon years beyond 2020 should consider continuing the downward





reduction path set by AB 32 and move toward climate stabilization goals established in Executive Order S-3-05.

To meet this threshold of significance, a GHG Reduction Strategy must include the following elements (corresponding to the State CEQA Guidelines Plan Elements):

**(A) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.**

A GHG Reduction Strategy must include an emissions inventory that quantifies an existing baseline level of emissions and projected GHG emissions from a business-as-usual, no-plan, forecast scenario of the horizon year. The baseline year is based on the existing growth pattern defined by an existing general plan. The projected GHG emissions are based on the emissions from the existing growth pattern or general plan through to 2020, and if different, the year used for the forecast. If the forecast year is beyond 2020, BAAQMD recommends doing a forecast for 2020 to establish a trend. The forecast does not include new growth estimates based on a new or draft general plan.

When conducting the baseline emissions inventory and forecast, ARB's business-as-usual 2020 forecasting methodology should be followed to the extent possible, including the following recommended methodology and assumptions:

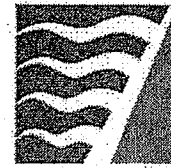
- The baseline inventory should include one complete calendar year of data for 2008 or earlier. CO<sub>2</sub> must be inventoried across all sectors (residential, commercial, industrial, transportation and waste); accounting of CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub>, HFC and PFC emission sources can also be included where reliable estimation methodologies and data are available.
- Business-as-usual emissions are projected in the absence of any policies or actions that would reduce emissions. The forecast should include only adopted and funded projects.
- The business-as-usual forecast should project emissions from the baseline year using growth factors specific to each of the different economic sectors: Recommendations for growth factors are included in the Air District's GHG Quantification Guidance document (explained below and available on the District's website).

The Air District's *GHG Plan Level Reduction Strategy Guidance* contains detailed recommendations for developing GHG emission inventories and projections and for quantifying emission reductions from policies and mitigation measures. This document is available at the Air District's website, <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES.aspx>.

**(B) Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.**

A GHG Reduction Strategy must establish a target that is adopted by legislation that meets or exceeds one of the following options, all based on AB 32 goals:





- Reduce emissions to 1990 level by 2020<sup>1</sup>
- Reduce emissions 15 percent below baseline (2008 or earlier) emission level by 2020<sup>2</sup>
- Meet the plan efficiency threshold of 6.6 MT CO<sub>2</sub>e/service population/year

If the target year for a GHG reduction goal exceeds 2020, then the GHG emission reduction target should be in line with the goals outlined in Executive Order S-3-05.

**(C) Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.**

A Strategy should identify and analyze GHG reductions from anticipated actions in order to understand the amount of reductions needed to meet its target. Anticipated actions refer to local and state policies and regulations that may be planned or adopted but not implemented. For example, ARB's Scoping Plan contains a number of measures that are planned but not yet implemented. BAAQMD recommends for the Strategy to include an additional forecast analyzing anticipated actions. Element (C), together with (A), is meant to identify the scope of GHG emissions to be reduced through Element (D).

**(D) Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.**

The GHG Reduction Strategy should include mandatory and enforceable measures that impact new development projects, such as mandatory energy efficiency standards, density requirements, etc. These measures may exist in codes or other policies and may be included in the Strategy by reference.

The GHG Reduction Strategy should include quantification of expected GHG reductions from each identified measure or categories of measures (such as residential energy efficiency measures, bike/pedestrian measures, recycling measures, etc.), including disclosure of calculation methods and assumptions. Quantification should reflect annual GHG reductions and demonstrate how the GHG reduction target will be met. The Strategy should specify which measures apply to new development projects.

**(E) Monitor the plan's progress**

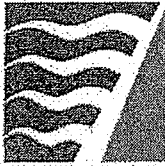
To ensure that all new development projects are incorporating all applicable measures contained within the GHG Reduction Strategy, the Strategy should include an Implementation Plan containing the following:

- Identification of which measures apply to different types of new development projects, discerning between voluntary and mandatory measures.
- Mechanism for reviewing and determining if all applicable mandatory measures are being adequately applied to new development projects.
- Identification of implementation steps and parties responsible for ensuring implementation of each action.

<sup>1</sup> Specified target in AB 32 legislation

<sup>2</sup> From "Climate Change Scoping Plan", Executive Summary page 5





- Schedule of implementation identifying near-term and longer-term implementation steps.
- Procedures for monitoring and updating the GHG inventory and reduction measures every 3-5 years before 2020 and submitting annual implementation updates to the jurisdiction's governing body.
- Annual review and reporting on the progress of implementation of individual measures, including assessment of how new development projects have been incorporating Strategy measures. Review should also include an assessment of the implementation of Scoping Plan measures in order to determine if adjustments to local Strategy must be made to account for any shortfalls in Scoping Plan implementation.

**(F) Adopt the GHG Reduction Strategy in a public process following environmental review**

A GHG Reduction Strategy should undergo an environmental review which may include a negative declaration or EIR.

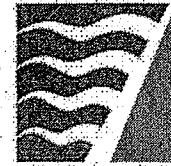
If the GHG Reduction Strategy consists of a number of different elements, such as a general plan, a climate action plan and/or separate codes, ordinances and policies, each element that is applicable to new development projects would have to complete an environmental review in order to allow tiering for new development projects.

**Sustainable Communities Strategy (SCS) or Alternative Planning Strategy**

If a project is located within an adopted Sustainable Communities Strategy or Alternative Planning Strategy, the GHG emissions from cars and light duty trucks do not need to be analyzed in the environmental analysis. This approach is consistent with the State CEQA Guidelines, Section 15183.5(c). This approach only applies to certain residential and mixed use projects and transit priority projects as defined in Section 21155 of the State CEQA Guidelines.

Section 15183.5(c) Special Situations. As provided in Public Resources Code sections 21155.2 and 21159.28, environmental documents for certain residential and mixed use projects, and transit priority projects, as defined in section 21155, that are consistent with the general use designation density, building intensity, and applicable policies specified for the project area in an applicable sustainable communities strategy 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 GHG emissions resulting from other source, however consistent with these Guidelines.

Section 21155: A transit priority project shall (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 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 one-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.

#### 4.4. MITIGATING OPERATIONAL-RELATED IMPACTS

The following mitigation measures would reduce operational-related emissions of criteria air pollutants, precursors, and GHGs from mobile, area, and stationary sources. Additional mitigation measures may be used, including off-site measures, provided their mitigation efficiency is justified. Where a range of emission reduction potential is given for a measure, the Lead Agency should provide justification for the mitigation reduction efficiency assumed for the project. If mitigation does not bring a project back within the threshold requirements, the project could be cumulatively significant and could be approved only with a Statement of Overriding Considerations and a showing that all feasible mitigation measures have been implemented.

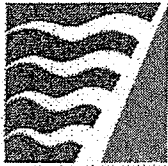
Reductions from mitigation measures should be scaled proportionally to their sector of project-generated emissions. For example, if a measure would result in a 50 percent reduction in residential natural gas consumption, but only 20 percent of a project's emissions are associated with natural gas consumption, and only 10 percent of a project's emissions are from residential land uses, then the scaled reduction would equal one percent ( $50\% \times 20\% \times 10\% = 1\%$ ).

Once all emission reductions are scaled by their applicable sector and land use, they should be added together for the total sum of emission reductions. Once all emission reductions are scaled by their applicable sector and land use, they should be added together for the total sum of emission reductions.

The Air District prefers for project emissions to be reduced to their extent possible onsite. For projects that are not able to mitigate onsite to a level below significance, offsite mitigation measures serve as a feasible alternative. Recent State's CEQA Guidelines amendments allow for offsite measures to mitigate a project's emissions, (Section 15126.4(c)(4)).

In implementing offsite mitigation measures, the lead agency must ensure that emission reductions from identified projects are real, permanent through the duration of the project, enforceable, and are equal to the pollutant type and amount of the project impact being offset. BAAQMD recommends that offsite mitigation projects occur within the nine-county Bay Area in order to reduce localized impacts and capture potential co-benefits. Offsite mitigation for PM and toxics emission reductions should occur within a five mile radius to the project site.





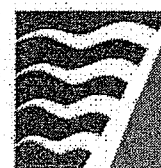
Another feasible mitigation measure the Air District is exploring establishing is an offsite mitigation program to assist lead agencies and project applicants in achieving emission reductions. A project applicant would enter into an agreement with the Air District and pay into an Air District fund. The Air District would commit to reducing the type and amount of emission identified in the agreement. The Air District would identify, implement, and manage offsite mitigation projects.

The following tables list feasible mitigation measures for consideration in projects. The estimated emission reductions are a work in progress and the Air District will continue to improve guidance on quantifying the mitigation measures.

**URBEMIS Mitigation Measures for Operational Mobile Source Emissions**

Measure	Sector Reductions	Applicable Pollutants	Sector	Notes	Additional comments
Mix of Uses	-3% to 9%	CAPs, GHGs	Mobile sources	-3 when no housing or employment centers within 1/2 mile	Residential: % reduction is taken from base trips (9.57) and subtracted from ITE trip generation; Nonresidential: % reduction from ITE trip generation
Local serving retail within 1/2 mile of project	2%	CAPs, GHGs	Mobile sources	Uses lower end of reported research to avoid double counting with mix of uses measure	
Transit Service	0% to 15%	CAPs, GHGs	Mobile sources		
Bike & Pedestrian	0%–9%	CAPs, GHGs	Mobile sources	Credit is given based on intersection density, sidewalk completeness, and bike network completeness; No reduction if entire area within 1/2 mile is single use	
Affordable Housing	0%–4%	CAPs, GHGs	Mobile sources		
Transportation Demand Management					
Parking, Transit Passes					
Daily Parking Charge	0%–25%	CAPs, GHGs	Only resident/ employee trips, no visitor/ shopper trips		
Parking Cash-Out	0%–12.5%	CAPs, GHGs		Shoup, Donald. 2005. Parking Cash Out. American Planning Association. Chicago, IL.	
Free Transit Passes	25% of Transit Service Reduction	CAPs, GHGs			
Telecommuting					
Employee Telecommuting Program	1%–100%	CAPs, GHGs	Mobile sources, Worker Trips only		
Compressed Work Schedule 3/36	1%–40%	CAPs, GHGs			
Compressed Work Schedule 4/40	1%–20%	CAPs, GHGs			
Compressed Work Schedule 9/80	1%–10%	CAPs, GHGs			



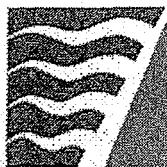

**URBEMIS Mitigation Measures for Operational Mobile Source Emissions**

Measure	Sector Reductions	Applicable Pollutants	Sector	Notes	Additional comments
<b>Other Transportation Demand Measures</b>					
Secure Bike Parking (at least 1 space per 20 vehicle spaces)	At least 3 elements: 1% reduction, plus 5% of the reduction for transit and pedestrian/bike friendliness; At least 5 elements: 2% reduction, plus 10% of the reduction for transit and pedestrian/bike friendliness	CAPs, GHGs	Mobile sources, Worker Trips only		
Showers/Changing Facilities Provided					
Guaranteed Ride Home Program Provided					
Car-Sharing Services Provided					
Information Provided on Transportation Alternatives (Bike Schedules, Maps)					
Dedicated Employee Transportation Coordinator					
Carpool Matching Program					
Preferential Carpool/Vanpool Parking					
Parking Supply	0%–50%	CAPs, GHGs	Mobile sources		
On Road Trucks	As input by user in URBEMIS	CAPs, GHGs	Mobile sources		

**URBEMIS Mitigation Measures for Operational Area-Source Emissions**

Measure	Sector Reductions	Applicable Pollutants	Sector	Notes
Increase Energy Efficiency Beyond Title 24	Same as % improvement over Title 24	CAPs, GHGs	Natural gas sector in URBEMIS for applicable land use only	User should specify baseline year for the Title 24 standards
Electrically powered landscape equipment and outdoor electrical outlets	Same as % of landscape equipment emissions	CAPs, GHGs	Landscape emissions: residential only	
Low VOC architectural coatings	Same as % VOC reduction in applicable coatings (Interior/Exterior)	ROG only	Architectural coating	

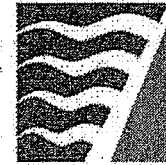




NON-URBEMIS Energy Efficiency Mitigation Measures

Measure	Sector Reductions	Applicable Pollutants	Sector	Notes	Additional comments
Plant shade trees within 40 feet of the south side or within 60 feet of the west sides of properties.	30%	GHGs	R, C A/C Electricity	USDA Forest Service, Pacific Northwest Research Station. "California Study Shows Shade Trees Reduce Summertime Electricity Use." Science Daily 7 January 2009. 20 February 2009 < <a href="http://www.sciencedaily.com/releases/2009/01/090105150831.htm">http://www.sciencedaily.com/releases/2009/01/090105150831.htm</a> >.	Electricity-related measures reduce CAPs off-site, but they are not typically quantified as part of a CEQA analysis.
Require cool roof materials (albedo $\geq 30$ )	34%	GHGs	C A/C Electricity	U.S. EPA Cool Roof Product Information, Available: < <a href="http://www.epa.gov/heatisoland/resources/pdf/CoolRoofsCompendium.pdf">http://www.epa.gov/heatisoland/resources/pdf/CoolRoofsCompendium.pdf</a> >	
	69%	GHGs	R A/C Electricity		
Install green roofs	1%	GHGs	R, C A/C Electricity	Reductions are based on the Energy & Atmosphere credits (EA Credit 2) documented in the Leadership in Energy & Environmental Design (LEED), Green Building Rating System for New Constructions and Major Renovations, Version 2.2, October 2005. The reduction assumes that a vegetated roof is installed on a least 50% of the roof area or that a combination high albedo and vegetated roof surface is installed that meets the following standard: $(\text{Area of SRI Roof}/0.75) + (\text{Area of vegetated roof}/0.5) \geq \text{Total Roof Area}$ .	
Require smart meters and programmable thermostats	10%	CAPs, GHGs	R, C electricity and natural gas space heating	U. S. Environmental Protection Agency. 2009. Programmable Thermostat. <a href="http://www.energystar.gov/ia/new_homes/features/ProgThermostats1-17-01.pdf">http://www.energystar.gov/ia/new_homes/features/ProgThermostats1-17-01.pdf</a>	

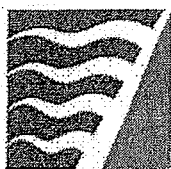




### NON-URBEMIS Energy Efficiency Mitigation Measures

Measure	Sector Reductions	Applicable Pollutants	Sector	Notes	Additional comments
Meet GBC standards in all New construction	17%	GHGs	R electricity	California Energy Commission [CEC] 2007. Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings	
	7%	GHGs	C electricity		
	9%	CAPs, GHGs	R natural gas		
	3%	CAPs, GHGs	C natural gas		
Retrofit existing buildings to meet CA GBC standards	38%	GHGs	R electricity	California Energy Commission [CEC] 2003. Impact Analysis 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings; California Energy Commission [CEC] 2007. Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings	
	12%	GHGs	C electricity		
	18%	CAPs, GHGs	R natural gas		
	12%	CAPs, GHGs	C natural gas		
Install solar water heaters	70%	CAPs, GHGs	R natural gas water heating	Energy Star. 2009. Solar Water Heater. <a href="http://www.energystar.gov/ia/new_homes/features/WaterHtrs_062906.pdf">http://www.energystar.gov/ia/new_homes/features/WaterHtrs_062906.pdf</a> , Department of Energy. California Energy Commission [CEC] 2007. Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings	Cannot take credit for both solar and tank-less water heater measures
	70%	CAPs, GHGs	C natural gas water heating		
Install tank-less water heaters	35%	CAPs, GHGs	R natural gas water heating	Tankless Water Heater. 2008. Available: <a href="http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=12820">http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=12820</a>	
	35%	CAPs, GHGs	C natural gas water heating		
Install solar panels on residential and commercial buildings	100%	GHGs	R, C electricity		

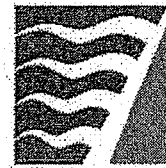




NON-URBEMIS Energy Efficiency Mitigation Measures

Measure	Sector Reductions	Applicable Pollutants	Sector	Notes	Additional comments
100% increase in diversity of land use mix	5%	CAPs, GHGs	Mobile sources	Ewing, Reid, et al. 2001. <i>Travel and the Built Environment: A Synthesis</i> . Transportation Research Record 1780. Paper No. 01-3515 as cited in Urban Land Institute. 2008. <i>Growing Cooler</i> . ISBN: 978-0-87420-082-2. Washington, DC	
Jobs housing balance	$\text{Trip reduction} = (1 - (\text{ABS} (1.5 * \text{HH} - \text{E}) / (1.5 * \text{HH} + \text{E})) - 0.25) / 0.25 * 0.03;$ where ABS = absolute value; HH = study area households ; E = study area employment	CAPs, GHGs	Mobile sources	Nelson/Nygaard Consultants. 2005. <i>Crediting Low-Traffic Developments: Adjusting Site-Level Vehicle Trip Generation Using URBEMIS</i> . Pg 12, (adapted from Criterion and Fehr & Peers, 2001)	
100% increase in design (i.e., presence of design guidelines for transit oriented development, complete streets standards)	3%	CAPs, GHGs	Mobile sources	Ewing, Reid, et al. 2001. <i>Travel and the Built Environment: A Synthesis</i> . Transportation Research Record 1780. Paper No. 01-3515 as cited in Urban Land Institute. 2008. <i>Growing Cooler</i> . ISBN: 978-0-87420-082-2. Washington, DC	

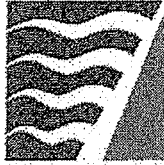




### NON-URBEMIS Energy Efficiency Mitigation Measures

Measure	Sector Reductions	Applicable Pollutants	Sector	Notes	Additional comments
100% increase in density	5%	CAPs, GHGs	Mobile sources	Ewing, Reid, et al. 2001. <i>Travel and the Built Environment: A Synthesis</i> . Transportation Research Record 1780. Paper No. 01-3515 as cited in Urban Land Institute. 2008. <i>Growing Cooler</i> . ISBN: 978-0-87420-082-2. Washington, DC	
HVAC duct sealing	30%	GHGs	R,C A/C electricity	Sacramento Metropolitan Utilities District. 2008. Duct Sealing. Available: < <a href="http://www.pge.com/myhome/saveenergymoney/rebates/coolheat/duct/index.shtml">http://www.pge.com/myhome/saveenergymoney/rebates/coolheat/duct/index.shtml</a> >.	
Provide necessary infrastructure and treatment to allow use of 50% greywater/ recycled water in residential and commercial uses for outdoor irrigation	SFR: 74%*50% = 37.5% MFR: 58% * 50% = 29% Commercial: 12% * 50% = 6%	GHGs	R electricity (water consumption) C electricity (water consumption)	Department of Water Resources. 2001. Statewide Indoor/Outdoor Split. Accessed December 2, 2008. Available at: < <a href="http://www.landwateruse.water.ca.gov/annualdata/urbanwateruse/2001/landuselvels.cfm?use=8">http://www.landwateruse.water.ca.gov/annualdata/urbanwateruse/2001/landuselvels.cfm?use=8</a> >.	
Complete streets (i.e., bike lanes and pedestrian sidewalks on both sides of streets, traffic calming features such as pedestrian bulb-outs, cross-walks, traffic circles, and elimination of physical and psychological barriers (e.g., sound walls and large arterial roadways, respectively).)	1-5%	CAPs, GHGs	Mobile sources	Dierkers, G., E. Silsbe, S. Stott, S. Winkelman, and M. Wubben. 2007. <i>CCAP Transportation Emissions Guidebook</i> . Center for Clean Air Policy. Washington, D.C. Available: < <a href="http://www.ccap.org/safe/guidebook.php">http://www.ccap.org/safe/guidebook.php</a> >. as cited in California Air Pollution Control Officers Association (CAPCOA) 2008. <i>CEQA and Climate Change</i> .	





**NON-URBEMIS Energy Efficiency Mitigation Measures**

Measure	Sector Reductions	Applicable Pollutants	Sector	Notes	Additional comments
Maximize interior day light		GHGs	R, C, M		
Increase roof/ceiling insulation		CAPs, GHGs	R, C, M		
Create program to encourage efficiency improvements in rental units		CAPs, GHGs	R		
Install rainwater collection systems in residential and Commercial Buildings		GHGs	R,C,M		
Install low-water use appliances and fixtures		GHGs	R,C,M	California Air Pollution Control Officers Association (CAPCOA) 2008. CEQA and Climate Change.	
Restrict the use of water for cleaning outdoor surfaces/Prohibit systems that apply water to non-vegetated surfaces		GHGs	R,C,M	California Attorney General's Office GHG Reduction Measures	
Implement water-sensitive urban design practices in new construction		GHGs	R,C,M		

**NON-URBEMIS Waste Reduction Mitigation Measures**

Provide composting facilities at residential uses		GHGs	R		
Create food waste and green waste curb-side pickup service		GHGs	R,C,M		
Require the provision of storage areas for recyclables and green waste in new construction		GHGs	R,C,M		

Notes: CAPs = Criteria Air Pollutants; GHGs = Greenhouse Gases; ROG = Reactive Organic Gases; R = Residential Development; C = Commercial Development; M = Mixed Use Development; A/C = Air Conditioning; and VOC = Volatile Organic Compounds.

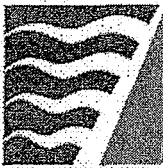
Source: Information compiled by EDAW 2009.





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## 5. LOCAL COMMUNITY RISK AND HAZARD IMPACTS<sup>3</sup>

The purpose of this Chapter is (1) to recommend methods whereby local community risk and hazard impacts from projects for both new sources and new receptors can be determined based on comparison with applicable thresholds of significance and screening criteria and (2) to recommend mitigation measures for these impacts. This chapter contains the following sections:

**Section 5.2** – Presents methods for assessing single-source impacts from either an individual new source or impacts on new receptors from existing individual sources.

**Section 5.3** – Discusses methods for assessing cumulative impacts from multiple sources.

**Section 5.4** – Discusses methods for mitigating local community risk and hazard impacts.

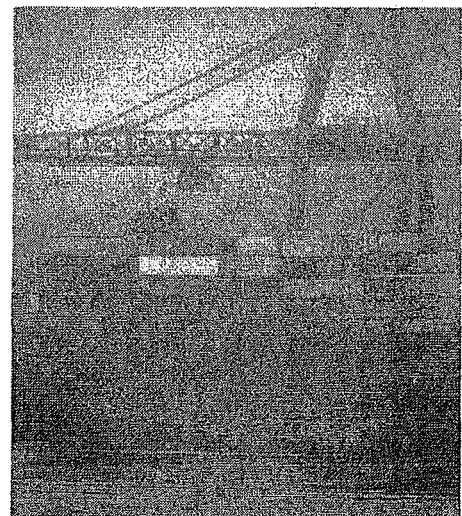
The recommendations provided in this chapter apply to assessing and mitigating impacts for project-level impacts and related cumulative impacts. Refer to Chapter 9 for recommendations for assessing and mitigating local community risk and hazard impacts at the plan-level.

To assist the Lead Agency in evaluating air quality impacts at the neighborhood scale, *Thresholds of Significance* have been established for local community risks and hazards associated with TACs and PM<sub>2.5</sub> with respect to siting a new source and/or receptor; as well as for assessing both individual source and cumulative multiple source impacts. These *Thresholds of Significance* focus on PM<sub>2.5</sub> and TACs because these more so than other emission types pose significant health impacts at the local level as discussed separately below.

### 5.1. TOXIC AIR CONTAMINANTS

TACs are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A wide range of sources, from industrial plants to motor vehicles, emit TACs. Like PM<sub>2.5</sub>, TAC can be emitted directly and can also be formed in the atmosphere through reactions among different pollutants. The methods presented in this Chapter for assessing local community risk and hazard impacts only include direct TAC emissions, not those formed in the atmosphere.

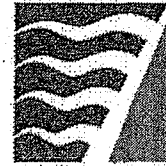
The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis or genetic damage; or short-term acute effects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches. For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure. Non-carcinogenic substances differ in that there is generally assumed to



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<sup>3</sup> The use of the receptor thresholds is discussed in section 2.8 of these Guidelines





be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis. Acute and chronic exposure to non-carcinogens is expressed as a hazard index (HI), which is the ratio of expected exposure levels to an acceptable reference exposure levels.

TACs are primarily regulated through State and local risk management programs. These programs are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. A chemical becomes a regulated TAC in California based on designation by the California Office of Environmental Health Hazard Assessment (OEHHA). As part of its jurisdiction under Air Toxics Hot Spots Program (Health and Safety Code Section 44360(b)(2)), OEHHA derives cancer potencies and reference exposure levels (RELs) for individual air contaminants based on the current scientific knowledge that includes consideration of possible differential effects on the health of infants, children and other sensitive subpopulations, in accordance with the mandate of the Children's Environmental Health Protection Act (Senate Bill 25, Escutia, Chapter 731, Statutes of 1999, Health and Safety Code Sections 39669.5 et seq.). The methodology in this Chapter reflects the approach adopted by OEHHA in May 2009, which considers age sensitivity factors to account for early life stage exposures. The specific toxicity values of each particular TAC as identified by OEHHA are listed in BAAQMD's Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.

#### 5.1.1. Fine Particulate Matter

PM<sub>2.5</sub> is a complex mixture of substances that includes elements such as carbon and metals; compounds such as nitrates, organics, and sulfates; and complex mixtures such as diesel exhaust and wood smoke. PM<sub>2.5</sub> can be emitted directly and can also be formed in the atmosphere through reactions among different pollutants. The methods presented in this Chapter for assessing local community risk and hazard impacts only include direct PM<sub>2.5</sub> emissions, not those formed in the atmosphere.

Compelling evidence suggests that PM<sub>2.5</sub> is by far the most harmful air pollutant in the SFBAAB in terms of the associated impact on public health. A large body of scientific evidence indicates that **both long-term and short-term exposure to PM<sub>2.5</sub> can cause a wide range of health effects (e.g., aggravating asthma and bronchitis, causing visits to the hospital for respiratory and cardiovascular symptoms, and contributing to heart attacks and deaths).** BAAQMD recommends characterizing potential health effects from exposure to directly PM<sub>2.5</sub> emissions through comparison to the applicable *Thresholds of Significance*.

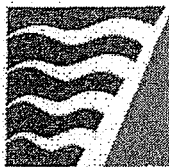
#### 5.1.2. Common Source Types

Common stationary source types of TAC and PM<sub>2.5</sub> emissions include gasoline stations, dry cleaners, and diesel backup generators, which are subject to BAAQMD permit requirements. The other, often more significant, common source type is on-road motor vehicles on freeways and roads such as trucks and cars, and off-road sources such as construction equipment, ships and trains. Because these common sources are prevalent in many communities, this Chapter focuses on screening tools for the evaluation of associated cumulative community risk and hazard impacts. However, it is important to note that other influential source types do exist (e.g., ports, railyards, and truck distribution centers), but these are often more complex and require more advanced modeling techniques beyond those discussed herein.

#### 5.1.3. Area of Influence

For assessing community risks and hazards, a 1,000 foot radius is recommended around the project property boundary. BAAQMD recommends that any proposed project that includes the siting of a new source or receptor assess associated impacts within 1,000 feet, taking into account both individual and nearby cumulative sources (i.e., proposed project plus existing and foreseeable future projects). Cumulative sources represent the combined total risk values of each





individual source within the 1,000-foot evaluation zone. A lead agency should enlarge the 1,000-foot radius on a case-by-case basis if an unusually large source or sources of risk or hazard emissions that may affect a proposed project is beyond the recommended radius.

The recommended methodology for assessing community risks and hazards from PM<sub>2.5</sub> and TACs follows a phased approach. Within this approach, more advanced techniques, for both new sources and receptors, which require additional site specific information are presented for each progressive phase to assess risks and hazards. Each phase provides concentrations and risks that are directly comparable to the applicable *Thresholds of Significance*, although it is important to note that the use of more site specific modeling input data produces more accurate results. Also, progression from one phase to the next in a sequential fashion is not necessary and a refined modeling analysis can be conducted at any time.

#### 5.1.4. Impacted Communities

In the Bay Area, there are a number of urban or industrialized communities where the exposure to TACs is relatively high in comparison to others. These same communities are often faced with other environmental and socio-economic hardships that further stress their residents and result in poor health outcomes. To address community risk from air toxics, the Air District initiated the Community Air Risk Evaluation (CARE) program in 2004 to identify locations with high levels of risk from TACs co-located with sensitive populations and use the information to help focus mitigation measures. Through the CARE program, the Air District developed an inventory of TAC emissions for 2005 and compiled demographic and health indicator data. According to the findings of the CARE Program, diesel PM, mostly from on and off-road mobile sources, accounts for over 80 percent of the inhalation cancer risk from TACs in the Bay Area. Figure 5-1 shows the impacted communities as of November 2009, including: the urban core areas of Concord, eastern San Francisco, western Alameda County, Redwood City/East Palo Alto, Richmond/San Pablo, and San Jose. For more information on, and possible revisions to, impacted communities, go to the [CARE Program](#) website.

In many cases, air quality conditions in impacted communities result in part from land use and transportation decisions made over many years. BAAQMD believes comprehensive, community-wide strategies will achieve the greatest reductions in emissions of and exposure to TAC and PM<sub>2.5</sub>. BAAQMD strongly recommends that within these impacted areas local jurisdictions develop and adopt Community Risk Reduction Plans, described in Section 5.4. The goal of the Community Risk Reduction Plan is to encourage local jurisdictions to take a proactive approach to reduce the overall exposure to TAC and PM<sub>2.5</sub> emissions and concentrations from new and existing sources. Local plans may also be developed in other areas to address air quality impacts related to land use decisions and ensure sufficient health protection in the community.

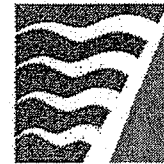
## 5.2. SINGLE SOURCE IMPACTS

### 5.2.1. Significance Determination

The Lead Agency shall determine whether operational-related TAC and PM<sub>2.5</sub> emissions generated as part of a proposed project siting a new source or receptor would expose existing or new receptors to levels that exceed BAAQMD's applicable *Thresholds of Significance* stated below:

- Compliance with a qualified Community Risk Reduction Plan;
- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) risk greater than 1.0 HI from a single source would be a significant cumulatively considerable contribution;



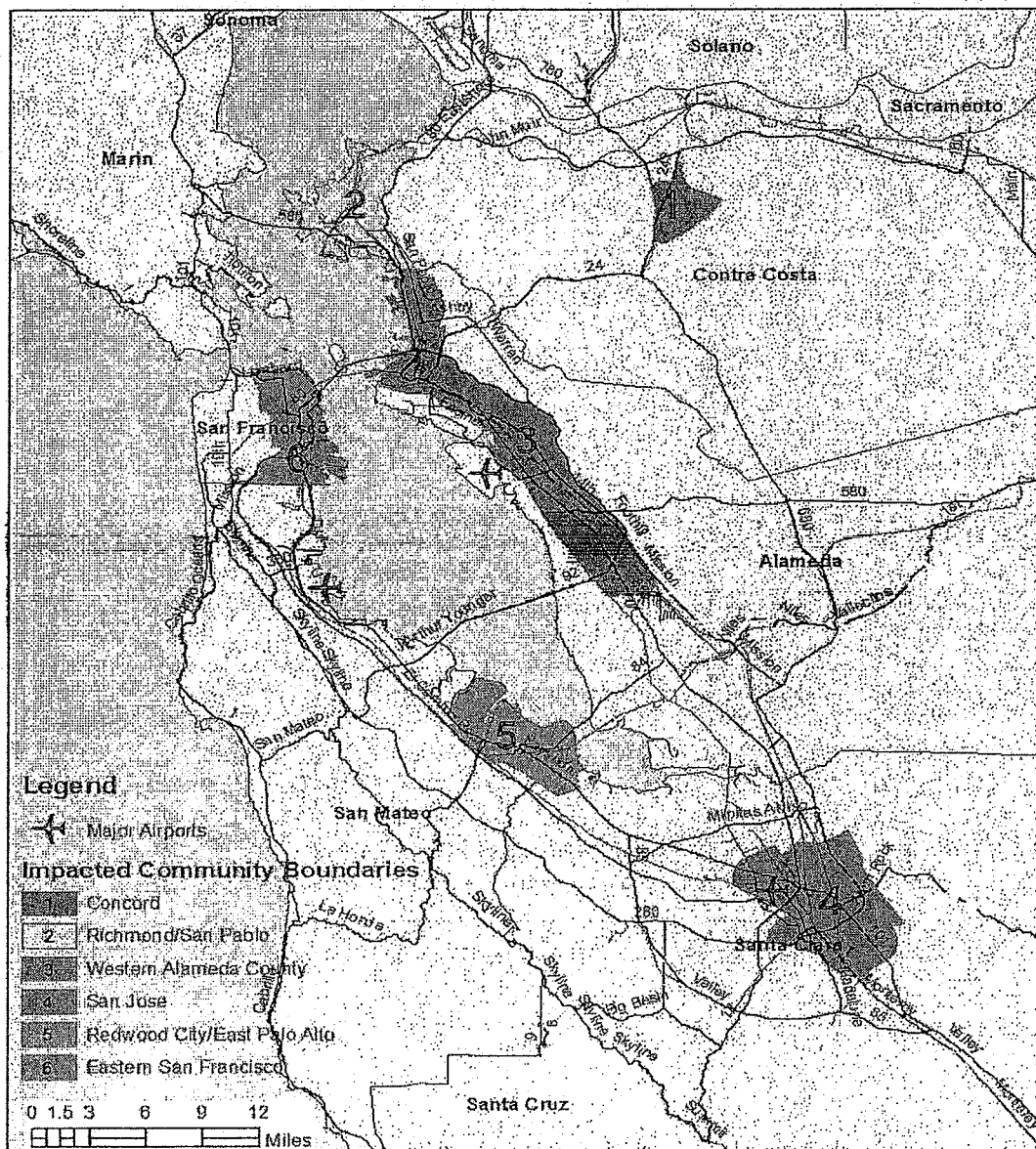


- An incremental increase of greater than  $0.3 \mu\text{g}/\text{m}^3$  annual average  $\text{PM}_{2.5}$  from a single source would be a significant cumulatively considerable contribution.

In all areas, but especially within impacted communities identified under BAAQMD's CARE program, the Lead Agency is encouraged to develop and adopt a Community Risk Reduction Plan. To determine whether an impacted community is located in a jurisdiction, the Lead Agency should refer to Figure 5-1 and the BAAQMD CARE web page at <http://www.baaqmd.gov/CARE/>. Please consult with BAAQMD if a more precise map is needed.

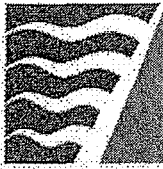
Impacted Communities

Figure 5-1



Source: BAAQMD 2009





Exposure of receptors to substantial concentrations of TACs and PM<sub>2.5</sub> could occur from the following situations:

1. Siting a new TAC and/or PM<sub>2.5</sub> source (e.g., diesel generator, truck distribution center, freeway) near existing or planned receptors; and
2. Siting a new receptor near an existing source of TAC and/or PM<sub>2.5</sub> emissions.

BAAQMD recommendations for evaluating and making a significance determination for each of these situations are discussed separately below.

#### **5.2.2. Siting a New Source**

When evaluating whether a new source of TAC and/or PM<sub>2.5</sub> emissions would adversely affect existing or future proposed receptors, a Lead Agency shall examine:

- the extent to which the new source would increase risk levels, hazard index, and/or PM<sub>2.5</sub> concentrations at nearby receptors,
- whether the source would be permitted or non-permitted by the BAAQMD, and
- whether the project would implement Best Available Control Technology for Toxics (T-BACT), as determined by BAAQMD.

The incremental increase in cancer and non-cancer (chronic and acute) risk from TACs and PM<sub>2.5</sub> concentrations at the affected receptors shall be assessed. As described above, the recommended methodology for assessing community risks and hazards from PM<sub>2.5</sub> and TACs follows a phased approach, within which progressively more advanced techniques are presented for each phase (Figure 5-2). Each phase provides concentrations and risks that are directly comparable to the applicable *Thresholds of Significance*, although it is important to note that the use of more site specific modeling input data produces more accurate results. Also, progression from one phase to the next in a sequential fashion is not necessary and a refined modeling analysis can be conducted at any time.

For siting a new source, the first step is to determine the associated emission levels.

#### **5.2.3. Sources Permitted by BAAQMD**

For sources that would be permitted by BAAQMD (e.g., gas stations and back-up diesel generators) the project's type, size, or planned level of use can be used to help estimate PM<sub>2.5</sub> and TAC emissions. Screening or modeling conducted as part of the permit application can be used to determine cancer and non-cancer risk and PM<sub>2.5</sub> concentrations for comparing to the applicable *Thresholds of Significance*. BAAQMD can assist in determining the level of emissions associated with the new source. A Lead Agency should identify the maximally exposed existing or reasonably foreseeable future receptor.

Requirements of Toxics New Source Review (Regulation 2, Rule 5) will determine whether the project would implement T-BACT.



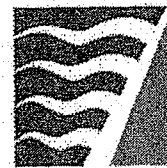
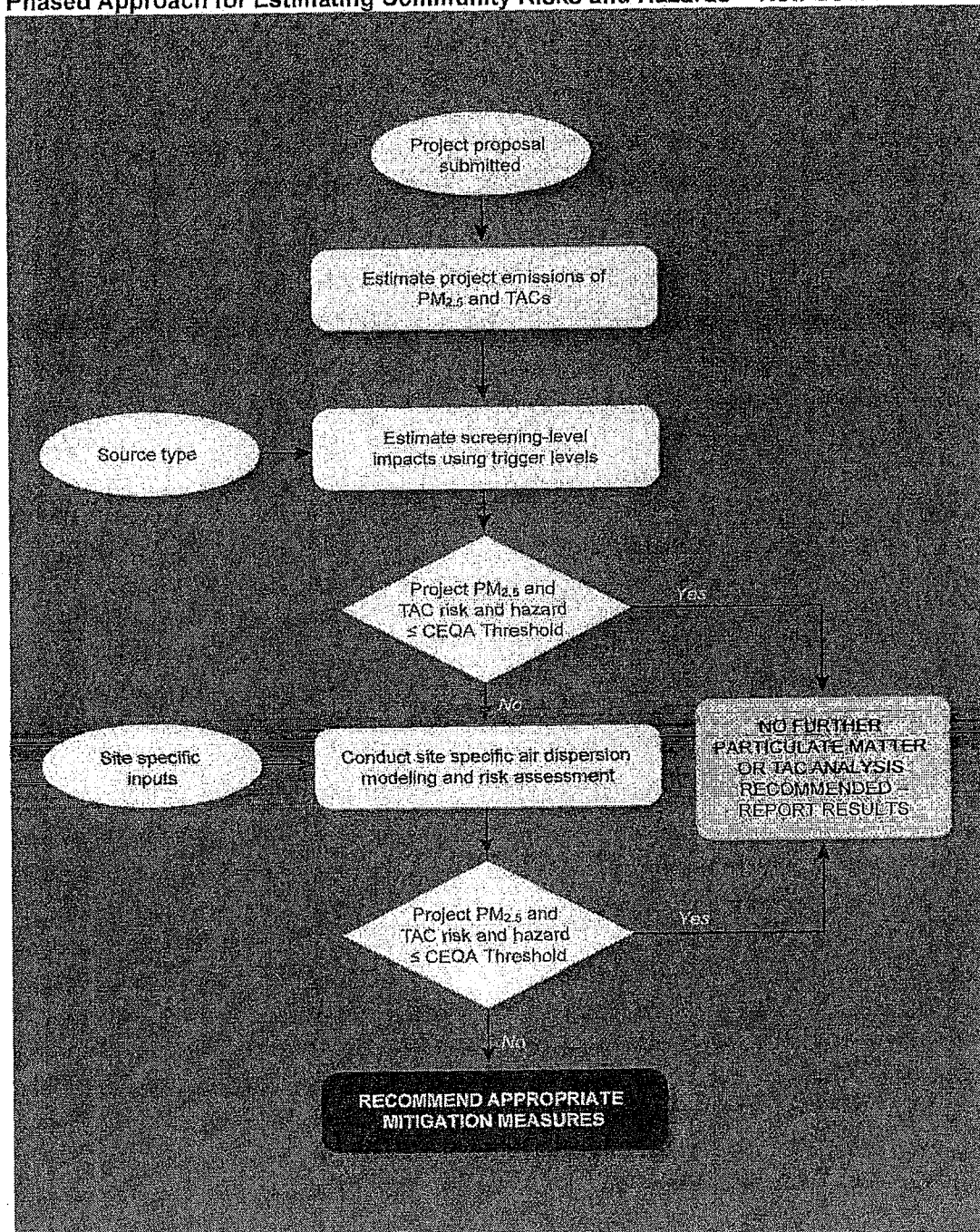


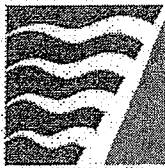
Figure 5-2

Phased Approach for Estimating Community Risks and Hazards – New Sources



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Concentration estimates of  $PM_{2.5}$  from screening or modeling should be compared with the *Threshold of Significance* for  $PM_{2.5}$ . If screening estimates determine  $PM_{2.5}$  concentrations from the project would not exceed the *Threshold of Significance*, no further analysis is recommended (See Figure 5-2). If emissions would exceed the *Threshold of Significance*, more refined modeling or mitigation measures to offset emission can be considered.

#### 5.2.4. Sources Not Requiring a BAAQMD Permit

Some proposed projects would include the operation of non-permitted sources of TAC and/or  $PM_{2.5}$  emissions. For instance, projects that would attract high numbers of diesel-powered on-road trucks or use off-road diesel equipment on site, such as a distribution center, a quarry, or a manufacturing facility, would potentially expose existing or future planned receptors to substantial risk levels and/or health hazards.

For sources that would not require permits from BAAQMD (e.g., distribution centers and large retail centers) where emissions are primarily from mobile sources—the number and activity of vehicles and fleet information would be required. The latest version of the State of California's EMFAC model is recommended for estimating emissions from on-road vehicles; the OFFROAD model is recommended for estimating emissions from off-road vehicles. For these types of new sources (not permitted by BAAQMD) screening methods are not currently available and a more refined analysis is necessary.

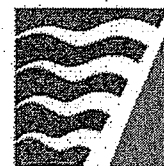


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If modeling estimates for community risks and hazards determine that local levels associated with the proposed project meet the applicable *Thresholds of Significance*, no further analysis is recommended. More details on project screening and recommended protocols for modeling stationary and mobile sources are presented in Recommended Methods for Screening and Modeling Local Risks and Hazards. This online companion document provides screening tables for emissions from on-road cars and trucks on major roadways and many existing permitted sources in the SFBAAB. It describes how to use screening tables to determine whether a site specific modeling analysis and risk assessment is required. The document also addresses sources that BAAQMD has determined to have negligible impact on health outcomes. It describes the recommended methodology for performing dispersion modeling and estimating emission factors if the project exceeds the thresholds based on the screening analysis; it describes how to calculate the potential cancer risk using age-sensitivity toxicity factors from the concentrations produced from the air modeling analysis; and it provides a sample calculation and the methodology for estimating short term, acute exposures and long term, chronic health impacts. The recommended protocols are consistent with the most current risk assessment methodology used for the BAAQMD's New Source Review for Toxic Air Contaminants Regulation 2, Rule 5: Toxics New Source Review and, with few exceptions, follows the California Air Pollution Control Officers Association's (CAPCOA) Health Risk Assessments for Proposed Land Use Projects (July 2009).

BAAQMD recommends that all receptors located within a 1,000 foot radius of the project's fence line be assessed for potentially significant impacts from the incremental increase in risks or hazards from the proposed new source. A lead agency should enlarge the 1,000-foot radius on a case-by-case basis if an unusually large source or sources of risk or hazard emissions that may affect a proposed project is beyond the recommended radius.





For new land uses that would host a high number of non-permitted TAC sources, such as a distribution center, the incremental increase in cancer risk shall be determined by an HRA using an acceptable air dispersion model in accordance with BAAQMD's Recommended Methods for Screening and Modeling Local Risks and Hazards and/or CAPCOA's guidance document titled Health Risk Assessments for Proposed Land Use Projects. A Lead Agency may consult HRAs that have previously been conducted for similar land uses to determine whether it assesses the incremental increase in cancer risk qualitatively or by performing an HRA. This analysis shall account for all TAC and PM emissions generated on the project site, as well as any TAC emissions that would occur near the site as a result of the implementation of the project (e.g., diesel trucks queuing outside an entrance, a high volume of trucks using a road to access a quarry or landfill).

Some proposed projects would include both permitted and non-permitted TAC sources. For instance, a manufacturing facility may include some permitted stationary sources and also attract a high volume of diesel trucks and/or include a rail yard. All sources should be accounted for in the analysis.

#### 5.2.5. Siting a New Receptor<sup>4</sup>

If a project is likely to be a place where people live, play, or convalesce, it should be considered a receptor. It should also be considered a receptor if sensitive individuals are likely to spend a significant amount of time there. Sensitive individuals refer to those segments of the population most susceptible to poor air quality: children, the elderly, and those with pre-existing serious health problems affected by air quality (ARB 2005). Examples of receptors include residences, schools and school yards, parks and play grounds, daycare centers, nursing homes, and medical facilities. Residences can include houses, apartments, and senior living complexes. Medical facilities can include hospitals, convalescent homes, and health clinics. Playgrounds could be play areas associated with parks or community centers.

When siting a new receptor, a Lead Agency shall examine existing or future proposed sources of TAC and/or PM<sub>2.5</sub> emissions that would adversely affect individuals within the planned project. A Lead Agency shall examine:

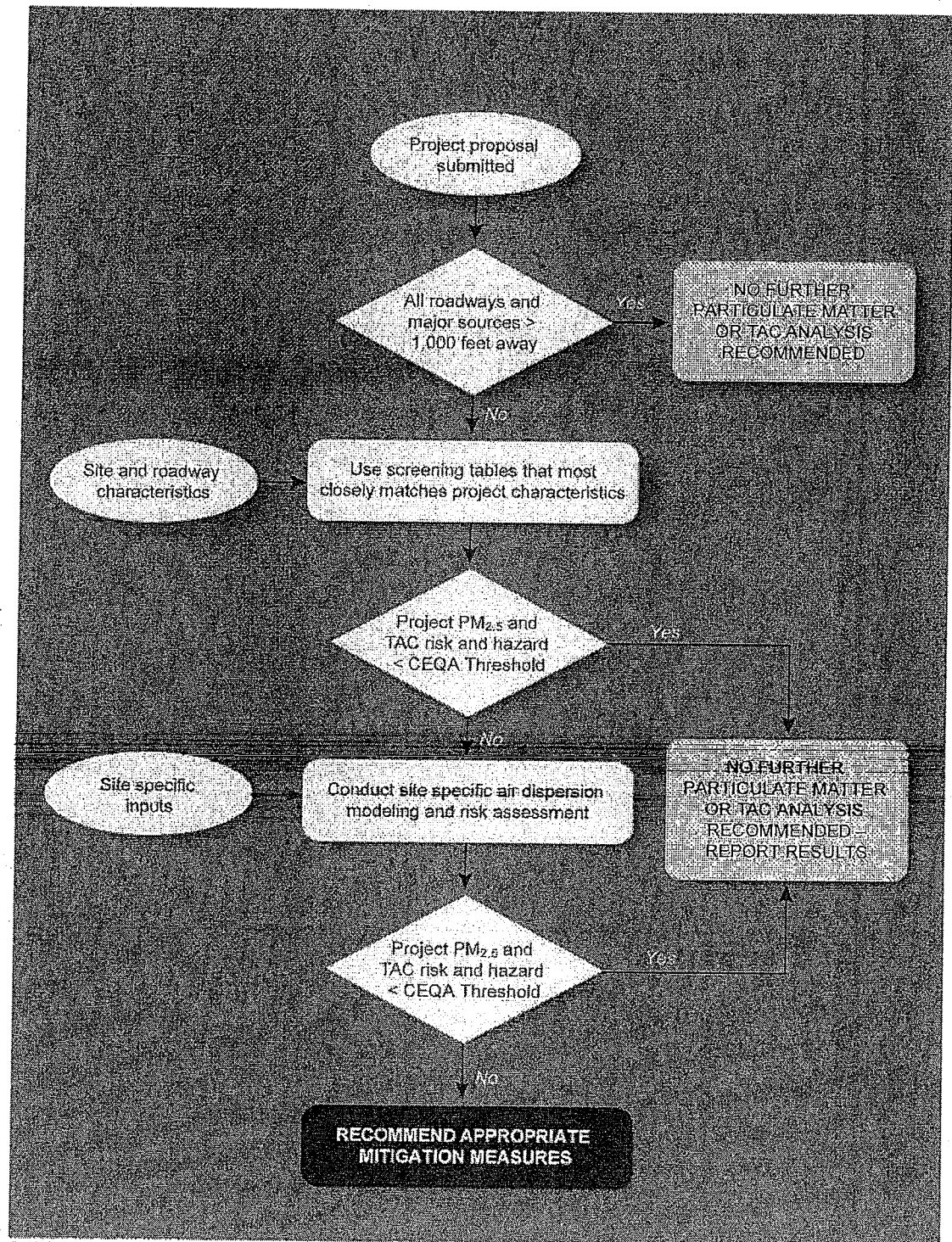
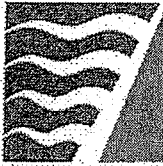
- the extent to which existing sources would increase risk levels, hazard index, and/or PM<sub>2.5</sub> concentrations near the planned receptor,
- whether the existing sources are permitted or non-permitted by the BAAQMD, and
- whether there are freeways or major roadways near the planned receptor.

BAAQMD recommends that a Lead Agency identify all TAC and PM<sub>2.5</sub> sources located within a 1,000 foot radius of the proposed project site. A lead agency should enlarge the 1,000-foot radius on a case-by-case basis if an unusually large source or sources of risk or hazard emissions that may affect a proposed project is beyond the recommended radius. Permitted sources of TAC and PM<sub>2.5</sub> should be identified and located as should freeways and major roadways, and other potential sources. To conduct a thorough search, a Lead Agency shall gather all facility data within 1,000 feet of the project site (and beyond where appropriate).

The phased approach for evaluating impacts to new receptors is shown in Figure 5-3.

<sup>4</sup> The use of the receptor thresholds is discussed in section 2.8 of these Guidelines

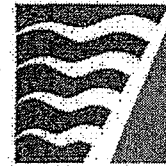




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Phased Approach for Estimating Community Risks and Hazards – Receptors  
Figure 5-3





### 5.2.6. Screening Table for Stationary Sources

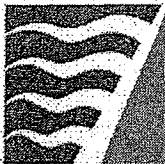
BAAQMD will make available data for certain existing permitted, stationary sources of TAC and PM<sub>2.5</sub> with site locations, coordinates, source type, and screening-level estimates of excess cancer risk, chronic, and acute HI, and PM<sub>2.5</sub> concentrations. An example of the entries to be provided in this table is shown in Table 5-1.

<b>Table 5-1</b> <b>Screening Table for Existing Permitted Stationary Sources*</b> <b>(within 1,000 feet of the Proposed Project)</b>									
<b>EXAMPLE</b> <b>Proposed Project Location Details:</b> <b>Address-19th Avenue and Judah Street, San Francisco, CA</b> <b>Centroid UTM's-E 546090, N 4179460</b>									
Site #	Facility Name	Street Address	City	UTM E	UTM N	Cancer Risk in a million	Chronic Hazard Index	Acute Hazard Index	PM <sub>2.5</sub> ug/m <sup>3</sup>
462	20th Avenue Cleaner	1845 Irving Street	San Francisco	546113	4179490	7.5	0.02	0.00	
4672	Sundown Cleaners	1952 Irving Street	San Francisco	546016	4179510	7.5	0.02	0.00	
13519	Pacific Bell	1515 19th Avenue	San Francisco	546086	4179240	58.4	0.10	0.04	0.10
2155	Chevron Station #91000	1288 19th Avenue	San Francisco	546052	4179720	5.8	0.03	0.00	
8756	ConocoPhillips #251075	1400 19th Avenue	San Francisco	546064	4179490	2.7	0.01	0.00	
9266	ConocoPhillips #2611185	1401 19th Avenue	San Francisco	546058	4179500	2.2	0.01	0.00	
<b>Cumulative:</b>						<b>84</b>	<b>0.19</b>	<b>0.04</b>	<b>0.10</b>
Source: BAAQMD 2009									
*This example provides conservative screening level estimates and does not represent actual risk levels, HI or PM concentrations for the facilities listed.									

Table 5-1 selects a hypothetical location at 19<sup>th</sup> Avenue and Judah Street in San Francisco, as shown at the top of the table along with the Universal Transverse Mercator (UTM) coordinates of the location. Below this location are listed permitted facilities within 1,000 feet of the example location. Each row contains entries for a specific existing permitted source and conservative estimates of maximum risk, hazard index, and PM<sub>2.5</sub> concentration within the 1,000 foot radius. Within a row, each risk, HI, or PM<sub>2.5</sub> concentration for a source can be compared to the significance threshold: cancer risk is compared to 10 in a million; chronic and acute hazard index are compared to 1.0; and PM<sub>2.5</sub> concentration is compared to 0.3 ug/m<sup>3</sup>. In Table 5-1 all entries are below the target threshold except for the source at 1515 19<sup>th</sup> Avenue, which has a cancer risk, conservatively estimated at about 58 in a million.

It is important to note that the listing of existing sources provided by the BAAQMD provides conservative screening-level estimates and does not represent the actual risk levels, HI, or PM





concentrations for that facility. These estimates are assumed to be uniform within the 1,000 foot radius and independent of the distance between source and receptor.

To use the screening tables, a Lead Agency would identify sources in the tables within 1,000 feet (or beyond where appropriate) of the project site. Risks, hazards, and PM<sub>2.5</sub> concentrations for individual sources correspond to the table entries. These values are assumed to remain constant for all locations within the 1,000 foot radius. Table entries within a column can be summed to estimate the cumulative risks from all sources. The screening table for Air District permitted sources is also available as a compressed keyhole language (kmz) file for each of the nine Bay Area counties. The kmz file can be plotted using the Google Earth™ mapping tool, which is freely available as described in [Recommended Methodology for Screening and Modeling Local Risks and Hazards](#).

#### 5.2.7. Screening Tables for On-road Mobile Sources

For all State highways within the SFBAAB, BAAQMD will make available a set of maps and tables that provide screening-level risks and PM<sub>2.5</sub> concentrations. Screening tables are provided for each of the nine counties within BAAQMD's jurisdiction. To develop these tables, BAAQMD selected conservative assumptions and inputs following this general methodology:

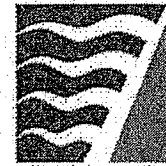
- Hourly vehicle miles traveled (VMT) and emissions for 2012 were developed for each county using EMFAC based on default vehicle mix and full range of vehicle speeds.
- Highest vehicle traffic volumes for each roadway based on Caltrans's *2007 Traffic Volumes on California State Highways* were scaled based on VMT to develop hourly vehicle volumes.
- Hourly vehicle volume and emissions were input into a roadway model, CAL3QHCR, to estimate annual average concentrations using the most conservative meteorological data collected from monitoring locations within each county.

For the PM<sub>2.5</sub> screening tables, the peak one hour of traffic was used to develop hourly vehicle volumes that totaled to the annual average daily traffic while risk and hazard tables are based on annual average daily vehicle volumes.

The purpose of the screening tables is to provide an easy-to-use initial analysis to determine if nearby roadway impacts to a new receptor are below the thresholds of significance. The outcome of the screening may be used to make a determination of no further action or it may indicate that a more refined analysis is warranted. The recommended project screening approach is as follows:

1. Determine if the new receptor is at least 1,000 feet from the nearest significant traffic volume roadway defined as a freeway or arterial roadway with greater than 10,000 vehicles per day. For new residential developments, the receptor should be placed at the edge of the property boundary. If the receptor does not have any significant roadway sources within 1,000 foot radius, then the proposed project meets the distance requirements and no further single-source roadway-related air quality evaluation is recommended.
2. If the receptor is within the 1,000 feet radius of a nearby roadway that has greater than 20,000 vehicles per day, then use the county- and road-specific screening tables to determine the PM<sub>2.5</sub> concentrations, cancer risks, and hazards for the project. For non-California highways, default local roadway screening tables are provided in the online report [Recommended Methodology for Screening and Modeling Local Risks and Hazards](#). If any of the thresholds for PM<sub>2.5</sub> concentration, risks, and hazards are





exceeded based on the comparisons, then more refined modeling analysis is recommended or the project sponsor may choose to implement mitigation measures.

3. For developments that exceed the screening analysis, site specific modeling analysis is recommended following BAAQMD's Recommended Methodology for Screening and Modeling Local Risks and Hazards.

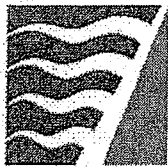
For completion of Step 2 as described above, the methodology requires the use of appropriate screening tables to determine if the distance from the development to the nearby significant roadway will expose new receptors to concentrations exceeding the thresholds. The first step is to ensure that the latest screening tables have been downloaded from BAAQMD's website. An example (Table 5-2) is included in this section for San Francisco County for demonstration purposes only and should not be relied upon for use in a CEQA analysis. The Lead Agency or project sponsor must first gather project information including the county for which the development is proposed and the distance of the project to the nearest state highway or local roadway to determine which screening tables are appropriate. For each county, two tables are provided for PM<sub>2.5</sub> concentrations, cancer risks, chronic non-cancer hazards, and acute non-cancer hazards based on whether the project is located north or south of the roadway or east or west of the roadway. The direction tables correspond to whether the projects are located generally upwind or downwind of the roadway with respect to the prevailing wind direction. Appropriate values are then posted in each table based on the project being located 100 feet, 200 feet, 500 feet, 700 feet, and 1,000 feet from the edge of the nearest travel lane to the project.

For proposed projects, the appropriate cell should be determined by referencing the corresponding county, roadway, and project distance in the tables that most closely matches the project conditions. If the project is predominantly north or south of the roadway, choose the north or south tables. Likewise, if the project is predominantly east or west, choose the east or west tables. If the project is evenly located for example, northeast or southwest of the roadway, select the higher value between either screening tables based on the project distance to the roadway. For distances not listed in the tables, BAAQMD recommends that the values between the two closest distances be linearly interpolated to estimate the value that best reflects the actual project distance.

The results of the screening analysis indicate whether new receptors will be exposed to roadway TAC emissions at concentrations exceeding the threshold of significance and therefore, a more refined modeling analysis and quantitative HRA may be required. If the concentration is less than the thresholds, then no further analysis is required for the single source comparison for roadways. The results of the analysis should be reported in the environmental documentation or staff report that includes a reference to the screening tables used. If the concentrations exceed the thresholds, then the project sponsor has the option to conduct a more refined modeling analysis or implement appropriate mitigation measures.

An example of how to use the screening tables is provided as follows. A new residential development is hypothetically proposed at the intersection of 23<sup>rd</sup> Street and Minnesota Street in San Francisco. It is located approximately 440 feet to the east of midpoint of northbound Highway 280. Based on Table 5-2, the PM<sub>2.5</sub> concentrations from Highway 280 is 0.60 µg/m<sup>3</sup> at 200 feet away and 0.28 µg/m<sup>3</sup> 500 feet away from the project.





**Table 5-2**  
**East or West of San Francisco County Highway**

Highway	Distance East or West of Freeway – PM <sub>2.5</sub> Concentrations (ug/m <sup>3</sup> )				
	100 Feet	200 Feet	500 Feet	700 Feet	1,000 Feet
1	0.50	0.28	0.12	0.096	0.060
35	0.14	0.11	0.032	0.020	0.016
80	1.0	0.64	0.30	0.20	0.15
101	1.1	0.72	0.34	0.26	0.17
280	0.80	0.60	0.28	0.19	0.13

Source: BAAQMD 2009; table above for demonstration purposes and should not be used in CEQA analysis.

To linearly interpolate the PM<sub>2.5</sub> concentration for the project distance of 440 feet, the following equation was used:

$$(200 \text{ ft} - 500 \text{ ft}) \times (0.60 \text{ ug/m}^3 - \text{PM}_{2.5 \text{ 440 feet}}) = (200 \text{ ft} - 440 \text{ ft}) \times (0.6 \text{ ug/m}^3 - 0.28 \text{ ug/m}^3)$$

Solving for PM<sub>2.5</sub> at 440 feet, the PM<sub>2.5</sub> concentration is estimated as 0.34 ug/m<sup>3</sup>.

A similar example methodology was applied to the cancer risk, chronic non-cancer hazard and acute hazard. The resulting values based on a distance of 440 feet are shown in Table 5-3.

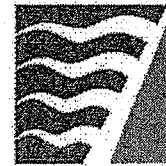
**Table 5-3**  
**Cancer and Non-Cancer (Chronic and Acute) Hazard Indices at 440 feet**

Description	Screening Value	Thresholds	Exceeds Threshold?
PM <sub>2.5</sub> Concentration	0.34 ug/m <sup>3</sup>	0.3 ug/m <sup>3</sup>	Yes
Cancer Risk	1.1 in a million	10 in a million	No
Chronic Non-cancer Hazard Index	0.028	1	No
Acute Non-cancer Hazard Index	0.028	1	No

Source: BAAQMD 2009; table above for demonstration purposes and should not be used in CEQA analysis.

In this example, the proposed project would exceed the PM<sub>2.5</sub> threshold, but not the risk or hazard-based thresholds. At this point, the project sponsor can ratio the PM concentration further based on the actual AADT at the closest milepost to the project. If the concentrations continue to exceed the threshold, the project sponsor can determine whether additional modeling is warranted or implementation of mitigation measures is appropriate. Possible options include moving the residential portion of the development to a distance at which the roadway impacts would be negligible or installing high efficiency filtration in the development.





If the project sponsors choose to conduct a more refined modeling analysis, BAAQMD recommends the following general procedures. More detailed methodology is provided on the online resources located at BAAQMD's CEQA webpage. To evaluate PM<sub>2.5</sub> concentrations, BAAQMD recommends using CAL3QHC, which was designed to model roadside CO and PM concentrations. The CAL3QHC model can estimate PM<sub>2.5</sub> concentrations at defined receptor locations by processing hourly meteorological data over a year, hourly emissions, and traffic volume. The latest version of the model is available at: [http://www.epa.gov/scram001/dispersion\\_prefrec.htm](http://www.epa.gov/scram001/dispersion_prefrec.htm).

To run CAL3QHC, meteorological, traffic, and vehicle emissions data at specified intervals over time are required. BAAQMD recommends the use of the meteorological data that most closely represents conditions at the site. BAAQMD offers readily compatible meteorological data for each county within the SFBAAB that can be run by CAL3QHC at <http://hank.baaqmd.gov/tec/data/>. For the screening analysis, BAAQMD relied on the most conservative meteorological data collected from any stations within the county; however, in this site-specific analysis, the user should select the data that is nearest the project and reflects actual meteorological conditions.

Emissions data must also be input into the CAL3QHC model. Year 2012 average hourly emissions (e.g., grams/vehicle mile) were used in developing the screening tables. The emissions data can be produced using the EMFAC2007 model, but should be reflective of the base year in which residents will be residing in the new development. The model should also be run assuming the full range of vehicle fleet and if available, the average vehicle speeds along the specific stretch of road. However, if average speeds are not available, the user should select the full range of variable speeds to ensure that the analysis is health protective.

**Table 5-4**  
**San Francisco County State Highway Traffic Volumes**

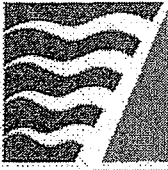
Highway Number	Average Daily 2-way Traffic Volumes (Vehicles/day)	Start Location	End Location
1	122,000	Alemany Boulevard	Presidio, South Highway 2, onto Golden Gate Bridge
35	31,000	John Muir Drive	Highway 1, Sloat Boulevard at 19 <sup>th</sup> Avenue
80	254,000	Highway 101 at Division Street	Bay Bridge at Treasure Island, Yerba Buena Island
101	245,000	Third Street	Van Ness Avenue to Highway 1 at Golden Gate Bridge
280	195,000	Alemany Boulevard, San Jose Avenue	Mariposa Street to 4 <sup>th</sup> Street and Brannan Street

Source: BAAQMD 2009

How to use the screening tables:

- Distance is from the center of the highway to the facility or development
- When two or more highways are within the influence area, sum the contribution from each freeway





The CAL3QHCR model also relies on hourly traffic volumes (e.g., vehicles per hour) as determined by the relative VMT. BAAQMD recommends developing a weighed VMT by using the ratio of VMT per hour to the peak VMT over the 24 hour day (as produced by the EMFAC model). This weighed VMT represents the percentage of traffic volume on an hourly basis over a 24 hour period. The hourly traffic volumes for the CAL3QHCR model are then the product of the weighed VMT by the peak traffic volumes for that roadway. The peak one-hour vehicle traffic for the applicable milepost of any California highway can be determined through the Caltrans web site at <http://traffic-counts.dot.ca.gov/>. Develop hourly emissions rates for input into the air model. The model provides annual average PM<sub>2.5</sub> concentrations that can be compared directly against the thresholds.

A more detailed analysis is required for estimating the risk and hazard evaluation. TAC emissions were evaluated for only those toxic compounds found in diesel or gasoline fuel including diesel PM, benzene, ethylbenzene, acrolein, etc. The District recommends using the CAL3QHCR model. The model must be run separately to estimate emissions from diesel PM and emission of other TAC. In each analysis, the District recommends developing diesel specific emission factors from EMFAC. Because risk and hazard are expressed as lifetime exposure, the emissions were averaged from 2012 to 2040 that accounts for more efficient vehicle emissions and increased VMT. Beyond 2040, the EMFAC model does not have emissions and consequently, the 2040 emissions were applied from 2040 to 2082, to complete a 70-year lifetime exposure.

Annual average traffic volumes were used in the model. As specified in Regulation 2, Rule 5, BAAQMD recommends that age sensitivity factors be applied to the emissions per year to account for early life-stage exposures. The cancer risk and hazard levels are calculated using the predicted annual average concentrations multiplied by the cancer slope factor for cancer risk or divided by the relative exposure levels for hazard.

The risk and hazard levels are then compared against the applicable thresholds. Further assessment may be warranted if the thresholds are exceeded, but the project sponsor may consider design changes and other mitigation measures as a means of reducing potential risks (see Section 5.4). **For detailed discussion on this methodology, the project sponsor should download the online report *Recommended Methodology for Screening and Modeling Local Risks and Hazards*.**

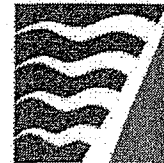
### 5.3. CUMULATIVE IMPACTS

#### 5.3.1. Significance Determination

A Lead Agency shall examine TAC and/or PM<sub>2.5</sub> sources that are located within 1,000 feet of a proposed project site. Sources of TACs include, but are not limited to, land uses such as freeways and high volume roadways, truck distribution centers, ports, rail yards, refineries, chrome plating facilities, dry cleaners using perchloroethylene, and gasoline dispensing facilities. Land uses that contain permitted sources, such as a landfill or manufacturing plant, may also contain non-permitted TAC and/or PM<sub>2.5</sub> sources, particularly if they host a high volume of diesel truck activity. A Lead Agency should determine what the combined risk levels are from all nearby TAC sources in the vicinity of sensitive receptors. Lead agencies should use their judgment to decide if there are significant sources outside 1,000 feet that should be included.

A Lead Agency's analysis shall determine whether TAC and/or PM<sub>2.5</sub> emissions generated as part of a proposed project would expose off-site receptors to risk levels that exceed BAAQMD's applicable *Thresholds of Significance* for determining cumulative impacts.





A project would have a cumulative significant impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000 foot radius (or beyond where appropriate) from the fence line of a source, or from the location of a receptor, plus the contribution from the project, exceeds the following:

- An excess cancer risk levels of more than 100 in one million or a chronic hazard index greater than 10 for TACs; or
- 0.8  $\mu\text{g}/\text{m}^3$  annual average  $\text{PM}_{2.5}$ .

Within impacted communities identified under BAAQMD's CARE program, the Lead Agency is encouraged to develop and adopt a Community Risk Reduction Plan. To determine whether a new source is located in an impacted community, the Lead Agency should refer to Figure 5-1 and the CARE webpage. Please consult with BAAQMD if a more precise map is needed.

BAAQMD recommends that cumulative impacts of new sources and new receptors be evaluated as described in Section 5.2, and include the impacts of all individual sources (stationary and roadways) within the 1,000 foot radius.

Community risk and hazards analyses should follow guidance developed by BAAQMD for risk screening described in *Recommended Methodology for Screening and Modeling Local Risks and Hazards*, which generally follows CAPCOA's guidance document titled *Health Risk Assessments for Proposed Land Use Projects*.  $\text{PM}_{2.5}$  concentrations and risk levels estimated for the locations where receptors may be located should be compared to BAAQMD's applicable *Threshold of Significance* for siting a new receptor near existing sources of TAC emissions.

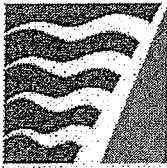
A Lead Agency shall compare the analysis results from TAC and  $\text{PM}_{2.5}$  emissions with the applicable *Threshold of Significance*. *Thresholds of Significance* apply for projects that would site new permitted or non-permitted sources in close proximity to receptors and for projects that would site new sensitive receptors in close proximity to permitted or non-permitted sources of TAC emissions. If a proposed project would not exceed BAAQMD's applicable *Threshold of Significance* for TACs or  $\text{PM}_{2.5}$ , then the project would result in a less-than-significant air quality impact. If a project would exceed the applicable *Threshold of Significance*, the proposed project would result in a significant air quality impact and the Lead Agency should implement all feasible mitigation to reduce the impact (refer to Section 5.4).

If implementation of BAAQMD-recommended mitigation measures for reducing TAC and  $\text{PM}_{2.5}$  emissions and resultant exposure to health risks would reduce all TAC impacts to levels below the applicable *Threshold of Significance*, TAC impacts would be reduced to a less-than-significant level. If resultant health risk exposure would still exceed the applicable *Threshold of Significance*, the impacts would remain significant and unavoidable.

#### 5.4. COMMUNITY RISK REDUCTION PLANS

The goal of a Community Risk Reduction Plan would be to bring TAC and  $\text{PM}_{2.5}$  concentrations for the entire community covered by the Plan down to acceptable levels as identified by the local jurisdiction and approved by the Air District. This approach provides local agencies a proactive alternative to addressing communities with high levels of risk on a project-by-project approach. The Air District has developed detailed guidelines for preparing Community Risk Reduction Plans which can be found on the Air District web site at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES.aspx>.





#### **Qualified Community Risk Reduction Plans**

A qualified Community Risk Reduction Plan adopted by a local jurisdiction should include, at a minimum, the following elements:

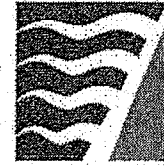
- (A) Define a planning area;
- (B) Include base year and future year emissions inventories of TACs and PM<sub>2.5</sub>;
- (C) Include Air District–approved risk modeling of current and future risks;
- (D) Establish risk and exposure reduction goals and targets for the community in consultation with Air District staff;
- (E) Identify feasible, quantifiable, and verifiable measures to reduce emissions and exposures;
- (F) Include procedures for monitoring and updating the inventory, modeling and reduction measures in coordination with Air District staff;
- (G) Be adopted in a public process following environmental review.

#### **5.5. MITIGATING LOCAL COMMUNITY RISK AND HAZARD IMPACTS**

For stationary sources, please refer to BAAQMD's permit handbook and BACT/T-BACT workbook. BAAQMD-recommended mitigation measures for reducing the exposure of sensitive receptors to TACs and hazards include the following:

1. Increase project distance from freeways and/or major roadways.
2. Redesign the site layout to locate sensitive receptors as far as possible from any freeways, major roadways, or other non-permitted TAC sources (e.g., loading docks, parking lots).
3. In some cases, BAAQMD may recommend site redesign. BAAQMD will work closely with the local jurisdiction and project consultant in developing a design that is more appropriate for the site.
4. Large projects may consider phased development where commercial/retail portions of the project are developed first. This would allow time for CARB's diesel regulations to effectively reduce diesel emissions along major highways and arterial roadways. Ultimately lower concentrations would be predicted along the roads in the near future such that residential development would be impacted by less risk in later phases of development.
5. Projects that propose sensitive receptors adjacent to sources of diesel PM (e.g., freeways, major roadways, rail lines, and rail yards) shall consider tiered plantings of trees such as redwood, deodar cedar, live oak and oleander to reduce TAC and PM exposure. This recommendation is based on a laboratory study that measured the removal rates of PM passing through leaves and needles of vegetation. Particles were generated in a wind tunnel and a static chamber and passed through vegetative layers at low wind velocities. Redwood, deodar cedar, live oak, and oleander were tested. The results indicate that all forms of vegetation were able to remove 65–85 percent of very fine particles at wind velocities below 1.5 meters per second (approximately 3 miles per hour [mph]) with redwood and deodar cedar being the most effective. Even greater

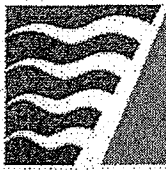




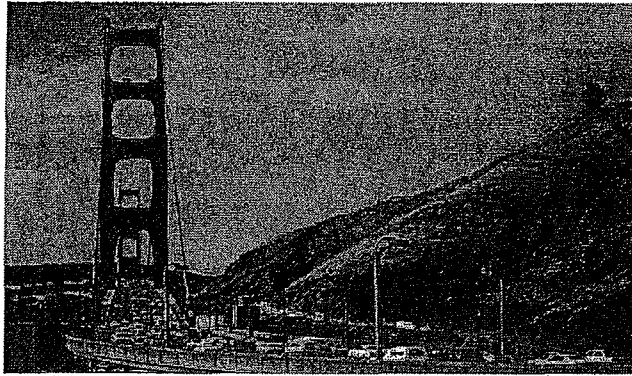
removal rates were predicted for ultra-fine PM (i.e., aerodynamic resistance diameter of 0.1 micrometer or less).

6. Install and maintain air filtration systems of fresh air supply either on an individual unit-by-unit basis, with individual air intake and exhaust ducts ventilating each unit separately, or through a centralized building ventilation system. The ventilation system should be certified to achieve a certain effectiveness, for example, to remove at least 80% of ambient PM<sub>2.5</sub> concentrations from indoor areas. The air intake for these units should be located away from areas producing the air pollution (i.e., away from major roadways and highways).
7. Where appropriate, install passive (drop-in) electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph).
8. Locate air intakes and design windows to reduce PM exposure (e.g., windows nearest to the freeway do not open).
9. Install indoor air quality monitoring units in buildings.
10. Require rerouting of nearby heavy-duty truck routes.
11. Enforce illegal parking and/or idling of heavy-duty trucks in vicinity.





## 6. LOCAL CARBON MONOXIDE IMPACTS



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Emissions and ambient concentrations of CO have decreased dramatically in the SFBAAB with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991. SFBAAB is currently designated as an attainment area for the CAAQS and NAAQS for CO; however, elevated localized concentrations of CO still warrant consideration in the environmental review process. Occurrences of localized CO concentrations, known

as hotspots, are often associated with heavy traffic congestion, which most frequently occur at signalized intersections of high-volume roadways.

### 6.1. SIGNIFICANCE DETERMINATION

#### Step 1: Comparison of Project Attributes with Screening Criteria

The first step in determining the significance of CO emissions is to compare the attributes of the proposed project to the applicable *Screening Criteria* (refer to Chapter 3).

This preliminary screening procedure provides a conservative indication of whether the proposed project would result in the generation of CO concentrations that would substantially contribute to an exceedance of the *Thresholds of Significance*. If all of the *Screening Criteria* are met, the proposed project would result in a less-than-significant impact to air quality with respect to concentrations of local CO. If the proposed project does not meet all the screening criteria, then CO emissions should be quantified.

#### Step 2: Emissions Quantification

This section describes recommended methodologies for quantifying concentrations of local CO for proposed projects that do not meet all of the *Screening Criteria*. The recommended methodology is to use both the On-Road Mobile-Source Emission Factors (EMFAC) and the California Line Source Dispersion Model (CALINE4) models in accordance with recommendations in the University of California, Davis, Transportation Project-Level Carbon Monoxide Protocol (*CO Protocol*) (Garza, et al. 1997).

#### Air Quality Models

BAAQMD recommends using the most current version of the EMFAC model to obtain mobile-source emission factors for CO associated with operating conditions that would be representative of the roadway or facility subject to analysis.

Users should input the emission factors and other input parameters into the CALINE4 model to quantify CO concentrations near roadways or facilities.

The CO Protocol contains detailed methodology for modeling CO impacts.





### **Input Parameters**

The CALINE4 model contains five screens for input data. CALINE4 input parameters are summarized below. For more detailed descriptions see the CALINE4 Users Guide.

#### **Job Parameters**

**File Name** – Name the file (e.g., data file extension) to create the CALINE4 Input file.

**Job Title** – Provide a name for the modeling scenario (e.g., existing no project, existing plus project).

**Run Type** – Select the worst-case wind angle.

**Aerodynamic Roughness Coefficient** – Choose the characteristic (i.e., rural, suburban, central business district, other) that is most representative of the project site.

**Model Information** – Indicate the unit of measurement (i.e., meters or feet) and inputs the vertical dimension of the project (i.e., altitude above sea level).

**Run** – Once data input is completed, return to this screen to run the model. Upon running the model, the output will appear as a text file called C4\$.out. Save the output file under an appropriate filename for future reference.

#### **Link Geometry**

On this screen, input the dimensions (i.e., coordinates) for the roadway intersection that is the subject of the analysis.

**Link Name** – Input names for each roadway segment.

**Link Type** – Indicate the character of the roadway segment (i.e., at-grade, depressed, fill, bridge, parking lot).

**Endpoint Coordinates ( $X_1$ ,  $X_2$ ,  $Y_1$ ,  $Y_2$ )** – Input the dimensions (i.e., coordinates) of the roadway segments as though the intersection were oriented at point of origin  $X = 0$ ,  $Y = 0$  on a Cartesian coordinate system. Roadway segments approaching the intersection from the west side of the screen (if north is treated as "up", or the top of the screen) would have negative X coordinate endpoints. Similarly, roadway segments approaching the intersection from the south would have negative Y coordinate endpoints.

**Link Height** – Indicate the vertical dimension of the roadway segment. If the roadway segment is at-grade, should set this parameter to zero. If the roadway segment is depressed, enter a negative value for this parameter.

**Mixing Zone Width** – The Mixing Zone is defined as the width of the roadway, plus three meters on either side. The minimum allowable value is 10 meters, or 32.81 feet.

**Canyon/Bluff (Mix Left/Right)** – Set these features to zero.

#### **Link Activity**

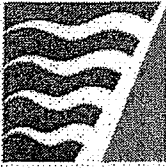
**Traffic Volume** – Input hourly traffic volumes applicable to each roadway segment.

**Emission Factor** – Input the CO emission factor (in units of grams/mile) obtained from EMFAC for the applicable vehicle speed class reflecting operating conditions for the affected intersection.

#### **Run Conditions**

**Wind Speed** – Input 0.5 meters per second to represent worst-case conditions.





Wind Direction – Set parameter to zero. Select “Worst-Case Wind Angle” as the “Run Type” on the “Job Parameters” screen, so this field will be overridden by the model.

Wind Direction Standard Deviation – Use a wind direction standard deviation of 5 degrees to represent worst-case conditions.

Atmospheric Stability Class – Use Stability Class 4 (i.e., class D) to represent average conditions in the SFBAAB.

Mixing Height – Indicate the vertical dimension over which vertical mixing may occur. In most situations, input 300 meters, approximately the height of the atmospheric boundary layer. If the roadway subject to analysis is a bridge underpass, tunnel, or other situation where vertical mixing would be limited, indicates the height of the structure that would hamper vertical mixing (in units of meters).

Ambient Temperature – Indicate the average temperature of the project site during the time of day at which maximum daily traffic volume would occur (in degrees Celsius). A temperature of 7.2 degrees Celsius is recommended.

Ambient Pollutant Concentration – Enter 0 in this field to determine the contribution of CO from the roadway subject to analysis. Add the roadway-related CO concentration to ambient CO levels outside of the CALINE4 model, as discussed later in this section.

#### ***Receptor Positions***

Receptor Name – Input names for each receptor.

Receptor Coordinates (X, Y, Z) – Input receptor coordinates in a manner similar to the “Link Coordinates” on the “Link Geometry” screen. Locate receptors at three and seven meters from the intersection in all directions from the intersection, in accordance with the recommendations of the *CO Protocol*. The Receptor Coordinates are oriented in the same Cartesian coordinate system as the roadway segment “Link Coordinates.” **Receptors located to the southwest of the intersection would have negative X and Y coordinates.** The Z dimension should be assigned the coordinate of 1.8 meters (5.9 feet); the approximate breathing height of a receptor located adjacent to the roadway.

This screen also contains a window that shows a map of the link and receptor coordinates in the X, Y plane.

#### **Model Output**

CALINE4 output includes estimated 1-hour CO concentrations in units of ppm at the receptor locations input into the model. Note the highest concentrations at each of the three meter and seven meter receptor distances from the roadway.

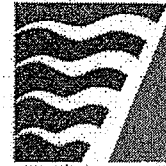
#### **Background Concentrations**

Ambient 1-hour CO concentrations can be obtained from ARB air quality monitoring station data and 8-hour concentrations from EPA. Users should obtain the CO monitoring data recorded at the monitoring station nearest the project site. According to the *CO Protocol*, select the second highest concentration recorded during the last two years to represent the ambient CO concentration in the project area.

#### **Estimated Localized CO Concentrations**

Users should sum the highest modeled 1-hour CO concentration in units of ppm obtained from CALINE4 to ambient (background) 1-hour CO concentrations in ppm obtained from ARB. This represents the modeled worst-case 1-hour CO concentration near the affected roadway.





Persistence Factor – multiply the highest 1-hour CO concentration estimated by CALINE4 by a persistence factor of 0.7, as recommended in the CO Protocol, to obtain the estimated 8-hour CO concentration.

Add the estimated 8-hour CO concentration (ppm) obtained in the previous step to the ambient 8-hour CO concentration obtained from EPA (ppm). This represents the modeled worst-case 8-hour CO concentration near the affected roadway.

**Step 3: Comparison of Unmitigated Emissions with Thresholds of Significance**

Following quantification of local CO emissions in accordance with the recommended methods, compare the total modeled worst-case 1-hour and 8-hour CO concentrations with the applicable *Threshold of Significance*. If the modeled concentrations do not exceed any of the *Thresholds of Significance*, the project would result in a less-than-significant impact to air quality. If modeled concentrations do exceed any applicable *Threshold of Significance*, the proposed project would result in a significant impact to air quality with respect to local CO impacts.

**Step 4: Mitigation Measures and Emission Reductions**

Where local CO emissions exceed applicable *Thresholds of Significance*, refer to Section 6.2 for recommended mitigation measures and associated emission reductions. Only reduction measures included in the proposed project or recommended as mitigation in a CEQA-compliant document can be included when quantifying mitigated emission levels.

**Step 5: Comparison of Mitigated Emissions with Thresholds of Significance**

Following quantification of local CO emissions in accordance with the recommended methods, compare the total modeled worst-case 1-hour and 8-hour CO concentrations with the applicable *Thresholds of Significance*. If the implementation of recommended mitigation measures reduces all local CO emissions to levels below the applicable *Thresholds of Significance*, the impact to air quality would be reduced to a less-than-significant level. If mitigated levels of local CO emissions still exceed the applicable *Threshold of Significance*, the impact to air quality would remain significant and unavoidable.

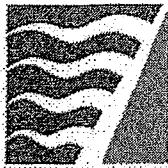
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## **6.2. MITIGATING LOCAL CARBON MONOXIDE IMPACTS**

The following section describes recommended mitigation measures for reducing local CO impacts to air quality. Consider implementation of the following measures, as feasible, for reducing project-generated traffic volumes and associated CO emissions at affected intersections. Actual emission reductions should be quantified through project-specific transportation modeling.

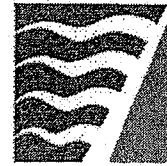
1. Synchronize traffic signals to improve traffic flow and minimize traffic congestion.
2. Consider additional traffic signals, such as light metering, to relocate congested areas further away from receptors.
3. Improve public transit service to reduce vehicle traffic and increase public transit mode share during peak traffic congestion periods.
4. Improve bicycle and pedestrian infrastructure to reduce vehicle traffic and increase bicycle and pedestrian mode share during peak traffic congestion periods. Improvements may include installing class I or II bike lanes, sidewalks, and traffic calming features.
5. Adjust pedestrian crosswalk signal timing to minimize waiting time for vehicles turning right or otherwise sharing green time with pedestrians. Give pedestrians a head start before traffic signal changes to green.





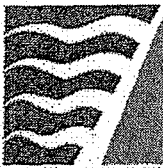
6. Where pedestrian traffic is high, implement pedestrian crosswalks with multi-directional crossings allowing pedestrians to cross intersections diagonally.
7. Limit heavy-duty truck traffic during peak hours. Designate truck routes that divert truck traffic away from congested intersections.
8. Limit left turns or other maneuvers during peak hours that add to congestion.
9. Limit on-street parking during peak hours to allow for added vehicle capacity.
10. Implement traffic congestion-alleviating mitigation measures as identified by a traffic engineer.





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## 7. ODOR IMPACTS<sup>5</sup>

Odor impacts could result from siting a new odor source near existing sensitive receptors or siting a new sensitive receptor near an existing odor source. Examples of land uses that have the potential to generate considerable odors include, but are not limited to:

1. Wastewater treatment plants;
2. Landfills;
3. Confined animal facilities;
4. Composting stations;
5. Food manufacturing plants;
6. Refineries; and
7. Chemical plants.

Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. **Odor intensity depends on the concentration in the air. When an odor sample is progressively diluted, the odor concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odor reaches a level that is no longer detectable.**

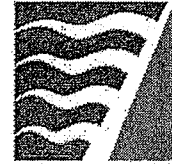
The presence of an odor impact is dependent on a number of variables including:

1. Nature of the odor source (e.g., wastewater treatment plant, food processing plant);
2. Frequency of odor generation (e.g., daily, seasonal, activity-specific);
3. Intensity of odor (e.g., concentration);
4. Distance of odor source to sensitive receptors (e.g., miles);
5. Wind direction (e.g., upwind or downwind); and
6. Sensitivity of the receptor.

The recommendations provided in this chapter only apply to assessing and mitigating odor impacts for individual projects. Please refer to Chapter 9 for recommendations for assessing and mitigating odor impacts at the plan-level.

<sup>5</sup> The use of the receptor thresholds is discussed in section 2.8 of these Guidelines





## 7.1. SIGNIFICANCE DETERMINATION

Odor impacts could occur from two different situations:

1. Siting a new odor source (e.g., the project includes a proposed odor source near existing sensitive receptors), or
2. Siting a new receptor (e.g., the project includes proposed sensitive receptors near an existing odor source).

Regardless of the situation, BAAQMD recommends completing the following steps to comprehensively analyze the potential for an odor impact.

### **Step 1: Disclosure of Odor Parameters**

The first step in assessing potential odor impacts is to gather and disclose applicable information regarding the characteristics of the buffer zone between the sensitive receptor(s) and the odor source(s), local meteorological conditions, and the nature of the odor source. Consideration of such parameters assists in evaluating the potential for odor impacts as a result of the proposed project. Projects should clearly state the following information in odor analyses, which provide the minimum amount of information required to address potential odor impacts:

1. Type of odor source(s) the project is exposed to or the type of odor source(s) produced by the project (e.g., wastewater treatment plant, landfill, food manufacturing plant);
2. Frequency of odor events generated by odor source(s) (e.g., operating hours, seasonal);
3. Distance and landscape between the odor source(s) and the sensitive receptor(s) (e.g., topography, land features); and
4. Predominant wind direction and speed and whether the sensitive receptor(s) in question are upwind or downwind from the odor source(s).

### **Step 2: Odor Screening Distances**

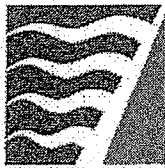
BAAQMD has developed a list of recommended odor screening distances for specific odor-generating facilities shown in Table 3-3. Projects that would locate sensitive receptor(s) to odor source(s) closer than the screening distances would be considered to result in a potential significant impact. If the proposed project would include the operation of an odor source, the screening distances should also be used to evaluate the potential impact to existing sensitive receptors. Projects that would locate sensitive receptor(s) near odor source(s) farther than the screening distances, or vice versa, would be considered to have a sufficient buffer to avoid significant impacts. The odor screening distances in Table 3-3 should not be used as absolute thresholds, rather an indicator to how much further analysis is required. The Lead Agency should also consider the other parameters listed above in Step 1 and information from Step 3 below to comprehensively evaluate potential odor impacts.

### **Step 3: Odor Complaint History**

The impact of an existing odor source on surrounding sensitive receptors should also be evaluated by identifying the number of confirmed complaints received for that specific odor source.

Facilities that are regulated by CalRecycle (e.g. landfill, composting, etc.) are required to have Odor Impact Minimization Plans (OIMP) in place and have procedures that establish fence line odor detection thresholds. The Air District recognizes a Lead Agency's discretion under CEQA to use established odor detection thresholds as thresholds of significance for CEQA review for CalRecycle regulated facilities with an adopted OIMP.





If the proposed project would be located near an existing odor source, lead agencies should contact BAAQMD to obtain the odor complaints over the past 3 years for the source in question. Then calculate the annual average confirmed odor complaints filed for the source. BAAQMD considers a source to have a substantial number of odor complaints if the complaint history includes five or more confirmed complaints per year averaged over a 3-year period. Also, disclose the distance at which receptors were affected by the existing odor source. As discussed in Step 1, describe the topography and landscape between the receptors and the odor source. These distances and landscaping should then be compared with the distance and landscape that would separate the proposed project and the odor source.

If the proposed project would locate an odor source, first identify the location of potential sensitive receptors (i.e., distance, upwind/downwind) with respect to the project site. If the proposed odor source does not have any existing or planned sensitive receptors within the screening distances shown in Table 3-3, it may be considered less than significant for odor impacts. To evaluate how implementation of the proposed source project would affect identified sensitive receptors contact BAAQMD to obtain odor complaints in the region for facilities similar in size and type of odor produced in the past 3 years. These surrogate odor complaints should be evaluated for their distance from source to receptor, and then compared with the distance from the proposed project to receptors. Odor complaints from the surrogate odor source are considered substantial if the complaint history includes more than five confirmed complaints per year averaged over a 3-year period.

BAAQMD considers a substantial number of odor complaints, specifically, more than five confirmed complaints per year averaged over the past three years as the indication of an odor impact. As discussed above, the Lead Agency should compare the odor parameters (i.e., distance and wind direction) associated with the odor complaints that have been filed with those of the proposed project. Similar to the odor screening distances, odor complaints should not be used as an absolute threshold, but evidence to support a significance determination.

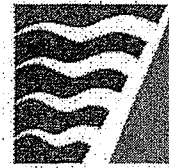
#### **Step 4: Significance Determination**

**An odor source with five or more confirmed complaints per year averaged over three years is considered to have a significant impact.** BAAQMD recognizes that there is not one piece of information that can solely be used to determine the significance of an odor impact. The factors (i.e., Step 1 through 3) discussed above could enhance the potential for a significant odor impact or help prevent the potential for a significant odor impact. For example, a project that would be located near an existing odor source may not discover any odor complaints for the existing odor source. It is possible that factors such as a small number of existing nearby receptors, predominate wind direction blowing away from the existing receptors, and/or seasonality of the odor source has prevented any odor complaints from being filed about the existing odor source. The results of each of the steps above should be clearly disclosed in the CEQA document. Projects should use the collective information from Steps 1 through 3 to qualitatively evaluate the potential for a significant odor impact. The Lead Agency should clearly state the reasoning for the significance determination using information from Steps 1 through 3 to support the determination.

## **7.2. MITIGATING ODOR IMPACTS**

BAAQMD considers appropriate land use planning the primary method to mitigate odor impacts. Providing a sufficient buffer zone between sensitive receptors and odor sources should be considered prior to analyzing implementation of odor mitigation technology. Projects that would include potential sensitive receptors should consider the odor parameters, discussed in Step 1 above, during the planning process to avoid siting receptors near odor sources. Similarly, projects





that would include an odor source should consider the location of nearby existing sensitive receptors that could be affected by the project.

The source types for which mitigation has been provided below have been selected based on the nature of the odors produced as a result of their operational activities. These land use types are those most likely to result in odor impacts if sensitive receptors are located in close proximity. This should not be considered an exhaustive list and due to the subjective nature of odor impacts, there is no formulaic method to assess if odor mitigation is sufficient. In determining whether the implementation of mitigation would reduce the potential odor impact to a less-than-significant level, rely on the information obtained through the steps above.

#### **7.2.1. Wastewater Treatment Plant**

Main odor sources for wastewater treatment plants typically are the headworks area where the wastewater enters the facility and large solids and grit are removed, the primary clarifiers where suspended solids are removed, and the aeration basins when poor mixing characteristics lead to inadequate dissolved oxygen levels. Lead agencies should consider applying the following odor mitigation measures to wastewater treatment plants.

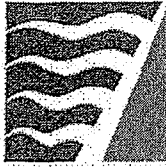
1. Activated Carbon Filter/Carbon adsorption
2. Biofiltration/Bio Trickling Filters
3. Fine Bubble Aerator
4. Hooded Enclosures
5. Wet and Dry Scrubbers
6. Caustic and Hypochlorite Chemical Scrubbers
7. Ammonia Scrubber
8. Energy Efficient Blower System
9. Thermal Oxidizer
10. Capping/Covering Storage Basins and Anaerobic Ponds
11. Mixed Flow Exhaust
12. Wastewater circulation technology
13. Exhaust stack and vent location with respect to receptors

#### **7.2.2. Landfill/Recycling/Composting Facilities**

Odors generated from landfills and composting facilities are typically associated with methane production from the anaerobic decomposition of waste. Lead agencies should consider applying the mitigation measures below to reduce and treat methane in facilities. Landfill projects should also implement best management practices to avoid and minimize the creation of anaerobic conditions.

1. Passive Gas Collection
2. Active Gas Collection
3. Flaring or energy production/utilization
4. Vegetation Growth on Landfill Cover
5. Cover/Cap Landfill
6. Odor Neutralizing Spray
7. Negative aeration for compost facilities
8. Turning and mixing of compost piles





Facilities that are regulated by CalRecycle (e.g. landfill, composting, etc.) are required to have Odor Impact Minimization Plans (OIMP) in place and have procedures that establish fence line odor detection thresholds. The Air District recognizes a Lead Agency's discretion under CEQA to use established odor detection thresholds as thresholds of significance for CEQA review for CalRecycle regulated facilities with an adopted OIMP.

#### 7.2.3. Petroleum Refinery

Odors generated from materials and processes associated with petroleum refineries include, but are not limited to,  $H_2S$ ,  $SO_2$ , mercaptan, ammonia ( $NH_3$ ), and petroleum coke. Installing the following current and feasible odor mitigation measures for petroleum refineries should be considered.

1. Water Injections to Hydrocracking Process
2. Vapor recovery system
3. Injection of masking odorants into process streams
4. Flare meters and controls
5. Wastewater circulation technology for Aerated Ponds
6. Exhaust stack and vent location with respect to receptors
7. Thermal oxidizers
8. Carbon absorption
9. Biofiltration/Bio Trickling Filters

#### 7.2.4. Chemical Plant

Chemical plants can generate a variety of different odors (e.g., acrylates, phenols, and styrene) as a result of process emissions. The range of odor mitigation measures required for chemical plants may vary substantially depending on the type of odors produced. The odor mitigation measures could be applied to chemical plants.

1. Wet scrubbers (50–90 percent efficiency)
2. Catalytic oxidation (99 percent efficiency)
3. Thermal oxidation (90–99 percent efficiency)
4. Carbon adsorption (95 percent efficiency)
5. Exhaust stack and vent location with respect to receptors



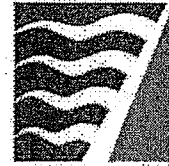
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#### 7.2.5. Food Services

Restaurants, especially fast food restaurants, can generate substantial sources of odors as a result of cooking processes and waste disposal. Char broilers, deep-fryers, and ovens tend to produce food odors that can be considered offensive to some people. The food waste produced by restaurants can putrefy if not properly managed, which can also produce objectionable odors. The follow mitigation measures are management practices and odor technology that can be used to reduce the amount odors generated by food services.

1. Integral grease filtration system or grease removal system
2. Baffle filters
3. Electrostatic precipitator
4. Water cooling/cleaning unit
5. Disposable pleated or bag filters

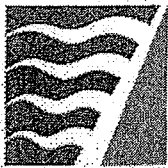




6. Activated carbon filters
7. Oxidizing pellet beds
8. Incineration
9. Catalytic conversion
10. Proper packaging and frequency of food waste disposal
11. Exhaust stack and vent location with respect to receptors

In conclusion, odor impacts can also be minimized, contained, or prevented by implementing technologies and design measures at the source, or through planning-based measures. Where odor sources and receptors cannot be physically separated to a degree where impacts would be minimized to less-than-significant level, disclosures of odor sources to prospective tenants of sensitive land uses should be used. Mitigation for odors that is both effective and feasible shall be selected on a case-by-case basis.





## 8. CONSTRUCTION-RELATED IMPACTS

Construction-related activities are those associated with the building of a project or plan components. Construction activities are typically short-term or temporary in duration; however, project-generated emissions could represent a significant impact with respect to air quality and/or global climate change. Construction-related activities will result in the generation of criteria air pollutants including carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub>, and PM<sub>2.5</sub>); precursor emissions such as, reactive organic gases (ROG) and oxides of nitrogen (NO<sub>x</sub>), and GHGs from exhaust, fugitive dust, and off-gas emissions. Sources of exhaust emissions could include on-road haul trucks, delivery trucks, worker commute motor vehicles, and off-road heavy-duty equipment. Sources of fugitive emissions (e.g., PM dust) could include construction-related activities such as soil disturbance, grading, and material hauling. Sources of off-gas emissions could include asphalt paving and the application of architectural coatings.

The recommendations provided in this chapter only apply to assessing and mitigating construction-related impacts for individual projects. Construction-related assumptions and project-specific information assumed in CEQA analyses should accompany the quantitative analysis described below. Refer to Chapter 9 for recommendations for assessing and mitigating construction-related impacts at the plan level.

### 8.1. CRITERIA AIR POLLUTANTS AND PRECURSORS

#### 8.1.1. Significance Determination

##### Step 1: Comparison of Project Attributes with Screening Criteria

The first step in determining the significance of construction-related criteria air pollutants and precursors is to compare the attributes of the proposed project with the applicable Screening Criteria listed in Chapter 3. If all of the Screening Criteria are met, construction of the proposed project would result in a less-than-significant impact to air quality. If not, then construction emissions need to be quantified.

##### Step 2: Emissions Quantification

BAAQMD recommends using URBEMIS to quantify construction emissions for proposed land use development projects and the Roadway Construction Emissions Model (RoadMod) for proposed linear projects such as, new roadway, roadway widening, or pipeline installation). The most current URBEMIS (currently version 9.2.4) should be used for emission quantification. Table 8-5 outlines summary guidelines for using URBEMIS. Refer to Appendix B for detailed instructions for modeling construction-generated emissions using URBEMIS and RoadMod.

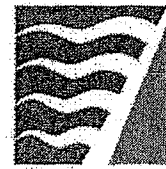


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##### Step 3: Comparison of Unmitigated Emissions with Thresholds of Significance

Following quantification of project-generated construction-related emissions, the total average daily emissions of each criteria pollutant and precursor should be compared with the applicable Threshold of Significance. For instance, with respect PM<sub>10</sub> and PM<sub>2.5</sub>, compare the total amount of emissions from both exhaust and fugitive sources with the applicable Threshold of Significance. If construction-related emissions have been quantified using multiple models or





model runs, sum the criteria air pollutants and precursor levels from each where said activities would overlap. In cases where the exact timing of construction activities is not known, sum any phases that could overlap to be conservative.

If daily average emissions of construction-related criteria air pollutants or precursors would not exceed any of the *Thresholds of Significance*, the project would result in a less-than-significant impact to air quality. If daily average emissions of construction-related criteria air pollutants or precursors would exceed any applicable *Threshold of Significance*, the proposed project would result in a significant impact to air quality and would require mitigation measures for emission reductions.

#### **Step 4: Mitigation and Emission Reductions**

For all proposed projects, BAAQMD recommends the implementation of all *Basic Construction Mitigation Measures* (Table 8.2) whether or not construction-related emissions exceed applicable *Thresholds of Significance*. In addition, all projects must implement any applicable air toxics control measures (ATCM). For example, projects that have the potential to disturb asbestos (from soil or building material) must comply with all the requirements of ARB's ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. Only reduction measures included in the proposed project's description or recommended as mitigation in a CEQA-compliant environmental document can be included when quantifying mitigated emission levels. Refer to Appendix B for detailed instructions on how to use URBEMIS to quantify the effects of construction emissions mitigation measures.

#### **Step 5: Comparison of Mitigated (Basic Mitigation) Emissions with Thresholds of Significance**

Following quantification of project-generated construction-related emissions, compare the total average daily amount of mitigated (with implementation of *Basic Construction Mitigation Measures*) criteria air pollutants and precursors with the applicable *Thresholds of Significance*. If the implementation of BAAQMD-recommended *Basic Construction Mitigation Measures* would reduce all construction-related criteria air pollutants and precursors to levels below the applicable *Thresholds of Significance*, the impact to air quality would be less than significant. If emissions of any criteria air pollutant or precursor would exceed the applicable *Threshold of Significance*, the impact to air quality would be significant. Table 8-1 provides an example of significance determination methodology.

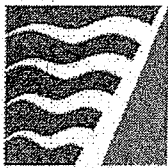
#### **Step 6: Implement Additional Construction Mitigation Measures**

BAAQMD recommends that all proposed projects, where construction-related emissions would exceed the applicable *Thresholds of Significance*, implement the *Additional Construction Mitigation Measures* (Table 8-3). The methodology for quantifying reductions of fugitive PM dust, exhaust, and off gas emissions associated with the implementation of these mitigation measures are discussed separately below (Table 8-3). Keep all of the changes recommended above with regards to the *Basic Construction Mitigation Measures*, as the emission reductions associated with these *Additional Construction Mitigation Measures* are considered additive. Please note that in RoadMod all of these associated reductions should be taken outside of the model, described in further detail in Appendix B.

#### **Step 7: Comparison of Mitigated Emissions with Thresholds of Significance**

Following quantification of project-generated construction-related emissions in accordance with the above BAAQMD-recommended methods, compare the total average daily amount of mitigated (with *Additional Construction Mitigation Measures* implemented) criteria air pollutants and precursors with the applicable *Thresholds of Significance*. If the implementation of additional mitigation measures would reduce all construction-related criteria air pollutants and precursors to levels below the applicable *Thresholds of Significance*, the impact to air quality would be reduced





to a less-than-significant level. If mitigated levels of any criteria air pollutant or precursor still exceed the applicable *Threshold of Significance*, the impact to air quality would remain significant and unavoidable.

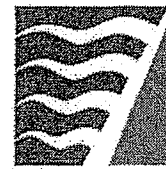
**Table 8-1**  
**Example Construction Criteria Air Pollutant and Precursor Significance Determination**

Step	Emissions Source	Emissions (lb/day or tpy)			
		ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2	Fugitive Dust Emissions	-	-	A	A
	Mobile Sources	B	B	B	B
	Off-gassing	C	-	-	-
3	Total Unmitigated Emissions	B + C = D	B = D	A + B = D	A + B = D
4	Total Basic Mitigated Emissions	E	E	E	E
	BAAQMD Threshold	54 lb/day	54 lb/day	82 lb/day*	54 lb/day*
5	Basic Mitigated Emissions Exceed BAAQMD Threshold?	Is E > 54 lb/day? (If Yes, significant. Go to step 6. If No, less than significant)	Is E > 54 lb/day? (If Yes, significant. Go to step 6. If No, less than significant)	Is B* > 82 lb/day? (If Yes, significant. Go to step 6. If No, less than significant)	Is B* > 54 lb/day? (If Yes, significant. Go to step 6. If No, less than significant)
6	Total Additional Mitigated Emissions	F	F	F	F
7	Additional Mitigated Emissions Exceed BAAQMD Threshold?	Is F > 54 lb/day? (If Yes, significant and unavoidable. If No, less than significant with mitigation incorporated)	Is F > 54 lb/day? (If Yes, significant and unavoidable. If No, less than significant with mitigation incorporated)	Is F* > 82 lb/day? (If Yes, significant and unavoidable. If No, less than significant with mitigation incorporated)	Is F* > 54 lb/day? (If Yes, significant and unavoidable. If No, less than significant with mitigation incorporated)

\* Applies to construction equipment exhaust only.

Notes: tpy = tons per year.; lb/day = pounds per day; NO<sub>x</sub> = oxides of nitrogen; PM<sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM<sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; Refer to Appendix D for support documentation.





### 8.1.2. Mitigating Criteria Air Pollutants and Precursors

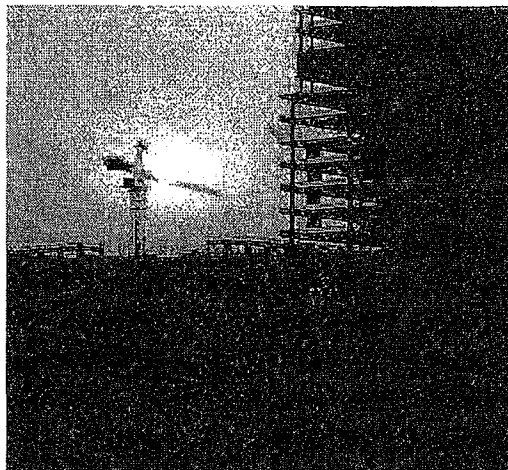
#### **Basic Construction Mitigation Measures**

For all proposed projects, BAAQMD recommends the implementation of all *Basic Construction Mitigation Measures*, listed in Table 8-2, whether or not construction-related emissions exceed applicable *Thresholds of Significance*. Appendix B provides guidance on quantifying mitigated emission reductions using URBEMIS and RoadMod.

<b>Table 8-2</b> <b>Basic Construction Mitigation Measures Recommended for ALL Proposed Projects</b>	
1.	All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2.	All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3.	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.
4.	All vehicle speeds on unpaved roads shall be limited to 15 mph.
5.	All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6.	Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7.	All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8.	Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

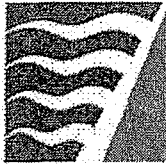
#### **Additional Construction Mitigation Measures**

BAAQMD recommends that all proposed projects, where construction-related emissions would exceed the applicable *Thresholds of Significance*, implement the *Additional Construction Mitigation Measures*. Table 8-3 lists the *Additional Construction Mitigation Measures*. Appendix B contains more detailed guidance on emission reductions by source type (i.e., fugitive dust and exhaust) for quantification in URBEMIS and RoadMod.



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**Table 8-3**  
**Additional Construction Mitigation Measures Recommended for Projects with Construction Emissions Above the Threshold**

1. 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.
2. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
3. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
4. 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.
5. 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.
6. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
7. 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.
8. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
9. Minimizing the idling time of diesel powered construction equipment to two minutes.
10. The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NO<sub>x</sub> reduction and 45 percent PM reduction compared to the most recent ARB 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 such become available.
11. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
12. Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NO<sub>x</sub> and PM.
13. Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy duty diesel engines.



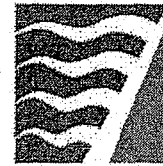
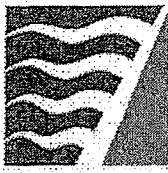
**Assessing Mitigation Measures**

Table 8-4 provides a summary of BAAQMD recommendations for assessing construction-related impacts and mitigation measures using URBEMIS. Detailed guidance is provided in Appendix B.

Table 8-4 URBEMIS Guidance for Assessing Construction-Related Impacts	
URBEMIS Construction Input Parameter	Guidance Principle
Land Use Type and Size	<ul style="list-style-type: none"> <li>Select most applicable land use type.</li> <li>Use the appropriate land use units.</li> </ul>
Construction Schedule	<ul style="list-style-type: none"> <li>Use the earliest possible commencement date(s) if project-specific information is unknown.</li> <li>Overlap phases that will or have the potential to occur simultaneously.</li> <li>Check the selected number of work days per week to ensure an accurate number of construction work days for each phase.</li> </ul>
Demolition Phase	<ul style="list-style-type: none"> <li>Use a separate demolition URBEMIS run if the land use size to be developed differs from the land use size to be demolished.</li> <li>Demolition fugitive dust is based on maximum daily volume of building to be demolished.</li> <li>Demolition construction equipment is based on acres of land use to be demolished (in <i>Enter Land Use Data</i> module).</li> </ul>
Site Grading Phase	<ul style="list-style-type: none"> <li>Site grading construction equipment is based on maximum daily acres disturbed.</li> <li>Enter project-specific maximum daily acres disturbed if known, otherwise URBEMIS assumes the maximum daily amount of acres disturbed is 25 percent of total acres disturbed.</li> </ul>
Site Grading Fugitive Dust	<ul style="list-style-type: none"> <li>Select the appropriate fugitive dust quantification methodology based on the amount and type of project-specific information available.</li> <li>The more specific grading information available will result in more accurate quantification of PM emissions.</li> </ul>
Asphalt Paving Phase	<ul style="list-style-type: none"> <li>Acres to be asphalt paved are based on land use type and size (in <i>Enter Land Use Data</i> module).</li> <li>Asphalt paving construction equipment is based on total acres to be paved.</li> <li>Assumes asphalt paving occurs at equal rate throughout phase.</li> <li>Account for excess asphalt paving requirements of project beyond default assumptions by adjusting the acres to be paved.</li> </ul>
Architectural Coatings	<ul style="list-style-type: none"> <li>Assumes architectural coating operations occur at equal rate throughout phase.</li> </ul>
Basic Construction Mitigation Measures	<ul style="list-style-type: none"> <li>All projects must implement Basic Construction Mitigation Measures, including those below the construction screening levels.</li> <li>Use surrogate URBEMIS mitigation to account for Basic Construction Mitigation Measures' emission reductions.</li> </ul>
Additional Construction Mitigation Measures	<ul style="list-style-type: none"> <li>Projects with construction emissions that exceed the thresholds are required to implement Additional Construction Mitigation Measures.</li> <li>Use surrogate URBEMIS mitigation to account for Additional Construction Mitigation Measures' emission reductions.</li> </ul>
Other	<ul style="list-style-type: none"> <li>For all construction phases, the more specific information available will result in more accurate emissions quantification.</li> <li>When a specific construction schedule is unknown, all phases that could potentially overlap should be added to calculate maximum daily emissions.</li> </ul>





## 8.2. GREENHOUSE GASES

The District does not have an adopted *Threshold of Significance* for construction-related GHG emissions. However, the Lead Agency should quantify and disclose GHG emissions that would occur during construction, and make a determination on the significance of these construction-generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals. BAAQMD recommends using URBEMIS for proposed land use development projects and RoadMod for proposed projects that are linear in nature. Sources of construction-related GHGs only include exhaust, for which the same detailed guidance as described for criteria air pollutants and precursors should be followed.

The Lead Agency is encouraged to incorporate best management practices to reduce GHG emissions during construction, as applicable. Best management practices may include, but are not limited to: using alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet; using local building materials of at least 10 percent; and recycling or reusing at least 50 percent of construction waste or demolition materials.

## 8.3. TOXIC AIR CONTAMINANTS

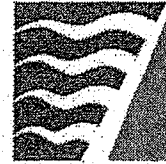
BAAQMD recommends that the same community risk and hazard *Threshold of Significance* for project operations be applied to construction. However, BAAQMD suggests associated impacts should be addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site receptors, as applicable. The Air District recommends that for construction projects that are less than one year duration, Lead Agencies should annualize impacts over the scope of actual days that peak impacts are to occur, rather than the full year.

BAAQMD has developed guidance for estimating risk and hazards impacts entitled *Recommended Methods for Screening and Modeling Local Risks and Hazards* (May 2010) which also includes recommendations for mitigation of significant risk and hazards impacts. The Air District has also developed a Construction Risk Calculator model that provides distances from a construction site, based on user-provided project data, where the risk impacts are estimated to be less than significant; sensitive receptors located within these distances would be considered to have potentially significant risk and hazards impacts from construction. The Construction Risk Calculator can be downloaded from the Air District web site at:  
<http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES.aspx>.

### 8.3.1. Diesel Particulate Matter

Construction-related activities could result in the generation of TACs, specifically diesel PM, from on-road haul trucks and off-road equipment exhaust emissions. Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (ARB 2005). In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. This results in difficulties with producing accurate estimates of health risk. Additionally, the implementation of the *Basic Construction Mitigation Measures* (table 8-2), which is recommended for all proposed projects, would also reduce diesel PM exhaust emissions.





However, these variability issues associated with construction do not necessarily minimize the significance of possible impacts.

The analysis shall disclose the following about construction-related activities:

1. Types of off-site receptors and their proximity to construction activity within approximately 1,000 feet;
2. Duration of construction period;
3. Quantity and types of diesel-powered equipment;
4. Number of hours equipment would be operated each day;
5. Location(s) of equipment use, distance to nearest off-site sensitive receptors, and orientation with respect to the predominant wind direction;
6. Location of equipment staging area; and
7. Amount of on-site diesel-generated PM<sub>2.5</sub> exhaust (assuming that all on-site diesel PM<sub>2.5</sub> exhaust is diesel PM) if mass emission levels from construction activity are estimated.

In cases where construction-generated emissions of diesel PM are anticipated to occur in close proximity to sensitive receptors for extended periods of time, lead agencies are encouraged to consult with BAAQMD.

### 8.3.2. Demolition and Renovation of Asbestos-Containing Materials

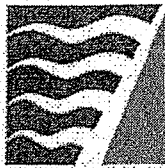
Demolition of existing buildings and structures would be subject to BAAQMD Regulation 11, Rule 2 (Asbestos Demolition, Renovation, and Manufacturing). BAAQMD Regulation 11, Rule 2 is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities. The rule addresses the national emissions standards for asbestos along with some additional requirements. The rule requires the Lead Agency and its contractors to notify BAAQMD of any regulated renovation or demolition activity. This notification includes a description of **structures and methods utilized to determine whether asbestos-containing materials are potentially present. All asbestos-containing material found on the site must be removed prior to demolition or renovation activity in accordance with BAAQMD Regulation 11, Rule 2, including specific requirements for surveying, notification, removal, and disposal of material containing asbestos. Therefore, projects that comply with Regulation 11, Rule 2 would ensure that asbestos-containing materials would be disposed of appropriately and safely. By complying with BAAQMD Regulation 11, Rule 2, thereby minimizing the release of airborne asbestos emissions, demolition activity would not result in a significant impact to air quality.**

Because BAAQMD Regulation 11, Rule 2 is in place, no further analysis about the demolition of asbestos-containing materials is needed in a CEQA document. BAAQMD does recommend that CEQA documents acknowledge and discuss BAAQMD Regulation 11, Rule 2 to support the public's understanding of this issue.

### 8.3.3. Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) was identified as a TAC in 1986 by ARB. NOA is located in many parts of California and is commonly associated with ultramafic rocks, according to the California Department of Geology's special publication titled Guidelines for Geologic Investigations of Naturally Occurring Asbestos in California. Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Ultramafic rocks form in high-temperature environments well below the surface of the earth. By the time they are exposed at the surface by geologic uplift and erosion, ultramafic rocks may be partially to completely altered into a type of metamorphic rock called serpentinite.





Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite-actinolite asbestos in the bodies of these rocks, along their boundaries, or in the soil.

For individuals living in areas of NOA, there are many potential pathways for airborne exposure. Exposures to soil dust containing asbestos can occur under a variety of scenarios, including children playing in the dirt; dust raised from unpaved roads and driveways covered with crushed serpentine; grading and earth disturbance associated with construction activity; quarrying; gardening; and other human activities. For homes built on asbestos outcroppings, asbestos can be tracked into the home and can also enter as fibers suspended in the air. Once such fibers are indoors, they can be entrained into the air by normal household activities, such as vacuuming (as many respirable fibers will simply pass through vacuum cleaner bags).

People exposed to low levels of asbestos may be at elevated risk (e.g., above background rates) of lung cancer and mesothelioma. The risk is proportional to the cumulative inhaled dose (quantity of fibers), and also increases with the time since first exposure. Although there are a number of factors that influence the disease-causing potency of any given asbestos (such as fiber length and width, fiber type, and fiber chemistry), all forms are carcinogens.

#### **8.3.4. Mitigating Naturally Occurring Asbestos**

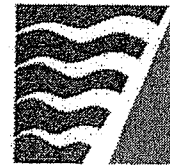
BAAQMD enforces CARB's ATCM which regulates NOA emissions from grading, quarrying, and surface mining operations at sites which contain ultramafic rock. The provisions that cover these operations are found specifically in the California Code of Regulations, Section 93105. The ATCM for Construction, Grading, Quarrying and Surface Mining Operations was signed into State law on July 22, 2002, and became effective in the SFBAAB on November 19, 2002. The purpose of this regulation is to reduce public exposure to NOA from construction and mining activities that emit or re-suspend dust which may contain NOA.

The ATCM requires regulated operations engaged in road construction and maintenance activities, construction and grading operations, and quarrying and surface mining operations in areas where NOA is likely to be found, to employ the best available dust mitigation measures to reduce and control dust emissions. Tables 8-2 and 8-3 list a number of dust mitigation measures for construction.

BAAQMD's NOA program requires that the applicable notification forms from the Air District's website be submitted by qualifying operations in accordance with the procedures detailed in the ATCM Inspection Guidelines Policies and Procedures. The Lead Agency shall reference BAAQMD's ATCM Policies and Procedures to determine which NOA Notification Form is applicable to the proposed project ([NOA Notification Forms](#)).

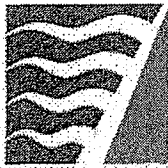
Using the geologic map of the SFBAAB ([Geologic Map](#)), the Lead Agency shall discuss whether a proposed project would be located in "areas moderately likely to contain NOA." If a project would not involve earth-disturbing construction activity in one of these areas or would not locate receptors in one of these areas then it can be assumed that the project would not have the potential to expose people to airborne asbestos particles.





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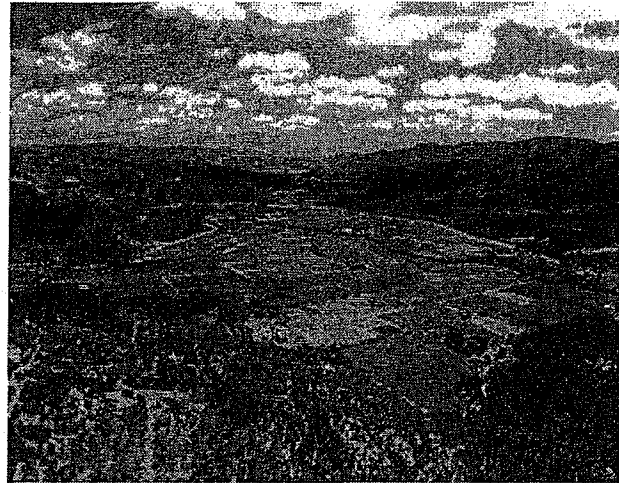




## PART III: ASSESSING & MITIGATING PLAN LEVEL IMPACTS

### 9. PLAN-LEVEL IMPACTS

Long range plans (e.g., general plan, redevelopment plans, specific plans, area plans, community plans, regional plans, congestion management plans, etc.) present unique challenges for assessing impacts. These plans often contain development strategies for 20-year, or longer, time horizons. They can also provide for a wide range of potential land uses and densities that accommodate all types of development. General plan updates and large specific plans nearly always require the Lead Agency to prepare an Environmental Impact Report (EIR). Due to the SFBAAB's nonattainment status for ozone and PM, and the



cumulative impacts of growth on air quality, these plans almost always have significant, unavoidable adverse air quality impacts. CEQA requires the Lead Agency to evaluate individual as well as cumulative impacts of general plans, and all feasible mitigation measures must be incorporated within the proposed plan to reduce significant air quality impacts.

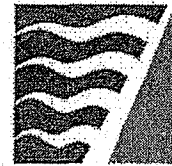
This chapter provides guidance on methods to evaluate air quality and climate change impacts of long-range plans prepared within the SFBAAB pursuant to CEQA. The term *general and area plan* refers broadly to discretionary planning activities which may include, but are not limited to the following: **general plans, redevelopment plans, specific plans, area plans, community plans, congestion management plans, and annexations of lands and service areas.** General and area plans are often subject to program-level analysis under CEQA, as opposed to project-level analysis. As a general principle, the guidance offered within this chapter should be applied to discretionary, program-level planning activities; whereas the project-level guidance offered in other chapters should be applied to individual project-specific approvals, such as a proposed development project.

Air quality impacts from future development pursuant to general or area plans can be divided into construction-related impacts and operational-related impacts. Construction-related impacts are associated with construction activities likely to occur in conjunction with future development allocated by the plan. Operational-related impacts are associated with continued and future operation of developed land uses, including increased vehicle trips and energy use.

Please note that the plan-level approach described here differs for greenhouse gas (GHG) impact assessments. The Air District recommends that when assessing GHG impacts for plans other than regional plans (transportation and air quality plans) and general plans, such as specific plans and area plans, the appropriate thresholds and methodology is the same as project-level GHG impact assessments described in Chapter 4.

Regional plan (transportation and air quality plans) impacts also are assessed differently because of their unique characteristics (regional plans do not establish land use designations) and are subject to a threshold of "no net increase in emissions."





## 9.1. CRITERIA AIR POLLUTANTS AND PRECURSOR EMISSIONS

To meet the *Threshold of Significance* for operational-related criteria air pollutant and precursor impacts for plans (other than regional plans), a proposed plan must satisfy the following criteria:

- Consistency with current air quality plan (AQP) control measures (this requirement applies to project-level as well as plan-level analyses).
- A proposed plan's projected VMT or vehicle trips (VT) (either measure may be used) increase is less than or equal to its projected population increase.

### Air Quality Plan Control Measures

For this threshold, an air quality plan refers to clean air plans, state implementation plans (SIPS), ozone plans, and other potential air quality plans developed by BAAQMD. To date, the Air District's most current plan is the 2010 Clean Air Plan.

The following approach for incorporating current AQP control measures into a plan is also applicable for determining a project's consistency with an air quality plan. CEQA requires lead agencies to determine whether a project is consistent with all applicable air quality plans. In addition, the State CEQA Guidelines sample Environmental Checklist Form (Appendix G), poses the question: "Would the project conflict with or obstruct implementation of the applicable air quality plan?"

BAAQMD recommends that the agency approving a project where an air quality plan consistency determination is required analyze the project with respect to the following questions. If all the questions are concluded in the affirmative, and those conclusions are supported by substantial evidence, the Air District considers the project consistent with air quality plans prepared for the Bay Area.

#### 1. Does the project support the primary goals of the AQP?

The primary goals of the 2010 Bay Area Clean Air Plan (CAP), the current AQP to date, are to:

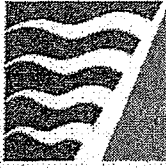
- Attain air quality standards;
- Reduce population exposure and protecting public health in the Bay Area; and
- Reduce greenhouse gas emissions and protect the climate.

Any project (i.e. project or plan) that would not support these goals would not be considered consistent with the 2010 CAP. The recommended measure for determining project support of these goals is consistency with District-approved CEQA thresholds of significance. Therefore, if approval of a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project would be considered consistent with the 2010 CAP.

#### 2. Does the project include applicable control measures from the AQP?

Agencies approving projects should require that they include all air quality plan control measures that can feasibly be incorporated into the project design or applied as mitigation, or justify the reasons, supported by substantial evidence, why a measure or measures are not incorporated into the project. Projects that incorporate all feasible air quality plan control measures are considered consistent with the 2010 CAP.





The 2010 CAP contains 55 control measures aimed at reducing air pollution in the Bay Area. Along with the traditional stationary, area, mobile source and transportation control measures, the 2010 CAP contains a number of new control measures designed to protect the climate and promote mixed use, compact development to reduce vehicle emissions and exposure to pollutants from stationary and mobile sources. BAAQMD encourages project developers and lead agencies to incorporate these Land Use and Local Impact (LUM) measures and Energy and Climate measures (ECM) into proposed project designs and plan elements.

Refer to Volume II of the 2010 CAP Control Measure for a list of all the control measures and implementation guidance.

3. Does the project disrupt or hinder implementation of any AQP control measures?

If approval of a project would not cause the disruption, delay or otherwise hinder the implementation of any air quality plan control measure, it would be considered consistent with the 2010 CAP. Examples of how a project may cause the disruption or delay of control measures include a project that precludes an extension of a transit line or bike path, or proposes excessive parking beyond parking requirements.

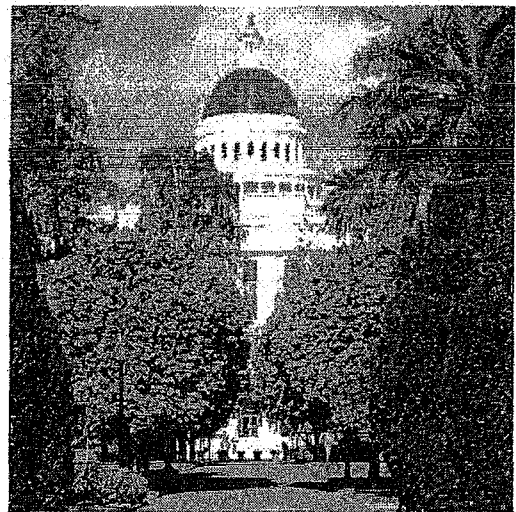
**Projected VMT and Population Growth**

A proposed plan must demonstrate that its projected VMT or vehicle trips (VT) (either measure may be used) is less than or equal to its projected population increase to be considered to have a less than significant impact on criteria air pollutants and precursor emissions.

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## 9.2. GREENHOUSE GASES

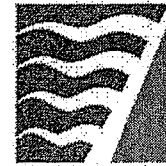
California's legislative mandate (AB 32) is to reduce total projected 2020 GHG emissions to 1990 levels, a reduction of approximately 30 percent. To achieve this target, future development must be planned and implemented **in the most GHG-efficient manner possible**. GHG-efficient development reduces vehicle miles traveled by supporting compact, dense, mixed-use, pedestrian- and bicycle-friendly, transit oriented development. State, regional and local agencies are strongly encouraged to address GHG emissions when updating and/or adopting long-range plans. For local jurisdictions, the general plan is perhaps the best venue for addressing GHG emissions in making meaningful progress toward attaining AB 32 goals while addressing CEQA requirements.



If a long-range plan includes goals, policies, performance standards, and implementation measures achieving GHG emission reductions that can be shown to meet and/or exceed AB 32 mandates, as outlined in Section 4.3, subsequent projects consistent with the plan could be relieved of performing GHG analysis as part of their CEQA compliance.

The *Threshold of Significance* for operational-related GHG impacts of plans employs either a GHG efficiency-based metric of 6.6 MT per SP per year of carbon dioxide equivalent (CO<sub>2</sub>e), or a GHG Reduction Strategy option. Unlike the other plan-level thresholds that apply to the different





plans mentioned in Section 9 above, the GHG efficiency threshold may only be applied to general plans. A Lead Agency may also determine that this threshold is appropriate for a GHG Reduction Strategy's 2020 milestone target. GHG Reduction Strategies using this threshold with horizon years beyond 2020 should consider horizon-year goals consistent with climate stabilization predictions identified in the Governor's Executive Order S-03-05.

#### **Step 1. GHG Reduction Strategy Approach**

A long-range plan would be assumed to have a less than significant impact related to GHG emissions if the Lead Agency has a qualified GHG Reduction Strategy that is referenced and or integrated within the long-range plan. See Chapter 4 for qualifying criteria for a qualified GHG Reduction Strategy.

If the Lead Agency does not have a qualified GHG Reduction Strategy meeting established criteria, refer to Step 2.

#### **Step 2. GHG Efficiency Approach – Emissions Quantification**



BAAQMD recommends quantifying community-wide GHG emissions from a general or area plan through development of a GHG emissions inventory and projections report. The emissions inventory should be conducted for a base year at or before the current year of the plan; and should follow published ARB protocols for municipal and community-wide inventories (when available). The base year inventory should be expressed in terms of metric tons CO<sub>2</sub>e emissions and account for municipal and community-wide emission sectors applicable in the jurisdiction such as, transportation, commercial, residential, water use and treatment, solid waste, and agriculture.

Section 4.3 contains additional guidance on preparing a GHG emissions inventory and projections report for a qualified GHG Reduction Strategy that should be applied to general plans as well. A range of tools and resources are available to assist lead agencies in completing inventories, including the Air District's *GHG Plan Level Reduction Strategy Guidance*, *Intergovernmental Panel on Climate Change (IPCC) Emissions Inventory Guidelines*, *CCAR GRP*, and *ICLEI's Clean Air and Climate Protection (CACAP) model*. In all instances where regional, statewide or national data sources are available, the Air District recommends that local data be used if available and more accurate.

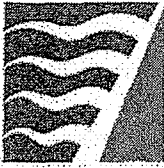
#### **Step 3. Prepare Greenhouse Gas Emissions Projections**

BAAQMD recommends preparing a community-wide GHG emission projection to identify the expected levels of GHG emissions for: 1) 2020 (i.e., the AB 32 benchmark year), and 2) the projected year of the plan build out. Two projections should be prepared for each year:

- A projection reflecting existing conditions (e.g., business-as-usual), and
- A projection that accounts for proposed policies, programs, and plans included within the general or area plan that would reduce GHG emissions from build-out of the plan.

The first projection should be used as the basis for evaluation of the no project alternative in the plan's EIR. The second projection should be used as the basis for evaluation of the proposed project. Additional projections corresponding to plan alternatives considered within the EIR should





also be prepared and included within the EIR's alternatives analysis. Examples of policies, performance standards and implementation measures are included in Section 9.5.

Where possible, emission projections should account for inherent improvements in energy and fuel efficiency, population and employment growth rates published by ABAG, VMT growth rates available from MTC, energy consumption growth rates available from California Energy Commission (CEC) planned expansions of municipal infrastructure or services, and anticipated statewide legislative requirements or mandates (e.g., Renewable Energy Portfolio, Green Building Code Standards, on-road vehicle emission regulations).

A range of GIS-based planning models are available that can assist lead agencies in completing projections, including Index, PLACE3S, UPlan, and the Sustainable Systems Integration Model (SSIM). The projection should be expressed in metric tons CO<sub>2</sub>e emissions, and include the expected municipal and community-wide emissions across all sectors evaluated in the base year inventory.

BAAQMD encourages lead agencies to prepare similar projections for 2050 (the Executive Order S-03-05 benchmark year). As we approach the 2020 timeframe, BAAQMD will reevaluate this significance threshold to better represent progress toward 2050 goals. The Lead Agency should use the projected build-out emissions profile of the general or area plan as a benchmark to ensure that adoption of the plan would not preclude attainment of 2050 goals.

**Step 4. Determine Planned Population and Employment Levels and Service Population**

State law requires that general and area plans identify the planned density and intensity of land uses for all lands within the planning area established by the Lead Agency. These measures of density (typically dwelling units/acre) and intensity (typically floor-area ratios) are often translated into expected population and employment levels for estimating traffic impacts associated with the proposed plan. Most demand-based transportation models use population and employment to determine trip generation. Measures of population and employment are typically available for general and area plans. In evaluating GHG impacts, estimates of the number of residents and jobs anticipated in the general or area plan are required for 2020, the build-out year of the proposed plan, the no project alternative, and additional alternatives the Lead Agency is evaluating in the environmental review.

Service population (SP) is an efficiency-based measure used by BAAQMD to estimate the development potential of a general or area plan. SP is determined by adding the number of residents to the number of jobs estimated for a given point in time. For purposes of evaluating GHG impacts, SP estimates are required for 2020 and for the build-out year of the proposed plan.

**Step 5. Compare Service Population to 2020 GHG Projections and Thresholds of Significance**

The Lead Agency should divide the 2020 GHG emissions inventory by 2020 SP estimates to determine the per-SP emissions associated with the proposed general or area plan, the no project alternative, and additional alternatives the Lead Agency is evaluating. The Lead Agency should then compare these per-SP emissions to the significance thresholds identified in Chapter 2 (refer to Table 9-1).



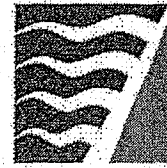


Table 9-1 Example Plan-level Greenhouse Gas Emissions Analysis			
Step	Emissions Source	Year	Emissions (MT CO2e/yr)*
2	GHG Emissions Inventory (Community-wide and municipal)	Base year (e.g., 2007)	A
3	GHG Emissions Projections	2020	B
		GP Buildout (e.g., 2030)	C
4	Projected Service Population (population + employment)	SP	
	GHG/SP (2020)	B/SP (MT CO2e/SP/yr)	
5	BAAQMD GHG/SP Threshold	6.6 (MT CO2e/SP/yr)	
	Is B/SP > 6.6? (If Yes, Significant. Proceed to Step 6. If No, less than significant).		

\*Letters "A", "B", and "C" are used to represent numeric values that would be obtained through conducting a community-wide emissions inventory and projections.

Notes: CO2e = carbon dioxide equivalent; MT = metric tons; yr = year, P = population, SP = service population. Refer to Appendix D for support documentation.

If the estimated per-SP emissions exceed identified thresholds, the general or area plan would be considered to have a significant impact with respect to GHG emissions, and mitigation would be required.

#### Step 6. Mitigation Measures

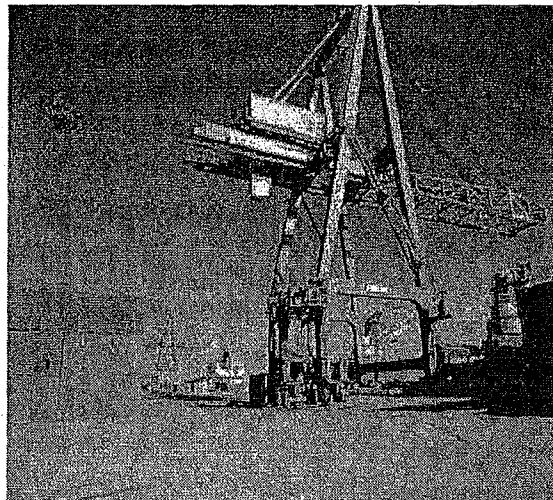
General or area plans found to have a significant impact should implement all feasible mitigation measures to reduce impacts. Refer to Section 9.5 for examples of appropriate mitigation measures for operational impacts relative to GHG emissions. Mitigation measures identified through the environmental review process must be made into binding and enforceable policies and implementation programs within the long range plan.

### 9.3. LOCAL COMMUNITY RISK AND HAZARD IMPACTS<sup>6</sup>

For general and area plans to have a less-than-significant impact with respect to potential toxic air contaminants (TACs), special overlay zones need to be established around existing and proposed land uses that emit TACs. Special overlay zones should be included in proposed plan policies, land use maps, and implementing ordinances.

The *Thresholds of Significance* for plans with regard to community risk and hazard impacts are:

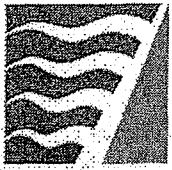
1. The land use diagram must identify:
  - a. Special overlay zones around existing and planned sources of TACs;



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<sup>6</sup> The use of the receptor thresholds is discussed in section 2.8 of these Guidelines





- b. Special overlay zones of at least 500 feet (or Air District-approved modeled distance) on each side of all freeways and high-volume roadways.
2. The plan must also identify goals, policies, and objectives to minimize potential impacts and create overlay zones for sources of TACs and receptors.

ARB's Land Use Handbook offers advisory recommendations for locating sensitive receptors near uses associated with TACs, such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, chrome platers, dry cleaners, gasoline stations, and other industrial facilities, to reduce exposure of sensitive populations. The Lead Agency should refer to this handbook when evaluating whether the proposed general or area plan includes adequate buffer distances between TAC sources and sensitive receptors.

#### **9.3.1. Community Risk Reduction Plans**

The goal of a Community Risk Reduction Plan (CRRP) would be to bring TAC and PM<sub>2.5</sub> concentrations for the entire community covered by the Plan down to acceptable levels as identified by the local jurisdiction and approved by the Air District. This approach provides local agencies a proactive alternative to addressing communities with high levels of risk on a project-by-project approach.

A qualified Community Risk Reduction Plan adopted by a local jurisdiction should include, at a minimum, the following elements:

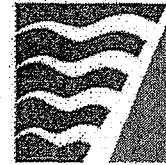
- (A) Define a planning area;
- (B) Include base year and future year emissions inventories of TACs and PM<sub>2.5</sub>;
- (C) Include Air District-approved risk modeling of current and future risks;
- (D) Establish risk and exposure reduction goals and targets for the community in consultation with Air District staff;
- (E) Identify feasible, quantifiable, and verifiable measures to reduce emissions and exposures;
- (F) Include procedures for monitoring and updating the inventory, modeling and reduction measures in coordination with Air District staff; and
- (G) Be adopted in a public process following environmental review.

Refer to Chapter 5 for additional guidance on preparing a CRRP. The Air District has also developed the *Community Risk Reduction Plan Methodology* guidance document, which can be found at <http://www.baagmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES.aspx>.

#### **9.4. ODOR IMPACTS**

- For plans to have a less-than-significant impact, a plan must identify the location of existing and planned odor sources in the plan area. The plan must also include policies to reduce potential odor impacts in the plan area.





## 9.5. REGIONAL PLANS

Regional plans must demonstrate a no net increase in emissions to satisfy the *Threshold of Significance* for operational-related criteria air pollutant and precursor impacts, GHGs, and toxic air contaminants.

Regional plans include the Regional Transportation Plan prepared by the Metropolitan Transportation Commission (MTC) and air quality plans prepared by the Air District. In order to meet this threshold, these agencies must compare the regional plan's baseline emissions with its projected future emissions. This approach requires two comparative analyses:

- a. Compare existing (base year) emissions with projected future year plus project emissions (base year/project comparison);
- b. Compare projected future year emissions without the project with projected future year emissions plus the project (no project/project comparison).

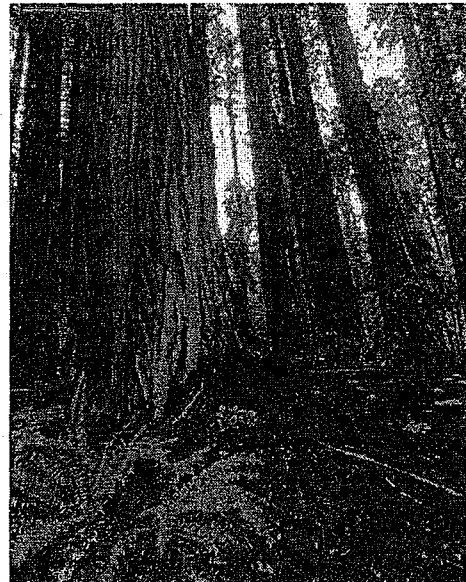
A regional plan is considered less than significant if each scenario demonstrates that no net increase in emissions of criteria air pollutants and precursors, GHGs, and toxic air contaminants will occur.

## 9.6. MITIGATING PLAN-LEVEL IMPACTS

Plans often have significant, unavoidable adverse air quality impacts due to the SFBAAB's nonattainment status and the cumulative impacts of growth on air quality. In addition, plans generally have long-term planning horizons of twenty years or more. For these reasons, it is essential for plans to incorporate all feasible strategies and measures to reduce air quality impacts. Mitigation measures for plans are often broad in scope due to the long timeframe and comprehensive nature of general and area plan policies and programs.

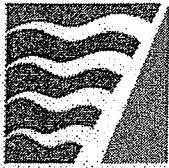
This section contains mitigation measures recommended for plans prepared within the SFBAAB. Measures are identified by state-required general plan element, planning issue, development phase, and type of air quality impact. Proposed plans should incorporate mitigation measures applicable to their elements and planning issues.

Plans are the appropriate place to establish community-wide air quality policies that reinforce regional air quality plans. Plans present opportunities to establish requirements for new construction, future development, and redevelopment projects within a community that will ensure new or revised plans do not inhibit attainment of state and national air quality standards and actually assist in improving local and regional air quality. Binding, enforceable mitigation measures identified through the environmental review process should be incorporated as policies and implementation programs within the plan to the



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greatest extent feasible. Ideally, air quality related goals, policies, performance measures and standards should be incorporated within the context of the proposed project itself, rather than introduced as corrective actions within the proposed project's EIR. The list below is not intended to serve as an exhaustive list. The Air District also recommends that Lead Agencies refer to CAPCOA's *Model Policies for Greenhouse Gases in General Plans* (June 2009) for additional guidance (<http://www.capcoa.org/modelpolicies/CAPCOA-ModelPolicies-6-12-09-915am.pdf>).

#### 9.6.1. Qualified Greenhouse Gas Reduction Strategy

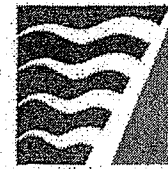
Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Develop and adopt a comprehensive Qualified GHG Reduction Strategy that includes: baseline inventory of greenhouse gas emissions from all sources, greenhouse gas emissions reduction targets that are consistent with the goals of AB 32, and enforceable GHG emission reduction strategies and performance measures.		X				X		
Qualified GHG Reduction Strategy to include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, report progress to the public and responsible agencies, and revise the plan as appropriate.		X				X		

#### 9.6.2. Land Use Element

##### Urban Form

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Create and enhance landscaped greenway, trail, and sidewalk connections between neighborhoods, commercial areas, activity centers, and parks.					X	X		
Adopt policies supporting infill development					X	X		
Ensure that proposed land uses are supported by a multi-modal transportation system and that the land uses themselves support the development of the transportation system.					X	X		
Designate a central city core for high-density and mixed-use development.					X	X		
Discourage high intensity office and commercial uses from locating outside of designated centers or downtowns, or far from residential areas and transit stations.					X	X		
Provide financial incentives and density bonuses to entice development within the designated central city.					X	X		
Provide public education about benefits of well-designed, higher-density housing and relationships between land use and transportation.					X	X		





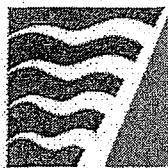
### Compact Development

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Achieve a jobs/housing balance or improve the jobs/housing ratio within the plan area.					X	X		
Create incentives to attract mixed-use projects to older commercial and industrial areas.					X	X		
Adopt incentives for the concurrent development of retail, office, and residential land uses within mixed-use projects or areas. Require mixed-use development to include ground-floor retail.					X	X		
Provide adaptive re-use alternatives to demolition of historic buildings. Provide incentives to prevent demolition of historic buildings.	X	X			X	X		
Facilitate lot consolidation that promotes integrated development with improved pedestrian and vehicular access.					X	X		
Reinvest in existing neighborhoods and promote infill development as a preference over new, greenfield development.					X	X		
Ensure that new development finances the full cost of expanding public infrastructure and services to provide an economic incentive for incremental expansion.					X	X		
Require new developments to extend sewer and water lines from existing systems or to be in conformance with a master sewer and water plan.	X	X			X	X		

### Transit-oriented Design

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Require all development projects proposed within 2,000 feet of an existing or planned light rail transit, commuter rail, express bus, or transit corridor stop, to incorporate site design measures that enhance the efficiency of the transit system.					X	X		
Develop transit/pedestrian-oriented design guidelines. Identify and designate appropriate sites during general plan updates and amendments.					X	X		
Plan areas within ¼-mile of locations identified as transit hubs and commercial centers for higher density development.					X	X		





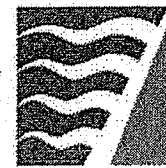
**Sustainable Development**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Ensure new construction complies with California Green Building Code Standards and local green building ordinances.					X	X		
Promote re-use of previously developed property, construction materials, and/or vacant sites within a built-up area.					X	X		
Avoid development of isolated residential areas near hillsides or other areas where such development would require significant infrastructure investment or adversely impact biological resources.						X		
Require orientation of buildings to maximize passive solar heating during cool seasons, avoid solar heat gain during hot periods, enhance natural ventilation, and promote effective use of daylight. Orientation should optimize opportunities for on-site solar generation.					X	X		
Provide land area zoned for commercial and industrial uses to support a mix of retail, office, professional, service, and manufacturing businesses.					X	X		
Provide permitting incentives for energy efficient and solar building projects.					X	X		
Develop a joint powers agreement or other legal instrument that provides incentive for counties to discourage urban commercial development in unincorporated areas and promote urban infill and redevelopment projects.					X	X		

**Activity Centers**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Provide pedestrian amenities, traffic-calming features, plazas and public areas, attractive streetscapes, shade trees, lighting, and retail stores at activity centers.					X	X		
Provide for a mix of complementary retail uses to be located together to create activity centers and commercial districts serving adjacent neighborhoods.					X	X		
Permit upper-story residential and office uses in neighborhood shopping areas.					X	X		
Provide pedestrian links between commercial districts and neighborhoods.					X	X		
Provide benches, streetlights, public art, and other amenities in activity centers to attract pedestrians.					X	X		





### Green Economy and Businesses

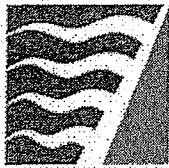
Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Work with businesses to encourage employee transit subsidies and shuttles from transit stations.					X	X		
Encourage businesses to participate in local green business programs.					X	X		
Offer incentives to attract businesses to city core and infill areas.					X	X		
Work to attract green businesses and promote local green job training programs.					X	X		
Support regional collaboration to strengthen the green economy.					X	X		
Provide outreach and education to local businesses on energy, waste, and water conservation benefits and cost savings.					X	X		
Support innovative energy technology companies.					X	X		

### 9.6.3. Circulation Element

#### Local Circulation

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Create or reinforce a grid street pattern with small block sizes and maintain high connectivity within the roadway network.					X	X		
Implement circulation improvements that reduce vehicle idling, such as signal timing systems and controlled intersections.					X	X	X	
Consider alternatives such as increasing public transit or improving bicycle or pedestrian travel routes before funding transportation improvements that increase VMT.					X	X		
Require payment of transportation impact fees and/or roadway and transit improvements as a condition upon new development.					X	X		
Minimize use of cul-de-sacs and incomplete roadway segments.					X	X		
Actively promote walking as a safe mode of local travel, particularly for children attending local schools.					X	X		
Consult with school districts, private schools, and other operators to coordinate local busing, to expand ride-sharing programs, and to replace older diesel buses with low or zero emission vehicles.					X	X	X	
Evaluate all busing options as a preferential strategy to roadway improvements in the vicinity of schools to ease congestion.					X	X		
Establish public/private partnerships to develop satellite and neighborhood work centers for telecommuting.					X	X		
Employ traffic calming methods such as median landscaping and provision of bike or transit lanes to slow traffic, improve roadway capacity, and address safety issues.					X	X		
Support the use of electric vehicles where appropriate. Provide electric recharge facilities.					X	X		





### Regional Transportation

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Ensure that submittals of transportation improvement projects to be included in regional transportation plans (RTP, RTIP, CMP, etc.) are consistent with the air quality goals and policies of the general plan.					X	X		
Consult with adjacent jurisdictions to address the impacts of regional development patterns on the circulation system.					X	X		
Adopt a (or implement the existing) Transportation Demand Management Ordinance.					X	X		
Create financing programs for the purchase or lease of vehicles used in employer ride sharing programs.					X	X		
Consult with adjacent jurisdictions to maintain adequate service levels at shared intersections and to provide adequate capacity on regional routes for through traffic.					X	X		
Work to provide a strong paratransit system that promotes the mobility of all residents and educate residents about local mobility choices.					X	X		
Designate sites for park-and-ride lots. Consider funding of the park and ride lots as mitigation during CEQA review of residential development projects.					X	X		
Consult with appropriate transportation agencies and major employers to establish express buses and vanpools to increase the patronage of park and ride lots.					X	X		
Allow developers to reach agreements with auto-oriented shopping center owners to use commercial parking lots as park-and-ride lots and multimodal transfer sites.					X	X		

### Parking

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Reduce parking for private vehicles while increasing options for alternative transportation.					X	X		
Eliminate minimum parking requirements for new development.					X	X		
Establish commercial district parking fees.					X	X		
Require that parking is paid for separately and is not included in rent for residential or commercial space.					X	X		
Encourage parking sharing between different land uses.					X	X		
Encourage businesses to offer parking cash-outs to employees.					X	X		
Encourage parking assessment districts.					X	X		
Encourage car-share and bike-share programs and dedicated parking spaces in new development.					X	X		
Support preferential parking for low emission and carpool vehicles					X	X		




**Bicycles and Pedestrians**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Provide safe and convenient pedestrian and bicycle connections to and from activity centers, commercial districts, offices, neighborhoods, schools, other major activity centers.					X	X		
Ensure that non-motorized transportation systems are connected and not interrupted by impassable barriers, such as freeways.					X	X		
Provide pedestrian pathways that are well-shaded and pleasantly landscaped to encourage use.					X	X		
Consult with transit providers to increase the number of bicycles that can be accommodated on buses.					X	X		
Provide crosswalks and sidewalks along streets that are accessible for people with disabilities and people who are physically challenged.					X	X		
Prohibit on-street parking to reduce bicycle/automobile conflicts in appropriate target areas.					X	X		
Prohibit projects that impede bicycle and walking access.					X	X		
Retrofit abandoned rail corridors as segments of a bikeway and pedestrian trail system.					X	X		
Require commercial developments and business centers to include bicycle amenities in building such as bicycle racks, showers, and lockers.					X	X		

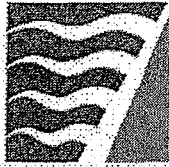
**Regional Rail Transit**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Support regional rail service and consult with rail operators to expand services.					X	X		
Create activity centers and transit-oriented development projects near transit stations.					X	X		

**Local and Regional Bus Transit**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Give funding preference to investment in public transit over investment in infrastructure for private automobile traffic.					X	X		
Establish a local shuttle service to connect neighborhoods, commercial centers, and public facilities to rail transit.					X	X		
Empower seniors and those with physical disabilities who desire maximum personal freedom and independence of lifestyle with unimpeded access to public transportation.					X	X		
Provide transit shelters that are comfortable, attractive, and accommodate transit riders. Ensure that shelters provide shade, route information, benches and lighting.					X	X		
Design all arterial and collector streets planned as transit routes to allow for the efficient operation of public transit.					X	X		
Require transit providers to coordinate intermodal time schedules					X	X		



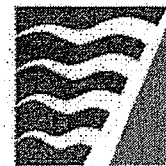


#### 9.6.4. Conservation Element

##### Municipal Operations

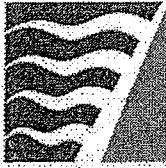
Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Replace existing City vehicles with ultra-low or zero emission vehicles and purchase new low emission vehicles.					X	X		
Require that all new government buildings, and all major renovations and additions, meet identified green building standards.					X	X		
Install cost-effective renewable energy systems on all city buildings and purchase remaining electricity from renewable sources.					X	X		
Support the use of teleconferencing in lieu of city/county employee travel to conferences and meetings when feasible.					X	X		
Require city/county departments to set up telecommuting programs as part of their trip reduction strategies.					X	X		
Require environmentally responsible government purchasing. Require or give preference to products that reduce or eliminate indirect GHG emissions.						X		
Investigate the feasibility of using solar (photovoltaic) street lights instead of conventional street lights to conserve energy.					X	X		
Support investment in cost-effective land use and transportation modeling and geographic information system technology.					X	X	X	X
Install LED lighting for all traffic light systems.						X		
Implement a timed traffic light system to reduce idling.					X	X		



**Air Quality – Sensitive Receptors**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Develop and adopt a comprehensive Community Risk Reduction Plan that includes: baseline inventory of TAC and PM <sub>2.5</sub> emissions from all sources, emissions reduction targets, and enforceable emission reduction strategies and performance measures. Community Risk Reduction Plan to include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, report progress to the public and responsible agencies, and revise the plan as appropriate.			X				X	
Require residential development projects and projects categorized as sensitive receptors to be located an adequate distance from existing and potential sources of TACs and odors.				X			X	X
Require new air pollution point sources such as, but not limited to, industrial, manufacturing, and processing facilities to be located an adequate distance from residential areas and other sensitive receptors.	X		X	X	X		X	X
Consult with BAAQMD to identify TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.			X	X			X	X
Consult with project proponents during the pre-application review process to avoid inappropriate uses at affected sites and during the environmental review process for general plan amendments and general plan updates.					X		X	X
Require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review when the proposed project has associated air-toxic emissions.			X				X	
Designate adequate industrial land in areas downwind and well-separated from sensitive uses.							X	X
Designate non-sensitive land uses for areas surrounding industrial sites.					X		X	X
Protect vacant industrial sites from encroachment by residential or other sensitive uses through appropriate zoning.					X		X	X
Require indoor air quality equipment, such as enhanced air filters, to be installed at schools, residences, and other sensitive receptor uses located near pollution sources.							X	X
Quantify the existing and added health risks to new sensitive receptors or for new sources.							X	
Utilize pollution absorbing trees and vegetation in buffer areas.					X	X	X	





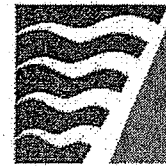
**Air Quality – PM<sub>10</sub> and Dust Control**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Include PM <sub>10</sub> control measures as conditions of approval for subdivision maps, site plans, and grading permits.	X				X			
Minimize vegetation removal required for fire prevention.	X				X			
Require alternatives to discing, such as mowing, to the extent feasible. Where vegetation removal is required for aesthetic or property maintenance purposes, encourage or require alternatives to discing.	X	X			X	X		
Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas.	X							
Condition grading permits to require that graded areas be stabilized from the completion of grading to commencement of construction.	X							
Require all access roads, driveways, and parking areas serving new commercial and industrial development to be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.	X							
Develop a street cleaning program aimed at removing heavy silt loadings from roadways that result from sources such as storm water runoff and construction sites.	X				X			
Pave shoulders and pave or landscape medians. Curb and gutter installation may provide additional benefits where paving is contiguous to the curb.	X	X			X	X		

**Water Conservation**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Require residential remodels and renovations to improve plumbing fixture and fixture-fitting water efficiency by an established amount above the California Building Standards Code water efficiency standards.		X						
Provide water use audits to identify conservation opportunities and financial incentives for adopting identified efficiency measures.		X						
Require use of native and drought-tolerant plants, proper soil preparation, and efficient irrigation systems for landscaping.		X				X		
Maximize use of native, low-water plants for landscaping of areas adjacent to sidewalks or other impermeable surfaces.		X				X		
Increase use of recycled and reclaimed water for landscaping projects.		X				X		
Adopt a water-efficient landscaping ordinance and implement the Bay-Friendly Landscaping Guidelines established by StopWaste.org.						X		
Provide public water conservation education.						X		
Reduce pollutant runoff from new development through use of Best Management Practices.	X	X	X		X	X	X	
Minimize impervious surfaces and associated urban runoff pollutants in new development and reuse projects.	X	X	X		X	X	X	
Utilize permeable surfaces and green roof technologies where appropriate.					X	X	X	





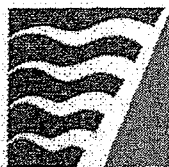
### Energy Conservation

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Conduct energy efficiency audits of existing buildings by checking, repairing, and readjusting heating, ventilation, air conditioning, and lighting, water heating equipment, insulation and weatherization. Offer financial incentives for adoption of identified efficiency measures.		X				X		
Require implementation of energy-efficient design features in new development, including appropriate site orientation, exceedance of Title 24, use of light color roofing and building materials, and use of evergreen and wind-break trees to reduce heating and cooling fuel consumption.		X				X		
Adopt residential and commercial energy efficiency retrofit ordinances that require upgrades as a condition of issuing permits for renovations or additions, and on the sale of residences and buildings.		X				X		
Facilitate cooperation between neighboring development projects to use on-site renewable energy supplies or combined heat and power co-generation facilities.		X				X		
Develop a comprehensive renewable energy financing and informational program for residential and commercial uses.		X				X		
Partner with community services agencies to fund energy efficiency projects for low income residents.		X				X		
Encourage the installation of energy efficient fireplaces in lieu of normal open-hearth fireplaces. Prohibit installation of wood burning devices.	X	X			X	X		
Provide natural gas lines or electrical outlets to backyards to encourage the use of natural gas or electric barbecues, and electric gardening equipment.	X				X			
Implement Community Choice Aggregation (CCA) for renewable electricity generation.		X				X		

### Solid Waste

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Achieve established local and regional waste-reduction and diversion goals. Adopt more stringent waste reduction goals.		X				X		
Establish programs that enable residents to donate or recycle surplus furniture, old electronics, clothing, and other household items.		X				X		
Establish methane recovery in local landfills and wastewater treatment plants to generate electricity.		X				X		
Participate or initiate a composting program for restaurants and residences.						X		
Implement recycling programs for businesses and construction waste.	X	X			X	X		
Prohibit styrofoam containers and plastic bag use by businesses.					X	X		





### 9.6.5. Open Space Element

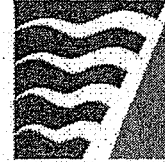
#### Community Forestry

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Require inclusion of low VOC-emitting street trees and landscaping for all development projects.		X				X		
Require that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio.		X				X		
Provide adequate funding to manage and maintain the existing community forest, including sufficient funds for tree planting, pest control, scheduled pruning, and removal and replacement of dead trees.		X				X		
Provide public education regarding the benefits of street trees and the community forest.		X				X		

#### Sustainable Agriculture

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Require agricultural practices be conducted in a manner that minimizes harmful effects on soils, air and water quality, and marsh and wildlife habitat. Sustainable agricultural practices should be addressed in the Qualified GHG Reduction Strategy to address climate change effects if relevant.	X	X			X	X		
Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas and other open spaces that provide carbon sequestration benefits.	X	X			X	X		
Establish a mitigation program for establishing conservation areas. Impose mitigation fees on development of such lands and use funds generated to protect existing, or create replacement, conservation areas.	X	X			X	X		
Require no-till farming, crop rotation, cover cropping, and residue farming.	X	X			X	X		
Require the use of appropriate vegetation within urban-agricultural buffer areas.		X				X		
Protect grasslands from conversion to non-agricultural uses.	X	X			X	X		
Support energy production activities that are compatible with agriculture, including biogas, wind and solar.		X				X		
Allow alternative energy projects in areas zoned for agriculture or open space where consistent with primary uses.		X				X		
Provide spaces within the community suitable for farmers markets.						X		
Promote local produce and garden programs at schools.						X		




**Parks and Recreation**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Expand and improve community recreation amenities including parks, pedestrian trails and connections to regional trail facilities.						X		
Require payment of park fees and/or dedication and provision of parkland, recreation facilities and/or multi-use trails as a condition upon new development.		X				X		
Encourage development of pocket parks in neighborhoods. Improve equal accessibility to park space across communities.		X				X		
Encourage joint use of parks with schools and community centers and facilities.		X				X		

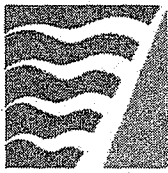
**9.6.6. Housing Element**
**Affordable Housing**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Ensure a portion of future residential development is affordable to low and very low income households.		X				X		
Target local funds, including redevelopment and Community Development or Energy Efficiency Block Grant resources, to assist affordable housing developers in incorporating energy efficient designs and features.						X		
Adopt minimum residential densities in areas designated for transit-oriented, mixed use development to ensure higher density in these areas.					X	X		
Consult with the Housing Authority, transit providers, and developers to facilitate construction of low-income housing developments that employ transit-oriented and pedestrian-oriented design principles.					X	X		
Offer density-bonus incentives for projects that provide for infill, mixed use, and higher density residential development.					X	X		

**9.6.7. Safety Element**
**Traffic Safety**

Mitigation Measure or General/Area Plan Policy	Construction				Operational			
	CAPs	GHGs	TACs	Odors	CAPs	GHGs	TACs	Odors
Facilitate traffic safety for motorists and pedestrians through proper street design and traffic monitoring.					X	X		
Require traffic control devices, crosswalks, and pedestrian-oriented lighting within design of streets, sidewalks, trails, and school routes.					X	X		





## A. CONSTRUCTION ASSESSMENT TOOLS

### High Level Haulage Input Worksheet High Level of Detail Fugitive Dust Quantification Method

Instructions: When using the *High Level of Detail* quantification method to calculate fugitive dust emissions from cut/fill activities, BAAQMD recommends using this worksheet to calculate the on- and off-site haulage inputs for URBEMIS. If a project would involve both on-site and off-site cut/fill operations, the user should create two separate High Level Haulage Input Worksheets (i.e., one worksheet calculation for on-site and one for off-site).

Project Name:

Grading Activity/Phase:

Cut/Fill Operations

Description	Amount	Units	Notes
Total Cut/Fill Volume	<input type="text" value="1305"/>	cubic yards	Enter information
Months of Activity	<input type="text" value="2"/>	months	Enter information
Days of Activity	<input type="text" value="44"/>	days	
Daily Cut/Fill Volume	<input type="text" value="40.41"/>	cubic yards/day	

URBEMIS 2007 Ton-Mile Calculation

Description	Amount	Units	Notes
Soil Type	<input type="text" value="Loamy Coarse-Loamy"/>		Use drop-down menu to select soil type. Assume Sandy unless project-specific soil type is known.
Soil Density	<input type="text" value="1.63"/>	tons/cubic yard	Enter project specific soil density if known
Haul Distance (Round Trip On-Site)	<input type="text" value="10.04"/>	miles	Enter distance
Ton-Mile per Day	<input type="text" value="2.25"/>	ton-miles/day	

Notes:

On-site ton-mile assumes cut/fill volume is moved by scrapers.

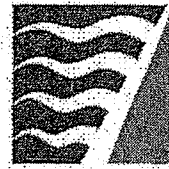
Off-site ton-mile assumes cut/fill volume is moved by haul trucks.

Soil Density by Soil Type and Condition

Soil Type	Bulk Density (grams/cubic centimeter)	Density (pounds/cubic yard)	Density (tons/cubic yard)
Sandy	1.69	2,849	1.42
Loamy Coarse-Loamy	1.63	2,747	1.37
Loamy Fine-Loamy	1.60	2,697	1.35
Loamy Coarse-Silty	1.60	2,697	1.35
Loamy Fine-Silty	1.54	2,596	1.30
Clayey 25-25% clay	1.49	2,511	1.26
Clayey >45% clay	1.39	2,343	1.17

Source: U.S. Department of Agriculture, Natural Resources Conservation Service, 2007. National Soil Survey Handbook, title 430-VI. [Online] Available at <<http://soils.usda.gov/technical/handbook/>>.





### URBEMIS Construction Modeling Data Needs/Requests

#### 1) Construction Schedule

Land use type and size to be developed

Commencement and buildout date

Duration and start date for each construction phase (e.g., demolition, grading, building construction)

Identify any potential or planned overlap in phases

Note: If project will be built out in multiple phases, provide information above for each phase.

#### 2) Demolition

Commencement date and duration of activities

Total volume to be demolished

Maximum daily volume to be demolished

Haul truck capacity and distance to disposal site (URBEMIS defaults provided)

Demolition equipment required (URBEMIS defaults provided)

Note: URBEMIS estimates demolition construction equipment based on the land use being developed.

#### 3) Grading (Mass and Fine)

Commencement date and duration of activities

Maximum daily acres disturbed (URBEMIS defaults provided)

Volume of material to be cut and/or filled (cubic yards)

Volume of material to be exported and/or imported (cubic yards)

Construction equipment required

Note: URBEMIS estimates grading construction equipment based on maximum daily acres disturbed.

#### 4) Fugitive Dust

##### A) Method 1 (Default)

Maximum daily acres disturbed (URBEMIS defaults provided)

##### B) Method 2 (Low Level of Detail)

Duration of cut/fill operations

Volume of material to be cut and/or filled (cubic yards)

Origin of soil material (i.e., on-site or off-site)

##### C) Method 3 (Medium Level of Detail)

Duration of cut/fill operations

Number of scrapers or haul trucks operating per day

Hours of operation for each scraper or haul truck (scraper hours and haul truck hours)

##### D) Method 4 (High Level of Detail)

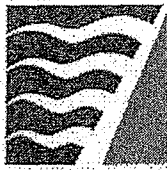
Duration of cut/fill operations

Volume of material to be cut and/or filled (cubic yards)

Bulk density of material (i.e., tons per cubic yard)

Round trip distance required to move materials on-site (on-site miles only)





5) Asphalt Paving

Commencement date and duration of activities

Total acres to be paved

Construction equipment required

Note: URBEMIS estimates asphalt paving construction equipment based on total acres to be paved.

6) Architectural Coatings

Commencement date and duration of activities





## B. AIR QUALITY MODELING INSTRUCTIONS (URBEMIS)

This section provides detailed instructions for and examples of air quality modeling of operational and construction-related emissions pursuant to the methodological recommendations in this guide.

### OPERATIONAL-RELATED EMISSIONS

#### URBEMIS Input Parameters

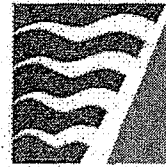
URBEMIS provides default values for Bay Area specific modeling parameters. Users may use the default values or provide project specific information when possible for more accurate emission quantification. BAAQMD-recommended input parameters and data requirements along with general URBEMIS user information for each operational-related activity are described below. Refer to the URBEMIS User's Guide and the BAAQMD Greenhouse Gas Model User's Manual (referred to collectively as the "User's Guide" below) for more detailed information.

Table B-1 URBEMIS Input Parameters for Operation Emissions	
Operational Input Parameters	Guidance Principle
Air District	Bay Area Air District
Analysis Year	Earliest possible year when project would be operational
Land Use Type and Units	Based on project description
Trip Rate	From project traffic study, local trip rates, or ITE Trip Generation Manual
Project Location	Urban
Road Dust	Category should not be turned off but can be modified if project information is known
Pass-by Trips	See User's Guide for further instructions
Double Counting Correction	See User's Guide for further instructions
Percentage of Land Uses using Natural Gas	100 percent for both residential and nonresidential development
Persons per Residential Unit (Consumer Products)	Based on estimated number of residents
All Other URBEMIS Inputs	Use default values, unless project-specific data is available. See User's Guide for further instructions <sup>1</sup>
<sup>1</sup> The rationale for changing default values should be disclosed in the CEQA document	

#### *Land Use Type and Size*

Choose each individual land use type (e.g., single family housing, apartment high rise, regional shopping center, or office park) that is most applicable to the proposed development project in the *Enter Land Use Data* module and enter the size of the project (e.g., acres, thousand square feet [ksf], students, dwelling units [du], rooms, pumps, rooms, or employees). Ensure that the unit type for the project-specific data is consistent with the unit type selected in URBEMIS. By default, URBEMIS estimates the trip generation rates for each land use type based on equations included in the *ITE Trip Generation Manual*. The trip rate represents the number of daily trips generated by a particular land use type by size. Override the default trip rate if project-specific data is available from the transportation analysis.





URBEMIS estimates the trip rate differently for residential land use types than for non-residential land use types. For residential land use types, URBEMIS adjusts the default trip rate based on residential density (i.e., dwelling units/residential acre). Overriding the default value for the number of acres for a residential land use type would automatically result in a change in the trip rate value. If both the number of acres and the trip rates for a residential development are known, enter the unit amount for the land use first, then adjust the acreage second, and then adjust the trip rate last. Select the *Submit* button after completing the *Enter Land Use Data* module.

For nonresidential land use types, URBEMIS uses a default trip rate value that is directly based on the unit amount entered into the *Enter Land Use Data* module. URBEMIS also assumes a Floor Area Ratio (FAR) of 0.5 for all nonresidential uses. The FAR is the ratio of the total floor area of a building to the size of the parcel on which it is located. Override the value in the acres data field based on the FAR for the proposed nonresidential land uses. URBEMIS does not adjust the default trip rate if the acre value is adjusted.

The *Enter Land Use Data* module includes a default worker commute trip percentage for all nonresidential land use types, which is used to estimate percentages of other commercial trip types in the *Enter Operational Data* module. The *Enter Land Use Data* module also contains default percentages of primary, diverted, and pass-by trips for all land use types, residential and non-residential. Primary trips are trips made for the specific purpose of visiting the generator and URBEMIS assumes that primary trips travel a full trip length; pass-by trips are trips made as intermediate stops on the way from an origin to another trip destination; and diverted-linked trips are trips attracted from the traffic volume on roadways in the vicinity of the generator but which require a diversion from that roadway to another roadway to gain access to the site. Pass-by and diverted-linked trips are assigned a shorter trip distance than primary trips. URBEMIS assumes that pass-by trips result in virtually no extra travel, with an assumed trip length of 0.1 mile. Diverted-linked trip lengths are assumed to equal 25 percent of the primary trip length. URBEMIS allows users to edit these data fields. URBEMIS incorporates this information for estimation of mobile-source emissions only if the check box for the Pass-by Trips category in the *Enter Operational Data* module is selected. When not selected, URBEMIS assumes all trips are primary trips. BAAQMD recommends reviewing the *User's Guide* for more information about when to use this feature. Additional discussion about pass-by trips is provided under the *Enter Operational Data* module guidance below.

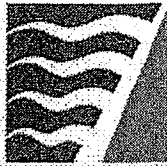
When estimating emissions for a type of land use that is not listed in URBEMIS, select a similar land use type or add a new land use type on the Blank tab of the *Enter Land Use Data* module. When selecting a similar nonresidential land use type as a proxy, consider the worker commute trip percentage and the primary, diverted, and pass-by trip values. The name of the land use type is unimportant and can be overridden with new text if desired. BAAQMD recommends using one of the types of residential land uses listed in URBEMIS as a proxy when analyzing any type of unique residential project.

For unique nonresidential types of land uses, BAAQMD recommends either using another nonresidential land use type as a proxy or using a Blank land use type. If a new land use type is analyzed using a row on the Blank tab of the *Enter Land Use Data* module, enter a trip rate as URBEMIS does not provide default trip rate on the Blank tab. BAAQMD recommends using a trip rate from the *ITE Trip Generation Manual*, if an appropriate trip rate is available. If an applicable trip generation rate is not available, the Lead Agency should make a good faith effort to derive a trip generation rate for the proposed project.

#### **Operational Data**

The *Enter Operational Data* module allows users to estimate vehicle exhaust emissions from trips (and associated VMT) generated by a project. The module consists of seven operational





parameter categories including *Year & Vehicle Fleet*, *Trip Characteristics*, *Temperature Data*, *Variable Starts*, *Road Dust*, *Pass-by Trips*, and *Double-Counting Correction*. The first five operational categories are all needed to calculate vehicle exhaust emissions and; therefore, cannot be turned off. Three of the seven operational categories can be turned off: *Road Dust*, *Pass-by Trips*, and *Double-Counting Correction*.

Guidance regarding each of the operational categories is provided below. In general, most of the default values for these seven source categories do not need to be changed, except where otherwise noted.

#### *Year & Vehicle Fleet*

The *Year & Vehicle Fleet* category allows users to specify the operational year for the project. Use the earliest possible year when the project would be operational to estimate worst-case operational emissions. Be aware that changing the project start year also changes the vehicle fleet mix. The default fleet mix values (i.e., *Fleet %*, *Vehicle Type*, *Non-Catalyst*, *Catalyst*, *Diesel*) are based on values from EMFAC using the year and the location of the project that is specified when users creates a new project in URBEMIS. The fleet mix should be modified only if it is known that the fleet mix for a project would be different from the average vehicle fleet mix in the project area. In that situation, select *Keep Current Fleet Mix When Changing Years*. Changes to the fleet mix data should be based on information provided by the transportation analysis and/or assumptions that are disclosed in the CEQA document. For instance, the fleet mix of motor vehicle trips generated by a school project would likely consist of a higher percentage of school buses and a lower percentage of motor homes and motorcycles than the URBEMIS average.

#### *Trip Characteristics*

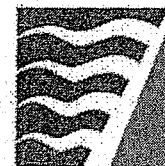
The *Trip Characteristics* category includes trip data such as average speed, trip percentages, urban and rural trip lengths for different trip types. The trip percentages for home-based trips can be modified; however, it is not possible to modify the same for commercial-based trips, which URBEMIS calculates using the worker commute trip percentage entered in the *Enter Land Use Data* module. URBEMIS uses either the urban or rural trip length values depending on whether *Urban Project* or *Rural Project* is selected on the same screen. In general, the *Urban Project* option should be selected for most land use development projects under BAAQMD's jurisdiction. The trip length values can be changed if supported by information produced in a transportation analysis and/or reasonable assumptions about the project. For instance, the trip length for a proposed school might be adjusted according to the spatial distribution of the households that would be served by that school, particularly if the majority of trip generation would consist of parents driving their children to the school.

In addition to trip rate adjustments based on residential density, URBEMIS allows for modifications to vehicle trips based on other project characteristics. If specific project information is available for any land use type it should be reflected in the URBEMIS inputs. The table "URBEMIS Measures – Operational (Mobile-source) Measures" in Section 4.2 lists available measures to alter the trip rate to better reflect specific conditions. For example, if a project includes access to transit, URBEMIS trip rates can be adjusted between 0% and 15%. A 15% reduction in vehicle trips due to transit access would only be appropriate for a project that offers access to exceptional transit service. See the User's Guide for further instructions on all adjustments. Lead agencies must discuss and justify their reductions with substantial evidence.

#### *Temperature Data*

The *Temperature Data* category contains default ambient winter and summer temperature values which are used to estimate winter and summer emissions, respectively. The default temperature values in these data fields are specific to SFBAAB and should only be modified in consultation with BAAQMD.





#### *Variable Starts*

The *Variable Starts* parameter category shows the percentage of vehicles in several time classes (minutes since the vehicle engine was turned off) for the six trip types defined in the *Trip Characteristics* parameter category. This information is derived from the applicable EMFAC file and should only be modified in consultation BAAQMD.

#### *Road Dust*

The *Road Dust* parameter category allows users to specify the distribution of vehicle travel between paved and unpaved roads. This category is used to calculate entrained road dust emissions due to vehicle travel on paved and unpaved surfaces. Do not turn this category off, and users can adjust the percentage of travel on paved and unpaved roads if detailed project information is known.

#### *Pass-by Trips*

The *Pass-by Trips* parameter category can only be turned on or off. When selected, this category divides all the project-generated trips into primary, pass-by, and diverted-linked trips (entered as percentages in *Enter Land Use Data* module). When this category is not selected, URBEMIS assumes 100 percent of the project-generated trips are primary trips. Pass-by trips are trips made as intermediate stops on the way from an origin to a primary trip destination. URBEMIS accounts for these trips by setting the trip length to 0.1 miles for each pass-by trip. These trips are most important for retail and commercial land uses, such as gas stations and fast food restaurants. This option is not applicable to all land use types. For example, most of the trips to and from a *Warehouse* are typically expected to be primary trips and the *Pass-by Trips* option should not be used. This category check box should not be selected unless the percentage of pass-by trips is supported by a transportation analysis or a set of reasonable assumptions discussed in the CEQA document. If the trip length values in the *Trip Characteristics* category or the trip rate values in the *Enter Land Use Data* module are overwritten using information provided by a transportation analysis, be aware of whether the traffic data incorporated the occurrence of pass-by trips. If the *Pass-By Trips* checkbox is selected then the Lead Agency should discuss its reasoning for assuming that some of the project-generated vehicle trips would be considered pass-by trips.

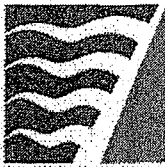
#### *Double-Counting Correction*

The *Double-Counting Correction* parameter category is designed to account for internal trips between residential and nonresidential land uses. The *Double-Counting Correction* is applicable to mixed-use projects that include both residential and nonresidential land use types in the *Enter Land Use Data* module. For example, a residential trip and a retail trip generated by a mixed-use project may be the same trip. Users have the option of entering the number of internal trips between residential and nonresidential land uses in the *Enter the gross internal trip* as desired. The value entered represents the number of internal trips that would not be included in the emissions estimate. This category should not be used unless the transportation analysis or local transportation studies contain data to support the correction factor. In some cases, the transportation analysis may report project-specific trip generation that is already corrected for internal trips. Consult with a traffic engineer to determine the appropriate method to account for internal trips. The *Double-Counting Correction* checkbox should not be selected if detailed project information is unknown.

#### *Area Source*

The *Enter Area Source Data* module allows users to adjust the five area-source emission categories including, natural gas fuel combustion, hearth fuel combustion, landscape fuel combustion, consumer products, and architectural coatings. The natural gas, hearth, and landscape maintenance categories relate to on-site fuel combustion and the consumer products and architectural coatings categories address on-site evaporative emissions.





Guidance regarding each of the area-source categories is provided below. In general, most of the default values for these five source categories do not need to be changed except where otherwise noted in this guide.

#### *Natural Gas Fuel Combustion*

Parameters in the *Natural Gas Fuel Combustion* category are used to estimate the natural gas combustion emissions from space and water heating. On the *Natural Gas* tab the default percentage for land uses using natural gas should be changed to 100 percent for both residential and nonresidential land use types, as is representative of most development projects in the SFBAAB, unless project-specific data is available. Similarly, do not override the default natural gas usage values unless project-specific data is available.

#### *Hearth Fuel Combustion*

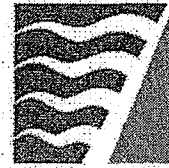
The *Hearth Fuel Combustion* category consists of separate tabs for *Hearth Percentages*, *Wood Stoves*, *Wood Fireplaces*, *Natural Gas Fireplaces*, and *Natural Gas Emission Factors*. Each of the tabs is discussed separately below.

- *Hearth Percentages*  
The parameters on the *Hearth Percentages* tab are applicable only to projects that include residential units. The default percentages should be used for the wood stoves, wood fireplaces, and wood stoves unless project-specific information is available. URBEMIS does not estimate emissions from any hearth types for nonresidential land use types.
- *Wood Stoves*  
On the *Wood Stoves* tab, the default percent values for the types of wood stoves (i.e., *Noncatalytic*, *Catalytic*, *Conventional*, and *Pellet*) should be changed in accordance with District Regulation 6, Rule 3, which allows only EPA-certified wood burning fireplaces and pellet stoves in new construction projects. The values for *Wood Burned*, *Wood Stove Usage*, and *Pounds in a Cord of Wood* should not be changed unless project-specific information is available.
- *Wood Fireplaces*  
The *Wood Fireplaces* tab is similar to the *Wood Stoves* tab. The emission factors on this tab cannot be modified. The values for *Wood Burned*, *Wood Stove Usage*, and *Pounds in a Cord of Wood* should not be changed unless project-specific information is available. District Regulation 6, Rule 3 allows only EPA-certified wood burning fireplaces in new construction projects.
- *Natural Gas Fireplaces*  
The values in the data fields on the *Natural Gas Fireplaces* tab should only be modified in the case that project-specific information is available that supports overriding default values.
- *Natural Gas Emission Factors*  
The emission factors contained in the *Natural Gas Emission Factors* tab cannot be modified. These values are used to estimate emissions from natural gas combustion in fireplaces/stoves and, according to the URBEMIS User's Guide, are based on U.S. Environmental Protection Agency Air Pollutant (AP-42) emission factors.

#### *Landscape Fuel Combustion*

The *Landscape Fuel Combustion* source category calculates on-site emissions from landscaping equipment such as lawn mowers, leaf blowers, chain saws, and hedge trimmers that are powered by internal combustion engines. On this tab, only adjust the value for the year being analyzed. The year entered into this field should be the earliest year when the project could become fully





operational. Landscaping emissions are estimated for the summer period only. URBEMIS uses emission rates from ARB's OFFROAD model to estimate of landscape maintenance equipment emissions.

#### *Consumer Products*

The *Consumer Products* source category is only relevant to projects that include residential land use types. The *Pounds of ROG (per person)* value should not be adjusted in this category. The persons per residential unit data field should be adjusted based on the estimated number of residents that would be supported by the proposed project, if available. The value should be consistent with the number of residents divided by the number of residential units.

#### *Architectural Coating*

Do not make changes to the values in the *Architectural Coating* source category without consulting BAAQMD.

## EXAMPLE PROJECT OPERATIONAL-RELATED EMISSIONS CALCULATION

### Description

The Example Project would develop a multi-story, mixed-use building that includes 40 units of residential condominium apartments, 50,000 square feet (or "50 thousand square feet" [ksf]) of offices and 35 ksf of retail land uses on an undeveloped 4.0-acre site. All of the residential condominium apartments would have natural gas lines for space heating but half of the units would be referred to as "suites" and include natural gas fireplaces. The regular apartments would not have natural gas fireplaces. Project construction would last two years beginning in 2010 and the project would be fully operational by 2013.

### Screening Analysis

In the Land Use Module of URBEMIS (*Enter Land Use Data*) the corresponding Land Use Types of the proposed development would be Apartment High Rise units, General Office Building, and Strip Mall.

When each of the Land Use Types (i.e. Apartment High Rise units, General Office Building, and Strip Mall) is considered individually, their respective sizes would not exceed any of the District's Operational Screening Criteria (Table 3-1). However, because the project would contain more than one land use type, the operational screening levels cannot be used to assess the project's operational emissions, as explained in the discussion about the screening levels earlier in this guidance. The lead agency would be required to perform a detailed estimation of operational emissions using URBEMIS.

### Emissions Quantification

When entering the proposed land uses into the Land Use Module, URBEMIS estimates the number of Acres for each Land Use Type assuming that each land use type would be constructed on separate lots. Using default values URBEMIS would assume this Example Project is 4.56 total acres (i.e. 0.65 acres for Apartment High Rise, 2.30 acres for General Office Building, and 1.61 acres for Strip Mall). For mixed-use and/or multi-level developments, the user should adjust the Acres for each of the proposed land uses such that the combined total acreage of all land use types is equal to the actual combined total size of the proposed project site (i.e., 4.0 acres, in this example) prior to running the model.

URBEMIS estimates the Trip Rate differently for residential land use types than for non-residential land use types. For residential land use types, URBEMIS adjusts the default Trip Rate based on residential density (i.e., dwelling units/residential acre). Therefore, overriding the default





value for the number of Acres assumed by URBEMIS for a residential land use type would automatically result in a change to the value assumed in the Trip Rate data field. If both the number of Acres and the Trip Rate for a residential development are known, the user should adjust the Acres field first, then adjust the Trip Rate field, and then click the Submit button. For nonresidential Land Use Types, URBEMIS uses a default value for in the Trip Rate data field that is directly based on the Unit Amt entered into the Land Use Module. The trip rates used by URBEMIS are based on standard rates from the ITE Trip Generation Manual. URBEMIS also assumes a Floor Area Ratio (FAR) of 0.5 for all nonresidential land use types. The FAR is the ratio of the total floor area of a building to the size of the parcel on which it is located. The user should override the value in the Acres data field based on the actual FAR for the development, as appropriate.

In the Area Source Module, Hearth Fuel Combustion category, the user should change the data fields for Wood Stoves, Wood Fireplaces, Natural Gas Fireplaces, and None (% w/o any hearth option) on the Hearth Percentages tab to 0, 0, 50, and 50, respectively to match the project description. In the Landscape Fuel Combustion source category the Year being Analyzed data field should be changed to 2013.

In the Operational Module the year data field in the Year & Vehicle Fleet category page should also be changed to 2013.

Lastly, the estimated daily and annual emissions of criteria air pollutants and precursors should be compared to the District's thresholds of significance (Table 2-2). If the daily or annual emissions would exceed the thresholds of significance, operational emissions would be considered significant and all feasible mitigation measures should be implemented to reduce these emissions.

## CONSTRUCTION-RELATED EMISSIONS

### **Land Use Development Projects**

URBEMIS includes a module (*Enter Construction Data*) that quantifies emissions from the following construction-related activity phases: demolition, mass and fine grading ("grading"), trenching, asphalt paving, building construction, and the application of architectural coatings.

### **URBEMIS Input Parameters**

BAAQMD recommends input parameters and data requirements along with general URBEMIS user information for each construction-related activity phase below. Refer to the URBEMIS User's Manual for more detailed information. Appendix A contains a *Construction Data Needs Form* template that can be used to assist with requesting and gathering project-specific information.

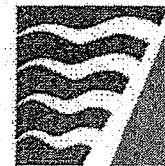
#### **Land Use Type and Size**

Choose each individual land use type (e.g., single family housing, apartment high rise, regional shopping center, or office park) that is most applicable to the proposed development project in the *Enter Land Use Data* module and enter the size of the project (e.g., acres, thousand square feet [ksf], students, dwelling units [du], rooms, pumps, rooms, or employees). For several of the land use types, various size units are available (e.g., ksf and acres); ensure that the unit type for the project-specific data is consistent with the unit type selected in URBEMIS.

#### **Schedule**

The project schedule typically provides the number of months or days required for the completion of each construction-related activity phase (e.g., grading, building construction, asphalt paving), as well as the total duration of project construction. Where project-specific information is





available, modify URBEMIS default assumptions in *Click to Add, Delete, or Modify Phases* under the *Enter Construction Data* module. In this module, add or delete construction activities, add multiple similar construction activities (e.g., three grading phases), as well as overlap any construction activities as necessary. The URBEMIS default assumption for the number of work days per week is five, which inherently assumes that construction-related activities would only occur during weekdays, not on weekends. This can be altered if project-specific data is available in *Click to Add, Delete, or Modify Phases* under the construction phase setting *Work Days/Week*. For projects with specific phasing information (i.e., duration of each construction phase), but no definite construction commencement date, the earliest feasible start date should be used to be conservative. In addition, when project-specific information is not known, assume some overlap of construction phases (e.g., overlap of grading and asphalt paving activities or asphalt paving and building construction activities) to also be conservative. Please note that URBEMIS quantifies annual emissions on a calendar year basis (i.e., January to December) rather than the year-long period (running yearly average from the start date of construction) with the maximum amount of emissions.

#### **Demolition**

URBEMIS quantifies exhaust and fugitive PM dust emissions from demolition activities in the *Demolition Phase* within the *Enter Construction Data* module. Information to quantify emissions from this activity phase includes:

1. Duration of demolition (work days/week, phase start and end dates);
2. Total volume of building to be demolished (width, length, and height);
3. Maximum daily volume of building to be demolished (width, length, and height);
4. Haul truck capacity (cubic yards [ $\text{yd}^3$ ]);
5. Haul truck trip length to disposal site (round trip miles); and
6. Off-road equipment requirements (number and type of equipment).

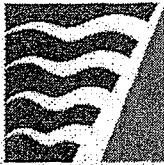
URBEMIS contains default assumptions for haul truck capacity ( $\text{yd}^3$  per truck) and round trip distance (miles), if project-specific information is not available. URBEMIS also contains default assumptions for off-road equipment requirements. URBEMIS bases these on the size(s) of the proposed land use type(s) in the *Enter Land Use Data* module to estimate the off-road equipment requirements. In other words, URBEMIS assumes the size of the land use to be demolished is equal to the land use that would be developed. If the size(s) and/or type(s) of the land use(s) to be demolished are different from the land use(s) to be developed, create a separate URBEMIS run to quantify demolition emissions. Input the size and type of land use(s) for the different demolition building space versus the proposed building space in the *Enter Land Use Data* module for the separate URBEMIS run and only include the *Demolition* phase within the *Enter Construction Data* module.

#### **Site Grading (Mass and Fine)**

URBEMIS quantifies exhaust and fugitive PM dust emissions from grading activities in the *Site Grading* phase within the *Enter Construction Data* module. Information to quantify emissions from this activity phase includes, where applicable:

1. Duration of grading (work days/week, phase start and end dates);
2. Total acreage to be graded (acres);
3. Maximum daily acreage disturbed (acres per day);
4. Type and amount of cut/fill activities ( $\text{yd}^3$  per day on- or off-site);
5. Description of soil hauling (amount of soil import/export [ $\text{yd}^3$ ], haul truck capacity [ $\text{yd}^3$  per truck], round trips per day, round trip distance [miles]); and





6. Off-road grading equipment requirements (number and type of equipment).

URBEMIS default assumptions for the total acreage to be graded and the maximum daily acreage disturbed are shown in the *Daily Acreage* tab within the *Site Grading* phase. Under the default settings, URBEMIS assumes that the maximum daily acreage disturbed is equivalent to 25 percent of the total acreage to be graded. Override this default assumption if more specific project information is available. The *Site Grading* phase consists of separate tabs for *Daily Acreage*, as mentioned above, *Fugitive Dust*, *Soil Hauling*, and *Site Grading Equipment*. Due to the differences in methodology and level of information required, each is discussed separately below.

**Fugitive Dust**

URBEMIS quantifies fugitive PM dust emissions in the *Site Grading* phase under the *Fugitive Dust* tab. URBEMIS provides four different levels of detail from which to select (i.e., default, low, medium, and high), described below.

*Default:* This method involves the use of the *Default Emission Rate* quantification methodology in the *Fugitive Dust* tab for which fugitive PM dust emissions are based on an emission rate (pound per disturbed acre per day [lb/acre-day]). This method should only be used when no project-specific information is known, or when no cut/fill activities would occur. BAAQMD recommends the selection of the worst-case emission rate (i.e., 38.2 lb/acre-day) for extensive site preparation activities (e.g., cut/fill) where the exact type and amount (e.g., yd<sup>3</sup> per day on- or off-site) are not known, and selection of the average emission rate (i.e., 10 lb/acre-day) otherwise. The average emission rate would be used for projects that involve typical site grading activities, but no cut/fill or earthmoving activities.

*Low:* The *Low Level of Detail* quantification method should be used when cut/fill activities would occur and the amount of on-site and off-site cut/fill is known. Input the type and amount of cut/fill activities (yd<sup>3</sup> per day on- or off-site). On-site cut/fill activities involve soil movement within the boundaries of the project site via scrapers or graders, while off-site cut/fill activities involve soil movement outside of the boundaries of the project site via haul trucks. Projects that require off-site cut/fill should also enter the appropriate amount of soil import/export in the *Soil Hauling* tab, as discussed in more detail below.

*Medium:* The *Medium Level of Detail* quantification method should be used when cut/fill activities would occur and the required number of activity hours per day for on-site scrapers and off-site haul trucks is known. Input the number of hours per day for on-site scraper and off-site haul trucks conducting cut/fill activities. Input the total number of scraper-hours and/or haul truck-hours that are anticipated to occur per day. For example, if two scrapers would operate for eight hours per day each and three haul trucks would operate for four hours per day each, enter 16 for the *Onsite Scraper* parameter (i.e., 2 scrapers × 8 hours) and 12 for the *Offsite Haul* parameter (i.e., 3 haul trucks × 4 hours). Similar to the *Low Level of Detail* quantification method, on-site cut/fill activities involve soil movement within the boundaries of the project site via scrapers or graders, while off-site cut/fill activities involve soil movement outside of the boundaries of the project site via haul trucks. Projects that require off-site cut/fill should also enter the appropriate amount of soil import/export in the *Soil Hauling* tab, as discussed in more detail below.

*High:* The *High Level of Detail* quantification method should be used when cut/fill activities would occur and details about soil haulage is known. Input data on the amount of on- and off-site haulage (ton-miles per day) based on the total volume of cut/fill (yd<sup>3</sup>), duration of the cut/fill activities (work days), density of soil being moved (tons per yd<sup>3</sup>), and the scraper or haul truck round-trip distance (miles). A *High Level Haulage Input* worksheet that can be used to assist with





determining the amount of on- and off-site haulage (ton-miles per day) required for this method is contained in Appendix A.

#### Soil Hauling

URBEMIS quantifies entrained PM road dust and exhaust emissions from soil hauling in the *Soil Hauling* tab within the *Site Grading* phase. Information requirements include the amount of soil import/export (yd<sup>3</sup>), round trips per day, round trip distance (miles), and haul truck capacity (yd<sup>3</sup> per truck). For round trip distance and haul truck capacity, URBEMIS provides default assumptions of 20 yd<sup>3</sup> per truck and 20 miles, respectively. Override the default assumptions if the project specific values are known.

#### Grading Equipment

URBEMIS quantifies exhaust emissions from on-site heavy-duty equipment in the *Site Grading Equipment* tab within the *Site Grading* phase. Information requirements include the type of equipment and quantity or amount, along with horsepower, load factor, and hours of operation per work day. URBEMIS provides default assumptions for all of these, primarily based on the amount of maximum daily acreage disturbed shown in the *Daily Acreage* tab. If project-specific grading equipment is known, click on the *All Checks Off* button and input the number for each type of equipment to be used for the project. Note that although the *All Checks Off* button will allow users to override the URBEMIS default equipment assumptions in the *Amount Model Uses* column, make sure to delete the previous URBEMIS default equipment selections prior to entering the project-specific equipment information.

#### Asphalt Paving

URBEMIS quantifies off-gas and exhaust emissions from asphalt paving activities in the *Paving* tab within the *Enter Construction Data* module. Information to quantify emissions from this activity phase includes the duration of asphalt paving (work days/week, phase start and end dates), total acreage to be paved, and off-road equipment requirements. URBEMIS includes default assumptions for the amount of asphalt to be paved based on the size of the proposed land use type(s) in the *Enter Land Use Data* module. Account for the size of project features (e.g., parking structure, roadways, and large hardtop fields) that would require asphalt paving in excess of default assumptions (i.e., standard site access and parking spaces) within the *Total Acreage to be Paved with Asphalt* parameter.

#### Architectural Coating

URBEMIS quantifies off-gas emissions from the application of architectural coatings in the *Arch Coating* tab within the *Enter Construction Data* module. Information to quantify emissions from this phase include the duration of activities (i.e., work days/week, phase start and end dates). URBEMIS includes default parameters for the volatile organic compound content per liter of coating based on BAAQMD's Regulation 8, Rule 3: Architectural Coating.

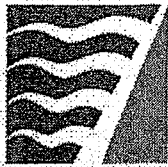
#### Basic Construction Mitigation Measures

BAAQMD recommends that all proposed projects implement the *Basic Construction Mitigation Measures* regardless of the significance determination. The methodology for quantifying criteria air pollutant and precursor emission reductions from both fugitive PM dust and exhaust emissions by implementing the *Basic Construction Mitigation Measures* discussed below.

#### *Fugitive Particulate Matter Dust Emissions*

For quantification of fugitive PM dust-related *Basic Construction Mitigation Measures* in URBEMIS, BAAQMD first recommends selecting the *Mitigation* option in the *Enter Construction Data* module for the *Site Grading* phase. For *Site Grading Soil Disturbance Mitigation*, select (turn on) the soil stabilizing measure titled *Water exposed surfaces* along with the two times daily option without altering the default percent reduction. For *Unpaved Roads Mitigation*, select the





measure titled *Reduce speed on unpaved roads to less than 15 mph* without altering the default percent reduction. URBEMIS assumes that fugitive PM dust emissions from soil disturbance activities and travel on unpaved roads account for approximately 79 percent and 21 percent of total the fugitive PM dust emissions, respectively. URBEMIS will apply an approximate 53 percent reduction to total fugitive PM dust emissions as a result of implementation of the *Basic Construction Mitigation Measures* 1 through 5 in Table 8-2.

BAAQMD considers this as a surrogate for the implementation of the *Basic Construction Mitigation Measures* listed in Section 8.2. RoadMod assumes an inherent 50 percent reduction in fugitive PM dust emissions when water trucks are selected. BAAQMD recommends selecting water trucks to account for the implementation of the *Basic Construction Mitigation Measures*.

#### ***Exhaust Emissions***

For quantification of the exhaust-related *Basic Construction Mitigation Measures* in URBEMIS, select the *Mitigation* option in the *Enter Construction Data* module for the *Site Grading*, *Building Construction*, and *Asphalt Paving* phases, as applicable to the proposed project. BAAQMD then recommends that for the *Off-Road Equipment Mitigation*, select (turn on) the measure titled *Use aqueous diesel fuel* and alter the default percent reduction for each to match those recommended by BAAQMD in Section 8.2. BAAQMD considers this as a surrogate for the implementation of the *Basic Construction Mitigation Measures* listed in Section 8.2.

#### ***RoadMod***

RoadMod does not calculate emission reductions associated with the implementation of the exhaust-related *Basic Construction Mitigation Measures*. To quantify the exhaust-related emission reductions associated with the implementation of the *Basic Construction Mitigation Measures*, rely on the information and data contained in the *Data Entry* and *Emission Estimates* tabs in RoadMod. Reductions in exhaust emissions should be quantified separately for each phase (i.e., Grubbing/Land Clearing, Grading/Excavation, Drainage/Utilities/ Sub-Grade, and Paving). First isolate the exhaust emissions from off-road (e.g., heavy-duty) equipment for each phase. Table 8-4 below provides a cell reference for the *Data Entry* tab of RoadMod to assist with the identification and isolation of such emissions.

Once isolated, apply the specified percent reductions listed in Section 8.2 to each compound emission to determine the resultant amount of mitigated emissions from construction of the proposed project for each phase. A 5 percent reduction could be applied for NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> to account for implementation of the appropriate *Basic Construction Mitigation Measures*.

Emission reductions should be estimated by multiplying the total emissions for each compound by the anticipated emission reduction applicable for that compound to estimate the mitigated amount of emissions reductions.

#### ***Linear Projects***

For proposed projects that are linear in nature (e.g., road or levee construction, pipeline installation, transmission lines), BAAQMD recommends using the most current version of Sacramento Metropolitan Air Quality Management District's (SMAQMD) Road Construction Emissions Model (*RoadMod*) to quantify construction-related criteria air pollutants and precursors. Similar to URBEMIS, RoadMod quantifies fugitive PM dust, exhaust, and off-gas emissions from the following construction-related activity phases: grubbing/land clearing, grading/excavation, drainage/utilities/sub-grade, and paving. BAAQMD recommends using RoadMod in accordance with the user instructions and default assumptions unless project-specific information is available. The default assumptions are applicable to projects located within the SFBAAB. Also, URBEMIS inherently accounts for the on-site construction of roadways and the installation of project infrastructure. If the proposed project involves off-site improvements that





are linear in nature (e.g., roadway widening), use RoadMod in addition to URBEMIS to determine total emissions.

<b>Table B-1</b> <b>Roadway Construction Emissions Model</b> <b>Cell Reference for Unmitigated Off-Road Equipment Emissions</b>			
Linear Construction Phase	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Grubbing/Land Clearing	G155	H155	I155
Grading/Excavation	G195	H195	I195
Drainage/Utilities/Sub-Grade	G235	H235	I235
Paving	G275	H275	I275
Notes: NO <sub>x</sub> = oxides of nitrogen; PM <sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM <sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less. Cell references refer to the <i>Data Entry</i> tab from the SMAQMD Road Construction Emissions Model. Source: SMAQMD 2009.			

#### NO<sub>x</sub> Emission Reduction

Emissions of NO<sub>x</sub> (lb/day) × (1 – [NO<sub>x</sub> percent reduction])

#### PM<sub>10</sub> Emission Reduction

Emissions of PM<sub>10</sub> (lb/day) × (1 – [PM<sub>10</sub> percent reduction])

#### PM<sub>2.5</sub> Emission Reduction

Emissions of PM<sub>2.5</sub> (lb/day) × ([1 – [PM<sub>2.5</sub> percent reduction]])

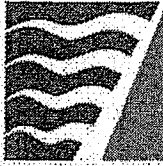
Users should use the *Emission Estimates* tab to calculate the total mitigated amount of emissions for each phase of construction. The total NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> exhaust emissions for each phase are contained in cells E6 to E9, H6 to H9, and K6 to K9, respectively. To calculate the total amount of mitigated emissions, first subtract the unmitigated off-road equipment exhaust emissions (Please refer to Table 8-2) from the total exhaust emissions to calculate total emissions without inclusion of off-road equipment exhaust emissions. Then, add the mitigated off-road exhaust emissions (calculated with the method described above) to the remaining emissions to calculate the total emissions with mitigated off-road construction equipment exhaust emissions. For PM<sub>10</sub> and PM<sub>2.5</sub>, add the mitigated exhaust emissions with the mitigated fugitive PM dust emissions (calculated by RoadMod) to calculate the total amount of mitigated PM<sub>10</sub> and PM<sub>2.5</sub> emissions.

#### Fugitive Particulate Matter Dust

BAAQMD recommends that for *Site Grading Soil Disturbance Mitigation* select (turn on) the soil stabilizing measure titled *Equipment loading/unloading*. To account for the implementation of the *Additional Construction Mitigation Measures* 1 through 8, alter the default percent reduction to 63 percent, which would result in a total reduction of 75 percent in fugitive PM dust emissions.

To quantify emission reductions associated with the implementation of the fugitive PM dust-related *Additional Construction Mitigation Measures* in RoadMod, rely on the *Emission Estimates* tab. RoadMod assumes a 50 percent reduction in fugitive PM dust emissions. Apply an additional 50 percent reduction to the fugitive PM dust emissions contained in the *Emission Estimates* tab of RoadMod to account for the implementation of the *Additional Construction Mitigation Measures* 1 through 8. The resulting total percent reduction from fugitive PM dust emissions would be 75





percent (i.e.,  $1 - (0.5 \times 0.5)$ ). The resultant amount of fugitive PM dust emissions should be added to the average daily mitigated exhaust PM emissions (methodology described below) to calculate the total amount of mitigated PM<sub>10</sub> and PM<sub>2.5</sub> emissions.

#### ***Exhaust Emissions***

BAAQMD recommends that for the *Off-Road Equipment Mitigation* select (turn on) the measure titled *Diesel particulate filter* and alter the default percent reduction for each to match those recommended by BAAQMD in Section 8.2. BAAQMD considers this as a surrogate for the implementation of the *Additional Construction Mitigation Measures*. BAAQMD recommends that, if implementing Measure 9, turn on the measure titled *Use aqueous diesel fuel* and alter the default percent reduction values to 20 percent for NO<sub>x</sub> and 45 percent for PM<sub>10</sub>, and PM<sub>2.5</sub>.

For RoadMod, apply a 20 percent reduction for NO<sub>x</sub> and a 45 percent reduction for PM<sub>10</sub> and PM<sub>2.5</sub> to account for implementation of Measure 9 in the *Additional Construction Mitigation Measure*. To quantify the other exhaust-related emission reductions associated with the implementation of the *Additional Construction Mitigation Measures*, follow the same methodology described above for applying the reductions associated with the implementation of the *Basic Construction Mitigation Measures*.

#### ***Off-Gas Emissions***

For quantification of off-gas-related *Additional Construction Mitigation Measures*, first select the *Mitigation* option in the *Enter Construction Data* module for the *Architectural Coating* phase. Then select (turn on) the measures applicable to the proposed project and alter the default percent reduction for each to match those recommended by BAAQMD in Section 8.2. BAAQMD considers this as a surrogate for the implementation of the *Additional Construction Mitigation Measures* listed in Section 8.2.

### **EXAMPLE PROJECT CONSTRUCTION-RELATED EMISSIONS CALCULATION**

#### **Description**

This Example Project proposes development of 100 single-family residential units over a 2-year period. The project site would be approximately 33 acres (URBEMIS default assumption) and require an undetermined volume of fill materials to be imported to the site. In addition, the project would involve construction of a new access road to serve the development.

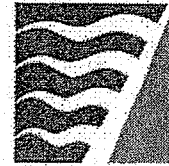
#### **Screening Analysis**

The project size is less than the construction screening level for single-family residential uses listed in Table 3-4. However, because the project includes the import of fill to the site, the construction screening levels cannot be used to address construction emissions. Therefore, a detailed quantitative analysis of construction-generated NO<sub>x</sub> emissions should be performed using URBEMIS to estimate NO<sub>x</sub> generated by construction of the residential units and using the RoadMod to estimate NO<sub>x</sub> emissions from construction of the new access road.

#### **Emissions Quantification**

The size and type of land use proposed (i.e., single family housing) should be entered into the Land Use Module in URBEMIS. In this case, the project's total acres are equal to the default URBEMIS assumption; therefore, no override is necessary in the Acres data field. Modeling the construction emissions associated with single-family residential units in URBEMIS requires detailed information about the construction schedule (e.g., commencement date, types of construction activities required, and length of construction activities).





The fugitive PM dust emissions associated with fill activities should be estimated using the Fugitive Dust tab of the Mass Site Grading phase. For use of the Low Level of Detail quantification method, the volume of fill activities should be divided by the number of days that fill activities would occur. For example, if the project would require up to 20,000 yd<sup>3</sup> of fill materials to be imported over a minimum of 40 work days, the user should enter 500 (i.e., 20,000 yd<sup>3</sup> ÷ 40 days) into the Amount of Offsite Cut/Fill (cubic yards/day) data field. In addition, users should also input the total volume of fill materials to be imported into the Total Amount of Soil to Import (cubic yards) data field in the Soil Hauling tab. Off-road construction equipment for grading activities is estimated by URBEMIS based on the Maximum Daily Acreage Disturbed data field.

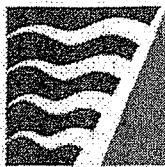
URBEMIS estimates the types and quantities of construction equipment in the Building Construction phase to develop the proposed project. For the Asphalt Paving phase, URBEMIS assumes the project requires asphalt paving for 25% of the total site. If more specific information can be provided, then user should turn off the Reset acreage with land use changes button in the Off Gas Emissions tab and override the Total Acreage to be Paved with Asphalt data field.

Due to the linear nature of the new access road to the project, daily mass emissions associated with its construction should be quantified using RoadMod. Users should obtain basic project information for the new access road and enter the information into the Data Entry tab of RoadMod. If project-specific information is not available RoadMod estimates the construction schedule for the road and the equipment used in each construction phase.

For analysis of the project's total average daily emissions, users should add emissions of each respective pollutant associated with development of the single-family residential units with the respective emissions associated with construction of the access road where construction activities are anticipated to overlap in the construction schedule. The average daily emissions of each pollutant that would occur throughout the entire construction period should be identified and compared with the District's threshold of significance. If the emissions would exceed the threshold of significance, construction emissions would be considered significant and all feasible mitigation measures to reduce emissions shall be implemented.

The user should keep in mind that the District's numeric thresholds for construction emissions apply to exhaust emissions only. The District recommends implementation of Basic Control Measures to reduce fugitive dust emissions for all projects, and Additional Control Measures to reduce fugitive dust emissions for significant projects.





## C. SAMPLE AIR QUALITY SETTING

The Bay Area Air Quality Management District (BAAQMD) is the regional air quality agency for the San Francisco Bay Area Air Basin (SFBAAB), which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

### C.1.1. Climate, Topography, Air Pollution Potential

The SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range splits resulting in a western coast gap, Golden Gate, and an eastern coast gap, Carquinez Strait, which allow air to flow in and out of the SFBAAB and the Central Valley.

The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high pressure cell is centered over the northeastern Pacific Ocean resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below to the surface because of the northwesterly flow produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold water band resulting in condensation and the presence of fog and stratus clouds along the Northern California coast.

In the winter, the Pacific high-pressure cell weakens and shifts southward resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.

#### High Pressure Cell

During the summer, the large-scale meteorological condition that dominates the West Coast is a semi-permanent high pressure cell centered over the northeastern Pacific Ocean. This high pressure cell keeps storms from affecting the California coast. Hence, the SFBAAB experiences little precipitation in the summer months. Winds tend to blow on shore out of the north/northwest.

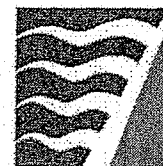
The steady northwesterly flow induces upwelling of cold water from below. This upwelling produces a band of cold water off the California coast. When air approaches the California coast, already cool and moisture-laden from its long journey over the Pacific, it is further cooled as it crosses this bank of cold water. This cooling often produces condensation resulting in a high incidence of fog and stratus clouds along the Northern California coast in the summer.

Generally in the winter, the Pacific high weakens and shifts southward, winds tend to flow offshore, upwelling ceases and storms occur. During the winter rainy periods, inversions (layers of warmer air over colder air; see below) are weak or nonexistent, winds are usually moderate and air pollution potential is low. The Pacific high does periodically become dominant, bringing strong inversions, light winds and high pollution potential.

#### Topography

The topography of the SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys and bays. This complex terrain, especially the higher elevations, distorts the normal wind flow patterns in the SFBAAB. The greatest distortion occurs when low-level inversions are present and the air beneath the inversion flows independently of air above the inversion, a condition that is common in the summer time.





The only major break in California's Coast Range occurs in the SFBAAB. Here the Coast Range splits into western and eastern ranges. Between the two ranges lies San Francisco Bay. The gap in the western coast range is known as the Golden Gate, and the gap in the eastern coast range is the Carquinez Strait. These gaps allow air to pass into and out of the SFBAAB and the Central Valley.

#### **Wind Patterns**

During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose when it meets the East Bay hills.

Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate or the San Bruno gap. For example, the average wind speed at San Francisco International Airport in July is about 17 knots (from 3 p.m. to 4 p.m.), compared with only 7 knots at San Jose and less than 6 knots at the Farallon Islands.

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. If the inversion is low and strong, and hence stable, the flow of the sea breeze will be inhibited and stagnant conditions are likely to result.

In the winter, the SFBAAB frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the SFBAAB.

#### **Temperature**

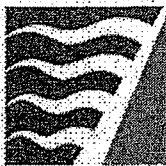
Summertime temperatures in the SFBAAB are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold ocean bottom water along the coast. On summer afternoons the temperatures at the coast can be 35°F cooler than temperatures 15 to 20 miles inland. At night this contrast usually decreases to less than 10°.

In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.

#### **Precipitation**

The SFBAAB is characterized by moderately wet winters and dry summers. Winter rains account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the SFBAAB to another even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys.





During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing are usually high, and thus pollution levels tend to be low. However, frequent dry periods do occur during the winter where mixing and ventilation are low and pollutant levels build up.

#### **Air Pollution Potential**

The potential for high pollutant concentrations developing at a given location depends upon the quantity of pollutants emitted into the atmosphere in the surrounding area or upwind, and the ability of the atmosphere to disperse the contaminated air. The topographic and climatological factors discussed above influence the atmospheric pollution potential of an area. Atmospheric pollution potential, as the term is used here, is independent of the location of emission sources and is instead a function of factors described below.

#### **Wind Circulation**

Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak, namely, commute traffic (early morning) and wood burning appliances (nighttime). The problem can be compounded in valleys, when weak flows carry the pollutants upvalley during the day, and cold air drainage flows move the air mass downvalley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthful levels.

Wind-roses provide useful information for communities that contain industry, landfills or other potentially odorous or noxious land uses. Each wind-rose diagram provides a general indication of the proportion of time that winds blow from each compass direction. The longer the vector length, the greater the frequency of wind occurring from that direction. Such information may be particularly useful in planning buffer zones. For example, sensitive receptors such as residential developments, schools or hospitals are inappropriate uses immediately downwind from facilities that emit toxic or odorous pollutants, unless adequate separation is provided by a buffer zone. Caution should be taken in using wind-roses in planning and environmental review processes. A site on the opposite side of a hill or tall building, even a short distance from a meteorological monitoring station, may experience a significant difference in wind pattern. Consult BAAQMD meteorologists if more detailed wind circulation information is needed.

#### **Inversions**

An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth, i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground. The highest air pollutant concentrations in the SFBAAB generally occur during inversions.

There are two types of inversions that occur regularly in the SFBAAB. One is more common in the summer and fall, while the other is most common during the winter. The frequent occurrence of elevated temperature inversions in summer and fall months acts to cap the mixing depth, limiting the depth of air available for dilution. Elevated inversions are caused by subsiding air from the subtropical high pressure zone, and from the cool marine air layer that is drawn into the SFBAAB by the heated low pressure region in the Central Valley.

The inversions typical of winter, called radiation inversions, are formed as heat quickly radiates from the earth's surface after sunset, causing the air in contact with it to rapidly cool. Radiation inversions are strongest on clear, low-wind, cold winter nights, allowing the build-up of such pollutants as carbon monoxide and particulate matter. When wind speeds are low, there is little mechanical turbulence to mix the air, resulting in a layer of warm air over a layer of cooler air next





to the ground. Mixing depths under these conditions can be as shallow as 50 to 100 meters, particularly in rural areas. Urban areas usually have deeper minimum mixing layers because of heat island effects and increased surface roughness. During radiation inversions downwind transport is slow, the mixing depths are shallow, and turbulence is minimal, all factors which contribute to ozone formation.

Although each type of inversion is most common during a specific season, either inversion mechanism can occur at any time of the year. Sometimes both occur simultaneously. Moreover, the characteristics of an inversion often change throughout the course of a day. The terrain of the SFBAAB also induces significant variations among subregions.

#### **Solar Radiation**

The frequency of hot, sunny days during the summer months in the SFBAAB is another important factor that affects air pollution potential. It is at the higher temperatures that ozone is formed. In the presence of ultraviolet sunlight and warm temperatures, reactive organic gases and oxides of nitrogen react to form secondary photochemical pollutants, including ozone.

Because temperatures in many of the SFBAAB inland valleys are so much higher than near the coast, the inland areas are especially prone to photochemical air pollution.

In late fall and winter, solar angles are low, resulting in insufficient ultraviolet light and warming of the atmosphere to drive the photochemical reactions. Ozone concentrations do not reach significant levels in the SFBAAB during these seasons.

#### **Sheltered Terrain**

The hills and mountains in the SFBAAB contribute to the high pollution potential of some areas. During the day, or at night during windy conditions, areas in the lee sides of mountains are sheltered from the prevailing winds, thereby reducing turbulence and downwind transport. At night, when wind speeds are low, the upper atmospheric layers are often decoupled from the surface layers during radiation conditions. If elevated terrain is present, it will tend to block pollutant transport in that direction. Elevated terrain also can create a recirculation pattern by inducing upvalley air flows during the day and reverse downvalley flows during the night, allowing little inflow of fresh air.

The areas having the highest air pollution potential tend to be those that experience the highest temperatures in the summer and the lowest temperatures in the winter. The coastal areas are exposed to the prevailing marine air, creating cooler temperatures in the summer, warmer temperatures in winter, and stratus clouds all year. The inland valleys are sheltered from the marine air and experience hotter summers and colder winters. Thus, the topography of the inland valleys creates conditions conducive to high air pollution potential.

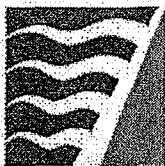
#### **Pollution Potential Related to Emissions**

Although air pollution potential is strongly influenced by climate and topography, the air pollution that occurs in a location also depends upon the amount of air pollutant emissions in the surrounding area or transported from more distant places. Air pollutant emissions generally are highest in areas that have high population densities, high motor vehicle use and/or industrialization. These contaminants created by photochemical processes in the atmosphere, such as ozone, may result in high concentrations many miles downwind from the sources of their precursor chemicals.

#### **Climatological Subregions**

This section discusses the varying climatological and topographic conditions, and the resulting variations in air pollution potential, within inhabited subregions of the SFBAAB. All urbanized areas of the SFBAAB are included in one of 11 climatological subregions. Sparsely inhabited





areas are excluded from the subregional designations. Some of the climatological subregions discussed in this appendix overlap county boundaries. The Lead Agencies analyzing projects located close to the boundary between subregions may need to examine the characteristics of the neighboring subregions to adequately evaluate potential air quality impacts.

The information about each subregion includes location, topography and climatological factors relevant to air quality. Where relevant to air quality concerns, more localized subareas within a subregion are discussed. Each subregional section concludes with a discussion of pollution potential resulting from climatological and topographic variables and the major types of air pollutant sources in the subregion.

#### **Carquinez Strait Region**

The Carquinez Strait runs from Rodeo to Martinez. It is the only sea-level gap between the Bay and the Central Valley. The subregion includes the lowlands bordering the strait to the north and south, and includes the area adjoining Suisun Bay and the western part of the Sacramento-San Joaquin Delta as far east as Bethel Island. The subregion extends from Rodeo in the southwest and Vallejo in the northwest to Fairfield on the northeast and Brentwood on the southeast.

Prevailing winds are from the west in the Carquinez Strait. During the summer and fall months, high pressure offshore coupled with low pressure in the Central Valley causes marine air to flow eastward through the Carquinez Strait. The wind is strongest in the afternoon. Afternoon wind speeds of 15 to 20 mph are common throughout the strait region. Annual average wind speeds are 8 mph in Martinez, and 9 to 10 mph further east. Sometimes atmospheric conditions cause air to flow from the east. East winds usually contain more pollutants than the cleaner marine air from the west. In the summer and fall months, this can cause elevated pollutant levels to move into the central SFBAAB through the strait. These high pressure periods are usually accompanied by low wind speeds, shallow mixing depths, higher temperatures and little or no rainfall.

Summer mean maximum temperatures reach about 90° F. in the subregion. Mean minimum temperatures in the winter are in the high 30's. Temperature extremes are especially pronounced in sheltered areas farther from the moderating effects of the strait itself, e.g. at Fairfield.

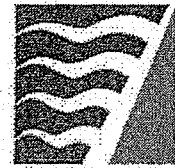
Many industrial facilities with significant air pollutant emissions — e.g., chemical plants and refineries — are located within the Carquinez Strait Region. The pollution potential of this area is often moderated by high wind speeds. However, upsets at industrial facilities can lead to short-term pollution episodes, and emissions of unpleasant odors may occur at anytime. Receptors downwind of these facilities could suffer more long-term exposure to air contaminants than individuals elsewhere. It is important that local governments and other Lead Agencies maintain buffers zones around sources of air pollution sufficient to avoid adverse health and nuisance impacts on nearby receptors. Areas of the subregion that are traversed by major roadways, e.g. Interstate 80, may also be subject to higher local concentrations of carbon monoxide and particulate matter, as well as certain toxic air contaminants such as benzene.

#### **Cotati and Petaluma Valleys**

The subregion that stretches from Santa Rosa to the San Pablo Bay is often considered as two different valleys: the Cotati Valley in the north and the Petaluma Valley in the south. To the east, the valley is bordered by the Sonoma Mountains, while to the west is a series of low hills, followed by the Estero Lowlands, which open to the Pacific Ocean. The region from the Estero Lowlands to the San Pablo Bay is known as the Petaluma Gap. This low-terrain area allows marine air to travel into the SFBAAB.

Wind patterns in the Petaluma and Cotati Valleys are strongly influenced by the Petaluma Gap, with winds flowing predominantly from the west. As marine air travels through the Petaluma Gap, it splits into northward and southward paths moving into the Cotati and Petaluma valleys. The





southward path crosses San Pablo Bay and moves eastward through the Carquinez Strait. The northward path contributes to Santa Rosa's prevailing winds from the south and southeast. Petaluma's prevailing winds are from the northwest.

When the ocean breeze is weak, strong winds from the east can predominate, carrying pollutants from the Central Valley and the Carquinez Strait. During these periods, upvalley flows can carry the polluted air as far north as Santa Rosa.

Winds are usually stronger in the Petaluma Valley than the Cotati Valley because the former is directly in line with the Petaluma Gap. Petaluma's climate is similar to areas closer to the coast even though Petaluma is 28 miles from the ocean. Average annual wind speed at the Petaluma Airport is seven mph. The Cotati Valley, being slightly north of the Petaluma Gap, experiences lower wind speeds. The annual average wind speed in Santa Rosa is five mph.

Air temperatures are very similar in the two valleys. Summer maximum temperatures for this subregion are in the low-to-mid-80's, while winter maximum temperatures are in the high-50's to low-60's. Summer minimum temperatures are around 50 degrees, and winter minimum temperatures are in the high 30's.

Generally, air pollution potential is low in the Petaluma Valley because of its link to the Petaluma Gap and because of its low population density. There are two scenarios that could produce elevated pollutant levels: 1) stagnant conditions in the morning hours created when a weak ocean breeze meets a weak bay breeze, and 2) an eastern or southeastern wind pattern in the afternoon brings in pollution from the Carquinez Strait Region and the Central Valley.

The Cotati Valley has a higher pollution potential than does the Petaluma Valley. The Cotati Valley lacks a gap to the sea, contains a larger population and has natural barriers at its northern and eastern ends. There are also industrial facilities in and around Santa Rosa. Both valleys of this subregion are also threatened by increased motor vehicle traffic and the associated air contaminants. Population and motor vehicle use are increasing significantly, and housing costs and the suburbanization of employment are leading to more and longer commutes traversing the subregion.

#### **Diablo and San Ramon Valleys**

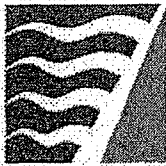
East of the Coast Range lay the Diablo and San Ramon Valleys. The valleys have a northwest to southeast orientation, with the northern portion known as Diablo Valley and the southern portion as San Ramon Valley. The Diablo Valley is bordered in the north by the Carquinez Strait and in the south by the San Ramon Valley. The San Ramon Valley is long and narrow and extends south from Walnut Creek to Dublin. At its southern end it opens onto the Amador Valley.

The mountains on the west side of these valleys block much of the marine air from reaching the valleys. During the daytime, there are two predominant flow patterns: an upvalley flow from the north and a westerly flow (wind from the west) across the lower elevations of the Coast Range. On clear nights, surface inversions separate the flow of air into two layers: the surface flow and the upper layer flow. When this happens, there are often drainage surface winds which flow downvalley toward the Carquinez Strait.

Wind speeds in these valleys generally are low. Monitoring stations in Concord and Danville report annual average wind speeds of 5 mph. Winds can increase in the afternoon near San Ramon because it is located at the eastern edge of the Crow Canyon gap. Through this gap, polluted air from cities near the Bay travels to the valley in the summer months.

Air temperatures in these valleys are cooler in the winter and warmer in the summer than are temperatures further west, as these valleys are far from the moderating effect of the Bay and





ocean. Mean summer maximum temperatures are in the low- to mid-80's. Mean winter minimum temperatures are in the high-30's to low-40's.

Pollution potential is relatively high in these valleys. On winter evenings, light winds combined with surface-based inversions and terrain that restricts air flow can cause pollutant levels to build up. San Ramon Valley can experience high pollution concentrations due to motor vehicle emissions and emissions from fireplaces and wood stoves. In the summer months, ozone and ozone precursors are often transported into the valleys from both the central SFBAAB and the Central Valley.

#### Livermore Valley

The Livermore Valley is a sheltered inland valley near the eastern border of SFBAAB. The western side of the valley is bordered by 1,000 to 1,500 foot hills with two gaps connecting the valley to the central SFBAAB, the Hayward Pass and Niles Canyon. The eastern side of the valley also is bordered by 1,000 to 1,500 foot hills with one major passage to the San Joaquin Valley called the Altamont Pass and several secondary passages. To the north lie the Black Hills and Mount Diablo. A northwest to southeast channel connects the Diablo Valley to the Livermore Valley. The south side of the Livermore Valley is bordered by mountains approximately 3,000 to 3,500 feet high.

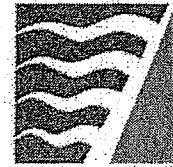
During the summer months, when there is a strong inversion with a low ceiling, air movement is weak and pollutants become trapped and concentrated. Maximum summer temperatures in the Livermore Valley range from the high-80's to the low-90's, with extremes in the 100's. At other times in the summer, a strong Pacific high pressure cell from the west, coupled with hot inland temperatures causes a strong onshore pressure gradient which produces a strong, afternoon wind. With a weak temperature inversion, air moves over the hills with ease, dispersing pollutants.

In the winter, with the exception of an occasional storm moving through the area, air movement is often dictated by local conditions. At night and early morning, especially under clear, calm and cold conditions, gravity drives cold air downward. The cold air drains off the hills and moves into the gaps and passes. On the eastern side of the valley the prevailing winds blow from north, northeast and east out of the Altamont Pass. Winds are light during the late night and early morning hours. Winter daytime winds sometimes flow from the south through the Altamont Pass to the San Joaquin Valley. Average winter maximum temperatures range from the high-50's to the low-60's, while minimum temperatures are from the mid-to-high-30's, with extremes in the high teens and low-20's.

Air pollution potential is high in the Livermore Valley, especially for photochemical pollutants in the summer and fall. High temperatures increase the potential for ozone to build up. The valley not only traps locally generated pollutants but can be the receptor of ozone and ozone precursors from San Francisco, Alameda, Contra Costa and Santa Clara counties. On northeasterly wind flow days, most common in the early fall, ozone may be carried west from the San Joaquin Valley to the Livermore Valley.

During the winter, the sheltering effect of the valley, its distance from moderating water bodies, and the presence of a strong high pressure system contribute to the development of strong, surface-based temperature inversions. Pollutants such as carbon monoxide and particulate matter, generated by motor vehicles, fireplaces and agricultural burning, can become concentrated. Air pollution problems could intensify because of population growth and increased commuting to and through the subregion.



**Marin County Basins**

Marin County is bounded on the west by the Pacific Ocean, on the east by San Pablo Bay, on the south by the Golden Gate and on the north by the Petaluma Gap. Most of Marin's population lives in the eastern part of the county, in small, sheltered valleys. These valleys act like a series of miniature air basins.

Although there are a few mountains above 1500 feet, most of the terrain is only 800 to 1000 feet high, which usually is not high enough to block the marine layer. Because of the wedge shape of the county, northeast Marin County is further from the ocean than is the southeastern section. This extra distance from the ocean allows the marine air to be moderated by bayside conditions as it travels to northeastern Marin County. In southern Marin the distance from the ocean is short and elevations are lower, resulting in higher incidence of maritime air in that area.

Wind speeds are highest along the west coast of Marin, averaging about 8 to 10 miles per hour. The complex terrain in central Marin creates sufficient friction to slow the air flow. At Hamilton Air Force Base, in Novato, the annual average wind speeds are only 5 mph. The prevailing wind directions throughout Marin County are generally from the northwest.

In the summer months, areas along the coast are usually subject to onshore movement of cool marine air. In the winter, proximity to the ocean keeps the coastal regions relatively warm, with temperatures varying little throughout the year. Coastal temperatures are usually in the high-50's in the winter and the low-60's in the summer. The warmest months are September and October.

The eastern side of Marin County has warmer weather than the western side because of its distance from the ocean and because the hills that separate eastern Marin from western Marin occasionally block the flow of the marine air. The temperatures of cities next to the Bay are moderated by the cooling effect of the Bay in the summer and the warming effect of the Bay in the winter. For example, San Rafael experiences average maximum summer temperatures in the low-80's and average minimum winter temperatures in the low-40's. Inland towns such as Kentfield experience average maximum temperatures that are two degrees cooler in the winter and two degrees warmer in the summer.

Air pollution potential is highest in eastern Marin County, where most of population is located in semi-sheltered valleys. In the southeast, the influence of marine air keeps pollution levels low. As development moves further north, there is greater potential for air pollution to build up because the valleys are more sheltered from the sea breeze. While Marin County does not have many polluting industries, the air quality on its eastern side — especially along the U.S. 101 corridor — may be affected by emissions from increasing motor vehicle use within and through the county.

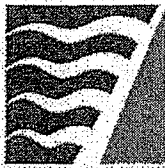
**Napa Valley**

The Napa Valley is bordered by relatively high mountains. With an average ridge line height of about 2000 feet, with some peaks approaching 3000 to 4000 feet, these mountains are effective barriers to the prevailing northwesterly winds. The Napa Valley is widest at its southern end and narrows in the north.

During the day, the prevailing winds flow upvalley from the south about half of the time. A strong upvalley wind frequently develops during warm summer afternoons, drawing air in from the San Pablo Bay. Daytime winds sometimes flow downvalley from the north. During the evening, especially in the winter, downvalley drainage often occurs. Wind speeds are generally low, with almost 50 percent of the winds less than 4 mph. Only 5 percent of the winds are between 16 and 18 mph, representing strong summertime upvalley winds and winter storms.

Summer average maximum temperatures are in the low 80's at the southern end of the valley and in the low 90's at the northern end. Winter average maximum temperatures are in the high-





50's and low-60's, and minimum temperatures are in the high to mid 30's with the slightly cooler temperatures in the northern end.

The air pollution potential in the Napa Valley could be high if there were sufficient sources of air contaminants nearby. Summer and fall prevailing winds can transport ozone precursors northward from the Carquinez Strait Region to the Napa Valley, effectively trapping and concentrating the pollutants when stable conditions are present. The local upslope and downslope flows created by the surrounding mountains may also recirculate pollutants already present, contributing to buildup of air pollution. High ozone concentrations are a potential problem to sensitive crops such as wine grapes, as well as to human health. The high frequency of light winds and stable conditions during the late fall and winter contribute to the buildup of particulate matter from motor vehicles, agriculture and wood burning in fireplaces and stoves.

#### **Northern Alameda and Western Contra Costa Counties**

This climatological subregion stretches from Richmond to San Leandro. Its western boundary is defined by the Bay and its eastern boundary by the Oakland-Berkeley Hills. The Oakland-Berkeley Hills have a ridge line height of approximately 1500 feet, a significant barrier to air flow. The most densely populated area of the subregion lies in a strip of land between the Bay and the lower hills.

In this area, marine air traveling through the Golden Gate, as well as across San Francisco and through the San Bruno Gap, is a dominant weather factor. The Oakland-Berkeley Hills cause the westerly flow of air to split off to the north and south of Oakland, which causes diminished wind speeds. The prevailing winds for most of this subregion are from the west. At the northern end, near Richmond, prevailing winds are from the south-southwest.

Temperatures in this subregion have a narrow range due to the proximity of the moderating marine air. Maximum temperatures during summer average in the mid-70's, with minimums in the mid-50's. Winter highs are in the mid- to high-50's, with lows in the low- to mid-40's.

The air pollution potential is lowest for the parts of the subregion that are closest to the bay, due largely to good ventilation and less influx of pollutants from upwind sources. The occurrence of light winds in the evenings and early mornings occasionally causes elevated pollutant levels.

The air pollution potential at the northern (Richmond) and southern (Oakland, San Leandro) parts of this subregion is marginally higher than communities directly east of the Golden Gate, because of the lower frequency of strong winds.

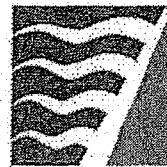
This subregion contains a variety of industrial air pollution sources. Some industries are quite close to residential areas. The subregion is also traversed by frequently congested major freeways. Traffic and congestion, and the motor vehicle emissions they generate, are increasing.

#### **Peninsula**

The peninsula region extends from northwest of San Jose to the Golden Gate. The Santa Cruz Mountains run up the center of the peninsula, with elevations exceeding 2000 feet at the southern end, decreasing to 500 feet in South San Francisco. Coastal towns experience a high incidence of cool, foggy weather in the summer. Cities in the southeastern peninsula experience warmer temperatures and fewer foggy days because the marine layer is blocked by the ridgeline to the west. San Francisco lies at the northern end of the peninsula. Because most of San Francisco's topography is below 200 feet, marine air is able to flow easily across most of the city, making its climate cool and windy.

The blocking effect of the Santa Cruz Mountains results in variations in summertime maximum temperatures in different parts of the peninsula. For example, in coastal areas and San Francisco





the mean maximum summer temperatures are in the mid-60's, while in Redwood City the mean maximum summer temperatures are in the low-80's. Mean minimum temperatures during the winter months are in the high-30's to low-40's on the eastern side of the Peninsula and in the low 40's on the coast.

Two important gaps in the Santa Cruz Mountains occur on the peninsula. The larger of the two is the San Bruno Gap, extending from Fort Funston on the ocean to the San Francisco Airport. Because the gap is oriented in the same northwest to southeast direction as the prevailing winds, and because the elevations along the gap are less than 200 feet, marine air is easily able to penetrate into the bay. The other gap is the Crystal Springs Gap, between Half Moon Bay and San Carlos. As the sea breeze strengthens on summer afternoons, the gap permits maritime air to pass across the mountains, and its cooling effect is commonly seen from San Mateo to Redwood City.

Annual average wind speeds range from 5 to 10 mph throughout the peninsula, with higher wind speeds usually found along the coast. Winds on the eastern side of the peninsula are often high in certain areas, such as near the San Bruno Gap and the Crystal Springs Gap.

The prevailing winds along the peninsula's coast are from the west, although individual sites can show significant differences. For example, Fort Funston in western San Francisco shows a southwest wind pattern while Pillar Point in San Mateo County shows a northwest wind pattern. On the east side of the mountains winds are generally from the west, although wind patterns in this area are often influenced greatly by local topographic features.

Air pollution potential is highest along the southeastern portion of the peninsula. This is the area most protected from the high winds and fog of the marine layer. Pollutant transport from upwind sites is common. In the southeastern portion of the peninsula, air pollutant emissions are relatively high due to motor vehicle traffic as well as stationary sources. At the northern end of the peninsula in San Francisco, pollutant emissions are high, especially from motor vehicle congestion. Localized pollutants, such as carbon monoxide, can build up in "urban canyons." Winds are generally fast enough to carry the pollutants away before they can accumulate.

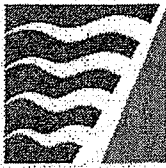
#### **Santa Clara Valley**

The Santa Clara Valley is bounded by the Bay to the north and by mountains to the east, south and west. Temperatures are warm on summer days and cool on summer nights, and winter temperatures are fairly mild. At the northern end of the valley, mean maximum temperatures are in the low-80's during the summer and the high-50's during the winter, and mean minimum temperatures range from the high-50's in the summer to the low-40's in the winter. Further inland, where the moderating effect of the Bay is not as strong, temperature extremes are greater. For example, in San Martin, located 27 miles south of the San Jose Airport, temperatures can be more than 10 degrees warmer on summer afternoons and more than 10 degrees cooler on winter nights.

Winds in the valley are greatly influenced by the terrain, resulting in a prevailing flow that roughly parallels the valley's northwest-southeast axis. A north-northwesterly sea breeze flows through the valley during the afternoon and early evening, and a light south-southeasterly drainage flow occurs during the late evening and early morning. In the summer the southern end of the valley sometimes becomes a "convergence zone," when air flowing from the Monterey Bay gets channeled northward into the southern end of the valley and meets with the prevailing north-northwesterly winds.

Wind speeds are greatest in the spring and summer and weakest in the fall and winter. Nighttime and early morning hours frequently have calm winds in all seasons, while summer afternoons and





evenings are quite breezy. Strong winds are rare, associated mostly with the occasional winter storm.

The air pollution potential of the Santa Clara Valley is high. High summer temperatures, stable air and mountains surrounding the valley combine to promote ozone formation. In addition to the many local sources of pollution, ozone precursors from San Francisco, San Mateo and Alameda Counties are carried by prevailing winds to the Santa Clara Valley. The valley tends to channel pollutants to the southeast. In addition, on summer days with low level inversions, ozone can be recirculated by southerly drainage flows in the late evening and early morning and by the prevailing northwesterlies in the afternoon. A similar recirculation pattern occurs in the winter, affecting levels of carbon monoxide and particulate matter. This movement of the air up and down the valley increases the impact of the pollutants significantly.

Pollution sources are plentiful and complex in this subregion. The Santa Clara Valley has a high concentration of industry at the northern end, in the Silicon Valley. Some of these industries are sources of air toxics as well as criteria air pollutants. In addition, Santa Clara Valley's large population and many work-site destinations generate the highest mobile source emissions of any subregion in the SFBAAB.

#### **Sonoma Valley**

The Sonoma Valley is west of the Napa Valley. It is separated from the Napa Valley and from the Cotati and Petaluma Valleys by mountains. The Sonoma Valley is long and narrow, approximately 5 miles wide at its southern end and less than a mile wide at the northern end.

The climate is similar to that of the Napa Valley, with the same basic wind characteristics. The strongest upvalley winds occur in the afternoon during the summer and the strongest downvalley winds occur during clear, calm winter nights. Prevailing winds follow the axis of the valley, northwest/southeast, while some upslope flow during the day and downslope flow during the night occurs near the base of the mountains. Summer average maximum temperatures are usually in the high-80's, and summer minimums are around 50 degrees. Winter maximums are in the high-50's to the mid-60's, with minimums ranging from the mid-30's to low-40's.

As in the Napa Valley, the air pollution potential of the Sonoma Valley could be high if there were significant sources of pollution nearby. Prevailing winds can transport local and nonlocally generated pollutants northward into the narrow valley, which often traps and concentrates the pollutants under stable conditions. The local upslope and downslope flows set up by the surrounding mountains may also recirculate pollutants.

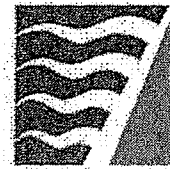
However, local sources of air pollution are minor. With the exception of some processing of agricultural goods, such as wine and cheese manufacturing, there is little industry in this valley. Increases in motor vehicle emissions and woodsmoke emissions from stoves and fireplaces may increase pollution as the valley grows in population and as a tourist attraction.

#### **Southwestern Alameda County**

This subregion encompasses the southeast side of San Francisco Bay, from Dublin Canyon to north of Milpitas. The subregion is bordered on the east by the East Bay hills and on the west by the bay. Most of the area is flat.

This subregion is indirectly affected by marine air flow. Marine air entering through the Golden Gate is blocked by the East Bay hills, forcing the air to diverge into northerly and southerly paths. The southern flow is directed down the bay, parallel to the hills, where it eventually passes over southwestern Alameda County. These sea breezes are strongest in the afternoon. The further from the ocean the marine air travels, the more the ocean's effect is diminished. Although the





climate in this region is affected by sea breezes, it is affected less so than the regions closer to the Golden Gate.

The climate of southwestern Alameda County is also affected by its close proximity to San Francisco Bay. The Bay cools the air with which it comes in contact during warm weather, while during cold weather the Bay warms the air. The normal northwest wind pattern carries this air onshore. Bay breezes push cool air onshore during the daytime and draw air from the land offshore at night.

Winds are predominantly out of the northwest during the summer months. In the winter, winds are equally likely to be from the east. Easterly-southeasterly surface flow into southern Alameda County passes through three major gaps: Hayward/Dublin Canyon, Niles Canyon and Mission Pass. Areas north of the gaps experience winds from the southeast, while areas south of the gaps experience winds from the northeast. Wind speeds are moderate in this subregion, with annual average wind speeds close to the Bay at about 7 mph, while further inland they average 6 mph.

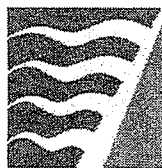
Air temperatures are moderated by the subregion's proximity to the Bay and to the sea breeze. Temperatures are slightly cooler in the winter and slightly warmer in the summer than East Bay cities to the north. During the summer months, average maximum temperatures are in the mid-70's. Average maximum winter temperatures are in the high-50's to low-60's. Average minimum temperatures are in the low 40's in winter and mid-50's in the summer.

Pollution potential is relatively high in this subregion during the summer and fall. When high pressure dominates, low mixing depths and Bay and ocean wind patterns can concentrate and carry pollutants from other cities to this area, adding to the locally emitted pollutant mix. The polluted air is then pushed up against the East Bay hills. In the wintertime, the air pollution potential in southwestern Alameda County is moderate. Air pollution sources include light and heavy industry, and motor vehicles. Increasing motor vehicle traffic and congestion in the subregion may increase Southwest Alameda County pollution as well as that of its neighboring subregions.

#### **C.1.2. Existing Ambient Air Quality: Criteria Air Pollutants**

The California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone, particulate matter (PM), nitrogen dioxide (NO<sub>2</sub>), CO, sulfur dioxide (SO<sub>2</sub>), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documents are available, they are commonly referred to as "criteria air pollutants." Sources and health effects of the criteria air pollutants are summarized in Table C.2. Current state and federal air quality standards are available at <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf> and designations are available at <http://www.arb.ca.gov/desig/desig.htm>. See Table C.1 for current attainment status.

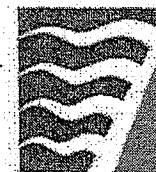




**Table C.1  
Ambient Air Quality Standards and Designations**

Pollutant	Averaging Time	California		National Standards <sup>a</sup>		
		Standards <sup>b, c</sup>	Attainment Status <sup>d</sup>	Primary <sup>e, e</sup>	Secondary <sup>c, f</sup>	Attainment Status <sup>g</sup>
Ozone	1-hour	0.09 ppm (180 µg/m <sup>3</sup> )	N (Serious)	— <sup>h</sup>	Same as Primary Standard	— <sup>h</sup>
	8-hour	0.070 ppm (137 µg/m <sup>3</sup> )	—	0.075 ppm (147 µg/m <sup>3</sup> )		N
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m <sup>3</sup> )	A	35 ppm (40 mg/m <sup>3</sup> )	—	U/A
	8-hour	9 ppm (10 mg/m <sup>3</sup> )		9 ppm (10 mg/m <sup>3</sup> )		
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )	—	0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary Standard	U/A
	1-hour	0.18 ppm (339 µg/m <sup>3</sup> )	A	—		—
Sulfur Dioxide (SO <sub>2</sub> )	Annual Arithmetic Mean	—	—	0.030 ppm (80 µg/m <sup>3</sup> )	—	A
	24-hour	0.04 ppm (105 µg/m <sup>3</sup> )	A	0.14 ppm (365 µg/m <sup>3</sup> )	—	
	3-hour	—	—	—	0.5 ppm (1300 µg/m <sup>3</sup> )	
	1-hour	0.25 ppm (655 µg/m <sup>3</sup> )	A	—	—	—
Respirable Particulate Matter (PM <sub>10</sub> )	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	N	— <sup>h</sup>	Same as Primary Standard	U
	24-hour	50 µg/m <sup>3</sup>		150 µg/m <sup>3</sup>		
Fine Particulate Matter (PM <sub>2.5</sub> )	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	N	15 µg/m <sup>3</sup>	Same as Primary Standard	N <sup>i</sup>
	24-hour	—	—	35 µg/m <sup>3</sup>		
Lead <sup>j</sup>	30-day Average	1.5 µg/m <sup>3</sup>	A	—	—	—
	Calendar Quarter	—	—	1.5 µg/m <sup>3</sup>	Same as Primary Standard	—





**Table C.1**  
**Ambient Air Quality Standards and Designations**

Pollutant	Averaging Time	California		National Standards <sup>a</sup>		
		Standards <sup>b, c</sup>	Attainment Status <sup>d</sup>	Primary <sup>e, g</sup>	Secondary <sup>e, f</sup>	Attainment Status <sup>g</sup>
Sulfates	24-hour	25 $\mu\text{g}/\text{m}^3$	A	No National Standards		
Hydrogen Sulfide	1-hour	0.03 ppm (42 $\mu\text{g}/\text{m}^3$ )	U			
Vinyl Chloride <sup>h</sup>	24-hour	0.01 ppm (26 $\mu\text{g}/\text{m}^3$ )	—			
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient of 0.23 per kilometer —visibility of 10 miles or more (0.07—30 miles or more for Lake Tahoe) because of particles when the relative humidity is less than 70%.	U			

<sup>a</sup> National standards (other than ozone, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM<sub>10</sub> 24-hour standard is attained when 99% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. The PM<sub>2.5</sub> 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the EPA for further clarification and current federal policies.

<sup>b</sup> California standards for ozone, CO (except Lake Tahoe), SO<sub>2</sub> (1- and 24-hour), NO<sub>2</sub>, PM, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

<sup>c</sup> Concentration expressed first in units in which it was promulgated [i.e., parts per million (ppm) or micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )]. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

<sup>d</sup> Unclassified (U): a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.

Attainment (A): a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a 3-year period.

Nonattainment (N): a pollutant is designated nonattainment if there was a least one violation of a state standard for that pollutant in the area.

Nonattainment/Transitional (NT): is a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the standard for that pollutant.

<sup>e</sup> National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

<sup>f</sup> National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

<sup>g</sup> Nonattainment (N): any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Attainment (A): any area that meets the national primary or secondary ambient air quality standard for the pollutant.

Unclassifiable (U): any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

<sup>h</sup> The 1-hour ozone NAAQS was revoked on June 15, 2005 and the annual PM<sub>10</sub> NAAQS was revoked in 2006.

<sup>i</sup> ARB has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for this pollutant.

<sup>j</sup> U.S. EPA lowered the 24-hour PM<sub>2.5</sub> standard from 65  $\mu\text{g}/\text{m}^3$  to 35  $\mu\text{g}/\text{m}^3$  in 2006. EPA issued attainment status designations for the 35  $\mu\text{g}/\text{m}^3$  standard on December 22, 2008. EPA has designated the Bay Area as nonattainment for the 35  $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub> standard. The EPA designation will be effective 90 days after publication of the regulation in the Federal Register.





**Table C.2**  
**Common Sources of Health Effects for Criteria Air Pollutants**

Pollutants	Sources	Health Effects
Ozone	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	Aggravation of respiratory and cardiovascular diseases; reduced lung function; increased cough and chest discomfort
Fine Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	Stationary combustion of solid fuels; construction activities; industrial processes; atmospheric chemical reactions	Reduced lung function; aggravation of respiratory and cardiovascular diseases; increases in mortality rate; reduced lung function growth in children
Nitrogen Dioxide (NO <sub>2</sub> )	Motor vehicle exhaust; high temperature stationary combustion; atmospheric reactions	Aggravation of respiratory illness
Carbon Monoxide (CO)	Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust; natural events, such as decomposition of organic matter	Aggravation of some heart diseases; reduced tolerance for exercise; impairment of mental function; birth defects; death at high levels of exposure
Sulfur Dioxide (SO <sub>2</sub> )	Combination of sulfur-containing fossil fuels; smelting of sulfur-bearing metal ore; industrial processes	Aggravation of respiratory diseases; reduced lung function
Lead	Contaminated soil	Behavioral and hearing disabilities in children; nervous system impairment

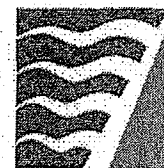
Source: South Coast Air Quality Management District 2005; EPA 2009; EDAW 2009

**Ozone**, or smog, is not emitted directly into the environment, but is formed in the atmosphere by complex chemical reactions between ROG and NO<sub>x</sub> in the presence of sunlight. Ozone formation is greatest on warm, windless, sunny days. The main sources of NO<sub>x</sub> and ROG, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) the evaporation of solvents, paints, and fuels, and biogenic sources. Automobiles are the single largest source of ozone precursors in the SFBAAB. Tailpipe emissions of ROG are highest during cold starts, hard acceleration, stop-and-go conditions, and slow speeds. They decline as speeds increase up to about 50 mph, then increase again at high speeds and high engine loads. ROG emissions associated with evaporation of unburned fuel depend on vehicle and ambient temperature cycles. Nitrogen oxide emissions exhibit a different curve; emissions decrease as the vehicle approaches 30 mph and then begin to increase with increasing speeds.

Ozone levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. Ozone can also damage plants and trees, and materials such as rubber and fabrics.

**Particulate Matter** refers to a wide range of solid or liquid particles in the atmosphere, including smoke, dust, aerosols, and metallic oxides. Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM<sub>10</sub>. PM<sub>2.5</sub> includes a subgroup of finer particles that have an aerodynamic diameter of 2.5 micrometers or less. Some particulate matter,





such as pollen, is naturally occurring. In the SFBAAB most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM<sub>10</sub> is of concern because it bypasses the body's natural filtration system more easily than larger particles, and can lodge deep in the lungs. The EPA and the state of California revised their PM standards several years ago to apply only to these fine particles. PM<sub>2.5</sub> poses an increased health risk because the particles can deposit deep in the lungs and contain substances that are particularly harmful to human health. Motor vehicles are currently responsible for about half of particulates in the SFBAAB. Wood burning in fireplaces and stoves is another large source of fine particulates.

**Nitrogen Dioxide (NO<sub>2</sub>)** is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO<sub>2</sub>. Aside from its contribution to ozone formation, nitrogen dioxide can increase the risk of acute and chronic respiratory disease and reduce visibility. NO<sub>2</sub> may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

**Carbon Monoxide (CO)** is an odorless, colorless gas. It is formed by the incomplete combustion of fuels. The single largest source of CO in the SFBAAB is motor vehicles. Emissions are highest during cold starts, hard acceleration, stop-and-go driving, and when a vehicle is moving at low speeds. New findings indicate that CO emissions per mile are lowest at about 45 mph for the average light-duty motor vehicle and begin to increase again at higher speeds. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease or anemia, as well as fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.

**Sulfur Dioxide (SO<sub>2</sub>)** is a colorless acid gas with a pungent odor. It has potential to damage materials and it can have health effects at high concentrations. It is produced by the combustion of sulfur-containing fuels, such as oil, coal and diesel. SO<sub>2</sub> can irritate lung tissue and increase the risk of acute and chronic respiratory disease.

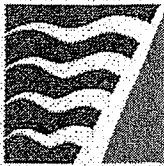
**Lead** is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The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

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

#### **Monitoring Data**

The BAAQMD operates a regional air quality monitoring network that regularly measures the concentrations of the five major criteria air pollutants. Air pollutant monitoring data is available at <http://www.arb.ca.gov/adam/welcome.html>. Air quality conditions in the SFBAAB have improved significantly since the BAAQMD was created in 1955. Ambient concentrations and the number of days on which the region exceeds standards have declined dramatically. Neither State nor





national ambient air quality standards of these chemicals have been violated in recent decades for nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and vinyl chloride.

#### **Emissions Inventory**

The BAAQMD estimates emissions of criteria air pollutants from approximately nine hundred source categories. The estimates are based on BAAQMD permit information for stationary sources (e.g., manufacturing industries, refineries, dry-cleaning operations), plus more generalized estimates for area sources (e.g., space heating, landscaping activities, use of consumer products) and mobile sources (e.g., trains, ships and planes, as well as on-road and off-road motor vehicles). BAAQMD emissions inventory data is available at <http://www.arb.ca.gov/ei/maps/statemap/dismap.htm>.

#### **C.1.2. Existing Ambient Air Quality: Toxic Air Contaminants**

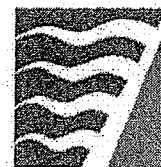
In addition to the criteria air pollutants listed above, another group of pollutants, commonly referred to as toxic air contaminants (TACs) or hazardous air pollutants can result in health effects that can be quite severe. Many TACs are confirmed or suspected carcinogens, or are known or suspected to cause birth defects or neurological damage. Secondly, many TACs can be toxic at very low concentrations. For some chemicals, such as carcinogens, there are no thresholds below which exposure can be considered risk-free.

Industrial facilities and mobile sources are significant sources of TACs. The electronics industry, including semiconductor manufacturing, has the potential to contaminate both air and water due to the highly toxic chlorinated solvents commonly used in semiconductor production processes. Sources of TACs go beyond industry. Various common urban facilities also produce TAC emissions, such as gasoline stations (benzene), hospitals (ethylene oxide), and dry cleaners (perchloroethylene). Automobile exhaust also contains TACs such as benzene and 1,3-butadiene. Most recently, diesel particulate matter was identified as a TAC by the ARB. Diesel PM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. BAAQMD research indicates that mobile-source emissions of diesel PM, benzene, and 1,3-butadiene represent a substantial portion of the ambient background risk from TACs in the SFBAAB.

#### **C.1.3. Greenhouse Gases and Global Climate Change**

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of greenhouse gases (GHGs) that contribute to global warming or global climate change have a broader, global impact. Global warming is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the earth's atmosphere. The principal GHGs contributing to global warming are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated compounds. The primary GHGs of concern are summarized in Table C.3. These gases allow visible and ultraviolet light from the sun to pass through the atmosphere, but they prevent heat from escaping back out into space. Among the potential implications of global warming are rising sea levels, and adverse impacts to water supply, water quality, agriculture, forestry, and habitats. In addition, global warming may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health. Like most criteria and toxic air pollutants, much of the GHG production comes from motor vehicles. GHG emissions can be reduced to some degree by improved coordination of land use and transportation planning on the city, county, and subregional level, and other measures to reduce automobile use. Energy conservation measures also can contribute to reductions in GHG emissions.





**Table C.3**  
**Examples of Greenhouse Gases**

Gas	Sources
Carbon dioxide (CO <sub>2</sub> )	Fossil fuel combustion in stationary and point sources; emission sources includes burning of oil, coal, gas.
Methane (CH <sub>4</sub> )	Incomplete combustion in forest fires, landfills, and leaks in natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, and certain industrial processes.
Nitrous oxide (N <sub>2</sub> O)	Fossil fuel combustion in stationary and point sources; other emission sources include agricultural soil management, animal manure management, sewage treatment, adipic acid production, and nitric acid production.
Chlorofluorocarbon (CFC), and Hydro-chlorofluorocarbon (HCFC)	Agents used in production of foam insulation; other sources include air conditioners, refrigerators, and solvents in cleaners.
Sulfur hexafluoride (SF <sub>6</sub> )	Electric insulation in high voltage equipment that transmits and distributes electricity, including circuit breakers, gas-insulated substations, and other switchgear used in the transmission system to manage the high voltages carried between generating stations and customer load centers.
Perfluorocarbons (PFC's)	Primary aluminum production and semiconductor manufacturing.
Source: EPA 2009	

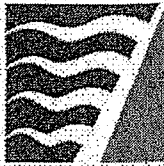
#### **California Greenhouse Gas Emissions Inventory**

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Emissions of CO<sub>2</sub> are byproducts of fossil fuel combustion. CH<sub>4</sub>, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) is largely associated with agricultural practices and landfills. N<sub>2</sub>O is also largely attributable to agricultural practices and soil management. CO<sub>2</sub> sinks, or reservoirs, include vegetation and the ocean, which absorb CO<sub>2</sub> through sequestration and dissolution, respectively, two of the most common processes of CO<sub>2</sub> sequestration.

California produced 474 million gross metric tons (MMT) of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) averaged over the period from 2002-2004. CO<sub>2</sub>e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of CH<sub>4</sub> has the same contribution to the greenhouse effect as approximately 23 tons of CO<sub>2</sub>. Therefore, CH<sub>4</sub> is a much more potent GHG than CO<sub>2</sub>. Expressing emissions in CO<sub>2</sub>e takes the contributions of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO<sub>2</sub> were being emitted.

Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2002-2004, accounting for 38 percent of total GHG emissions in the state. This sector was followed by the electric power sector (including both in-state and out-of-state sources) (18 percent) and the industrial sector (21 percent).





### **California Greenhouse Gas Emissions Projections**

The 1990 GHG emissions limit is approximately 430 MMT CO<sub>2</sub>e, which must be met in California by 2020 per the requirements of AB 32 (discussed below in the Regulatory Setting). ARB's GHG inventory for all emissions sectors would require an approximate 28 percent reduction in GHG emissions from projected 2020 forecasts to meet the target emissions limit (equivalent to levels in 1990) established in AB 32. The AB 32 Scoping Plan, discussed further below, is ARB's plan for meeting this mandate.

### **C.1.4. Existing Ambient Air Quality: Odors and Dust**

Other air quality issues of concern in the SFBAAB include nuisance impacts of odors and dust. Objectionable odors may be associated with a variety of pollutants. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries and chemical plants. Similarly, nuisance dust may be generated by a variety of sources including quarries, agriculture, grading and construction. Odors rarely have direct health impacts, but they can be very unpleasant and can lead to anger and concern over possible health effects among the public. Each year the BAAQMD receives thousands of citizen complaints about objectionable odors. Dust emissions can contribute to increased ambient concentrations of PM<sub>10</sub>, and can also contribute to reduced visibility and soiling of exposed surfaces.

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## **REGULATORY SETTING**

Air quality with respect to criteria air pollutants and TACs within the SFBAAB is regulated by such agencies as the BAAQMD, ARB, and EPA. Each of these agencies develops rules, regulations, policies, and/or goals to attain the goals or directives imposed through legislation. Although the EPA regulations may not be superseded, both state and local regulations may be more stringent.

### **C.1.5. Criteria Air Pollutants**

#### **Federal Air Quality Regulations**

##### **U.S. Environmental Protection Agency**

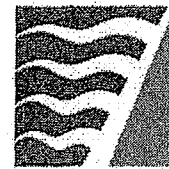
At the federal level, EPA has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required EPA to establish primary and secondary NAAQS, which are available at <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The Federal Clean Air Act Amendments of 1990 (FCAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA has responsibility to review all state SIPs to determine conformation to the mandates of the FCAAA and determine if implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

#### **State Air Quality Regulations**

In 1992 and 1993, the California Air Resources Board (CARB) requested delegation of authority for the implementation and enforcement of specified New Source Performance Standards





(NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPS) to the following local agencies: Bay Area and South Coast Air Quality Management Districts (AQMDs). EPA's review of the State of California's laws, rules, and regulations showed them to be adequate for the implementation and enforcement of these federal standards, and EPA granted the delegations as requested.

#### **California Air Resources Board**

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), which was adopted in 1988. The CCAA requires that all air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources.

ARB is primarily responsible for developing and implementing air pollution control plans to achieve and maintain the NAAQS. The ARB is primarily responsible for statewide pollution sources and produces a major part of the SIP. Local air districts are still relied upon to provide additional strategies for sources under their jurisdiction. The ARB combines this data and submits the completed SIP to EPA.

Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts), establishing CAAQS (which in many cases are more stringent than the NAAQS), determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, and off-road vehicles.

#### **Transport of Pollutants**

The California Clean Air Act, Section 39610 (a), directs the ARB to "identify each district in which transported air pollutants from upwind areas outside the district cause or contribute to a violation of the ozone standard and to identify the district of origin of transported pollutants." The information regarding the transport of air pollutants from one basin to another was to be quantified to assist interrelated basins in the preparation of plans for the attainment of State ambient air quality standards. Numerous studies conducted by the ARB have identified air basins that are impacted by pollutants transported from other air basins (as of 1993). Among the air basins affected by air pollution transport from the SFBAAB are the North Central Coast Air Basin, the Mountain Counties Air Basin, the San Joaquin Valley Air Basin, and the Sacramento Valley Air Basin. The SFBAAB was also identified as an area impacted by the transport of air pollutants from the Sacramento region.

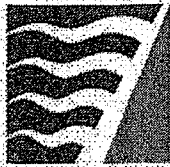
#### **Local Air Quality Regulations**

##### **Bay Area Air Quality Management District**

The BAAQMD attains and maintains air quality conditions in the SFBAAB through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of the BAAQMD includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. The BAAQMD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the FCAA, FCAAA, and the CCAA.

In 2009, the BAAQMD released the update to its CEQA Guidelines. This is an advisory document that provides the Lead Agency, consultants, and project applicants with uniform procedures for





addressing air quality in environmental documents. The handbook contains the following applicable components:

1. Criteria and thresholds for determining whether a project may have a significant adverse air quality impact;
2. Specific procedures and modeling protocols for quantifying and analyzing air quality impacts;
3. Methods available to mitigate air quality impacts;
4. Information for use in air quality assessments and environmental documents that will be updated more frequently such as air quality data, regulatory setting, climate, topography.

#### ***Air Quality Plans***

As stated above, the BAAQMD prepares plans to attain ambient air quality standards in the SFBAAB. The BAAQMD prepares ozone attainment plans (OAP) for the national ozone standard and clean air plans (CAP) for the California standard both in coordination with the Metropolitan Transportation Commission and the Association of Bay Area Governments (ABAG).

With respect to applicable air quality plans, the BAAQMD prepared the *2010 Clean Air Plan* to address nonattainment of the national 1-hour ozone standard in the SFBAAB. The purpose of the 2010 Clean Air Plan is to:

1. Update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone;
2. Consider the impacts of ozone control measures on particulate matter (PM), air toxics, and greenhouse gases in a single, integrated plan;
3. Review progress in improving air quality in recent years;
4. Establish emission control measures to be adopted or implemented in the 2009-2012 timeframe.

Similarly, the BAAQMD prepared the *2010 Clean Air Plan* to address nonattainment of the CAAQS.

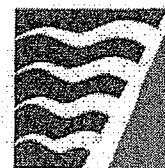
#### **C.1.6. Toxic Air Contaminants**

TACs, or in federal parlance under the FCAA, HAPs, are pollutants that result in an increase in mortality, a serious illness, or pose a present or potential hazard to human health. Health effects of TACs may include cancer, birth defects, and immune system and neurological damage.

TACs can be separated into carcinogens and noncarcinogens based on the nature of the physiological degradation associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts will not occur. Noncarcinogenic TACs differ in that there is a safe level in which it is generally assumed that no negative health impacts would occur. These levels are determined on a pollutant-by-pollutant basis.

It is important to understand that TACs are not considered criteria air pollutants and thus are not specifically addressed through the setting of ambient air quality standards. Instead, the EPA and ARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology (MACT and BACT) to limit emissions. These in conjunction with additional rules set forth by the BAAQMD establish the regulatory framework for TACs.



**Federal Hazardous Air Pollutant Program**

Title III of the FCAAA requires the EPA to promulgate national emissions standards for hazardous air pollutants (NESHAPs). The NESHAP may differ for major sources than for area sources of HAPs (major sources are defined as stationary sources with potential to emit more than 10 tons per year [TPY] of any HAP or more than 25 TPY of any combination of HAPs; all other sources are considered area sources). The emissions standards are to be promulgated in two phases. In the first phase (1992–2000), the EPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring MACT. These federal rules are also commonly referred to as MACT standards, because they reflect the Maximum Achievable Control Technology. For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), the EPA is required to promulgate health risk–based emissions standards where deemed necessary to address risks remaining after implementation of the technology-based NESHAP standards. The FCAAA required the EPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions, at a minimum to benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, §219 required the use of reformulated gasoline in selected U.S. cities (those with the most severe ozone nonattainment conditions) to further reduce mobile-source emissions.

**State Toxic Air Contaminant Programs**

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB can designate a substance as a TAC. To date, ARB has identified over 21 TACs, and adopted the EPA's list of HAPs as TACs. Most recently, diesel exhaust particulate was added to the ARB list of TACs. Once a TAC is identified, ARB's then adopts an Airborne Toxics Control Measure for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate TBACT to minimize emissions. None of the TACs identified by ARB have a safe threshold.

The Hot Spots Act requires that existing facilities that emit toxic substances above specified level:

1. Prepare a toxic emission inventory;
2. Prepare a risk assessment if emissions are significant;
3. Notify the public of significant risk levels;
4. Prepare and implement risk reduction measure.

ARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). In February 2000, ARB adopted a new public transit bus fleet rule and emission standards for new urban buses. These new rules and standards provide for 1) more stringent emission standards for some new urban bus engines beginning with 2002 model year engines, 2) zero-emission bus demonstration and purchase requirements applicable to transit agencies, and 3) reporting requirements with which transit agencies must demonstrate compliance with the urban transit bus fleet rule. Upcoming milestones include the low sulfur diesel fuel requirement, and tighter emission standards for heavy-duty diesel trucks (2007) and off-road diesel equipment (2011) nationwide. Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially less TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced





significantly over the last decade, and will be reduced further in California through a progression of regulatory measures [e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of ARB's Risk Reduction Plan, it is expected that diesel PM concentrations will be reduced by 75% in 2010 and 85% in 2020 from the estimated year 2000 level. Adopted regulations are also expected to continue to reduce formaldehyde emissions from cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

#### **Local Air Quality Regulations**

##### **Bay Area Air Quality Management District**

The BAAQMD has regulated TACs since the 1980s. At the local level, air pollution control or management districts may adopt and enforce ARB's control measures. Under BAAQMD Regulation 2-1 (General Permit Requirements), Regulation 2-2 (New Source Review), and Regulation 2-5 (New Source Review), all nonexempt sources that possess the potential to emit TACs are required to obtain permits from BAAQMD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new source review standards and air toxics control measures. The BAAQMD limits emissions and public exposure to TACs through a number of programs. The BAAQMD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. In addition, the BAAQMD has adopted Regulation 11 Rules 2 and 14, which address asbestos demolition renovation, manufacturing, and standards for asbestos containing serpentine.

#### **C.1.7. Greenhouse Gases and Global Climate Change**

##### **Federal Greenhouse Gas Regulations**

##### **Supreme Court Ruling**

The U.S. Environmental Protection Agency (EPA) is the Federal agency responsible for implementing the Clean Air Act (CAA). The U.S. Supreme Court ruled in its decision in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120), issued on April 2, 2007, that carbon dioxide (CO<sub>2</sub>) is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs.

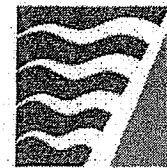
##### **EPA Actions**

In response to the mounting issue of climate change, EPA has taken actions to regulate, monitor, and potentially reduce GHG emissions.

##### **Mandatory Greenhouse Gas Reporting Rule**

On September 22, 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO<sub>2</sub> per year. This publically available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial greenhouse gases along with vehicle and engine manufacturers will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.



**Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act**

On April 23, 2009, EPA published their Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the CCA (Endangerment Finding) in the Federal Register. The Endangerment Finding is based on Section 202(a) of the CAA, which states that the Administrator (of EPA) should regulate and develop standards for "emission[s] of air pollution from any class of classes of new motor vehicles or new motor vehicle engines, which in [its] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." The proposed rule addresses Section 202(a) in two distinct findings. The first addresses whether or not the concentrations of the six key GHGs (i.e., carbon dioxide [CO<sub>2</sub>], methane [CH<sub>4</sub>], nitrous oxide [N<sub>2</sub>O], hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF<sub>6</sub>]) in the atmosphere threaten the public health and welfare of current and future generations. The second addresses whether or not the combined emissions of GHGs from new motor vehicles and motor vehicle engines contribute to atmospheric concentrations of GHGs and therefore the threat of climate change.

The Administrator proposed the finding that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the CCA. The evidence supporting this finding consists of human activity resulting in "high atmospheric levels" of GHG emissions, which are very likely responsible for increases in average temperatures and other climatic changes. Furthermore, the observed and projected results of climate change (e.g., higher likelihood of heat waves, wild fires, droughts, sea level rise, higher intensity storms) are a threat to the public health and welfare. Therefore, GHGs were found to endanger the public health and welfare of current and future generations.

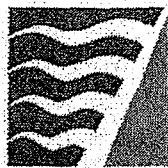
The Administrator also proposed the finding that GHG emissions from new motor vehicles and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. The proposed finding cites that in 2006, motor vehicles were the second largest contributor to domestic GHG emissions (24 percent of total) behind electricity generation. Furthermore, in 2005, the U.S. was responsible for 18 percent of global GHG emissions. ~~Therefore, GHG emissions from motor vehicles and motor vehicle engines were found to contribute to air pollution that endangers public health and welfare.~~

**State Greenhouse Gas Regulations****Assembly Bill 1493 (2002)**

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493 requires that ARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state."

To meet the requirements of AB 1493, in 2004 ARB approved amendments to the California Code of Regulations (CCR) adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1) require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily for the transportation of persons), beginning with the 2009 model year. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for the 2016 model year are approximately 37 percent lower than the limits for the first year of the regulations, the 2009 model year. For light-duty trucks with LVW of 3,751 pounds to gross vehicle





weight (GVW) of 8,500 pounds, as well as medium-duty passenger vehicles, GHG emissions would be reduced approximately 24 percent between 2009 and 2016.

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of 13 CCR Sections 1900 and 1961 as amended by AB 1493 and 13 CCR 1961.1 (*Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in Her Official Capacity as Executive Director of the California Air Resources Board, et al.*). The auto-makers' suit in the U.S. District Court for the Eastern District of California, contended California's implementation of regulations that, in effect, regulate vehicle fuel economy violates various federal laws, regulations, and policies.

On December 12, 2007, the Court found that if California receives appropriate authorization from EPA (the last remaining factor in enforcing the standard), these regulations would be consistent with and have the force of federal law, thus, rejecting the automakers' claim. This authorization to implement more stringent standards in California was requested in the form of a CAA Section 209, subsection (b) waiver in 2005. Since that time, EPA failed to act on granting California authorization to implement the standards. Governor Schwarzenegger and Attorney General Edmund G. Brown filed suit against EPA for the delay. In December 2007, EPA Administrator Stephen Johnson denied California's request for the waiver to implement AB 1493. Johnson cited the need for a national approach to reducing GHG emissions, the lack of a "need to meet compelling and extraordinary conditions", and the emissions reductions that would be achieved through the Energy Independence and Security Act of 2007 as the reasoning for the denial.

The state of California filed suit against EPA for its decision to deny the CAA waiver. The recent change in presidential administration directed EPA to reexamine its position for denial of California's CAA waiver and for its past opposition to GHG emissions regulation. California received the waiver, notwithstanding the previous denial by EPA, on June 30, 2009.

**Assembly Bill 32 (2006), California Global Warming Solutions Act**

In September 2006, the governor of California signed AB 32 (Chapter 488, Statutes of 2006), the **California Global Warming Solutions Act of 2006, which enacted Sections 38500–38599 of the California Health and Safety Code**. AB 32 requires the reduction of statewide GHG emissions to 1990 levels by 2020. This equates to an approximate 15 percent reduction compared to existing statewide GHG emission levels or a 30 percent reduction from projected 2020 "business as usual" emission levels. The required reduction will be accomplished through an enforceable statewide cap on GHG emissions beginning in 2012.

To effectively implement the statewide cap on GHG emissions, AB 32 directs ARB to develop and implement regulations that reduce statewide GHG emissions generated by stationary sources. Specific actions required of ARB under AB 32 include adoption of a quantified cap on GHG emissions that represent 1990 emissions levels along with disclosing how the cap was quantified, institution of a schedule to meet the emissions cap, and development of tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions needed to meet the cap.

In addition, AB 32 states that if any regulations established under AB 1493 (2002) cannot be implemented then ARB is required to develop additional, new regulations to control GHG emissions from vehicles as part of AB 32.

**AB 32 Climate Change Scoping Plan**

In December 2008, ARB adopted its *Climate Change Scoping Plan*, which contains the main strategies California will implement to achieve reduction of approximately 169 million metric tons (MMT) of CO<sub>2</sub>e, or approximately 30% from the state's projected 2020 emission level of 596 MMT of CO<sub>2</sub>e under a business-as-usual scenario (this is a reduction of 42 MMT CO<sub>2</sub>e, or almost 10%,





from 2002-2004 average emissions). The *Scoping Plan* also includes ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The *Scoping Plan* calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO<sub>2</sub>e);
- the Low-Carbon Fuel Standard (15.0 MMT CO<sub>2</sub>e);
- energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO<sub>2</sub>e); and
- a renewable portfolio standard for electricity production (21.3 MMT CO<sub>2</sub>e).

ARB has not yet determined what amount of GHG reductions it recommends from local government operations; however, the *Scoping Plan* does state that land use planning and urban growth decisions will play an important role in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions( meanwhile, ARB is also developing an additional protocol for community emissions). ARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The *Scoping Plan* states that the ultimate GHG reduction assignment to local government operations is to be determined (ARB 2008). With regard to land use planning, the *Scoping Plan* expects approximately 5.0 MMT CO<sub>2</sub>e will be achieved associated with implementation of SB 375, which is discussed further below.

**Senate Bills 1078 and 107 and Executive Order S-14-08**

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008 Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33 percent renewable power by 2020. Governor Schwarzenegger plans to propose legislative language that will codify the new higher standard.

**Senate Bill 1368 (2006)**

SB 1368 is the companion bill of AB 32 and was signed by Governor Schwarzenegger in September 2006. SB 1368 requires the California Public Utilities Commission (PUC) to establish a greenhouse gas emission performance standard for baseload generation from investor owned utilities by February 1, 2007. The California Energy Commission (CEC) must establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural gas fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the PUC and CEC.

**Senate Bill 97 (2007)**

SB 97, signed by governor of California in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency by July 1, 2009 guidelines for mitigating GHG emissions or the effects of GHG emissions,





as required by CEQA. The California Resources Agency is required to certify and adopt these guidelines by January 1, 2010.

This bill also removes, both retroactively and prospectively, as legitimate causes of action in litigation any claim of inadequate CEQA analysis of effects of GHG emissions associated with environmental review for projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006 (Proposition 1B) or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1E). This provision will be repealed by provision of law on January 1, 2010 at that time such projects, if any remain unapproved, will no longer enjoy protection against litigation claims based on failure to adequately address issues related to GHG emissions.

**Senate Bill 375 (2008)**

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. As part of the alignment, SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) which prescribes land use allocation in that MPO's Regional Transportation Plan (RTP). The ARB, in consultation with MPOs, is required to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. The ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned GHG emission reduction targets. If MPOs do not meet the GHG reduction targets, transportation projects located in the MPO boundaries would not be eligible for funding programmed after January 1, 2012.

This bill also extends the minimum time period for the Regional Housing Needs Allocation (RNHA) cycle from 5 years to 8 years for local governments located in an MPO that meets certain requirements. City or County land use policies (e.g., General Plans) are not required to be consistent with the RTP including associated SCSs or APSs. Qualified projects consistent with an approved SCS or APS and categorized as "transit priority projects" would receive incentives under new provisions of CEQA.

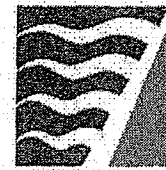
**Executive Order S-3-05 (2005)**

Governor Schwarzenegger signed Executive Order S-3-05 on June 1, 2005 which proclaimed California is vulnerable to the impacts of climate change. The executive order declared increased temperatures could reduce snowpack in the Sierra Nevada Mountains, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the executive order established targets for total GHG emissions which include reducing GHG emissions to the 2000 level by 2010, to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The executive order also directed the secretary of the California Environmental Protection Agency to coordinate a multiagency effort to reduce GHG emissions to the target levels. The secretary will submit biannual reports to the governor and legislature describing progress made toward reaching the emission targets; impacts of global warming on California's resources; and mitigation and adaptation plans to combat impacts of global warming.

To comply with the executive order, the Secretary of the California Environmental Protection Agency created the California Climate Action Team which is made up of members from various state agencies and commissions. The California Climate Action Team released its first report in March 2006 of which proposed achieving the GHG emissions targets by building on voluntary





actions of California businesses and actions by local governments and communities along with continued implementation of state incentive and regulatory programs.

#### **Executive Order S-13-08**

Governor Schwarzenegger signed Executive Order S-13-08 on November 14, 2008 which directs California to develop methods for adapting to climate change through preparation of a statewide plan. The executive order directs OPR, in cooperation with the California Resources Agency (CRA), to provide land use planning guidance related to sea level rise and other climate change impacts by May 30, 2009. The order also directs the CRA to develop a state Climate Adaptation Strategy by June 30, 2009 and to convene an independent panel to complete the first California Sea Level Rise Assessment Report. The assessment report is required to be completed by December 1, 2010 and required to include the following four items:

1. Project the relative sea level rise specific to California by taking into account issues such as coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates;
2. Identify the range of uncertainty in selected sea level rise projections;
3. Synthesize existing information on projected sea level rise impacts to state infrastructure (e.g., roads, public facilities, beaches), natural areas, and coastal and marine ecosystems; and
4. Discuss future research needs relating to sea level rise in California.

#### **Executive Order S-1-07**

Governor Schwarzenegger signed Executive Order S-1-07 in 2007 which proclaimed the transportation sector as the main source of GHG emissions in California. The executive order proclaims the transportation sector accounts for over 40 percent of statewide GHG emissions. The executive order also establishes a goal to reduce the carbon intensity of transportation fuels sold in California by a minimum of 10 percent by 2020.

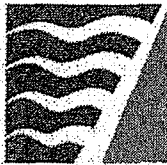
In particular, the executive order established a Low-Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the CEC, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (*State Alternative Fuels Plan* adopted by CEC on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the LCFS on April 23, 2009.

#### **Local Greenhouse Gas Regulations**

##### **Bay Area Air Quality Management District Climate Protection Program**

The BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the SFBAAB. The climate protection program includes measures that promote energy efficiency, reduce vehicle miles traveled, and develop alternative sources of energy all of which assist in reducing emissions of GHG and in reducing air pollutants that affect the health of residents. BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

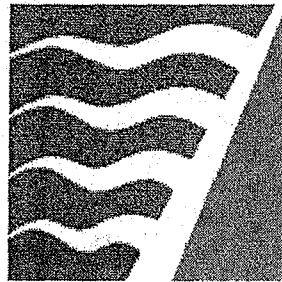




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Appendix D. Threshold of Significance Justification

## D. THRESHOLDS OF SIGNIFICANCE JUSTIFICATION



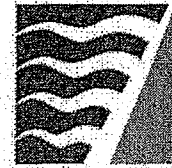
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# California Environmental Quality Act Guidelines Update

## Thresholds of Significance

June 2, 2010

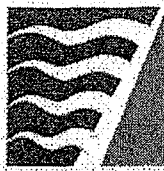




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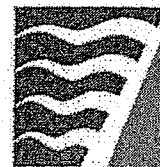




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## Bay Area Air Quality Management District

### Air Quality CEQA Thresholds of Significance

#### 1. INTRODUCTION

Bay Area Air Quality Management District (BAAQMD or Air District) staff analyzed various options for California Environmental Quality Act (CEQA) air quality thresholds of significance for use within BAAQMD's jurisdiction. The analysis and evaluation undertaken by Air District staff is documented in the *Revised Draft Options and Justification Report – California Environmental Quality Act Thresholds of Significance* (Draft Options Report) (BAAQMD October 2009).

Air District staff hosted public workshops in February, April, September and October 2009, and April 2010 at several locations around the Bay Area. Air District staff also hosted additional workshops in each of the nine Bay Area counties specifically designed for, and to solicit input from, local agency staff. In addition, Air District staff met with regional stakeholder groups to discuss and receive input on the threshold options being evaluated. Throughout the course of the public workshops and stakeholder meetings Air District staff received many comments on the various options under consideration. Based on comments received and additional staff analysis, the threshold options and staff-recommended thresholds were further refined. The culmination of this nearly year and a half-long effort was presented in the Proposed Thresholds of Significance Report published on November 2, 2009 as the Air District staff's proposed air quality thresholds of significance.

The Air District Board of Directors (Board) held public hearings on November 18 and December 2, 2009 and January 6, 2010, to receive comments on staff's Proposed Thresholds of Significance (November 2, 2009; revised December 7, 2009). After public testimony and Board deliberations, the Board requested staff to present additional options for risk and hazard thresholds for Board consideration. This Report includes risks and hazards threshold options, as requested by the Board, in addition to staff's previously recommended thresholds of significance. The thresholds presented herein, adopted by the Air District Board of Directors, are intended to replace all of the Air District's currently recommended thresholds. The air quality thresholds of significance, and Board-requested risk and hazard threshold options, are provided in Table 1 at the end of this introduction.

#### 1.1. BAAQMD/CEQA REGULATORY AUTHORITY

The BAAQMD has direct and indirect regulatory authority over sources of air pollution in the San Francisco Bay Area Air Basin (SFBAAB). CEQA requires that public agencies consider the potential adverse environmental impacts of any project that a public agency proposes to carry out, fund or approve. CEQA requires that a lead agency prepare an Environmental Impact Report (EIR) whenever it can be fairly argued (the "fair argument" standard), based on substantial evidence,<sup>7</sup> that a project may have a significant effect<sup>8</sup> on the environment, even if there is

<sup>7</sup> "Substantial evidence" includes facts, reasonable assumptions predicated upon facts, or expert opinions supported by facts, but does not include argument, speculation, unsubstantiated opinion or narrative, evidence that is clearly inaccurate





substantial evidence to the contrary (CEQA Guidelines §15064). CEQA requires that the lead agency review not only a project's direct effects on the environment, but also the cumulative impacts of a project and other projects causing related impacts. When the incremental effect of a project is cumulatively considerable, the lead agency must discuss the cumulative impacts in an EIR. (CEQA Guidelines §15064).

The "fair argument" standard refers to whether a fair argument can be made that a project may have a significant effect on the environment (*No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 84). The fair argument standard is generally considered a low threshold requirement for preparation of an EIR. The legal standards reflect a preference for requiring preparation of an EIR and for "resolving doubts in favor of environmental review." *Meija v. City of Los Angeles* (2005) 130 Cal. App. 4th 322, 332. "The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data." (CEQA Guidelines §15064(b)).

In determining whether a project may have a significant effect on the environment, CEQA Guidelines Section 15064.7 provides that lead agencies may adopt and/or apply "thresholds of significance." A threshold of significance is "an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant" (CEQA Guidelines §15064.7).

While thresholds of significance give rise to a presumption of insignificance, thresholds are not conclusive, and do not excuse a public agency of the duty to consider evidence that a significant effect may occur under the fair argument standard. *Meija*, 130 Cal. App. 4th at 342. "A public agency cannot apply a threshold of significance or regulatory standard 'in a way that forecloses the consideration of any other substantial evidence showing there may be a significant effect.'" *Id.* This means that if a public agency is presented with factual information or other substantial evidence establishing a fair argument that a project may have a significant effect on the environment, the agency must prepare an EIR to study those impacts even if the project's impacts fall below the applicable threshold of significance.

**Thresholds of significance must be supported by substantial evidence. This Report provides the substantial evidence in support of the thresholds of significance developed by the BAAQMD. If adopted by the BAAQMD Board of Directors, the Air District will recommend that lead agencies within the nine counties of the BAAQMD's jurisdiction use the thresholds of significance in this Report when considering the air quality impacts of projects under their consideration.**

## **1.2. JUSTIFICATION FOR UPDATING CEQA THRESHOLDS**

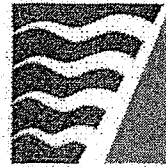
Any analysis of environmental impacts under CEQA includes an assessment of the nature and extent of each impact expected to result from the project to determine whether the impact will be treated as significant or less than significant. CEQA gives lead agencies discretion whether to classify a particular environmental impact as significant. Ultimately, formulation of a standard of significance requires the lead agency to make a policy judgment about where the line should be drawn distinguishing adverse impacts it considers significant from those that are not deemed significant. This judgment must, however, be based on scientific information and other factual data to the extent possible (CEQA Guidelines §15064(b)).

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or erroneous, or evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment. Cal. Pub. Res. C. §21080(c); see also CEQA Guidelines §15384.

<sup>8</sup> A "significant effect" on the environment is defined as a "substantial, or potentially substantial, adverse change in the environment." Cal. Pub. Res. C. §21068; see also CEQA Guidelines §15382.





In the sense that advances in science provide new or refined factual data, combined with advances in technology and the gradual improvement or degradation of an environmental resource, the point where an environmental effect is considered significant is fluid over time. Other factors influencing this fluidity include new or revised regulations and standards, and emerging, new areas of concern.

In the ten years since BAAQMD last reviewed its recommended CEQA thresholds of significance for air quality, there have been tremendous changes that affect the quality and management of the air resources in the Bay Area. Traditional criteria air pollutant ambient air quality standards, at both the state and federal levels, have become increasingly more stringent. A new criteria air pollutant standard for fine particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>) has been added to federal and state ambient air quality standards. We have found, through technical advances in impact assessment, that toxic air contaminants are not only worse than previously thought from a health perspective, but that certain communities experience high levels of toxic air contaminants, giving rise to new regulations and programs to reduce the significantly elevated levels of ambient toxic air contaminant concentrations in the Bay Area.

In response to the elevated levels of toxic air contaminants in some Bay Area communities, the Air District created the Community Air Risk Evaluation (CARE) Program. Phase 1 of the BAAQMD's CARE program compiled and analyzed a regional emissions inventory of toxic air contaminants (TACs), including emissions from stationary sources, area sources, and on-road and off-road mobile sources. Phase 2 of the CARE Program conducted regional computer modeling of selected TAC species, species which collectively posed the greatest risk to Bay Area residents. In both Phases 1 and 2, demographic data were combined with estimates of TAC emissions or concentrations to identify communities that are disproportionately impacted from high concentrations of TACs. Bay Area Public Health Officers, in discussions with Air District staff and in comments to the Air District's Advisory Council (February 11, 2009, Advisory Council Meeting on Air Quality and Public Health), have recommended that PM<sub>2.5</sub>, in addition to TACs, be considered in assessments of community-scale impacts of air pollution.

Another significant issue that affects the quality of life for Bay Area residents is the growing concern with global climate change. In just the past few years, estimates of the global atmospheric temperature and greenhouse gas concentration limits needed to stabilize climate change have been adjusted downward and the impacts of greenhouse gas emissions considered more dire. Previous scientific assessments assumed that limiting global temperature rise to 2-3°C above pre-industrial levels would stabilize greenhouse gas concentrations in the range of 450-550 parts per million (ppm) of carbon dioxide-equivalent (CO<sub>2e</sub>). Now the science indicates that a temperature rise of 2°C would not prevent dangerous interference with the climate system. Recent scientific assessments suggest that global temperature rise should be kept below 2°C by stabilizing greenhouse gas concentrations below 350 ppm CO<sub>2e</sub>, a significant reduction from the current level of 385 ppm CO<sub>2e</sub>.

For the reasons stated above, and to further the goals of other District programs such as encouraging transit-oriented and infill development, BAAQMD has undertaken an effort to review all of its currently-recommended CEQA thresholds, revise them as appropriate, and develop new thresholds where appropriate. The overall goal of this effort is to develop CEQA significance criteria that ensure new development implements appropriate and feasible emission reduction measures to mitigate significant air quality impacts. The Air District's recommended CEQA significance thresholds have been vetted through a public review process and will be presented to the BAAQMD Board of Directors for adoption.



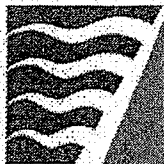


Table D-2 – Air Quality CEQA Thresholds of Significance			
Pollutant	Construction-Related	Operational-Related	
Project Level			
Criteria Air Pollutants and Precursors (Regional)	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Maximum Annual Emissions (tpy)
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (exhaust only)	82	15
PM <sub>2.5</sub>	54 (exhaust only)	54	10
PM <sub>10</sub> /PM <sub>2.5</sub> (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
GHGs  Projects other than Stationary Sources	None	Compliance with Qualified Greenhouse Gas Reduction Strategy OR 1,100 MT of CO <sub>2</sub> e/yr OR 4.6 MT CO <sub>2</sub> e/SP/yr (residents + employees)	
GHGs  Stationary Sources	None	10,000 MT/yr	
Risks and Hazards – New Source (All Areas) (Individual Project)  <u>Staff Proposal</u>	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.3 µg/m <sup>3</sup> annual average  <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor	





Table D-2 – Air Quality CEQA Thresholds of Significance

Pollutant	Construction-Related	Operational-Related
<b>Risks and Hazards – New Receptor (All Areas)</b> (Individual Project)  <u>Staff Proposal</u>	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.3 µg/m <sup>3</sup> annual average  <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor
<b>Risks and Hazards</b> (Individual Project)  <u>Tiered Thresholds Option</u>	Same as Operational Thresholds*	<u>Impacted Communities: Siting a New Source</u>  Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >5.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.2 µg/m <sup>3</sup> annual average  <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor
<b>Risks and Hazards</b> (Individual Project)  <u>Tiered Thresholds Option (Continued)</u>	Same as Operational Thresholds*	<u>Impacted Communities: Siting a New Receptor</u> <u>All Other Areas: Siting a New Source or Receptor</u>  Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.3 µg/m <sup>3</sup> annual average  <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor



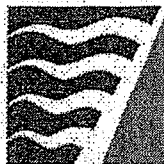


Table D-2 – Air Quality CEQA Thresholds of Significance

Pollutant	Construction-Related	Operational-Related
<b>Risks and Hazards – New Source (All Areas) (Cumulative Thresholds)</b>	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM <sub>2.5</sub> : > 0.8 µg/m <sup>3</sup> annual average (from all local sources)  <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor
<b>Risks and Hazards – New Receptor (All Areas) (Cumulative Thresholds)</b>	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM <sub>2.5</sub> : > 0.8 µg/m <sup>3</sup> annual average (from all local sources)  <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor
<b>Accidental Release of Acutely Hazardous Air Pollutants</b>	None	Storage or use of acutely hazardous materials locating near receptors or receptors locating near stored or used acutely hazardous materials considered significant
<b>Odors</b>	None	Complaint History—Five confirmed complaints per year averaged over three years
<b>Plan-Level</b>		
<b>Criteria Air Pollutants and Precursors</b>	None	1. Consistency with Current Air Quality Plan control measures 2. Projected VMT or vehicle trip increase is less than or equal to projected population increase





Table D-2 – Air Quality CEQA Thresholds of Significance		
Pollutant	Construction-Related	Operational-Related
GHGs	None	Compliance with Qualified Greenhouse Gas Reduction Strategy (or similar criteria included in a General Plan) OR 6.6 MT CO <sub>2</sub> e/ SP/yr (residents + employees)
Risks and Hazards	None	1. Overlay zones around existing and planned sources of TACs (including adopted Risk Reduction Plan areas) 2. Overlay zones of at least 500 feet (or Air District-approved modeled distance) from all freeways and high volume roadways
Odors	None	Identify the location of existing and planned sources of odors
Accidental Release of Acutely Hazardous Air Pollutants	None	None
Regional Plans (Transportation and Air Quality Plans)		
GHGs, Criteria Air Pollutants and Precursors, and Toxic Air Contaminants	None	No net increase in emissions
Notes: CO = carbon monoxide; CO <sub>2</sub> e = carbon dioxide equivalent; GHGs = greenhouse gases; lb/day = pounds per day; MT = metric tons; NO <sub>x</sub> = oxides of nitrogen; PM <sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM <sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; ROG = reactive organic gases; SO <sub>2</sub> = sulfur dioxide; SP = service population; TACs = toxic air contaminants; TBP = toxic best practices; tons/day = tons per day; tpy = tons per year; yr = year. * Note: The Air District recommends that for construction projects that are less than one year duration, Lead Agencies should annualize impacts over the scope of actual days that peak impacts are to occur, rather than the full year.		

## 2. GREENHOUSE GAS THRESHOLDS

BAAQMD does not currently have an adopted threshold of significance for GHG emissions. BAAQMD currently recommends that lead agencies quantify GHG emissions resulting from new development and apply all feasible mitigation measures to lessen the potentially significant adverse impacts. One of the primary objectives in updating the current CEQA Guidelines is to identify a GHG significance threshold, analytical methodologies, and mitigation measures to ensure new land use development meets its fair share of the emission reductions needed to address the cumulative environmental impact from GHG emissions. GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. As reviewed herein, climate change impacts include an increase in extreme heat days, higher ambient concentrations of air pollutants, sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental





impacts. No single land use project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts.

## 2.1. THRESHOLDS OF SIGNIFICANCE

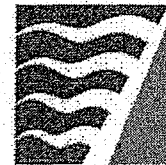
Project Type	Thresholds
Projects other than Stationary Sources	Compliance with Qualified Greenhouse Gas Reduction Strategy OR 1,100 MT of CO <sub>2</sub> e/yr OR 4.6 MT CO <sub>2</sub> e/SP/yr (residents + employees)
Stationary Sources	10,000 MT of CO <sub>2</sub> e/yr
Plans	Compliance with Qualified Greenhouse Gas Reduction Strategy (or similar criteria included in a General Plan) OR 6.6 MT CO <sub>2</sub> e/SP/yr (residents + employees)
Regional Plans (Transportation and Air Quality Plans)	No net increase in GHG emissions

## 2.2. JUSTIFICATION AND SUBSTANTIAL EVIDENCE SUPPORTING THRESHOLDS

BAAQMD's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. If mitigation can be applied to lessen the emissions such that the project meets its share of emission reductions needed to address the cumulative impact, the project would normally be considered less than significant.

As explained in the District's *Revised Draft Options and Justifications Report* (BAAQMD 2009), there are several types of thresholds that may be supported by substantial evidence and be consistent with existing California legislation and policy to reduce statewide GHG emissions. In determining which thresholds to recommend, Staff studied numerous options, relying on reasonable, environmentally conservative assumptions on growth in the land use sector, predicted emissions reductions from statewide regulatory measures and resulting emissions inventories, and the efficacies of GHG mitigation measures. The thresholds recommended herein were chosen based on the substantial evidence that such thresholds represent quantitative and/or qualitative levels of GHG emissions, compliance with which means that the environmental impact of the GHG emissions will normally not be cumulatively considerable under CEQA. Compliance with such thresholds will be part of the solution to the cumulative GHG emissions problem, rather than hinder the state's ability to meet its goals of reduced statewide GHG emissions. Staff notes that it does not believe there is only one threshold for GHG emissions that can be supported by substantial evidence.





GHG CEQA significance thresholds recommended herein are intended to serve as interim levels during the implementation of the AB 32 Scoping Plan and SB 375, which will occur over time. Until AB 32 has been fully implemented in terms of adopted regulations, incentives, and programs and until SB 375 required plans have been fully adopted, or the California Air Resources Board (ARB) adopts a recommended threshold, the BAAQMD recommends that local agencies in the Bay Area apply the GHG thresholds recommended herein.

If left unchecked, GHG emissions from new land use development in California will result in a cumulatively considerable amount of GHG emissions and a substantial conflict with the State's ability to meet the goals within AB 32. Thus, BAAQMD proposes to adopt interim GHG thresholds for CEQA analysis, which can be used by lead agencies within the Bay Area. This would help lead agencies navigate this dynamic regulatory and technological environment where the field of analysis has remained wide open and inconsistent. BAAQMD's framework for developing a GHG threshold for land development projects that is based on policy and substantial evidence follows.

### 2.2.1. Scientific and Regulatory Justification

#### Climate Science Overview

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons, chlorofluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is *extremely unlikely* that global climate change of the past 50 years can be explained without the contribution from human activities (IPCC 2007a).

According to Article 2 of the United Nations Framework Convention on Climate Change (UNFCCC), "Avoiding Dangerous Climate Change" means: *"stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."* Dangerous climate change defined in the UNFCCC is based on several key indicators including the potential for severe degradation of coral reef systems, disintegration of the West Antarctic Ice Sheet, and shut down of the large-scale, salinity- and thermally-driven circulation of the oceans. (UNFCCC 2009). The global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 ppm to 379 ppm in 2005 (IPCC 2007a). "Avoiding dangerous climate change" is generally understood to be achieved by stabilizing global average temperatures between 2 and 2.4°C above pre-industrial levels. In order to limit temperature increases to this level, ambient global CO<sub>2</sub> concentrations must stabilize between 350 and 400 ppm (IPCC 2007b).

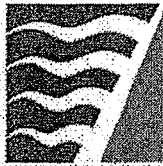
#### Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

#### Assembly Bill 32, the California Global Warming Solutions Act of 2006

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill 32, the California Global Warming Solutions Act of 2006, which set the 2020 greenhouse gas emissions reduction goal into law. AB 32 finds and declares that "Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020, and establishes





regulatory, reporting, voluntary, and market mechanisms to achieve quantifiable reductions in GHG emissions to meet the statewide goal.

In December of 2008, ARB adopted its *Climate Change Scoping Plan (Scoping Plan)*, which is the State's plan to achieve GHG reductions in California, as required by AB 32 (ARB 2008). The Scoping Plan contains strategies California will implement to achieve a reduction of 169 MMT CO<sub>2</sub>e emissions, or approximately 28 percent from the state's projected 2020 emission level of 596 MMT of CO<sub>2</sub>e under a business-as-usual scenario (this is a reduction of 42 MMT of CO<sub>2</sub>e, or almost 10 percent, from 2002-2004 average emissions), so that the state can return to 1990 emission levels, as required by AB 32.

While the Scoping Plan establishes the policy intent to control numerous GHG sources through regulatory, incentive, and market means, given the early phase of implementation and the level of control that local CEQA lead agencies have over numerous GHG sources, CEQA is an important and supporting tool in achieving GHG reductions overall in compliance with AB 32. In this spirit, BAAQMD is considering the adoption of thresholds of significance for GHG emissions for stationary source and land use development projects.

#### **Senate Bill 375**

Senate Bill (SB) 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years, but can be updated every four years if advancements in emission technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects would not be eligible for State funding programmed after January 1, 2012. New provisions of CEQA incentivize qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

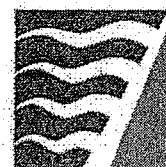
The revised District CEQA Guidelines includes methodology consistent with the recently updated State CEQA Guidelines, which provides that certain residential and mixed use projects, and transit priority projects consistent with an applicable SCS or APS need not analyze GHG impacts from cars and light duty trucks (CEQA Guidelines §15183.5(c)).

#### **2.2.2. Project-Level GHG Thresholds**

Staff recommends setting GHG significance thresholds based on AB 32 GHG emission reduction goals while taking into consideration emission reduction strategies outlined in ARB's Scoping Plan. Staff proposes two quantitative thresholds for land use projects: a bright line threshold based on a "gap" analysis and an efficiency threshold based on emission levels required to be met in order to achieve AB 32 goals.

Staff also proposes one qualitative threshold for land use projects: if a project complies with a Qualified Greenhouse Gas Reduction Strategy (as defined in Section 2.3.4 below) that addresses the project it would be considered less than significant. As explained in detail in Section 2.3.4 below, compliance with a Qualified Greenhouse Gas Reduction Strategy (or similar adopted policies, ordinances and programs), would provide the evidentiary basis for making CEQA findings that development consistent with the plan would result in feasible, measurable, and verifiable GHG reductions consistent with broad state goals such that projects approved under





qualified Greenhouse Gas Reduction Strategies or equivalent demonstrations would achieve their fair share of GHG emission reductions.

#### Land Use Projects "Gap-Based" Threshold

Staff took eight steps in developing this threshold approach, which are summarized here and detailed in the sections that follow. It should be noted that the "gap-based approach" used for threshold development is a conservative approach that focuses on a limited set of state mandates that appear to have the greatest potential to reduce land use development-related GHG emissions at the time of this writing. It is also important to note that over time, as the effectiveness of the State's implementation of AB 32 (and SB 375) progresses, BAAQMD will need to reconsider the extent of GHG reductions needed over and above those from the implementation thereof for the discretionary approval of land use development projects. Although there is an inherent amount of uncertainty in the estimated capture rates (i.e., frequency at which project-generated emissions would exceed a threshold and would be subject to mitigation under CEQA) and the aggregate emission reductions used in the gap analysis, they are based on BAAQMD's expertise, the best available data, and use conservative assumptions for the amount of emission reductions from legislation in derivation of the gap (e.g., only adopted legislation was relied upon). This approach is intended to attribute an appropriate share of GHG emission reductions necessary to reach AB 32 goals to new land use development projects in BAAQMD's jurisdiction that are evaluated pursuant to CEQA.

- Step 1 Estimate from ARB's statewide GHG emissions inventory the growth in emissions between 1990 and 2020 attributable to "land use-driven" sectors of the emission inventory as defined by OPR's guidance document (*CEQA and Climate Change*). Land use-driven emission sectors include Transportation (On-Road Passenger Vehicles; On-Road Heavy Duty), Electric Power (Electricity; Cogeneration), Commercial and Residential (Residential Fuel Use; Commercial Fuel Use) and Recycling and Waste (Domestic Waste Water Treatment).

Result: 1990 GHG emissions were 295.53 MMT CO<sub>2</sub>e/yr and projected 2020 business-as-usual GHG emissions would be 400.22 MMT CO<sub>2</sub>e/yr; thus a 26.2 percent reduction from statewide land use-driven GHG emissions would be necessary to meet the AB 32 goal of returning to 1990 emission levels by 2020. (See Table 2)

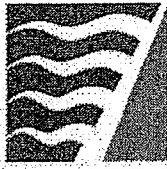
- Step 2 Estimate the anticipated GHG emission reductions affecting the same land use-driven emissions inventory sectors associated with adopted statewide regulations identified in the AB 32 Scoping Plan.

Result: Estimated a 23.9 percent reduction can be expected in the land use-driven GHG emissions inventory from adopted Scoping Plan regulations, including AB 1493 (Pavley), LCFS, Heavy/Medium Duty Efficiency, Passenger Vehicle Efficiency, Energy-Efficiency Measures, Renewable Portfolio Standard, and Solar Roofs. (See Table 3)

- Step 3 Determine any short fall or "gap" between the 2020 statewide emission inventory estimates and the anticipated emission reductions from adopted Scoping Plan regulations. This "gap" represents additional GHG emission reductions needed statewide from the land use-driven emissions inventory sectors, which represents new land use development's share of the emission reductions needed to meet statewide GHG emission reduction goals.

Result: With the 23.9 percent reductions from AB 32 Scoping Measures, there is a "gap" of 2.3 percent in necessary additional GHG emissions reductions to meet AB 32





goals of a 26.2 percent reduction from statewide land use-driven GHG emissions to return to 1990 levels in 2020. (See Table 2)

- Step 4 Determine the percent reduction this "gap" represents in the "land use-driven" emissions inventory sectors from BAAQMD's 2020 GHG emissions inventory. Identify the mass of emission reductions needed in the SFBAAB from land use-driven emissions inventory sectors.

Result: Estimated that a 2.3 percent reduction in BAAQMD's projected 2020 emissions projections requires emissions reductions of 1.6 MMT CO<sub>2</sub>e/yr from the land use-driven sectors. (See Table 4)

- Step 5 Assess BAAQMD's historical CEQA database (2001-2008) to determine the frequency distribution trend of project sizes and types that have been subject to CEQA over the past several years.

Result: Determined historical patterns of residential, commercial and industrial development by ranges of average sizes of each development type. Results were used in Step 6 below to distribute anticipated Bay Area growth among different future project types and sizes.

- Step 6 Forecast new land use development for the Bay Area using DOF/EDD population and employment projections and distribute the anticipated growth into appropriate land use types and sizes needed to accommodate the anticipated growth (based on the trend analysis in Step 5 above). Translate the land use development projections into land use categories consistent with those contained in the Urban Emissions Model (URBEMIS).

Result: Based on population and employment projections and the trend analysis from Step 5 above, forecasted approximately 4,000 new development projects, averaging about 400 projects per year through 2020 in the Bay Area.

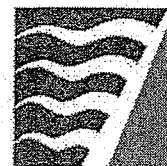
- Step 7 Estimate the amount of GHG emissions from each land use development project type and size using URBEMIS and post-model manual calculation methods (for emissions not included in URBEMIS). Determine the amount of GHG emissions that can reasonably and feasibly be reduced through currently available mitigation measures ("mitigation effectiveness") for future land use development projects subject to CEQA (based on land use development projections and frequency distribution from Step 6 above).

Result: Based on the information available and on sample URBEMIS calculations, found that mitigation effectiveness of between 25 and 30 percent is feasible.

- Step 8 Conduct a sensitivity analysis of the numeric GHG mass emissions threshold needed to achieve the desired emissions reduction (i.e., "gap") determined in Step 4. This mass emission GHG threshold is that which would be needed to achieve the emission reductions necessary by 2020 to meet the Bay Area's share of the statewide "gap" needed from the land use-driven emissions inventory sectors.

Result: The results of the sensitivity analysis conducted in Step 8 found that reductions between about 125,000 MT/yr (an aggregate of 1.3 MMT in 2020) and over 200,000 MT/yr (an aggregate of over 2.0 MMT in 2020) were achievable and feasible. A mass emissions threshold of 1,100 MT of CO<sub>2</sub>e/yr would result in approximately 59 percent of all projects being above the significance threshold (e.g., this is approximately the operational GHG emissions that would be associated with a 60 residential unit





subdivision) and must implement feasible mitigation measures to meet CEQA requirements. With an estimated 26 percent mitigation effectiveness, the 1,100 MT threshold would achieve 1.6 MMT CO<sub>2</sub>e/yr in GHG emissions reductions.

### **Detailed Basis and Analysis**

#### **Derivation of Greenhouse Gas Reduction Goal**

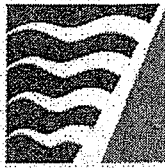
To meet the target emissions limit established in AB 32 (equivalent to levels in 1990), total GHG emissions would need to be reduced by approximately 28 percent from projected 2020 forecasts (ARB 2009a). The AB 32 Scoping Plan is ARB's plan for meeting this mandate (ARB 2008). While the Scoping Plan does not specifically identify GHG emission reductions from the CEQA process for meeting AB 32 derived emission limits, the scoping plan acknowledges that "other strategies to mitigate climate change . . . should also be explored." The Scoping Plan also acknowledges that "Some of the measures in the plan may deliver more emission reductions than we expect; others less . . . and new ideas and strategies will emerge." In addition, climate change is considered a significant environmental issue and, therefore, warrants consideration under CEQA. SB 97 represents the State Legislature's confirmation of this fact, and it directed the Governor's Office of Planning and Research (OPR) to develop CEQA Guidelines for evaluation of GHG emissions impacts and recommend mitigation strategies. In response, OPR released the *Technical Advisory: CEQA and Climate Change* (OPR 2008), and proposed revisions to the State CEQA guidelines (April 14, 2009) for consideration of GHG emissions. The California Natural Resources Agency adopted the proposed State CEQA Guidelines revisions on December 30, 2009 and the revisions were effective beginning March 18, 2010. It is known that new land use development must also do its fair share toward achieving AB 32 goals (or, at a minimum, should not hinder the State's progress toward the mandated emission reductions).

#### **Foreseeable Scoping Plan Measures Emission Reductions and Remaining "Gap"**

Step 1 of the Gap Analysis entailed estimating from ARB's statewide GHG inventory the growth in emissions between 1990 and 2020 attributable to land use driven sectors of the emissions inventory. As stated above, to meet the requirements set forth in AB 32 (i.e., achieve California's 1990-equivalent GHG emissions levels by 2020) California would need to achieve an approximate 28 percent reduction in emissions across all sectors of the GHG emissions inventory compared with 2020 projections. However, to meet the AB 32 reduction goals in the emissions sectors that are related to land use development (e.g., on-road passenger and heavy-duty motor vehicles, commercial and residential area sources [i.e., natural gas], electricity generation/consumption, wastewater treatment, and water distribution/consumption), staff determined that California would need to achieve an approximate 26 percent reduction in GHG emissions from these land use-driven sectors (ARB 2009a) by 2020 to return to 1990 land use emission levels.

Next, in Step 2 of the Gap Analysis, Staff determined the GHG emission reductions within the land use-driven sectors that are anticipated to occur from implementation of the Scoping Plan measures statewide, which are summarized in Table 2 and described below. Since the GHG emission reductions anticipated with the Scoping Plan were not accounted for in ARB's or BAAQMD's 2020 GHG emissions inventory forecasts (i.e., business as usual), an adjustment was made to include (i.e., give credit for) GHG emission reductions associated with key Scoping Plan measures, such as the Renewable Portfolio Standard, improvements in energy efficiency through periodic updates to Title 24, AB 1493 (Pavley) (which recently received a federal waiver to allow it to be enacted in law), the Low Carbon Fuel Standard (LCFS), and other measures. With reductions from these State regulations (Scoping Plan measures) taken into consideration and accounting for an estimated 23.9 percent reduction in GHG emissions, in Step 3 of the Gap Analysis Staff determined that the Bay Area would still need to achieve an additional 2.3 percent reduction from projected 2020 GHG emissions to meet the 1990 GHG emissions goal from the





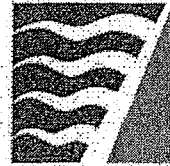
land-use driven sectors. This necessary 2.3 percent reduction in projected GHG emissions from the land use sector is the "gap" the Bay Area needs to fill to do its share to meet the AB 32 goals. Refer to the following explanation and Tables 2 through 4 for data used in this analysis.

Because the transportation sector is the largest emissions sector of the state's GHG emissions inventory, it is aggressively targeted in early actions and other priority actions in the Scoping Plan including measures concerning gas mileage (Pavley), fuel carbon intensity (LCFS) and vehicle efficiency measures.

Table D-3 – California 1990, 2002-2004, and 2020 Land Use Sector GHG <sup>1</sup> (MMT CO <sub>2</sub> e/yr)				
Sector	1990 Emissions	2002-2004 Average	2020 BAU Emissions Projections	% of 2020 Total
<b>Transportation</b>	<b>137.98</b>	<b>168.66</b>	<b>209.06</b>	<b>52%</b>
On-Road Passenger Vehicles	108.95	133.95	160.78	40%
On-Road Heavy Duty	29.03	34.69	48.28	12%
<b>Electric Power</b>	<b>110.63</b>	<b>110.04</b>	<b>140.24</b>	<b>35%</b>
Electricity	95.39	88.97	107.40	27%
Cogeneration <sup>2</sup>	15.24	21.07	32.84	8%
<b>Commercial and Residential</b>	<b>44.09</b>	<b>40.96</b>	<b>46.79</b>	<b>12%</b>
Residential Fuel Use	29.66	28.52	32.10	8%
Commercial Fuel Use	14.43	12.45	14.63	4%
<b>Recycling and Waste<sup>1</sup></b>	<b>2.83</b>	<b>3.39</b>	<b>4.19</b>	<b>1%</b>
Domestic Wastewater Treatment	2.83	3.39	4.19	1%
<b>TOTAL GROSS EMISSIONS</b>	<b>295.53</b>	<b>323.05</b>	<b>400.22</b>	
% Reduction Goal from Statewide land use driven sectors (from 2020 levels to reach 1990 levels in these emission inventory sectors)			26.2%	
% Reduction from AB32 Scoping Plan measures applied to land use sectors (see Table 3)			-23.9%	
% Reduction needed statewide beyond Scoping Plan measures (Gap)			2.3%	
Notes: MMT CO <sub>2</sub> e /yr = million metric tons of carbon dioxide equivalent emissions per year.				
<sup>1</sup> Landfills not included. See text.				
<sup>2</sup> Cogeneration included due to many different applications for electricity, in some cases provides substantial power for grid use, and because electricity use served by cogeneration is often amenable to efficiency requirements of local land use authorities.				
Sources: Data compiled by EDAW and ICF Jones & Stokes from ARB data.				

Pavley Regulations. The AB 32 Scoping Plan assigns an approximate 20 percent reduction in emissions from passenger vehicles associated with the implementation of AB 1493. The AB 32 Scoping Plan also notes that "AB 32 specifically states that if the Pavley regulations do not remain in effect, ARB shall implement alternative regulations to control mobile sources to achieve





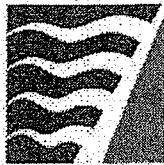
equivalent or greater reductions of greenhouse gas emissions (HSC §38590).<sup>9</sup> Thus, it is reasonable to assume full implementation of AB 1493 standards, or equivalent programs that would be implemented by ARB. Furthermore, on April 1, 2010, U.S. EPA and the Department of Transportation's National Highway Safety Administration (NHTSA) announced a joint final rule establishing a national program that will dramatically reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States after 2011. Under this national program, automobile manufacturers will be able to build a single light-duty national fleet that satisfies all requirements under both the national program and the standards of California and other states. Nonetheless, BAAQMD may need to revisit this methodology as the federal standards come on line to ensure that vehicle standards are as aggressive as contemplated in development of this threshold.

**Table D-4 – 2020 Land Use Sector GHG Emission Reductions from State Regulations and AB 32 Measures**

Affected Emissions Source	California Legislation	% Reduction from 2020 GHG Inventory	End Use Sector (% of Bay Area LU Inventory)	Scaled % Emissions Reduction (credit)
Mobile	AB 1493 (Pavley)	19.7%	On road passenger/light truck transportation (45%)	8.9%
	LCFS	7.2%	On road passenger/light truck transportation (45%)	3.2%
	LCFS	7.2%	On road Heavy/Medium Duty Transportation (5%)	0.4%
	Heavy/Medium Duty Efficiency	2.9%	On road Heavy/Medium Duty Transportation (5%)	0.2%
	Passenger Vehicle Efficiency	2.8%	On road passenger/light truck transportation (45%)	1.3%
Area	Energy-Efficiency Measures	9.5%	Natural gas (Residential, 10%)	1.0%
			Natural gas (Non-residential, 13%)	1.2%
Indirect	Renewable Portfolio Standard	21.0%	Electricity (excluding cogen) (17%)	3.5%
	Energy-Efficiency Measures	15.7%	Electricity (26%)	4.0%
	Solar Roofs	1.5%	Electricity (excluding cogen) (17%)	0.2%
Total credits given to land use-driven emission inventory sectors from Scoping Plan measures				<b>23.9%</b>
Notes: AB = Assembly Bill; LCFS = Low Carbon Fuel Standard; SB = Senate Bill; RPS = Renewable Portfolio Standard Please refer to Appendix D for detailed calculations. Sources: Data compiled by ICF Jones & Stokes.				

LCFS. According to the adopted LCFS rule (CARB, April 2009), the LCFS is expected to result in approximately 10 percent reduction in the carbon intensity of transportation fuels. However, a





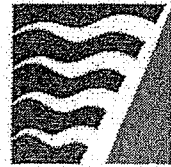
portion of the emission reductions required from the LCFS would be achieved over the life cycle of transportation fuel production rather than from mobile-source emission factors. Based on CARB's estimate of nearly 16 MMT reductions in on-road emissions from implementation of the LCFS and comparison to the statewide on-road emissions sector, the LCFS is assumed to result in a 7.2 percent reduction compared to 2020 BAU conditions (CARB 2009e).

Table D-5 – SFBAAB 1990, 2007, and 2020 Land Use Sector GHG Emissions Inventories and Projections (MMT CO<sub>2</sub>e/yr)

Sector	1990 Emissions	2007 Emissions	2020 Emissions Projections	% of 2020 Total <sup>2</sup>
<b>Transportation</b>	<b>26.1</b>	<b>30.8</b>	<b>35.7</b>	<b>50%</b>
On-Road Passenger Vehicles	23.0	27.5	32.0	
On-Road Heavy Duty	3.1	3.3	3.7	
<b>Electric Power</b>	<b>25.1</b>	<b>15.2</b>	<b>18.2</b>	<b>26%</b>
Electricity	16.5	9.9	11.8	
Cogeneration	8.6	5.3	6.4	
<b>Commercial and Residential</b>	<b>8.9</b>	<b>15.0</b>	<b>16.8</b>	<b>24%</b>
Residential Fuel Use	5.8	7.0	7.5	
Commercial Fuel Use	3.1	8.0	9.3	
<b>Recycling and Waste<sup>1</sup></b>	<b>0.2</b>	<b>0.4</b>	<b>0.4</b>	<b>1%</b>
Domestic Waste Water Treatment	0.2	0.4	0.4	
<b>TOTAL GROSS EMISSIONS</b>	<b>60.3</b>	<b>61.4</b>	<b>71.1</b>	
SFBAAB's "Fair Share" % Reduction (from 2020 levels to reach 1990 levels) with AB-32 Reductions (from Table 3)			2.3%	
SFBAAB's Equivalent Mass Emissions Land Use Reduction Target at 2020 (MMT CO <sub>2</sub> e/yr)			1.6	
Notes: MMT CO <sub>2</sub> e /yr = million metric tons of carbon dioxide equivalent emissions per year; SFBAAB = San Francisco Bay Area Air Basin.				
<sup>1</sup> Landfills not included.				
<sup>2</sup> Percentages do not sum exactly to 100% in table due to rounding.				
Please refer to Appendix D for detailed calculations.				
Sources: Data compiled by EDAW 2009, ICF Jones & Stokes 2009, BAAQMD 2008.				

Renewable Portfolio Standard, Energy Efficiency and Solar Roofs. Energy efficiency and renewable energy measures from the Scoping Plan were also included in the gap analysis. The Renewable Portfolio Standard (rules) will require the renewable energy portion of the retail electricity portfolio to be 33 percent in 2020. For PG&E, the dominant electricity provider in the Basin, approximately 12 percent of their current portfolio qualifies under the RPS rules and thus the gain by 2020 would be approximately 21 percent. The Scoping Plan also estimates that energy efficiency gains with periodic improvement in building and appliance energy standards and incentives will reach 10 to 15 percent for natural gas and electricity respectively. The final





state measure included in this gap analysis is the solar roof initiative, which is estimated to result in reduction of the overall electricity inventory of 1.5 percent.

Landfill emissions are excluded from this analysis. While land use development does generate waste related to both construction and operations, the California Integrated Waste Management Board (CIWMB) has mandatory diversion requirements that will, in all probability, increase over time to promote waste reductions, reuse, and recycle. The Bay Area has relatively high levels of waste diversion and extensive recycling efforts. Further, ARB has established and proposes to increase methane capture requirements for all major landfills. Thus, at this time, landfill emissions associated with land use development waste generation is not included in the land use sector inventory used to develop this threshold approach.

Industrial stationary sources thresholds were developed separately from the land use threshold development using a market capture approach as described below. However, mobile source and area source emissions, as well as indirect electricity emissions that derive from industrial use are included in the land use inventory above as these particular activities fall within the influence of local land use authorities in terms of the affect on trip generation and energy efficiency.

AB 32 mandates reduction to 1990-equivalent GHG levels by 2020, with foreseeable emission reductions from State regulations and key Scoping Plan measures taken into account, were applied to the land use-driven emission sectors within the SFBAAB (i.e., those that are included in the quantification of emissions from a land use project pursuant to a CEQA analysis [on-road passenger vehicles, commercial and residential natural gas, commercial and residential electricity consumption, and domestic waste water treatment], as directed by OPR in the Technical Advisory: *Climate Change and CEQA* [OPR 2008]). This translates to a 2.3 percent gap in necessary GHG emission reductions by 2020 from these sectors.

#### **Land Use Projects Bright Line Threshold**

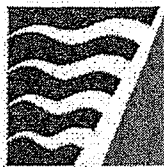
In Steps 4 and 5 of the gap analysis, Staff determined that applying a 2.3 percent reduction to these land use emissions sectors in the SFBAAB's GHG emissions inventory would result in an equivalent fair share of 1.6 million metric tons per year (MMT/yr) reductions in GHG emissions from new land use development. As additional regulations and legislation aimed at reducing GHG emissions from land use-related sectors become available in the future, the 1.6 MMT GHG emissions reduction goal may be revisited and recalculated by BAAQMD.

In order to derive the 1.6 MMT "gap," a projected development inventory for the next ten years in the SFBAAB was calculated (see Table 4 and *Revised Draft Options and Justifications Report* (BAAQMD 2009)). CO<sub>2e</sub> emissions were modeled for projected development in the SFBAAB and compiled to estimate the associated GHG emissions inventory. The GHG (i.e., CO<sub>2e</sub>) CEQA threshold level was adjusted for projected land use development that would occur within BAAQMD's jurisdiction over the period from 2010 through 2020.

Projects with emissions greater than the threshold would be required to mitigate to the threshold level or reduce project emissions by a percentage (mitigation effectiveness) deemed feasible by the Lead Agency under CEQA compared to a base year condition. The base year condition is defined by an equivalent size and character of project with annual emissions using the defaults in URBEMIS and the California Climate Action Registry's General Reporting Protocol for 2008. By this method, land use project mitigation subject to CEQA would help close the "gap" remaining after application of the key regulations and measures noted above supporting overall AB 32 goals.

This threshold takes into account Steps 1-8 of the gap analysis described above to arrive at a numerical mass emissions threshold. Various mass emissions significance threshold levels (i.e.,





bright lines) could be chosen based on the mitigation effectiveness and performance anticipated to be achieved per project to meet the aggregate emission reductions of 1.6 MMT needed in the SFBAAB by 2020 (see Table 5 and *Revised Draft Options and Justifications Report* (BAAQMD 2009)). Staff recommends a 1,100 MT CO<sub>2</sub>e per year threshold. Choosing a 1,100 MT mass emissions significance threshold level (equivalent to approximately 60 single-family units), would result in about 59 percent of all projects being above the significance threshold and having to implement feasible mitigation measures to meet their CEQA obligations. These projects account for approximately 92 percent of all GHG emissions anticipated to occur between now and 2020 from new land use development in the SFBAAB.

Project applicants and lead agencies could use readily available computer models to estimate a project's GHG emissions, based on project specific attributes, to determine if they are above or below the bright line numeric threshold. With this threshold, projects that are above the threshold level, after consideration of emission-reducing characteristics of the project as proposed, would have to reduce their emissions to below the threshold to be considered less than significant.

**Establishing a "bright line" to determine the significance of a project's GHG emissions impact provides a level of certainty to lead agencies in determining if a project needs to reduce its GHG emissions through mitigation measures and when an EIR is required.**

Table D-6 – Operational GHG Threshold Sensitivity Analysis

Option	Mitigation Effectiveness Assumptions		Mass Emission Threshold Level (MT CO <sub>2</sub> e/yr)	% of Projects Captured (>threshold)	% of Emissions Captured (> threshold)	Emissions Reduction per year (MT/yr)	Aggregate Emissions Reduction (MMT) at 2020	Threshold Project Size Equivalent (single family dwelling units)
	Performance Standards Applied to All Projects with Emissions < Threshold Level	Mitigation Effectiveness Applied to Emissions > Threshold Level						
1A	N/A	30%	975	60%	93%	201,664	2.0	53
1A	N/A	25%	110	96%	100%	200,108	2.0	66
1A	N/A	30%	1,225	21%	67%	159,276	1.6	67
1A	N/A	26%	1,100	59%	92%	159,877	1.6	60
1A	N/A	30%	2,000	14%	61%	143,418	1.4	109
1A	N/A	25%	1,200	58%	92%	136,907	1.4	66
1A	N/A	30%	3,000	10%	56%	127,427	1.3	164
1A	N/A	25%	1,500	20%	67%	127,303	1.3	82
1B	26%	N/A	N/A	100%	100%	208,594	2.1	N/A <sup>1</sup>
1C	5%	30%	1,900	15%	62%	160,073	1.6	104
1C	10%	25%	1,250	21%	67%	159,555	1.6	68
1C	5%	30%	3,000	10%	56%	145,261	1.5	164
1C	10%	25%	2,000	4%	61%	151,410	1.5	109
1C	10%	30%	10,000	2%	33%	125,271	1.3	547

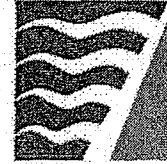
MMT = million metric tons per year; MT CO<sub>2</sub>e/yr = metric tons of carbon dioxide equivalent emissions per year; MT/yr = metric tons per year; N/A = not applicable.

<sup>1</sup> Any project subject to CEQA would trigger this threshold.

Please refer to Appendix E for detailed calculations.

Source: Data modeled by ICF Jones & Stokes.





### Land Use Projects Efficiency-Based Threshold

GHG efficiency metrics can also be utilized as thresholds to assess the GHG efficiency of a project on a per capita basis (residential only projects) or on a "service population" basis (the sum of the number of jobs and the number of residents provided by a project) such that the project will allow for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020). GHG efficiency thresholds can be determined by dividing the GHG emissions inventory goal (allowable emissions), by the estimated 2020 population and employment. This method allows highly efficient projects with higher mass emissions to meet the overall reduction goals of AB 32. Staff believes it is more appropriate to base the land use efficiency threshold on the service population metric for the land use-driven emission inventory. This approach is appropriate because the threshold can be applied evenly to all project types (residential or commercial/retail only and mixed use) and uses only the land use emissions inventory that is comprised of all land use projects. Staff will provide the methodology to calculate a project's GHG emissions in the revised CEQA Guidelines, such as allowing infill projects up to a 50 percent or more reduction in daily vehicle trips if the reduction can be supported by close proximity to transit and support services, or a traffic study prepared for the project.

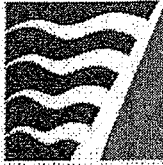
Table D-7 – California 2020 GHG Emissions, Population Projections and GHG Efficiency Thresholds - Land Use Inventory Sectors	
Land Use Sectors Greenhouse Gas Emissions Target	295,530,000
Population	44,135,923
Employment	20,194,661
California Service Population (Population + Employment)	64,330,584
AB 32 Goal GHG emissions (metric tons CO <sub>2</sub> e)/SP <sup>1</sup>	4.6
Notes: AB = Assembly Bill; CO <sub>2</sub> e = carbon dioxide equivalent; GHG = greenhouse gas; SP = service population.	
<sup>1</sup> Greenhouse gas efficiency levels were calculated using only the "land use-related" sectors of ARB's emissions inventory.	
Please refer to Appendix D for detailed calculations.	
Sources: Data compiled by EDAW 2009, ARB 2009a, DOF 2009, EDD 2009, ICF Jones & Stokes 2009.	

Staff proposes a project-level efficiency threshold of 4.6 MT CO<sub>2</sub>e/SP, the derivation of which is shown Table 6. This efficiency-based threshold reflects very GHG-efficient projects. As stated previously and below, staff anticipates that significance thresholds (rebuttable presumptions of significance at the project level) will function on an interim basis only until adequate programmatic approaches are in place at the city, county, and regional level that will allow the CEQA streamlining of individual projects. (See State CEQA Guidelines §15183.5 ["Tiering and Streamlining the Analysis of Greenhouse Gas Emissions"]).

### **2.2.3. Plan-Level GHG Thresholds**

Staff proposes using a two step process for determining the significance of proposed plans and plan amendments for GHG. As a first step in assessing plan-level impacts, Staff is proposing that agencies that have adopted a qualified Greenhouse Gas Reduction Strategy (or have incorporated similar criteria in their general plan) and the general plan is consistent with the Greenhouse Gas Reduction Strategy, the general plan would be considered less than significant. In addition, as discussed above for project-level GHG impacts, Staff is proposing an efficiency threshold to assess plan-level impacts. Staff believes a programmatic approach to limiting GHG emissions is appropriate at the plan-level. Thus, as projects consistent with the Greenhouse Gas





Reduction Strategy are proposed, they may be able to tier off the plan and its environmental analysis.

#### **GHG Efficiency Metrics for Plans**

For local land use plans, a GHG-efficiency metric (e.g., GHG emissions per unit) would enable comparison of a proposed general plan to its alternatives and to determine if the proposed general plan meets AB 32 emission reduction goals.

AB 32 identifies local governments as essential partners in achieving California's goal to reduce GHG emissions. Local governments have primary authority to plan, zone, approve, and permit how and where land is developed to accommodate population growth and the changing needs of their jurisdiction. ARB has developed the Local Government Operations Protocol and is developing a protocol to estimate community-wide GHG emissions. ARB encourages local governments to use these protocols to track progress in reducing GHG emissions. ARB encourages local governments to institutionalize the community's strategy for reducing its carbon footprint in its general plan. SB 375 creates a process for regional integration of land development patterns and transportation infrastructure planning with the primary goal of reducing GHG emissions from the largest sector of the GHG emission inventory, light duty vehicles.

If the statewide AB 32 GHG emissions reduction context is established, GHG efficiency can be viewed independently from the jurisdiction in which the plan is located. Expressing projected 2020 mass of emissions from land use-related emissions sectors by comparison to a demographic unit (e.g., population and employment) provides evaluation of the GHG efficiency of a project in terms of what emissions are allowable while meeting AB 32 targets.

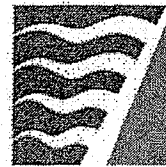
Two approaches were considered for efficiency metrics. The "service population" (SP) approach would consider efficiency in terms of the GHG emissions compared to the sum of the number of jobs and the number of residents at a point in time. The per capita option would consider efficiency in terms of GHG emissions per resident only. Staff recommends that the efficiency threshold for plans be based on all emission inventory sectors because, unlike land use projects, general plans comprise more than just land use related emissions (e.g. industrial). Further, Staff recommends that the plan threshold be based on the service population metric as general plans include a mix of residents and employees. The Service Population metric would allow decision makers to compare GHG efficiency of general plan alternatives that vary residential and non-residential development totals, encouraging GHG efficiency through improving jobs/housing balance. This approach would not give preference to communities that accommodate more residential (population-driven) land uses than non-residential (employment driven) land uses which could occur with the per capita approach.

A SP-based GHG efficiency metric (see Table 7) was derived from the emission rates at the State level that would accommodate projected population and employment growth under trend forecast conditions, and the emission rates needed to accommodate growth while allowing for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020).

**Table D-8 – California 2020 GHG Emissions, Population Projections and GHG Efficiency Thresholds - All Inventory Sectors**

All Inventory Sectors Greenhouse Gas Emissions Target	426,500,000
Population	44,135,923
Employment	20,194,661
California Service Population (Population + Employment)	64,330,584



AB 32 Goal GHG emissions (metric tons CO<sub>2</sub>e)/SP<sup>1</sup>

6.6

Notes: AB = Assembly Bill; CO<sub>2</sub>e = carbon dioxide equivalent; GHG = greenhouse gas; SP = service population.

<sup>1</sup> Greenhouse gas efficiency levels were calculated using only the "land use-related" sectors of ARB's emissions inventory.

Please refer to Appendix D for detailed calculations.

Sources: Data compiled by EDAW 2009, ARB 2009a, DOF 2009, EDD 2009, ICF Jones & Stokes 2009.

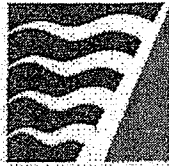
If a general plan demonstrates, through dividing the emissions inventory projections (MT CO<sub>2</sub>e) by the amount of growth that would be accommodated in 2020, that it could meet the GHG efficiency metrics in this section (6.6 MT CO<sub>2</sub>e/SP from all emission sectors, as noted in Table 7), then the amount of GHG emissions associated with the general plan would be considered less than significant, regardless of its size (and magnitude of GHG emissions). In other words, the general plan would accommodate growth in a manner that would not hinder the State's ability to achieve AB 32 goals, and thus, would be less than significant for GHG emissions and their contribution to climate change. The efficiency metric would not penalize well-planned communities that propose a large amount of development. Instead, the SP-based GHG efficiency metric acts to encourage the types of development that BAAQMD and OPR support (i.e., infill and transit-oriented development) because it tends to reduce GHG and other air pollutant emissions overall, rather than discourage large developments for being accompanied by a large mass of GHG emissions. Plans that are more GHG efficient would have no or limited mitigation requirements to help them complete the CEQA process more readily than plans that promote GHG inefficiencies, which will require detailed design of mitigation during the CEQA process and could subject a plan to potential challenge as to whether all feasible mitigation was identified and adopted. This type of threshold can shed light on a well-planned general plan that accommodates a large amount of growth in a GHG-efficient way.

When analyzing long-range plans, such as general plans, it is important to note that the planning horizon will often surpass the 2020 timeframe for implementation of AB 32. Executive Order S-3-05 establishes a more aggressive emissions reduction goal for the year 2050 of 80 percent below 1990 emissions levels. The year 2020 should be viewed as a milestone year, and the general plan should not preclude the community from a trajectory toward the 2050 goal. However, the 2020 timeframe is examined in this threshold evaluation because doing so for the 2050 timeframe (with respect to population, employment, and GHG emissions projections) would be too speculative. Advances in technology and policy decisions at the state level will be needed to meet the aggressive 2050 goals. It is beyond the scope of the analysis tools available at this time to examine reasonable emissions reductions that can be achieved through CEQA analysis in the year 2050. As the 2020 timeframe draws nearer, BAAQMD will need to reevaluate the threshold to better represent progress toward 2050 goals.

#### 2.2.4. Greenhouse Gas Reduction Strategies

Finally, many local agencies have already undergone or plan to undergo efforts to create general or other plans that are consistent with AB 32 goals. The Air District encourages such planning efforts and recognizes that careful upfront planning by local agencies is invaluable to achieving the state's GHG reduction goals. If a project is consistent with an adopted Qualified Greenhouse Gas Reduction Strategy that addresses the project's GHG emissions, it can be presumed that the project will not have significant GHG emission impacts. This approach is consistent with CEQA Guidelines Sections 15064(h)(3) and 15183.5(b), which provides that a "lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or





mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem.”

A qualified Greenhouse Gas Reduction Strategy (or similar adopted policies, ordinances and programs) is one that is consistent with all of the AB 32 Scoping Plan measures and goals. The Greenhouse Gas Reduction Strategy should identify a land use design, transportation network, goals, policies and implementation measures that would achieve AB 32 goals. Strategies with horizon years beyond 2020 should consider continuing the downward reduction path set by AB 32 and move toward climate stabilization goals established in Executive Order S-3-05.

**Qualified Greenhouse Gas Reduction Strategy**

A qualified Greenhouse Gas Reduction Strategy adopted by a local jurisdiction should include the following elements as described in the State CEQA Guidelines Section 15183.5. The District's revised CEQA Guidelines provides the methodology to determine if a Greenhouse Gas Reduction Strategy meets these requirements.

- (A) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- (B) Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;
- (C) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- (D) Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- (E) Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
- (F) Be adopted in a public process following environmental review.

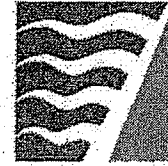
**Local Climate Action Policies, Ordinances and Programs**

Air District staff recognizes that many communities in the Bay Area have been proactive in planning for climate change but have not yet developed a stand-alone Greenhouse Gas Reduction Strategy that meets the above criteria. Many cities and counties have adopted climate action policies, ordinances and program that may in fact achieve the goals of AB 32 and a qualified Greenhouse Gas Reduction Strategy. Staff recommends that if a local jurisdiction can demonstrate that its collective set of climate action policies, ordinances and other programs is consistent with AB 32 and State CEQA Guidelines Section 15183.5, includes requirements or feasible measures to reduce GHG emissions and achieves one of the following GHG emission reduction goals,<sup>9</sup> the AB 32 consistency demonstration should be considered equivalent to a qualified Greenhouse Gas Reduction Strategy:

- 1990 GHG emission levels,
- 15 percent below 2008 emission levels, or

<sup>9</sup> Lead agencies using consistency with their jurisdiction's climate action policies, ordinances and programs as a measure of significance under CEQA Guidelines section 15064(h)(3) and 15183.5(b) should ensure that the policies, ordinances and programs satisfy all of the requirements of that subsection before relying on them in a CEQA analysis.





- Meet the plan efficiency threshold of 6.6 MT CO<sub>2</sub>e/service population/year.

Qualified Greenhouse Gas Reduction Strategies that are tied to the AB 32 reduction goals would promote reductions on a plan level without impeding the implementation of GHG-efficient development, and would recognize the initiative of many Bay Area communities who have already developed or are in the process of developing a GHG reduction plan. The details required above for a qualified Greenhouse Gas Reduction Strategy (or similar adopted policies, ordinances and programs) would provide the evidentiary basis for making CEQA findings that development consistent with the plan would result in feasible, measureable, and verifiable GHG reductions consistent with broad state goals such that projects approved under qualified Greenhouse Gas Reduction Strategies or equivalent demonstrations would achieve their fair share of GHG emission reductions.

#### **GHG Thresholds for Regional Plans**

Regional plans include the Regional Transportation Plan prepared by the Metropolitan Transportation Commission (MTC) and air quality plans prepared by the Air District.

The Regional Transportation Plan (RTP), also called a Metropolitan Transportation Plan (MTP) or Long-Range Transportation Plan is the mechanism used in California by both Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs) to conduct long-range (minimum of 20 years) planning in their regions. MTC functions as both the regional transportation planning agency, a state designation, and, for federal purposes, as the region's metropolitan planning organization (MPO). As such, it is responsible for regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of the Bay Area's transportation system that includes mass transit, highway, airport, seaport, railroad, bicycle and pedestrian facilities. The performance of this system affects such public policy concerns as air quality, environmental resource consumption, social equity, "smart growth," economic development, safety, and security. Transportation planning recognizes the critical links between transportation and other societal goals. The planning process requires developing strategies for operating, managing, maintaining, and financing the area's transportation system in such a way as to advance the area's long-term goals.

The Air District periodically prepares and updates plans to achieve the goal of healthy air. Typically, a plan will analyze emissions inventories (estimates of current and future emissions from industry, motor vehicles, and other sources) and combine that information with air monitoring data (used to assess progress in improving air quality) and computer modeling simulations to test future strategies to reduce emissions in order to achieve air quality standards. Air quality plans usually include measures to reduce air pollutant emissions from industrial facilities, commercial processes, motor vehicles, and other sources. Bay Area air quality plans are prepared with the cooperation of MTC, the Association of Bay Area Governments (ABAG) and the Bay Conservation and Development Commission (BCDC).

The threshold of significance for regional plans is no net increase in emissions including greenhouse gas emissions. This threshold serves to answer the State CEQA Guidelines Appendix G sample question: "Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?"

#### **2.2.5. Stationary Source GHG Threshold**

Staff's recommended threshold for stationary source GHG emissions is based on estimating the GHG emissions from combustion sources for all permit applications submitted to the Air District in 2005, 2006 and 2007. The analysis is based only on CO<sub>2</sub> emissions from stationary sources, as that would cover the vast majority of the GHG emissions due to stationary combustion sources in





the SFBAAB. The estimated CO<sub>2</sub> emissions were calculated for the maximum permitted amount, i.e. emissions that would be emitted if the sources applying for a permit application operate at maximum permitted load and for the total permitted hours. All fuel types are included in the estimates. For boilers burning natural gas, diesel fuel is excluded since it is backup fuel and is used only if natural gas is not available. Emission values are estimated before any offsets (i.e., Emission Reduction Credits) are applied. GHG emissions from mobile sources, electricity use and water delivery associated with the operation of the permitted sources are not included in the estimates.

It is projected that a threshold level of 10,000 metric tons of CO<sub>2</sub>e per year would capture approximately 95 percent of all GHG emissions from new permit applications from stationary sources in the SFBAAB. That threshold level was calculated as an average of the combined CO<sub>2</sub> emissions from all stationary source permit applications submitted to the Air District during the three year analysis period.

Staff recommends this 10,000 MT of CO<sub>2</sub>/yr as it would address a broad range of combustion sources and thus provide for a greater amount of GHG reductions to be captured and mitigated through the CEQA process. As documented in the Scoping Plan, in order to achieve statewide reduction targets, emissions reductions need to be obtained through a broad range of sources throughout the California economy and this threshold would achieve this purpose. While this threshold would capture 95 percent of the GHG emissions from new permit applications, the threshold would do so by capturing only the large, significant projects. Permit applications with emissions above the 10,000 MT of CO<sub>2</sub>/yr threshold account for less than 10 percent of stationary source permit applications which represent 95 percent of GHG emissions from new permits analyzed during the three year analysis period.

This threshold would be considered an interim threshold and Air District staff will reevaluate the threshold as AB 32 Scoping Plan measures such as cap and trade are more fully developed and implemented at the state level.

#### **2.2.6. Summary of Justification for GHG Thresholds**

The bright-line numeric threshold of 1,100 MT CO<sub>2</sub>e/yr is a numeric emissions level below which a project's contribution to global climate change would be less than "cumulatively considerable." This emissions rate is equivalent to a project size of approximately 60 single-family dwelling units, and approximately 59 percent of all future projects and 92 percent of all emissions from future projects would exceed this level. For projects that are above this bright-line cutoff level, emissions from these projects would still be less than cumulatively significant if the project as a whole would result in an efficiency of 4.6 MT CO<sub>2</sub>e per service population or better for mixed-use projects. Projects with emissions above 1,100 MT CO<sub>2</sub>e/yr would therefore still be less than significant if they achieved project efficiencies below these levels. If projects as proposed exceed these levels, they would be required to implement mitigation measures to bring them back below the 1,100 MT CO<sub>2</sub>e/yr bright-line cutoff or within the 4.6 MT CO<sub>2</sub>e Service Population efficiency threshold. If mitigation did not bring a project back within the threshold requirements, the project would be cumulatively significant and could be approved only with a Statement of Overriding Considerations and a showing that all feasible mitigation measures have been implemented. Projects' GHG emissions would also be less than significant if they comply with a Qualified Greenhouse Gas Reduction Strategy.

As explained in the preceding analyses of these thresholds, the greenhouse gas emissions from land use projects expected between now and 2020 built in compliance with these thresholds would be approximately 26 percent below BAU 2020 conditions and thus would be consistent with achieving an AB 32 equivalent reduction. The 26 percent reduction from BAU 2020 from new





projects built in conformance with these thresholds would achieve an aggregate reduction of approximately 1.6 MMT CO<sub>2</sub>e/yr, which is the level of emission reductions from new Bay Area land use sources needed to meet the AB 32 goals, per ARB's Scoping Plan as discussed above.

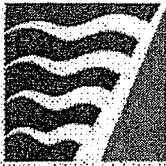
Projects with greenhouse gas emissions in conformance with these thresholds would therefore not be considered significant for purposes of CEQA. Although the emissions from such projects would add an incremental amount to the overall greenhouse gas emissions that cause global climate change impacts, emissions from projects consistent with these thresholds would not be a "cumulatively considerable" contribution under CEQA. Such projects would not be "cumulatively considerable" because they would be helping to solve the cumulative problem as a part of the AB 32 process.

California's response to the problem of global climate change is to reduce greenhouse gas emissions to 1990 levels by 2020 under AB 32 as a near-term measure and ultimately to 80 percent below 1990 levels by 2050 as the long-term solution to stabilizing greenhouse gas concentrations in the atmosphere at a level that will not cause unacceptable climate change impacts. To implement this solution, the Air Resources Board has adopted a Scoping Plan and budgeted emissions reductions that will be needed from all sectors of society in order to reach the interim 2020 target.

The land-use sector in the Bay Area needs to achieve aggregate emission reductions of approximately 1.6 MMT CO<sub>2</sub>e/yr from new projects between now and 2020 to achieve this goal, as noted above, and each individual new project will need to achieve its own respective portion of this amount in order for the Bay Area land use sector as a whole to achieve its allocated emissions target. Building all of the new projects expected in the Bay Area between now and 2020 in accordance with the thresholds that District staff are proposing will achieve the overall appropriate share for the land use sector, and building each individual project in accordance with the thresholds will achieve that individual project's respective portion of the emission reductions needed to implement the AB 32 solution. For these reasons, projects built in conformance with the thresholds will be part of the solution to the cumulative problem, and not part of the continuing problem. They will allow the Bay Area's land use sector to achieve the emission reductions necessary from that sector for California to implement its solution to the cumulative problem of global climate change. As such, even though such projects will add an incremental amount of greenhouse gas emissions, their incremental contribution will be less than "cumulatively considerable" because they are helping to achieve the cumulative solution, not hindering it. Such projects will therefore not be "significant" for purposes of CEQA (see CEQA Guidelines §15064(h)(1)).

The conclusion that land use projects that comply with these thresholds is also supported by CEQA Guidelines Section 15030(a)(3), which provides that a project's contribution to a cumulative problem can be less than cumulatively considerable "if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact." In the case of greenhouse gas emissions associated with land use projects, achieving the amount of emission reductions below BAU that will be required to achieve the AB 32 goals is the project's "fair share" of the overall emission reductions needed under ARB's scoping plan to reach the overall statewide AB 32 emissions levels for 2020. If a project is designed to implement greenhouse gas mitigation measures that achieve a level of reductions consistent with what is required from all new land use projects to achieve the land use sector "budget" – i.e., keeping overall project emissions below 1,100 MT CO<sub>2</sub>e/yr or ensuring that project efficiency is better than 4.6 MT CO<sub>2</sub>e/service population – then it will be implementing its share of the mitigation measures necessary to alleviate the cumulative impact, as shown in the analyses set forth above.





It is also worth noting that this "fair share" approach is flexible and will allow a project's significance to be determined by how well it is designed from a greenhouse gas efficiency standpoint, and not just by the project's size. For example, a large high-density infill project located in an urban core nearby to public transit and other alternative transportation options, and built using state-of-the-art energy efficiency methods and improvements such as solar panels, as well as all other feasible mitigation measures, would not become significant for greenhouse gas purposes (and thus require a Statement of Overriding Considerations in order to be approved) simply because it happened to be a large project. Projects such as this hypothetical development with low greenhouse gas emissions per service population are what California will need in the future in order to do its part in achieving a solution to the problem of global climate change. The determination of significance under CEQA should therefore take these factors into account, and the significance thresholds would achieve this important policy goal. In all, land use sector projects that comply with the GHG thresholds would not be "cumulatively considerable" because they would be helping to solve the cumulative problem as a part of the AB 32 process.

Likewise, new Air District permit applications for stationary sources that comply with the quantitative threshold of 10,000 MT CO<sub>2</sub>e/yr would not be "cumulatively considerable" because they also would not hinder the state's ability to solve the cumulative greenhouse gas emissions problem pursuant to AB 32. Unlike the land use sector, the AB 32 Scoping Plan measures, including the cap-and-trade program, provide for necessary emissions reductions from the stationary source sector to achieve AB 32 2020 goals.

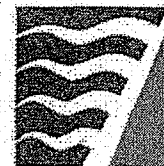
While stationary source projects will need to comply with the cap-and-trade program once it is enacted and reduce their emissions accordingly, the program will be phased in over time starting in 2012 and at first will only apply to the very largest sources of GHG emissions. In the mean time, certain stationary source projects, particularly those with large GHG emissions, still will have a cumulatively considerable impact on climate change. The 10,000 MT CO<sub>2</sub>e/yr threshold will capture 95 percent of the stationary source sector GHG emissions in the Bay Area. The five percent of emissions that are from stationary source projects below the 10,000 MT CO<sub>2</sub>e/yr threshold account for a small portion of the Bay Area's total GHG emissions from stationary sources and these emissions come from very small projects. Such small stationary source projects will not significantly add to the global problem of climate change, and they will not hinder the Bay Area's ability to reach the AB 32 goal in any significant way, even when considered cumulatively. In Air District's staff's judgment, the potential environmental benefits from requiring EIRs and mitigation for these projects would be insignificant. In all, based on staff's expertise, stationary source projects with emissions below 10,000 MT CO<sub>2</sub>e/yr will not provide a cumulatively considerable contribution to the cumulative impact of climate change.

### 3. COMMUNITY RISK AND HAZARD THRESHOLDS

To address community risk from air toxics, the Air District initiated the Community Air Risk Evaluation (CARE) program in 2004 to identify locations with high levels of risk from ambient toxic air contaminants (TAC) co-located with sensitive populations and use the information to help focus mitigation measures. Through the CARE program, the Air District developed an inventory of TAC emissions for 2005 and compiled demographic and health indicator data. According to the findings of the CARE Program, diesel PM—mostly from on and off-road mobile sources—accounts for over 80 percent of the inhalation cancer risk from TACs in the Bay Area (BAAQMD 2006).

The Air District applied a regional air quality model using the 2005 emission inventory data to estimate excess cancer risk from ambient concentrations of important TAC species, including diesel PM, 1,3-butadiene, benzene, formaldehyde and acetaldehyde. The highest cancer risk





levels from ambient TAC in the Bay Area tend to occur in the core urban areas, along major roadways and adjacent to freeways and port activity. Cancer risks in areas along these major freeways are estimated to range from 200 to over 500 excess cases in a million for a lifetime of exposure. Priority communities within the Bay Area – defined as having higher emitting sources, highest air concentrations, and nearby low income and sensitive populations – include the urban core areas of Concord, eastern San Francisco, western Alameda County, Redwood City/East Palo Alto, Richmond/San Pablo, and San Jose.

Fifty percent of BAAQMD's population was estimated to have an ambient background inhalation cancer risk of less than 500 cases in one million, based on emission levels in 2005. Table 8 presents a summary of percentages of the population exposed to varying levels of cancer risk from ambient TACs. Approximately two percent of the SFBAAB population is exposed to background risk levels of less than 200 excess cases in one million. This is in contrast to the upper percentile ranges where eight percent of the SFBAAB population is exposed to background risk levels of greater than 1,000 excess cases per one million. To identify and reduce risks from TAC, this chapter presents thresholds of significance for both cancer risk and non-cancer health hazards.

**Table D-9 – Statistical Summary of Estimated Population-Weighted Ambient Cancer Risk in 2005**

Percentage of Population (Percent below level of ambient risk)	Ambient Cancer Risk (inhalation cancer cases in one million)
92	1,000
90	900
83	800
77	700
63	600
50	500
32	400
13	300
2	200
<1	100

Source: Data compiled by EDAW 2009.

Many scientific studies have linked fine particulate matter and traffic-related air pollution to respiratory illness (Hiltermann et al. 1997, Schikowski et al. 2005, Vineis et al. 2007) and premature mortality (Dockery 1993, Pope et al. 1995, Jerrett et al. 2005). Traffic-related air pollution is a complex mix of chemical compounds (Schauer et al. 2006), often spatially correlated with other stressors, such as noise and poverty (Wheeler and Ben-Shlomo 2005). While such correlations can be difficult to disentangle, strong evidence for adverse health effects of fine particulate matter (PM<sub>2.5</sub>) has been developed for regulatory applications in a study by the U.S. EPA. This study found that a 10 percent increase in PM<sub>2.5</sub> concentrations increased the non-injury death rate by 10 percent (U.S. EPA 2006).

Public Health Officers for four counties in the San Francisco Bay Area in 2009 provided testimony to the Air District's Advisory Council (February 11, 2009, Advisory Council Meeting on Air Quality





and Public Health). Among the recommendations made, was that PM<sub>2.5</sub>, in addition to TACs, be considered in assessments of community-scale impacts of air pollution. In consideration of the scientific studies and recommendations by the Bay Area Health Directors, it is apparent that, in addition to the significance thresholds for local-scale TAC, thresholds of significance are required for near-source, local-scale concentrations of PM<sub>2.5</sub>.

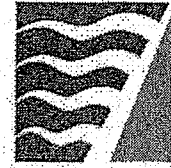
### 3.1. THRESHOLDS OF SIGNIFICANCE

The thresholds of significance and Board-requested options are presented in this section:

- The **Staff Proposal** includes thresholds for cancer risk, non-cancer health hazards, and fine particulate matter.
- **Tiered Thresholds Option** includes tiered thresholds for new sources in impacted communities. Thresholds for receptors and cumulative impacts are the same as the Staff Proposal.

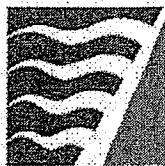
Proposal/Option	Construction-Related	Operational-Related
<b>Project-Level – Individual Project</b>		
<b>Risks and Hazards – New Source (All Areas)</b> (Individual Project)  <u><b>Staff Proposal</b></u>	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.3 µg/m <sup>3</sup> annual average  <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor
<b>Risks and Hazards – New Receptor (All Areas)</b> (Individual Project)  <u><b>Staff Proposal</b></u>	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.3 µg/m <sup>3</sup> annual average  <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor





Proposal/Option	Construction-Related	Operational-Related
<b>Risks and Hazards</b> (Individual Project)  <u>Tiered Thresholds</u> <u>Option</u>	Same as Operational Thresholds*	<u><b>Impacted Communities: Siting a New Source</b></u>  Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >5.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.2 µg/m <sup>3</sup> annual average  <u>Zone of Influence: 1,000-foot radius from fence line of source or receptor</u>
	Same as Operational Thresholds*	<u><b>Impacted Communities: Siting a New Receptor</b></u> <u><b>All Other Areas: Siting a New Source or Receptor</b></u>  Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.3 µg/m <sup>3</sup> annual average  <u>Zone of Influence: 1,000-foot radius from fence line of source or receptor</u>
<b>Accidental Release of Acutely Hazardous Air Pollutants</b>	None	Storage or use of acutely hazardous materials locating near receptors or receptors locating near stored or used acutely hazardous materials considered significant
<b>Project-Level – Cumulative</b>		

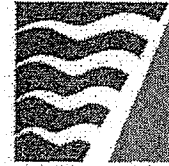




Proposal/Option	Construction-Related	Operational-Related
Risks and Hazards – New Source (All Areas) (Cumulative Thresholds)	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) <u>PM<sub>2.5</sub></u> : > 0.8 µg/m <sup>3</sup> annual average (from all local sources)  <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor
Risks and Hazards – New Receptor (All Areas) (Cumulative Thresholds)	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) <u>PM<sub>2.5</sub></u> : > 0.8 µg/m <sup>3</sup> annual average (from all local sources)  <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor
<b>Plan-Level</b>		
Risks and Hazards	None	1. Overlay zones around existing and planned sources of TACs (including adopted Risk Reduction Plan areas). 2. Overlay zones of at least 500 feet (or Air District-approved modeled distance) from all freeways and high volume roadways.
Accidental Release of Acutely Hazardous Air Pollutants	None	None
<b>Regional Plans (Transportation and Air Quality Plans)</b>		
Risks and Hazards	None	No net increase in toxic air contaminants

\* Note: The Air District recommends that for construction projects that are less than one year duration, Lead Agencies should annualize impacts over the scope of actual days that peak impacts are to occur, rather than the full year.





### 3.2. JUSTIFICATION AND SUBSTANTIAL EVIDENCE SUPPORTING THRESHOLDS

The goal of the thresholds is to ensure that no source creates, or receptor endures, a significant adverse impact from any individual project, and that the total of all nearby directly emitted risk and hazard emissions is also not significantly adverse. The thresholds for local risks and hazards from TAC and PM<sub>2.5</sub> are intended to apply to all sources of emissions, including both permitted stationary sources and on- and off-road mobile sources, such as sources related to construction, busy roadways, or freight movement.

Thresholds for an individual new source are designed to ensure that the source does not contribute to a cumulatively significant impact. Cumulative thresholds for sources recognize that some areas are already near or at levels of significant impact. If within such an area there are receptors, or it can reasonably be foreseen that there will be receptors, then a cumulative significance threshold sets a level beyond which any additional risk is significant.

For new receptors – sensitive populations or the general public – thresholds of significance are designed to identify levels of contributed risk or hazards from existing local sources that pose a significant risk to the receptors. Single-source thresholds for receptors are provided to recognize that within the area defined there can be variations in risk levels that may be significant. Single-source thresholds assist in the identification of significant risks, hazards, or concentrations in a subarea, within the area defined by the selected radius. Cumulative thresholds for receptors are designed to account for the effects of all sources within the defined area.

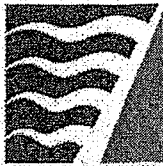
Cumulative thresholds, for both sources and receptors, must consider the size of the source area, defined by a radius from the proposed project. To determine cumulative impacts from a prescribed zone of influence requires the use of modeling. The larger the radius, the greater the number of sources considered that may contribute to the modeled risk and, until the radius approaches a regional length scale, the greater the expected modeled risk increment. If the area of impact considered were grown to the scale of a city, the modeled risk increment would approach the risk level present in the ambient air.

#### 3.2.1. Scientific and Regulatory Justification

##### Regulatory Framework for TACs

Prior to 1990, the Clean Air Act required EPA to list air toxics it deemed hazardous and to establish control standards which would restrict concentrations of hazardous air pollutants (HAP) to a level that would prevent any adverse effects "with an ample margin of safety." By 1990, EPA had regulated only seven such pollutants and it was widely acknowledged by that time that the original Clean Air Act had failed to address toxic air emissions in any meaningful way. As a result, Congress changed the focus of regulation in 1990 from a risk-based approach to technology-based standards. Title III, Section 112(b) of the 1990 Clean Air Act Amendment established this new regulatory approach. Under this framework, prescribed pollution control technologies based upon maximum achievable control technology (MACT) were installed without the a priori estimation of the health or environmental risk associated with each individual source. The law listed 188 HAPs that would be subject to the MACT standards. EPA issued 53 standards for 89 different types of major industrial sources of air toxics and eight categories of smaller sources such as dry cleaners. These requirements took effect between 1996 and 2002. Under the federal Title V Air Operating Permit Program, a facility with the potential to emit 10 tons of any toxic air pollutant, or 25 tons per year of any combination of toxic air pollutants, is defined as a major source HAPs. Title V permits include requirements for these facilities to limit toxic air pollutant emissions.





Several state and local agencies adopted programs to address gaps in EPA's program prior to the overhaul of the national program in 1990. California's program to reduce exposure to air toxics was established in 1983 by the Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) and the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987). Under AB 1807, ARB and the Office of Environmental Health Hazard Assessment (OEHHA) determines if a substance should be formally identified as a toxic air contaminant (TAC) in California. OEHHA also establishes associated risk factors and safe concentrations of exposure.

AB 1807 was amended in 1993 by AB 2728, which required ARB to identify the 189 federal hazardous air pollutants as TACs. AB 2588 (Connelly, 1987) supplements the AB 1807 program, by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. In September 1992, the "Hot Spots" Act was amended by Senate Bill 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

#### **Cancer Risk**

Cancer risk from TACs is typically expressed in numbers of excess cancer cases per million persons exposed over a defined period of exposure, for example, over an assumed 70 year lifetime. The Air District is not aware of any agency that has established an acceptable level of cancer risk for TACs. However, a range of what constitutes a significant increment of cancer risk from any compound has been established by the U.S. EPA. EPA's guidance for conducting air toxics analyses and making risk management decisions at the facility- and community-scale level considers a range of acceptable cancer risks from one in a million to one in ten thousand (100 in a million). The guidance considers an acceptable range of cancer risk increments to be from one in a million to one in ten thousand. In protecting public health with an ample margin of safety, EPA strives to provide maximum feasible protection against risks to health from HAPs by limiting additional risk to a level no higher than the one in ten thousand estimated risk that a person living near a source would be exposed to at the maximum pollutant concentrations for 70 years. This goal is described in the preamble to the benzene National Emissions Standards for Hazardous Air Pollutants (NESHAP) rulemaking (54 Federal Register 38044, September 14, 1989) and is *incorporated by Congress for EPA's residual risk program under Clean Air Act section 112(f).*

Regulation 2, Rule 5 of the Air District specifies permit requirements for new and modified stationary sources of TAC. The Project Risk Requirement (2-5-302.1) states that the Air Pollution Control Officer shall deny an Authority to Construct or Permit to Operate for any new or modified source of TACs if the project cancer risk exceeds 10.0 in one million.

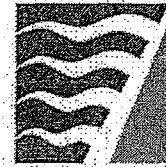
#### **Hazard Index for Non-cancer Health Effects**

Non-cancer health hazards for chronic and acute diseases are expressed in terms of a hazard index (HI), a ratio of TAC concentration to a reference exposure level (REL), below which no adverse health effects are expected, even for sensitive individuals. As such, OEHHA has defined acceptable concentration levels, and also significant concentration increments, for compounds that pose non-cancer health hazards. If the HI for a compound is less than one, non-cancer chronic and acute health impacts have been determined to be less than significant.

#### **State and Federal Ambient Air Quality Standards for PM<sub>2.5</sub>**

The Children's Environmental Health Protection Act (Senate Bill 25), passed by the California state legislature in 1999, requires ARB, in consultation with OEHHA, to "review all existing health-based ambient air quality standards to determine whether, based on public health, scientific literature and exposure pattern data, these standards adequately protect the public, including infants and children, with an adequate margin of safety." As a result of the review requirement, in 2002 ARB adopted an annual average California Ambient Air Quality Standard (CAAQS) for





PM<sub>2.5</sub> of 12 ug/m<sup>3</sup> that is not to be exceeded (California Code of Regulations, Title 17 § 70200, Table of Standards). The National Ambient Air Quality Standard (NAAQS) established an annual standard for PM<sub>2.5</sub> (15 ug/m<sup>3</sup>) that is less stringent than the CAAQS, but also set a 24-hour average standard (35 ug/m<sup>3</sup>), which is not included in the CAAQS (Code of Federal Regulations, Title 40, Part 50.7).

#### Significant Impact Levels for PM<sub>2.5</sub>

EPA recently proposed and documented alternative options for PM<sub>2.5</sub> Significant Impact Levels (SILs) (Federal Register 40 CFR Parts 51 and 52, September 21, 2007). The EPA is proposing to facilitate implementation of a PM<sub>2.5</sub> Prevention of Significant Deterioration (PSD) program in areas attaining the PM<sub>2.5</sub> NAAQS by developing PM<sub>2.5</sub> increments, or SILs. These "increments" are maximum increases in ambient PM<sub>2.5</sub> concentrations (PM<sub>2.5</sub> increments) allowed in an area above the baseline concentration.

The SIL is a threshold that would be applied to individual facilities that apply for a permit to emit a regulated pollutant in an area that meets the NAAQS. The State and EPA must determine if emissions from that facility will cause the air quality to worsen. If an individual facility projects an increase in emissions that result in ambient impacts greater than the established SIL, the permit applicant would be required to perform additional analyses to determine if those impacts will be more than the amount of the PSD increment. This analysis would combine the impact of the proposed facility when added to all other sources in the area.

The EPA is proposing such values for PM<sub>2.5</sub> that will be used as screening tools by a major source subject to PSD to determine the subsequent level of analysis and data gathering required for a PSD permit application for emissions of PM<sub>2.5</sub>. The SIL is one element of the EPA program to prevent deterioration in regional air quality and is utilized in the new source review (NSR) process. New source review is required under Section 165 of the Clean Air Act, whereby a permit applicant must demonstrate that emissions from the proposed construction and operation of a facility "will not cause, or contribute to, air pollution in excess of any maximum allowable increase or maximum allowable concentration for any pollutant." The purpose of the SIL is to provide a screening level that triggers further analysis in the permit application process.

For the purpose of NSR, SILs are set for three types of areas: Class I areas where especially clean air is most desirable, including national parks and wilderness areas; Class II areas where there is not expected to be substantial industrial growth; and Class III areas where the highest relative level of industrial development is expected. In Class II and Class III areas, a PM<sub>2.5</sub> concentration of 0.3, 0.8, and 1 ug/m<sup>3</sup> has been proposed as a SIL. To arrive at the SIL PM<sub>2.5</sub> option of 0.8 ug/m<sup>3</sup>, EPA scaled an established PM<sub>10</sub> SILs of 1.0 ug/m<sup>3</sup> by the ratio of emissions of PM<sub>2.5</sub> to PM<sub>10</sub> using the EPA's 1999 National Emissions Inventory. To arrive at the SIL option of 0.3 ug/m<sup>3</sup>, EPA scaled the PM<sub>10</sub> SIL of 1.0 ug/m<sup>3</sup> by the ratio of the current Federal ambient air quality standards for PM<sub>2.5</sub> and PM<sub>10</sub> (15/50). These options represent what EPA currently considers as a range of appropriate SIL values.

EPA interprets the SIL to be the level of PM<sub>2.5</sub> increment that represents a "significant contribution" to regional non-attainment. While SIL options were not designed to be thresholds for assessing community risk and hazards, they are being considered to protect public health at a regional level by helping an area maintain the NAAQS. Furthermore, since it is the goal of the Air District to achieve and maintain the NAAQS and CAAQS at both regional and local scales, the SILs may be reasonably be considered as thresholds of significance under CEQA for local-scale increments of PM<sub>2.5</sub>.





### Roadway Proximity Health Studies

Several medical research studies have linked near-road pollution exposure to a variety of adverse health outcomes impacting children and adults. Kleinman et al. (2007) studied the potential of roadway particles to aggravate allergic and immune responses in mice. Using mice that were not inherently susceptible, the researchers placed these mice at various distances downwind of State Road 60 and Interstate 5 freeways in Los Angeles to test the effect these roadway particles have on their immune system. They found that within five meters of the roadway, there was a significant allergic response and elevated production of specific antibodies. At 150 meters (492 feet) and 500 meters (1,640 feet) downwind of the roadway, these effects were not statistically significant.

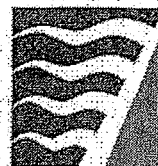
Another significant study (Ven Hee et al. 2009) conducted a survey involving 3,827 participants that aimed to determine the effect of residential traffic exposure on two preclinical indicators of heart failure; left ventricular mass index (LVMI), measured by the cardiac magnetic resonance imaging (MRI), and ejection fraction. The studies classified participants based on the distance between their residence and the nearest interstate highway, state or local highway, or major arterial road. Four distance groups were defined: less than 50 meters (165 feet), 50-100 meters, 101-150 meters, and greater than 150 meters. After adjusting for demographics, behavioral, and clinical covariates, the study found that living within 50 meters of a major roadway was associated with a 1.4 g/m<sup>2</sup> higher LVMI than living more than 150 meters from one. This suggests an association between traffic-related air pollution and increased prevalence of a preclinical predictor of heart failure among people living near roadways.

To quantify the roadway concentrations of PM<sub>2.5</sub> that contributed to the health impacts reported by Kleinman et al (2007), the Air District modeled the emissions and associated particulate matter concentrations for the roadways studied. To perform the modeling, emissions were estimated for Los Angeles using the EMFAC model and annual average vehicle traffic data taken from Caltrans was used in the roadway model (CAL3QHCR) to estimate the downwind PM<sub>2.5</sub> concentrations at 50 meters and 150 meters. Additionally, emissions were assumed to occur from 10:00 a.m. to 2:00 p.m. corresponding to the time in which the mice were exposed during the study. The results of the modeling indicate that at 150 meters, where no significant health effects were found, the downwind concentration of PM<sub>2.5</sub> was 0.78 µg/m<sup>3</sup>, consistent with the proposed EPA SIL option of 0.8 µg/m<sup>3</sup>.

### Concentration-Response Function for PM<sub>2.5</sub>

The U.S. EPA reevaluated the relative risk of premature death associated with PM<sub>2.5</sub> exposure and developed a new relative risk factor (U.S. EPA 2006). This expert elicitation was prepared in support of the characterization of uncertainty in EPA's benefits analyses associated with reductions in exposure to particulate matter pollution. As recommended by the National Academy of Sciences, EPA used expert judgment to better describe the uncertainties inherent in their benefits analysis. Twelve experts participated in the study and provided not just a point estimate of the health effects of PM<sub>2.5</sub>, but a probability distribution representing the range where they expected the true effect would be. Among the experts who directly incorporated their views on the likelihood of a causal relationship into their distributions, the central (median) estimates of the percent change in all-cause mortality in the adult U.S. population that would result from a permanent 1 µg/m<sup>3</sup> drop in annual average PM<sub>2.5</sub> concentrations ranged from 0.7 to 1.6 percent. The median of their estimates was 1.0 (% increase per 1 µg/m<sup>3</sup> increase in PM<sub>2.5</sub>), with a 90% confidence interval of 0.3 to 2.0 (medians of their 5<sup>th</sup> and 95<sup>th</sup> percentiles, respectively) (BAAQMD 2010). Subsequent to the EPA elicitation, Schwartz et al. (2008) examined the linearity of the concentration-response function of PM<sub>2.5</sub>-mortality and showed that the response function was linear, with health effects clearly continuing below the current U.S. standard of 15 µg/m<sup>3</sup>, and that the effects of changes in exposure on mortality were seen within two years.



**San Francisco Ordinance on Roadway Proximity Health Effects**

In 2008, the City and County of San Francisco adopted an ordinance (San Francisco Health Code, Article 38 - Air Quality Assessment and Ventilation Requirement for Urban Infill Residential Development, Ord. 281-08, File No. 080934, December 5, 2008) requiring that public agencies in San Francisco take regulatory action to prevent future air quality health impacts from new sensitive uses proposed near busy roadways (SFDPH 2008). The regulation requires that developers screen sensitive use projects for proximity to traffic and calculate the concentration of  $PM_{2.5}$  from traffic sources where traffic volumes suggest a potential hazard. If modeled levels of traffic-attributable  $PM_{2.5}$  at a project site exceed an action level (currently set at  $0.2 \mu g/m^3$ ) developers would be required to incorporate ventilation systems to remove 80 percent of  $PM_{2.5}$  from outdoor air. The regulation does not place any requirements on proposed sensitive uses if modeled air pollutant levels fall below the action threshold. This ordinance only considers impacts from on-road motor vehicles, not impacts related to construction equipment or stationary sources.

A report with supporting documentation for the ordinance (SFPD 2008) provided a threshold to trigger action or mitigation of  $0.2 \mu g/m^3$  of  $PM_{2.5}$  annual average exposure from roadway vehicles within a 150 meter (492 feet) maximum radius of a sensitive receptor. The report applied the concentration-response function from Jerrett et al. (2005) that attributed 14 percent increase in mortality to a  $10 \mu g/m^3$  increase in  $PM_{2.5}$  to estimate an increase in non-injury mortality in San Francisco of about 21 excess deaths per million population per year from a  $0.2 \mu g/m^3$  increment of annual average  $PM_{2.5}$ .

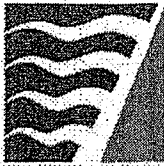
**Distance for Significant Impact**

The distance used for the radius around the project boundary should reflect the zone or area over which sources may have a significant influence. For cumulative thresholds, for both sources and receptors, this distance also determines the size of the source area, defined. To determine cumulative impacts from a prescribed zone of influence requires the use of modeling. The larger the radius, the greater the number of sources considered that may contribute to the risk and the greater the expected modeled risk increment. If the area of impact considered were grown to approach the scale of a city, the modeled risk increment would approach the risk level present in the ambient air.

A summary of research findings in ARB's *Land Use Compatibility Handbook* (ARB 2005) indicates that traffic-related pollutants were higher than regional levels within approximately 1,000 feet downwind and that differences in health-related effects (such as asthma, bronchitis, reduced lung function, and increased medical visits) could be attributed in part to the proximity to heavy vehicle and truck traffic within 300 to 1,000 feet of receptors. In the same summary report, ARB recommended avoiding siting sensitive land uses within 1,000 feet of a distribution center and major rail yard, which supports the use of a 1,000 feet evaluation distance in case such sources may be relevant to a particular project setting. A 1,000 foot zone of influence is also supported by Health & Safety Code §42301.6 (Notice for Possible Source Near School).

Some studies have shown that the concentrations of particulate matter tend to be reduced substantially or can even be indistinguishable from upwind background concentrations at a distance 1,000 feet downwind from sources such as freeways or large distribution centers. Zhu et al. (2002) conducted a systematic ultrafine particle study near Interstate 710, one of the busiest freeways in the Los Angeles Basin. Particle number concentration and size distribution were measured as a function of distances upwind and downwind of the I-710 freeway. Approximately 25 percent of the 12,180 vehicles per hour are heavy duty diesel trucks based on video counts conducted as part of the research. Measurements were taken at 13 feet, 23 feet, 55 feet, 252 feet, 449 feet, and 941 feet downwind and 613 feet upwind from the edge of the freeway. The particle number and supporting measurements of carbon monoxide and black carbon decreased





exponentially and all constituents simultaneously tracked with each other as one moves away from the freeway. Ultrafine particle size distribution changed markedly and its number concentrations dropped dramatically with increasing distance. The study found that ultrafine particle concentrations measured 941 feet downwind of I-710 were indistinguishable from the upwind background concentration.

#### **Impacted Communities**

Starting in 2006, the Air District's CARE program developed gridded TAC emissions inventories and compiled demographic information that were used to identify communities that were particularly impacted by toxic air pollution for the purposes of distributing grant and incentive funding. In 2009, the District completed regional modeling of TAC on a one kilometer by one kilometer grid system. This modeling was used to estimate cancer risk and TAC population exposures for the entire District. The information derived from the modeling was then used to update and refine the identification of impacted communities. One kilometer modeling yielded estimates of annual concentrations of five key compounds – diesel particulate matter, benzene, 1,3-butadiene, formaldehyde, and acetaldehyde – for year 2005. These concentrations were multiplied by their respective unit cancer risk factors, as established by OEHHA, to estimate the expected excess cancer risk per million people from these compounds.

Sensitive populations from the 2000 U.S. Census database were identified as youth (under 18) and seniors (over 64) and mapped to the same one kilometer grid used for the toxics modeling. Excess cancers from TAC exposure were determined by multiplying these sensitive populations by the model-estimated excess risk to establish a data set representing sensitive populations with high TAC exposures. TAC emissions (year 2005) were mapped to the one kilometer grid and also scaled by their unit cancer risk factor to provide a data set representing source regions for TAC emissions. Block-group level household income data from the U.S. Census database were used to identify block groups with family incomes where more than 40 percent of the population was below 185 percent of the federal poverty level (FPL). Poverty-level polygons that intersect high (top 50 percent) exposure cells and are within one grid cell of a high emissions cell (top 25 percent) were used to identify impacted areas. Boundaries were constructed along major roads or highways that encompass nearby high emission cells and low income areas. This method identified the following six areas as priority communities: (1) portions of the City of Concord; (2) Western Contra Costa County (including portions of the Cities of Richmond and San Pablo); (3) Western Alameda County along the Interstate-880 corridor (including portions of the Cities of Berkeley, Oakland, San Leandro, San Lorenzo, Hayward; (4) Portions of the City of San Jose. (5) Eastern San Mateo County (including portions of the Cities of Redwood City and East Palo Alto); and (6) Eastern portions of the City of San Francisco.

#### **3.2.2. Construction, Land Use and Stationary Source Risk and Hazard Thresholds**

The options for local risk and hazards thresholds of significance are based on U.S. EPA guidance for conducting air toxics analyses and making risk management decisions at the facility and community-scale level. The thresholds consider reviews of recent health effects studies that link increased concentrations of fine particulate matter to increased mortality. The thresholds would apply to both siting new sources and siting new receptors.

For new sources of TACs, thresholds of significance for a single source are designed to ensure that emissions do not raise the risk of cancer or non-cancer health impacts to cumulatively significant levels. For new sources of  $PM_{2.5}$ , thresholds are designed to ensure that  $PM_{2.5}$  concentrations are maintained below state and federal standards in all areas where sensitive receptors or members of the general public live or may foreseeably live, even if at the local- or community-scale where sources of TACs and PM may be nearby.



**Project Radius for Assessing Impacts**

For a project proposing a new source or receptor it is recommended to assess impacts within 1,000 feet, taking into account both its individual and nearby cumulative sources (i.e. proposed project plus existing and foreseeable future projects). Cumulative sources are the combined total risk values of each individual source within the 1,000-foot evaluation zone. A lead agency should enlarge the 1,000-foot radius on a case-by-case basis if an unusually large source or sources of risk or hazard emissions that may affect a proposed project is beyond the recommended radius.

The 1,000 foot radius is consistent with findings in ARB's Land Use Compatibility Handbook (ARB 2005), the Health & Safety Code §42301.6 (Notice for Possible Source Near School), and studies such as that of Zhu et al (2002) which found that concentrations of particulate matter tend to be reduced substantially at a distance 1,000 feet downwind from sources such as freeways or large distribution centers.

**Qualified Community Risk Reduction Plan**

Within the framework of these thresholds, proposed projects would be considered to be less than significant if they are consistent with a qualified Community Risk Reduction Plan (CRRP) adopted by the local jurisdiction with enforceable measures to reduce the community risk.

Project proposed in areas where a CRRP has been adopted that are not consistent with the CRRP would be considered to have a significant impact.

Projects proposed in areas where a CRRP has not been adopted and that have the potential to expose sensitive receptors or the general public to emissions-related risk in excess of the thresholds below from any source would be considered to have a significant air quality impact.

The conclusion that land use projects that comply with qualified Community Risk Reduction Plans are less than significant is supported by CEQA Guidelines Sections 15030(a)(3) and 15064(h)(3), which provides that a project's contribution to a cumulative problem can be less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

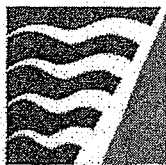
**Increased Cancer Risk to Maximally Exposed Individual (MEI)**

Emissions from a new source or emissions affecting a new receptor would be considered significant where ground-level concentrations of carcinogenic TACs from any source result in an increased cancer risk greater than 10.0 in one million, assuming a 70 year lifetime exposure. Under Board Option 1, within Impacted Communities as defined through the CARE program, the significance level for cancer would be reduced to 5.0 in one million for new sources.

The 10.0 in one million cancer risk threshold for a single source is supported by EPA's guidance for conducting air toxics analyses and making risk management decisions at the facility and community-scale level. It is also the level set by the Project Risk Requirement in the Air District's Regulation 2, Rule 5 new and modified stationary sources of TAC, which states that the Air Pollution Control Officer shall deny an Authority to Construct or Permit to Operate for any new or modified source of TACs if the project risk exceeds a cancer risk of 10.0 in one million.

This threshold for an individual new source is designed to ensure that the source does not contribute a cumulatively significant impact. The justification for the Tiered Thresholds Option threshold of 5.0 in one million for new sources in an impacted community is that in these areas the cancer risk burden is higher than in other parts of the Bay Area; the threshold at which an individual source becomes significant is lower for an area that is already at or near unhealthy levels. However, even without a tiered approach, the recommended thresholds already address the burden of impacted communities via the cumulative thresholds: specifically, if an area has





many existing TAC sources near receptors, then the cumulative threshold will be reached sooner than it would in another area with fewer TAC sources.

The single-source threshold for receptors is provided to address the possibility that within the area defined by the 1,000 foot radius there can be variations in risk levels that may be significant, below the corresponding cumulative threshold. Single-source thresholds assist in the identification of significant risks, hazards, or concentrations in a subarea, within the 1,000 foot radius.

#### **Increased Non-Cancer Risk to MEI**

Emissions from a new source or emissions affecting a new receptor would be considered significant where ground-level concentrations of non-carcinogenic TACs result in an increased chronic or acute Hazard Index (HI) from any source greater than 1.0. This threshold is unchanged under Tiered Thresholds Option.

A HI less than 1.0 represents a TAC concentration, as determined by OEHHA that is at a health protective level. While some TACs pose non-carcinogenic, chronic and acute health hazards, if the TAC concentrations result in a HI less than one, those concentrations have been determined to be less than significant.

#### **Increased Ambient Concentration of PM<sub>2.5</sub>**

Emissions from a new source or emissions affecting a new receptor would be considered significant where ground-level concentrations of PM<sub>2.5</sub> from any source would result in an average annual increase greater than 0.3 µg/m<sup>3</sup>. Under Tiered Thresholds Option, within Impacted Communities as defined through the CARE program, the significance level for a PM<sub>2.5</sub> increment is 0.2 µg/m<sup>3</sup>.

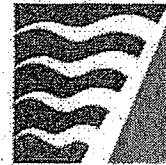
If one applies the concentration-response of the median of the EPA consensus review (EPA 2005, BAAQMD 2010) and attributes a 1 percent increase in mortality to a 1 µg/m<sup>3</sup> increase in PM<sub>2.5</sub>, one finds an increase in non-injury mortality in the Bay Area of about 20 excess deaths per million per year from a 0.3 µg/m<sup>3</sup> increment of PM<sub>2.5</sub>. This is consistent with the impacts reported and considered significant by SFDPH (2008) using an earlier study (Jerrett et al. 2005) to estimate the increase in mortality from a 0.2 µg/m<sup>3</sup> PM<sub>2.5</sub> increment.

The SFDPH recommended a lower threshold of significance for multiple sources but only considered roadway emissions within a 492 foot radius. This recommendation applies to a single source but considers all types of emissions within 1,000 feet. On balance, the Air District estimates that the SFDPH threshold and this one, in combination with the cumulative threshold for PM<sub>2.5</sub>, will afford similar levels of health protection.

The PM<sub>2.5</sub> threshold represents the lower range of an EPA proposed Significant Impact Level (SIL). EPA interprets the SIL to be the level of ambient impact that is considered to represent a "significant contribution" to regional non-attainment. While this threshold was not designed to be a threshold for assessing community risk and hazards, it was designed to protect public health at a regional level by helping an area maintain the NAAQS. Since achieving and maintaining state and federal AAQS is a reasonable goal at the local scale, the SIL provides a useful reference for comparison.

This threshold for an individual new source is designed to ensure that the source does not contribute a cumulatively significant impact. The justification for the Tiered Thresholds Option threshold of 0.2 µg/m<sup>3</sup> for new sources in an impacted community is that these areas have higher levels of diesel particulate matter than do other parts of the Bay Area; the threshold at which an individual source becomes significant is lower for an area that is already at or near unhealthy





levels. However, even without a tiered approach, the recommended thresholds already address the burden of impacted communities via the cumulative thresholds: specifically, if an area has many existing PM<sub>2.5</sub> sources near receptors, then the cumulative threshold will be reached sooner than it would in another area with fewer PM<sub>2.5</sub> sources.

The single-source threshold for receptors is provided to address the possibility that within the area defined by the 1,000 foot radius there can be variations in risk levels that may be significant, below the corresponding cumulative threshold. Single-source thresholds assist in the identification of significant risks, hazards, or concentrations in a subarea, within the 1,000 foot radius.

### **Accidental Release of Acutely Hazardous Air Emissions**

The BAAQMD currently recommends, at a minimum, that the lead agency, in consultation with the administering agency of the Risk Management Prevention Program (RMPP), find that any project resulting in receptors being within the Emergency Response Planning Guidelines (ERPG) exposure level 2 for a facility has a significant air quality impact. ERPG exposure level 2 is defined as "the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action."

Staff proposes continuing with the current threshold for the accidental release of hazardous air pollutants. Staff recommends that agencies consult with the California Emergency Management Agency for the most recent guidelines and regulations for the storage of hazardous materials. Staff proposes that projects using or storing acutely hazardous materials locating near existing receptors, and projects resulting in receptors locating near facilities using or storing acutely hazardous materials be considered significant.

The current Accidental Release/Hazardous Air Emissions threshold of significance could affect all projects, regardless of size, and require mitigation for Accidental Release/Hazardous Air Emissions impacts.

### **3.2.3. Cumulative Risk and Hazard Thresholds**

#### **Qualified Community Risk Reduction Plan**

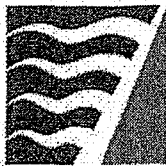
Proposed projects would be considered to be less than significant if they are consistent with a qualified Community Risk Reduction Plan (CRRP) adopted by the local jurisdiction with enforceable measures to reduce the community risk.

Project proposed in areas where a CRRP has been adopted that are not consistent with the CRRP would be considered to have a significant impact.

Projects proposed in areas where a CRRP has not been adopted and that have the potential to expose sensitive receptors or the general public to emissions-related risk in excess of the following thresholds from the aggregate of cumulative sources would be considered to have a significant air quality impact.

The conclusion that land use projects that comply with qualified Community Risk Reduction Plans are less than significant is supported by CEQA Guidelines Sections 15030(a)(3) and 15064(h)(3), which provides that a project's contribution to a cumulative problem can be less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.





#### **Increased Cancer Risk to Maximally Exposed Individual (MEI)**

Emissions from a new source or emissions affecting a new receptor would be considered significant where ground-level concentrations of carcinogenic TACs from any source result in an increased cancer risk greater than 100.0 in one million.

The significance threshold of 100 in a million increased excess cancer risk would be applied to the cumulative emissions. The 100 in a million threshold is based on EPA guidance for conducting air toxics analyses and making risk management decisions at the facility and community-scale level. In protecting public health with an ample margin of safety, EPA strives to provide maximum feasible protection against risks to health from hazardous air pollutants (HAPs) by limiting risk to a level no higher than the one in ten thousand (100 in a million) estimated risk that a person living near a source would be exposed to at the maximum pollutant concentrations for 70 years (NESHAP 54 Federal Register 38044, September 14, 1989; CAA section 112(f)). One hundred in a million excess cancer cases is also consistent with the ambient cancer risk in the most pristine portions of the Bay Area based on the District's recent regional modeling analysis.

#### **Increased Non-Cancer Risk to MEI**

Emissions from a new source or emissions affecting a new receptor would be considered significant where ground-level concentrations of non-carcinogenic TACs result in an increased chronic Hazard Index from any source greater than 10.0.

The Air District has developed an Air Toxics Hot Spots (ATHS) program that provides guidance for implementing the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly, 1987; chaptered in the California Health and Safety Code § 44300, et. al.). The ATHS provides that if the health risks resulting from the facility's emissions exceed significance levels established by the air district, the facility is required to conduct an airborne toxic risk reduction audit and develop a plan to implement measures that will reduce emissions from the facility to a level below the significance level. The Air District has established a non-cancer Hazard Index of ten (10.0) as ATHS mandatory risk reduction levels. The cumulative chronic non-cancer Hazard Index threshold is consistent with the Air District's ATHS program.

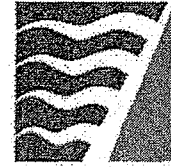
#### **Increased Ambient Concentration of PM<sub>2.5</sub>**

Emissions from a new source or emissions affecting a new receptor would be considered significant where ground-level concentrations of PM<sub>2.5</sub> from any source would result in an average annual increase greater than 0.8 µg/m<sup>3</sup>.

If one applies the concentration-response function from the U.S. EPA assessment (U.S. EPA 2006) and attributes a 10 percent increase in mortality to a 10 µg/m<sup>3</sup> increase in PM<sub>2.5</sub>, one finds an increase in non-injury mortality in the Bay Area of about 50 excess deaths per year from a 0.8 µg/m<sup>3</sup> increment of PM<sub>2.5</sub>. This is greater the impacts reported and considered significant by SFDPH (2008) using an earlier study (Jerrett et al. 2005) to estimate the increase in mortality from a 0.2 µg/m<sup>3</sup> PM<sub>2.5</sub> increment (SFDPH reported 21 excess deaths per year). However, SFDPH only considered roadway emissions within a 492 foot radius. This threshold applies to all types of emissions within 1,000 feet. In modeling applications for proposed projects, a larger radius results in a greater number of sources considered and higher modeled concentrations. On balance, the Air District estimates that the SFDPH threshold and this one, in combination with the individual source threshold for PM<sub>2.5</sub>, will afford similar levels of health protection.

The cumulative PM<sub>2.5</sub> threshold represents the middle range of an EPA proposed Significant Impact Level (SIL). EPA interprets the SIL to be the level of ambient impact that is considered to represent a "significant contribution" to regional non-attainment. While this threshold was not designed to be a threshold for assessing community risk and hazards, it was designed to protect public health at a regional level by helping an area maintain the NAAQS. Since achieving and





maintaining state and federal AAQS is a reasonable goal at the local scale, the SIL provides a useful reference for comparison. Furthermore, the  $0.8 \mu\text{g}/\text{m}^3$  threshold is consistent with studies (Kleinman et al 2007) that examined the potential health impacts of roadway particles.

#### 3.2.4. Plan-Level Risk and Hazard Thresholds

Staff proposes plan-level thresholds that will encourage a programmatic approach to addressing the overall adverse conditions resulting from risks and hazards that many Bay Area communities experience. By designating overlay zones in land use plans, local land use jurisdictions can take preemptive action before project-level review to reduce the potential for significant exposures to risk and hazard emissions. While this will require more up-front work at the general plan level, in the long-run this approach is a more feasible approach consistent with Air District and CARB guidance about siting sources and sensitive receptors that is more effective than project by project consideration of effects that often has more limited mitigation opportunities. This approach would also promote more robust cumulative consideration of effects of both existing and future development for the plan-level CEQA analysis as well as subsequent project-level analysis.

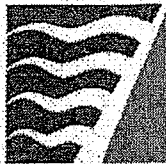
For local plans to have a less-than-significant impact with respect to potential risks and hazards, overlay zones would have to be established around existing and proposed land uses that would emit these air pollutants. Overlay zones to avoid risk impacts should be reflected in local plan policies, land use map(s), and implementing ordinances (e.g., zoning ordinance). The overlay zones around existing and future risk sources would be delineated using the quantitative approaches described above for project-level review and the resultant risk buffers would be included in the General Plan (or the EIR for the General Plan) to assist in site planning. BAAQMD will provide guidance as to the methods used to establish the TAC buffers and what standards to be applied for acceptable exposure level in the updated CEQA Guidelines document. Special overlay zones of at least 500 feet (or an appropriate distance determined by modeling and approved by the Air District) on each side of all freeways and high volume roadways would be included in this threshold.

The threshold of significance for plan impacts could affect all plan adoptions and amendments and require mitigation for a plan's air quality impacts. Where sensitive receptors would be exposed above the acceptable exposure level, the plan impacts would be considered significant and mitigation would be required to be imposed either at the plan level (through policy) or at the project level (through project level requirements).

#### 3.2.5. Community Risk Reduction Plans

The goal of a Community Risk Reduction Plan would be to bring TAC and  $\text{PM}_{2.5}$  concentrations for the entire community covered by the Plan down to acceptable levels as identified by the local jurisdiction and approved by the Air District. This approach provides local agencies a proactive alternative to addressing communities with high levels of risk on a project-by-project approach. This approach is supported by CEQA Guidelines Section 15030(a)(3), which provides that a project's contribution to a cumulative problem can be less than cumulatively considerable "if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact." This approach is also further supported by CEQA Guidelines Section 15064(h)(3), which provides that a project's contribution to a cumulative effect is not considerable "if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem."

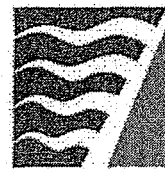




**Qualified Community Risk Reduction Plans**

- (A) A qualified Community Risk Reduction Plan adopted by a local jurisdiction should include, at a minimum, the following elements. The District's revised CEQA Guidelines provides the methodology to determine if a Community Risk Reduction Plan meets these requirements. Define a planning area;
- (B) Include base year and future year emissions inventories of TACs and PM2.5;
- (C) Include Air District-approved risk modeling of current and future risks;
- (D) Establish risk and exposure reduction goals and targets for the community in consultation with Air District staff;
- (E) Identify feasible, quantifiable, and verifiable measures to reduce emissions and exposures;
- (F) Include procedures for monitoring and updating the inventory, modeling and reduction measures in coordination with Air District staff;
- (G) Be adopted in a public process following environmental review.





## 4. CRITERIA POLLUTANT THRESHOLDS

### 4.1. THRESHOLDS OF SIGNIFICANCE

Project Construction	
Pollutant	Average Daily (pounds/day)
ROG (reactive organic gases)	54
NO <sub>x</sub> (nitrogen oxides)	54
PM <sub>10</sub> (exhaust) (particulate matter-10 microns)	82
PM <sub>2.5</sub> (exhaust) (particulate matter-2.5 microns)	54
PM <sub>10</sub> /PM <sub>2.5</sub> (fugitive dust)	Best Management Practices
Local CO (carbon monoxide)	None

Project Operations		
Pollutant	Average Daily (pounds/day)	Maximum Annual (tons/year)
ROG	54	10
NO <sub>x</sub>	54	10
PM <sub>10</sub>	82	15
PM <sub>2.5</sub>	54	10
Local CO	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	

Plans
<ol style="list-style-type: none"> <li>1. Consistency with Current Air Quality Plan control measures</li> <li>2. Projected VMT or vehicle trip increase is less than or equal to projected population increase</li> </ol>

Regional Plans (Transportation and Air Quality Plans)
No net increase in emissions of criteria air pollutants and precursors

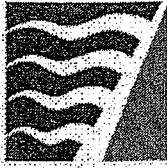
### 4.2. JUSTIFICATION AND SUBSTANTIAL EVIDENCE SUPPORTING THRESHOLDS

#### 4.2.1. Project Construction Criteria Pollutant Thresholds

Staff proposes criteria pollutant construction thresholds that add significance criteria for exhaust emissions to the existing fugitive dust criteria employed by the Air District. While our current Guidelines considered construction exhaust emissions controlled by the overall air quality plan, the implementation of new and more stringent state and federal standards over the past ten years now warrants additional control of this source of emissions.

The average daily criteria air pollutant and precursor emission levels shown above are recommended as the thresholds of significance for construction activity for exhaust emissions. These thresholds represent the levels above which a project's individual emissions would result in a considerable contribution (i.e., significant) to the SFBAAB's existing non-attainment air quality





conditions and thus establish a nexus to regional air quality impacts that satisfies CEQA requirements for evidence-based determinations of significant impacts.

For fugitive dust emissions, staff recommends following the current best management practices approach which has been a pragmatic and effective approach to the control of fugitive dust emissions. Studies have demonstrated (Western Regional Air Partnership, U.S.EPA) that the application of best management practices at construction sites have significantly controlled fugitive dust emissions. Individual measures have been shown to reduce fugitive dust by anywhere from 30 percent to more than 90 percent. In the aggregate best management practices will substantially reduce fugitive dust emissions from construction sites. These studies support staff's recommendation that projects implementing construction best management practices will reduce fugitive dust emissions to a less than significant level.

#### 4.2.2. Project Operation Criteria Pollutant Thresholds

The thresholds for project operations are the average daily and maximum annual criteria air pollutant and precursor levels shown above. These thresholds are based on the federal BAAQMD Offset Requirements to ozone precursors for which the SFBAAB is designated as a non-attainment area which is an appropriate approach to prevent further deterioration of ambient air quality and thus has nexus and proportionality to prevention of a regionally cumulative significant impact (e.g. worsened status of non-attainment). Despite non-attainment area for state  $PM_{10}$  and pending nonattainment for federal  $PM_{2.5}$ , the federal NSR Significant Emission Rate annual limits of 15 and 10 tons per year, respectively, are the thresholds as BAAQMD has not established an Offset Requirement limit for  $PM_{2.5}$  and the existing limit of 100 tons per year is much less stringent and would not be appropriate in light of our pending nonattainment designation for the federal 24-hour  $PM_{2.5}$  standard. These thresholds represent the emission levels above which a project's individual emissions would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. The thresholds would be an evaluation of the incremental contribution of a project to a significant cumulative impact. These threshold levels are well-established in terms of existing regulations as promoting review of emissions sources to prevent cumulative deterioration of air quality. Using existing environmental standards in this way to establish CEQA thresholds of significance under Guidelines section 15067.4 is an appropriate and effective means of promoting consistency in significance determinations and integrating CEQA environmental review activities with other areas of environmental regulation. (See *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal. App. 4<sup>th</sup> 98, 111.<sup>10</sup>)

#### 4.2.3. Local Carbon Monoxide Thresholds

The carbon monoxide thresholds are based solely on ambient concentration limits set by the California Clean Air Act for Carbon Monoxide and Appendix G of the State of California CEQA Guidelines.

Since the ambient air quality standards are health-based (i.e., protective of public health), there is substantial evidence (i.e., health studies that the standards are based on) in support of their use

<sup>10</sup> The Court of Appeal in the *Communities for a Better Environment* case held that existing regulatory standards could not be used as a definitive determination of whether a project would be significant under CEQA where there is substantial evidence to the contrary. Staff's thresholds would not do that. The thresholds are levels at which a project's emissions would normally be significant, but would not be binding on a lead agency if there is contrary evidence in the record.





as CEQA significance thresholds. The use of the ambient standard would relate directly to the CEQA checklist question. By not using a proxy standard, there would be a definitive bright line about what is or is not a significant impact and that line would be set using a health-based level.

The CAAQS of 20.0 ppm and 9 ppm for 1-hour and 8-hour CO, respectively, would be used as the thresholds of significance for localized concentrations of CO. Carbon monoxide is a directly emitted pollutant with primarily localized adverse effects when concentrations exceed the health based standards established by the California Air Resources Board (ARB).

In addition, Appendix G of the State of California CEQA Guidelines includes the checklist question: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation? Answering yes to this question would indicate that the project would result in a significant impact under CEQA. The use of the ambient standard would relate directly to this checklist question.

#### **4.2.4. Plan-Level Criteria Pollutant Thresholds**

This threshold achieves the same goals as the Air District's current approach while alleviating the existing analytical difficulties and the inconsistency of comparing a plan update with AQP growth projections that may be up to several years old. Eliminating the analytical inconsistency provides better nexus and proportionality for evaluating air quality impacts for plans.

Over the years staff has received comments on the difficulties inherent in the current approach regarding the consistency tests for population and VMT growth. First, the population growth estimates used in the most recent AQP can be up to several years older than growth estimates used in a recent plan update, creating an inconsistency in this analysis. Staff recommends that this test of consistency be eliminated because the Air District and local jurisdictions all use regional population growth estimates that are disaggregated to local cities and counties. In addition, the impact to air quality is not necessarily growth but where that growth is located. The second test, rate of increase in vehicle use compared to growth rate, will determine if planned growth will impact air quality. Compact infill development inherently has less vehicle travel and more transit opportunities than suburban sprawl.

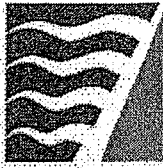
Second, the consistency test of comparing the rate of increase in VMT to the rate of increase in population has been problematic at times for practitioners because VMT is not always available with the project analysis. Staff recommends that either the rate of increase in VMT or vehicle trips be compared to the rate of increase in population. Staff also recommends that the growth estimates used in this analysis be for the years covered by the plan. Staff also recommends that the growth estimates be obtained from the Association of Bay Area Governments since the Air District uses ABAG growth estimates for air quality planning purposes.

#### **4.2.5. Criteria Pollutant Thresholds for Regional Plans**

Regional plans include the Regional Transportation Plan prepared by the Metropolitan Transportation Commission (MTC) and air quality plans prepared by the Air District.

The Regional Transportation Plan (RTP), also called a Metropolitan Transportation Plan (MTP) or Long-Range Transportation Plan is the mechanism used in California by both Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs) to conduct long-range (minimum of 20 years) planning in their regions. MTC functions as both the regional transportation planning agency, a state designation, and, for federal purposes, as the region's metropolitan planning organization (MPO). As such, it is responsible for regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of





comprehensive transportation system that includes mass transit, highway, airport, seaport, railroad, bicycle and pedestrian facilities. The performance of this system affects such public policy concerns as air quality, environmental resource consumption, social equity, "smart growth," economic development, safety, and security. Transportation planning recognizes the critical links between transportation and other societal goals. The planning process requires developing strategies for operating, managing, maintaining, and financing the area's transportation system in such a way as to advance the area's long-term goals.

The Air District periodically prepares and updates plans to achieve the goal of healthy air. Typically, a plan will analyze emissions inventories (estimates of current and future emissions from industry, motor vehicles, and other sources) and combine that information with air monitoring data (used to assess progress in improving air quality) and computer modeling simulations to test future strategies to reduce emissions in order to achieve air quality standards. Air quality plans usually include measures to reduce air pollutant emissions from industrial facilities, commercial processes, motor vehicles, and other sources. Bay Area air quality plans are prepared with the cooperation of MTC and the Association of Bay Area Governments (ABAG).

The threshold of significance for regional plans is no net increase in emissions including criteria pollutant emissions. This threshold serves to answer the State CEQA Guidelines Appendix G sample question: "Would the project Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?"

## 5. ODOR THRESHOLDS

### 5.1. THRESHOLDS OF SIGNIFICANCE

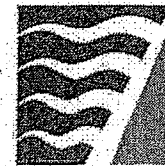
Project Operations – Source or Receptor	Plans
Five confirmed complaints per year averaged over three years	Identify the location, and include policies to reduce the impacts, of existing or planned sources of odors

### 5.2. JUSTIFICATION AND SUBSTANTIAL EVIDENCE SUPPORTING THRESHOLDS

Staff proposes revising the current CEQA significance threshold for odors to be consistent with the Air District's regulation governing odor nuisances (Regulation 7—Odorous Substances). The current approach includes assessing the number of unconfirmed complaints which are not considered indicative of actual odor impacts. Basing the threshold on an average of five confirmed complaints per year over a three year period reflects the most stringent standards derived from the Air District rule and is therefore considered an appropriate approach to a CEQA evaluation of odor impacts.

Odors are generally considered a nuisance, but can result in a public health concern. Some land uses that are needed to provide services to the population of an area can result in offensive odors, such as filling portable propane tanks or recycling center operations. When a proposed project includes the siting of sensitive receptors in proximity to an existing odor source, or when siting a new source of potential odors, the following qualitative evaluation should be performed.





When determining whether potential for odor impacts exists, it is recommended that Lead Agencies consider the following factors and make a determination based on evidence in each qualitative analysis category:

**Distance:** Use the screening-level distances in Table 9.

**Wind Direction:** Consider whether sensitive receptors are located upwind or downwind from the source for the most of the year. If odor occurrences associated with the source are seasonal in nature, consider whether sensitive receptors are located downwind during the season in which odor emissions occur.

**Complaint History:** Consider whether there is a history of complaints associated with the source. If there is no complaint history associated with a particular source (perhaps because sensitive receptors do not already exist in proximity to the source), consider complaint-history associated with other similar sources in BAAQMD's jurisdiction with potential to emit the same or similar types of odorous chemicals or compounds, or that accommodate similar types of processes.

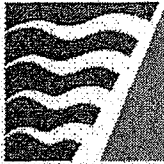
**Character of Source:** Consider the character of the odor source, for example, the type of odor events according to duration of exposure or averaging time (e.g., continuous release, frequent release events, or infrequent events).

**Exposure:** Consider whether the project would result in the exposure of a substantial number of people to odorous emissions.

Table D-10 – Screening Distances for Potential Odor Sources

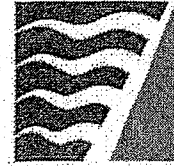
Type of Operation Project Screening	Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Coffee Roaster	1 mile





California Integrated Waste Management Board (CIWMB). Facilities that are regulated by the CIWMB (e.g. landfill, composting, etc.) are required to have Odor Impact Minimization Plans (OIMP) in place and have procedures that establish fence line odor detection thresholds. The Air District recognizes a Lead Agency's discretion under CEQA to use established odor detection thresholds as thresholds of significance for CEQA review for CIWMB regulated facilities with an adopted OIMP.

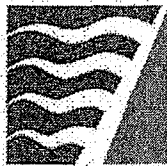




## REFERENCES

- ARB. See California Air Resources Board.
- BAAQMD. See Bay Area Air Quality Management District.
- Bay Area Air Quality Management District. 1999 (December). *BAAQMD CEQA Guidelines*. San Francisco, CA.
- \_\_\_\_\_. 2005. Regulation 2, Rule 2. New Source Review. Available:  
<<http://www.baaqmd.gov/dst/regulations/rg0202.pdf>>. Accessed February 2009.
- \_\_\_\_\_. 2006. CARE Phase 1 Findings and Policy Recommendations. Available:  
<[http://baaqmd.gov/CARE/documents/care\\_p1\\_findings\\_recommendations\\_v2.pdf](http://baaqmd.gov/CARE/documents/care_p1_findings_recommendations_v2.pdf)>.  
Accessed March 2009.
- \_\_\_\_\_. 2008. Source Inventory of Bay Area Greenhouse Gas Emissions. San Francisco, CA.
- \_\_\_\_\_. 2009. *Revised Draft Options and Justifications Report – California Environmental Quality Act Thresholds of Significance*  
(<http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/Revised%20Draft%20CEQA%20Thresholds%20%20Justification%20Report%20Oct%202009.ashx>)
- \_\_\_\_\_. 2010. *Draft 2010 CAP Appendix A – Bay Area Air Pollution Burden: Past & Present*  
San Francisco, CA
- California Air Pollution Control Officers Association. 2008 (January). *CEQA and Climate Change*.  
Sacramento, CA. Available:  
<<http://www.capcoa.org/CEQA/CAPCOA%20White%20Paper.pdf>>. Accessed April 10, 2009.
- California Air Resources Board. 2000. Risk Reduction Plan to Reduce Particulate Matter  
Emissions from Diesel-Fueled Engines and Vehicles. Stationary Source Division. Mobile  
Source Control Division. October.
- \_\_\_\_\_. 2002. Staff Report: Public Hearing to Consider Amendments to the Ambient Air  
Quality Standards for Particulate Matter and Sulfates. Available:  
<http://www.arb.ca.gov/research/aaqs/std-rs/pm-final/pm-final.htm>.
- \_\_\_\_\_. 2005. *Land Use Compatibility Handbook. A Community Health Perspective*.  
Sacramento, CA.
- \_\_\_\_\_. 2008a. *Climate Change Proposed Scoping Plan*. Sacramento, CA. Adopted in  
December 2008 Available:  
<<http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>>. Accessed  
March 2009.
- \_\_\_\_\_. *Climate Change Proposed Scoping Plan*. Sacramento, CA. Adopted in December  
2008 Available:





<<http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>>. Accessed March 2009.

\_\_\_\_\_. 2009a. Greenhouse Gas Inventory and Forecast. Available:  
<[http://www.arb.ca.gov/cc/inventory/data/tables/arb\\_ghg\\_inventory\\_forecast\\_2008\\_06\\_26.xls](http://www.arb.ca.gov/cc/inventory/data/tables/arb_ghg_inventory_forecast_2008_06_26.xls)>.  
Accessed March 2009.

\_\_\_\_\_. 2009b. *Preliminary Draft Staff Proposal: Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act*. Available:  
<<http://www.arb.ca.gov/cc/localgov/ceqa/meetings/10270prelimdraftproposal102408.pdf>>  
. Accessed March 2009.

\_\_\_\_\_. 2009c. *Area Designations and Maps*. Available:  
<<http://www.arb.ca.gov/desig/desig.htm>>, Accessed April 10.

\_\_\_\_\_. 2009d. Proposed Regulation to Implement the Low Carbon Fuel Standard, Staff Report Initial Statement Reasons. March 5. Available:  
<http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>. Accessed, August 20, 2009.

CEC. See California Energy Commission.

CEC. 2007. Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available:  
<[http://www.energy.ca.gov/title22008standards/rulemaking/documents/2007-11-07\\_IMPACT\\_ANALYSIS.PDF](http://www.energy.ca.gov/title22008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF)>. Accessed March 2009.

California Department of Finance. 2009. Residential Development Data: E5 – City and County Population Estimates. 2000-2050 - Race and Ethnic Populations Totals. Available:  
<<http://www.labormarketinfo.edd.ca.gov/?pageid=145>>. Accessed February 2009.

California Economic Development Department. 2009. *Commercial/Industrial Employment Data: Projections of Employment by Industry and Occupation*. Available:  
<<http://www.labormarketinfo.edd.ca.gov/?pageid=145>>. Accessed February 2009.

City and County of San Francisco Department of Public Health. 2008. Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review. Program on Health, Equity, & Sustainability. Occupational & Environmental Health Section. Prepared by Rajiv Bhatia and Thomas Rivard. May 6.

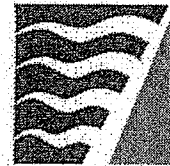
Dockery D. 1993. An association between air pollution and mortality in six U.S. cities. *N Engl J Med* 329:1753–1759.

EPA. See U.S. Environmental Protection Agency.

Governor's Office of Planning and Research. 2008 (June 19). *Technical Advisory: CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*. Sacramento, CA. Available: <<http://opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf>>. Accessed February 2009.

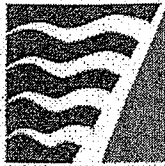
Hiltermann T, Bruijne Cd, Stolk J, Zwinderman A, Spijksma F, Roemer W, et al. 1997. Effects of photochemical air pollution and allergen exposure on upper respiratory tract inflammation in asthmatics. *Am J Respir Crit Care Med* 156(6):1765–1772.





- Intergovernmental Panel on Climate Change. 2007a (February). *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC*. Geneva, Switzerland.
- \_\_\_\_\_. 2007a (February). *Climate Change 2007: Climate Change 2007: Synthesis Report Summary for Policymakers*. Geneva, Switzerland.
- IPCC. See Intergovernmental Panel on Climate Change.
- Jerrett M et al. 2005. Spatial Analysis of Air Pollution and Mortality in Los Angeles. *Epidemiology*. 16: 727-736.
- Kleinman, M.T., Sioutas, C., Froines, J.R., Fanning, E., Hamade, A., Mendez, L., Meacher, D., Oldham, M. Inhalation of Concentrated Ambient Particulate Matter Near a Heavily Trafficked Road Simulates Antigen-Induced Airway Responses in Mice; *Inhal. Toxicol*. 2007, 19 (Supp. 1), 117-126.
- Laden, F.; Schwartz, J.; Speizer, F.E.; Dockery, D.W. Reduction in Fine Particulate Air Pollution and Mortality: Extended Follow-Up of the Harvard Six Cities Study. *Am. J. Respir. Crit. Care Med*. (2006), 173, 667-672.
- OPR. See Governor's Office of Planning and Research.
- Pope C III, Thun M, Namboodiri M, Dockery D, Evans J, Speizer F. 1995. Particulate air pollution as a predictor of mortality in a prospective study of U.S. adults. *Am J Respir Crit Care Med* 151(3):669-6
- Rimpo and Associates. 2009. BAAQMD CEQA Projects Database. Orangevale, CA.
- Schauer JJ, Lough GC, Schafer MM, Christensen WF, Arndt MF, DeMinter JT, et al. 2006. **Characterization of metals emitted from motor vehicles. *Res Rep Health Eff Inst* 133:1-7.**
- Schikowski T, Sugiri D, Ranft U, Gehring U, Heinrich J, Wichmann E, et al. 2005. Long-term air pollution exposure and living close to busy roads are associated with COPD in women. *Respir Res* 6(1):152.
- Schwartz, J.; Coull, B.; Laden, F.; Ryan, L. The Effect of Dose and Timing of Dose on the Association between Airborne Particles and Survival. *Env Health Persp* (2008) 116, 1: 64-69.
- SFDPH. See City and County of San Francisco Department of Public Health.
- UNFCCC. See United Nations Framework Convention on Climate Change.
- United Nations Framework Convention on Climate Change. 2009. *Article 1 of the UNFCCC*. Available: [http://unfccc.int/essential\\_background/convention/background/items/2536.php](http://unfccc.int/essential_background/convention/background/items/2536.php). Accessed April 8, 2009.
- U.S. Environmental Protection Agency. 2008. Federal Register: Implementation of the New Source Review (NSR) Program for Particulate Matter (PM<sub>2.5</sub>) less than 2.5 Micrometers.





Available: <<http://www.epa.gov/fedrgstr/EPA-AIR/200May/Day-1a10768.pdf>>. Accessed February 2009.

\_\_\_\_\_. 2009. Monitor Values Report Data. Available: <<http://www.epa.gov/air/data/index.html>>. Accessed April 8, 2009.

\_\_\_\_\_. 2006. *Expanded Expert Judgment Assessment of the Concentration-Response Relationship between PM<sub>2.5</sub> Exposure and Mortality*, prepared for OAQPS-EPA by Industrial Economics Inc., September 21, 2006. A summary of this study is provided in Roman, HA et al., *Environ. Sci. Tech.* 2008, 42, 2268-2274.

\_\_\_\_\_. 1988. C. Cowherd, et al., *Control of Open Fugitive Dust Sources*, EPA-450/3-88-008, U. S. Environmental Protection Agency, Research Triangle Park, NC, September 1988.

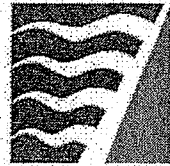
Van Hee, V.C., Adar, S.D., Szpiro, A.A., Barr, R.G., Bluemke, D.A., Diez Roux, A.V., Gill, E.A., Sheppard, L., Kaufman, J.D. Exposure to Traffic and Left Ventricular Mass and Function; *Am. J. Respir. Crit. Care Med.* 2009, 179 (9), 827-834.

Vineis P, Hoek G, Krzyzanowski M, Vigna-Taglianti F, Veglia F, Airolidi L, et al. 2007. Lung cancers attributable to environmental tobacco smoke and air pollution in non-smokers in different European countries: a prospective study. *Environ Health* 6:7; doi:10.1186/1476-069X-6-7 [Online 15 February 2007]

Western Regional Air Partnership. 2006. *WRAP Fugitive Dust Handbook*. September 7, 2006. Available: [http://www.wrapair.org/forums/dejf/fdh/content/FDHandbook\\_Rev\\_06.pdf](http://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf). Accessed September 2009.

Zhu, Y. Hinds, W.C., Kim S, and Sioutas, C. 2002. Concentration and size distribution of ultrafine particles near a major highway. *Journal of Air and Waste Management Association*. 2002 Sep; 52 (9): 1032-42.





BAY AREA AIR QUALITY MANAGEMENT DISTRICT

RESOLUTION No. 2010-06

A Resolution of the Board of Directors of the Bay Area Air Quality Management District Adopting Thresholds For Use In Determining the Significance of Projects' Environmental Effects Under the California Environmental Quality Act

WHEREAS, pursuant to Title 14, Chapter 3, Article 5, Section 15064.7 of the California Code of Regulations ("Section 15064.7"), the California Resources Agency encourages public agencies to adopt "Thresholds of Significance" under the California Environmental Quality Act ("CEQA");

WHEREAS, pursuant to Section 15064.7, CEQA Thresholds of Significance are identifiable quantitative, qualitative or performance levels of a particular environmental effect, non-compliance with which means the effect will normally be determined to be "significant" under CEQA, and compliance with which means the effect normally will be determined to be less than significant under CEQA;

WHEREAS, the Board of Directors ("Board") of the Bay Area Air Quality Management District ("District") finds it necessary and appropriate to adopt CEQA Thresholds of Significance as set forth in Attachment A hereto for use by District staff and by other appropriate agencies in determining whether projects may have significant effects on the environment for purposes of CEQA environmental analyses;

WHEREAS, the CEQA Thresholds of Significance as set forth in Attachment A hereto do not alter the existing procedural and substantive requirements of CEQA under California law, but simply clarify the level at which, in the District's considered opinion, an environmental effect should normally be considered "significant" for purposes of existing CEQA law;

WHEREAS, the CEQA Thresholds of Significance set forth in Attachment A hereto were developed through an extensive public review process, which included public workshops, Board meetings and meetings with local government agency and non-government organization staff, including the cities of Berkeley, Colma, Daly City, Dublin, Fremont, Livermore, Oakland, Pleasanton, Richmond, San Leandro, San Mateo, San Francisco and Santa Rosa; the counties of Alameda, Contra Costa, Napa, Santa Clara, and Sonoma; and the CARE Task Force, the Alameda County Planning for Healthy Communities Network and the Governor's Office of Planning and Research Local Government Roundtable;

WHEREAS, District staff held ten public workshops throughout the Bay Area on February 26, 2009, April 27, 29 and 30, 2009, September 8, 9, and 10, 2009, October 2, 2009, and April 15 and 26, 2010; solicited Thresholds of Significance options for consideration; and published for public review and comment the Threshold Options Report on April 24, 2009, the CEQA Thresholds Options and Justification Report on October 8, 2009, and the Proposed Thresholds of Significance Report on November 2, 2009, December 7, 2009 and May 3, 2010;





meetings were held on November 18, 2009, December 2, 2009, January 6, 2010, May 5, 2010 and June 2, 2010;

WHEREAS, at the November 18, 2009, December 2, 2009, January 6, 2010, May 5, 2010 and June 2, 2010 public meetings, the subject matter of the Thresholds of Significance was discussed with interested persons in accordance with all provisions of law;

WHEREAS, the November 18, 2009, December 2, 2009, January 6, 2010, May 5, 2010 and June 2, 2010 public meetings and the other public review opportunities that the District has provided regarding the Thresholds of Significance, constitute a public review process as required by Section 15064.7;

WHEREAS, District staff has prepared and presented to this Board the May 3, 2010, Proposed Thresholds of Significance report, which has been considered by this Board and is incorporated herein by reference;

WHEREAS, the documents and other materials that constitute the record of the public review process under Section 15064.7 on which this Resolution is based are located at the Bay Area Air Quality Management District, 939 Ellis Street, San Francisco, 94109, and the custodian for these documents is Ms. Lisa Harper, Clerk of the Boards;

WHEREAS, District staff recommends adoption of the CEQA Thresholds of Significance set forth in Attachment A hereto;

WHEREAS, the Board of Directors concurs with District staff's recommendations and desires to adopt the CEQA Thresholds of Significance set forth in Attachment A hereto;

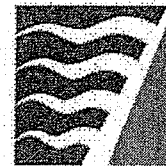
NOW, THEREFORE, BE IT RESOLVED that that the Board of Directors of the Bay Area Air Quality Management District does hereby adopt the CEQA Thresholds of Significance, pursuant to the authority granted by law, as set forth in Attachment A hereto, and discussed in the Proposed Thresholds of Significance report dated May 3, 2010, with instructions to staff to correct any typographical or formatting errors before final publication of the CEQA Thresholds of Significance.

BE IT FURTHER RESOLVED that it is the policy of the Bay Area Air Quality Management District that projects that do not comply with the CEQA Thresholds of Significance will normally be determined to have a significant effect on the environment for purposes of CEQA, and projects that comply with the CEQA Thresholds of Significance normally will be determined to have a less-than-significant effect on the environment for purposes of CEQA.

BE IT FURTHER RESOLVED that it is the policy of the Bay Area Air Quality Management District that Lead Agencies in the Bay Area apply the CEQA Thresholds of Significance, except for the Risk and Hazard thresholds for Receptor Projects, for Notices of Preparation issued, and environmental analyses begun, on or after the date of adoption of this Resolution.

BE IT FURTHER RESOLVED that it is the policy of the Bay Area Air Quality Management District that Lead Agencies in the Bay Area apply the CEQA Thresholds of Significance for the





Risk and Hazard thresholds for Receptor Projects for Notices of Preparation issued, and environmental analyses begun, after January 1, 2011.

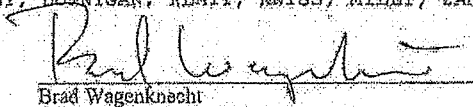
The foregoing Resolution was duly and regularly introduced, passed and adopted at a regular meeting of the Board of Directors of the Bay Area Air Quality Management District on the Motion of Director KALRA, seconded by Director UULKEMA, on the 2nd day of JUNE, 2010, by the following vote of the Board:

AYES: BATES, GARNER, GIOIA, GROOM, HOSTERMAN, HUDSON, KALRA, MAR, ROSS, SPERING, TORLIATT, UULKEMA, YEAGER, WAGENKNECHT

NOES: NONE

RECUSED: HAGGERTY

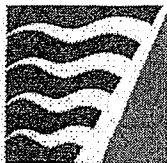
ABSENT: BROWN, DALY, DUNNIGAN, KLATT, KNISS, MILEY, ZANE

  
Brad Wagenknecht  
Chairperson of the Board of Directors

ATTEST:

  
John Gioia  
Secretary of the Board of Directors

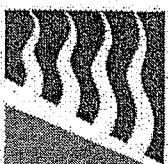




ATTACHMENT A

Proposed Air Quality CEQA Thresholds of Significance (May 3, 2010)			
Pollutant	Construction-Related	Operational-Related	
<b>Project-Level</b>			
Criteria Air Pollutants and Precursors (Regional)	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Maximum Annual Emissions (tpy)
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub> (exhaust)	82	82	15
PM <sub>2.5</sub> (exhaust)	54	54	10
PM <sub>10</sub> /PM <sub>2.5</sub> (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
GHGs Projects other than Stationary Sources	None	Compliance with Qualified Greenhouse Gas Reduction Strategy OR 1,100 MT of CO <sub>2</sub> /yr OR 4.6 MT CO <sub>2</sub> e/SP/yr (residents + employees)	
GHGs Stationary Sources	None	10,000 MT/yr	
Risks and Hazards – New Source (Individual Project)	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.3 µg/m <sup>3</sup> annual average <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor	
Risks and Hazards – New Receptor (Individual Project)	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.3 µg/m <sup>3</sup> annual average <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor	
Risks and Hazards – New Source (Cumulative Thresholds)	Same as Operational Thresholds*	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM <sub>2.5</sub> : > 0.8 µg/m <sup>3</sup> annual average (from all local sources) <u>Zone of Influence:</u> 1,000-foot radius from fence line of source or receptor	





### Proposed Air Quality CEQA Thresholds of Significance

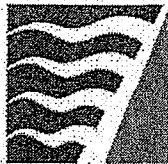
(May 3, 2010)

Pollutant	Contribution-Related	Operational-Related
Risks and Hazards - New Receptor (Cumulative Thresholds)	Same as Operational Thresholds*	<p>Compliance with Qualified Community Risk Reduction Plan OR</p> <p>Cancer: &gt; 100 in a million (from all local sources)</p> <p>Non-cancer: &gt; 10.0 Hazard Index (from all local sources) (Current)</p> <p><math>PM_{2.5}</math> &gt; 0.8 <math>\mu g/m^3</math> annual average (from all local sources)</p> <p>Zone of Influence: 1,000-foot radius from fence line of source or receptor</p> <p>Storage or use of acutely hazardous materials involving near receptors or receptors located near stored or used acutely hazardous materials considered significant</p>
Accidental Release of Acutely Hazardous Air Pollutants	None	Storage or use of acutely hazardous materials involving near receptors or receptors located near stored or used acutely hazardous materials considered significant
Odors	None	Complaint History—5 confirmed complaints per year averaged over three years
<b>Plan-Level</b>		
Criteria Air Pollutants and Precursors	None	<ol style="list-style-type: none"> <li>1. Consistency with Current Air Quality Plan control measures.</li> <li>2. Projected VMT or vehicle trip increase is less than or equal to projected population increase.</li> </ol> <p>Compliance with Qualified Greenhouse Gas Reduction Strategy (or similar criteria included in a General Plan) OR</p> <p>6.6 MT CO<sub>2</sub>e SP/yr (residents + employees)</p>
GHGs	None	<ol style="list-style-type: none"> <li>1. Overlay zones around existing and planned sources of TACs (including adopted Risk Reduction Plan areas).</li> <li>2. Overlay zones of at least 500 feet (or Air District-approved modeled distance) from all freeways and high volume roadways.</li> </ol>
Risks and Hazards	None	Identify locations of odor sources in general plan
Odors	None	Identify locations of odor sources in general plan
Accidental Release of Acutely Hazardous Air Pollutants	None	None
<b>Regional Plans (Transportation and Air Quality Plans)</b>		
GHGs, Criteria Air Pollutants and Precursors, and Toxic Air Contaminants	None	No net increase in emissions

Note: CO = carbon monoxide; CO<sub>2</sub>e = carbon dioxide equivalent; GHGs = greenhouse gases; HAPs = hazardous air pollutants; NO<sub>x</sub> = oxides of nitrogen; PM<sub>10</sub> = fine particulate matter with an aerodynamic equivalent diameter of 2.5 micrometers or less; PM<sub>2.5</sub> = respirable particulate matter with an aerodynamic equivalent diameter of 10 micrometers or less; POPs = polycyclic aromatic hydrocarbons; ROG = reactive organic gases; SP = source population (yr<sup>-1</sup> tons per year) per year.

\* Note: The Air District recommends that for transportation projects that are less than one year duration, Lead Agencies should annualize impacts over the scope of travel days that peak requests are to occur, rather than the full year.





## E. GLOSSARY

**Aerosol** -- Particle of solid or liquid matter that can remain suspended in the air because of its small size (generally under one micrometer in diameter).

**Air Quality Management District (AQMD)** -- Local agency charged with controlling air pollution and attaining air quality standards. The Bay Area Air Quality Management District is the regional AQMD that includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara Counties and the southern halves of Solano and Sonoma Counties.

**Air Resources Board (ARB)** -- The State of California agency responsible for air pollution control. Responsibilities include: establishing State ambient air quality standards, setting allowable emission levels for motor vehicles in California and oversight of local air quality management districts.

**Area Sources** -- Sources of air pollutants that individually emit relatively small quantities of air pollutants, but that may emit considerable quantities of emissions when aggregated over a large area. Examples include water heaters, lawn maintenance equipment, and consumer products.

**Best Available Control Technology (BACT)** -- The most stringent emissions control that has been achieved in practice, identified in a state implementation plan, or found by the District to be technologically feasible and cost-effective for a given class of sources.

**California Clean Air Act (CCAA)** -- Legislation enacted in 1988 mandating a planning process to attain state ambient air quality standards.

**CALINE** -- A model developed by the Air Resources Board that calculates carbon monoxide concentrations resulting from motor vehicle use.

**Carbon Monoxide (CO)** -- A colorless, odorless, toxic gas produced by the incomplete combustion of carbon-containing substances. It is emitted in large quantities by exhaust of gasoline-powered vehicles.

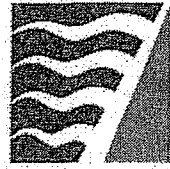
**Carbon Dioxide (CO<sub>2</sub>)** -- A colorless, odorless gas that is an important contributor to Earth's greenhouse effect.

**Carbon Dioxide Equivalent (CO<sub>2</sub>E)** -- A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

**Chlorofluorocarbons (CFCs)** -- A family of inert, nontoxic, and easily liquefied chemicals used in refrigeration, air conditioning, packaging, insulation, or as solvents and aerosol propellants. CFCs drift into the upper atmosphere where their chlorine components destroy stratospheric ozone.

**Clean Air Act (CAA)** -- Long-standing federal legislation, last amended in 1990, that is the legal basis for the national clean air programs.





**Conformity** -- A requirement in federal law and administrative practice that requires that projects will not be approved if they do not conform with the State Implementation Plan by: causing or contributing to an increase in air pollutant emissions, violating an air pollutant standard, or increasing the frequency of violations of an air pollutant standard.

**Criteria Air Pollutants** -- Air pollutants for which the federal or State government has established ambient air quality standards, or criteria, for outdoor concentration in order to protect public health. Criteria pollutants include: ozone, carbon monoxide, sulfur dioxide PM10 (previously total suspended particulate), nitrogen oxide, and lead.

**EMFAC** -- The computer model developed by the California Air Resources Board to estimate composite on-road motor vehicle emission factors by vehicle class.

**Emission Factor** -- The amount of a specific pollutant emitted from a specified polluting source per unit quantity of material handled, processed, or burned.

**Emission Inventory** -- A list of air pollutants emitted over a determined area by type of source. Typically expressed in mass per unit time.

**Environmental Protection Agency (EPA)** -- The federal agency responsible for control of air and water pollution, toxic substances, solid waste, and cleanup of contaminated sites.

**Exceedance** -- A monitored level of concentration of any air contaminant higher than national or state ambient air quality standards.

**Global Warming Potential (GWP)** -- The index used to translate the level of emissions of various gases into a common measure in order to compare the relative radiative forcing of different gases without directly calculating the changes in atmospheric concentrations. GWPs are calculated as the ratio of the radiative forcing that would result from the emissions of one kilogram of a greenhouse gas to that from emission of one kilogram of carbon dioxide over a period of time (usually 100 years).

**Greenhouse Gas (GHG)** -- Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), halogenated fluorocarbons (HCFCs), ozone (O<sub>3</sub>), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>) and hydrofluorocarbons (HFCs).

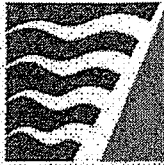
**Hazardous Air Pollutants** -- Federal terminology for air pollutants which are not covered by ambient air quality standards but may reasonably be expected to cause or contribute to serious illness or death (see NESHAPs).

**Health Risk Assessment** -- An analysis where human exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risk.

**Hot Spot** -- A location where emissions from specific sources may expose individuals and population groups to elevated risks of adverse health effects and contribute to the cumulative health risks of emissions from other sources in the area.

**Hydrogen Sulfide (H<sub>2</sub>S)** -- A gas characterized by "rotten egg" smell, found in the vicinity of oil refineries, chemical plants and sewage treatment plants.





**Impacted Communities** – Also known as priority communities, the Air District defines impacted communities within the Bay Area as having higher emitting sources, highest air concentrations, and nearby low income and sensitive populations. The Air District identified the following impacted communities: the urban core areas of Concord, eastern San Francisco, western Alameda County, Redwood City/East Palo Alto, Richmond/San Pablo, and San Jose.

**Indirect Sources** – Land uses and facilities that attract or generate motor vehicle trips and thus result in air pollutant emissions, e.g., shopping centers, office buildings, and airports.

**Inversion** -- The phenomenon of a layer of warm air over cooler air below. This atmospheric condition resists the natural dispersion and dilution of air pollutants.

**Level of Service (LOS)** -- A transportation planning term for a method of measurement of traffic congestion. The LOS compares actual or projected traffic volume to the maximum capacity of the road under study. LOS ranges from A through F. LOS A describes free flow conditions, while LOS F describes the most congested conditions, up to or over the maximum capacity for which the road was designed.

**Mobile Source** -- Any motor vehicle that produces air pollution, e.g., cars, trucks, motorcycles (on-road mobile sources) or airplanes, trains and construction equipment (off-road mobile sources).

**National Ambient Air Quality Standards (NAAQS)** -- Health-based pollutant concentration limits established by EPA that apply to outdoor air (see Criteria Air Pollutants).

**National Emissions Standards for Hazardous Air Pollutants (NESHAPs)** -- Emissions standards set by EPA for air pollutants not covered by NAAQS that may cause an increase in deaths or in serious, irreversible, or incapacitating illness.

**Nitrogen Oxides (NO<sub>x</sub>)** -- Gases formed in great part from atmospheric nitrogen and oxygen when combustion takes place under conditions of high temperature and high pressure; NO<sub>x</sub> is a precursor to the criteria air pollutant ozone.

**Nonattainment Area** -- Defined geographic area that does not meet one or more of the

Ambient Air Quality Standards for the criteria pollutants designated in the federal Clean Air Act and/or California Clean Air Act.

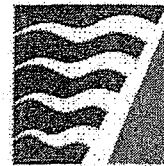
**Ozone (O<sub>3</sub>)** -- A pungent, colorless, toxic gas. A product of complex photochemical processes, usually in the presence of sunlight. Tropospheric (lower atmosphere) ozone is a criteria air pollutant.

**Particulate** -- A particle of solid or liquid matter; soot, dust, aerosols, fumes and mists.

**Photochemical Process** -- The chemical changes brought about by the radiant energy of the sun acting upon various polluting substances. The products are known as photochemical smog.

**PM<sub>2.5</sub>** -- Fine particulate matter (solid or liquid) with an aerodynamic diameter equal to or less than 2.5 micrometers. Individual particles of this size are small enough to be inhaled deeply into the lungs.





PM<sub>10</sub> -- Fine particulate matter (solid or liquid) with an aerodynamic diameter equal to or less than 10 micrometers. Individual particles of this size are small enough to be inhaled into human lungs; they are not visible to the human eye.

Precursor -- Compounds that change chemically or physically after being emitted into the air and eventually produce air pollutants. For example, organic compounds are precursors to ozone.

Prevention of Significant Deterioration (PSD) -- EPA program in which State and/or federal permits are required that are intended to restrict emissions for new or modified sources in places where air quality is already better than required to meet primary and secondary ambient air quality standards.

Reactive Organic Gases (ROG) -- Classes of organic compounds, especially olefins, substituted aromatics and aldehydes, that react rapidly in the atmosphere to form photochemical smog or ozone.

Sensitive Receptors -- Facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas.

State Implementation Plan (SIP) -- EPA-approved state plans for attaining and maintaining federal air quality standards.

Stationary Source -- A fixed, non-mobile source of air pollution, usually found at industrial or commercial facilities.

Sulfur Oxides (SO<sub>x</sub>) -- Pungent, colorless gases formed primarily by the combustion of sulfur-containing fossil fuels, especially coal and oil. Considered a criteria air pollutant, sulfur oxides may damage the respiratory tract as well as vegetation.

Toxic Air Contaminants -- Air pollutants which cause illness or death in relatively small quantities. **Non-criteria air contaminants that, upon exposure, ingestion, inhalation, or assimilation into organisms either directly from the environment or indirectly by ingestion through food chains, may cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, or physical deformations in such organisms or their offspring.**

Transportation Control Measures (TCMs) -- Measures to reduce traffic congestion and decrease emissions from motor vehicles by reducing vehicle use.

URBEMIS -- A computer model developed by the California Air Resources Board to estimate air pollutant emissions from motor vehicle trips associated with land use development.

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01.17.13

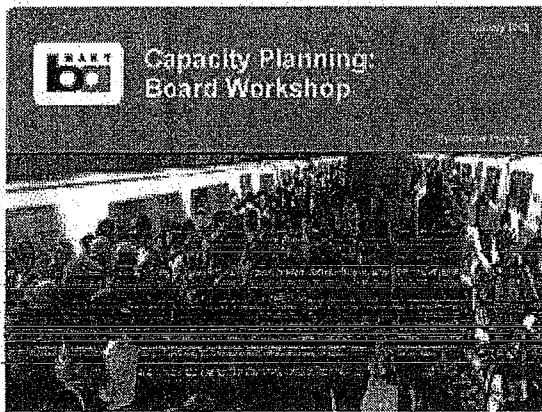


This story is archived. Visit [bart.gov/news](http://bart.gov/news) for the latest BART news.

## Train strain: BART working on capacity issues as ridership rises to record levels

It's not your imagination. BART trains are still getting more crowded, especially in the peak commute hours. In 2012 BART carried more than 114 million riders, surpassing all records. BART also set an all-time single-day record of 568,061 as the Bay Area celebrated the 2012 Giants World Series victory.

The good news: It's an indication the economy is rebounding; more people have jobs to go to; they're choosing BART and reporting high customer satisfaction with important attributes such as on-time performance. The down side: Crowded cars are less comfortable for riders.



*Cover page of Capacity Planning presentation*

### WHAT BART IS DOING TO HELP

BART is stretching train car utilization to the max, putting every possible car in service that can be used without jeopardizing safety or reliability. We're also working over the long range to completely replace the fleet and expand capacity (see [www.bart.gov/cars](http://www.bart.gov/cars) for more info). At a Board of Directors workshop Jan. 11-12, 2013, the Board heard presentations on the new rail vehicle program and on capacity planning issues. Download the new rail vehicle presentation and the capacity planning presentation for more details, or play an archived video of the workshop for the discussion.

"Our cars continue to age and require intensive maintenance to maintain reliability," Jay Bolcik, manager of schedules and service planning, said. BART has one of the oldest fleets in the nation.





Riders can do their part to maximize space by following the guidelines for courtesy and safety, such as moving to the center of the car to make room for riders getting on, not holding the train doors open, following rules 1 Q es and preparing to exit as the train nears your destination. With more crowded trains, a little patience goes a long way.

In 2012 BART saw weekdays with ridership of 400,000-plus – edging up past figures from 2008, the system's highest sustained ridership levels for regular days, without special events. While overall numbers are one thing, looking at commute hours is even more telling – after all, about 57 percent of all BART ridership happens in the peak (defined as 7 am – 10 am and 4 pm to 7 pm). Every month in calendar year 2012 the combined AM/PM peak ridership has exceeded previous monthly records.

#### "PEAK OF THE PEAK" TRENDING TOWARD RECORD

Even more interesting is the "peak of the peak" – numbers obtained from internal modeling, showing riders traveling to the most congested stops in the San Francisco Financial District. Those numbers are trending even higher than the record seen in 2008 – about 49,000 every morning, compared with about 46,000 in 2008.

"Those peak hour trains are the most crowded," Bolcik said. "We still have capacity, but we are running the maximum number of trains and cars at those times." Because many of those riders are going to fixed work schedules, they have little flexibility to change their commute patterns.

BART is now serving 44 stations without any increase in the total fleet size, although some trains were lengthened on the Dublin line to serve the new customers using the West Dublin/Pleasanton station that opened in 2011. BART typically has 573 of its 669 train cars available at the peak commute, representing over 85 percent of the BART fleet – one of the highest utilization rates of any major transit agency. (The rest of the cars are undergoing scheduled maintenance or component upgrades.) "We don't let a car operate unless we have complete confidence in its safety and reliability," Bolcik said.

#### SAFETY AND RELIABILITY COME FIRST

Pressing train cars into service that are not road-ready would only lead to more delays. It's akin to running your personal car without ever changing the oil – the longer you wait, the more damage you do, the greater chance of a major failure, and an even longer wait time when it eventually gets fixed.

Scheduling managers are constantly analyzing data from the passenger loads on BART trains, working to make any adjustments that are needed so that the right size trains can be assigned. In some cases even when more train cars would be optimal, there just aren't enough to go around. That's why you can't guarantee that even if your regular route typically has a 10-car train, there won't be a day when it has to be nine cars or even shorter, depending on availability. Train car lengths are





decade, BART is modifying the seat configuration on trains to increase the space for standing riders, luggage, bikes and strollers. BART plans to have all train cars modified by July 2013.

*This is an updated version of a story that was originally published in May 2011.*

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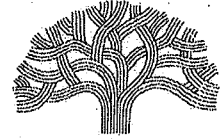


# **ATTACHMENT C**

*Planning Commission Decision Letter*



# CITY OF OAKLAND



DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA, SUITE 2114 • OAKLAND, CALIFORNIA 94612-2032

Department of Planning and Building  
Zoning Division

(510) 238-3911  
FAX (510) 238-4730  
TDD (510) 238-3254

## PLANNING COMMISSION DECISION LETTER

Sent via U.S. Mail and Electronic Mail

March 22, 2019

Rubicon Point Partners, LLC  
Attn: Chris Relf  
55 2<sup>nd</sup> Street, Suite 1900  
San Francisco, CA 94105

**RE: Application Number: PLN18369; Property Location: 1750 Broadway; APN: 008 062301300**

Dear Mr. Relf:

The above application was **APPROVED** at the City Planning Commission meeting (by a (4-0) vote) on March 20, 2019. The Commission's action is indicated below. This action becomes final ten (10) days after the date of the announcement of the decision unless an appeal to the City Council is filed by **4:00 pm on Monday, April 1, 2019.**

1. Adoption/approval of the CEQA Findings.
2. Approval of the project, including Major Conditional Use Permit and Regular Design Review, subject to the attached Findings, Conditions of Approval, Mitigation Monitoring and Reporting Program.
3. This includes an additional Condition of Approval (#24) imposed at the Planning Commission hearing to consider the feasibility of adding a new lightwell on the northside of the new building.

If you, or any interested party, seeks to challenge this decision, an appeal must be filed by no later than ten (10) calendar days from the announcement of the decision (by 4:00 pm on Monday, April 1, 2019). An appeal shall be on a form provided by the Bureau of Planning, and submitted to the same at 250 Frank H. Ogawa Plaza, Suite 2114, to the attention of Mike Rivera, Project Planner. The appeal shall state specifically wherein it is claimed there was error or abuse of discretion by the Planning Commission or wherein their decision is not supported by substantial evidence and must include payment of \$1,891.08 in accordance with the City of Oakland Master Fee Schedule. Failure to timely appeal will preclude you, or any interested party, from challenging the City's decision in court. The appeal itself must raise each and every issue that is contested, along with all the arguments and evidence in the record which supports the basis of the appeal; failure to do so may preclude you from raising such issues during the appeal and/or in court. However, the appeal will be limited to issues and/or evidence presented to the City Planning



Commission prior to the close of the City Planning Commission's public hearing on the matter. Project conditions of approval, are set forth in Attachments A and B.

If you have any questions, please contact the project case Planner, Mike Rivera at (510) 238-6417 or by email [mriviera@oaklandnet.com](mailto:mriviera@oaklandnet.com), however, this does not substitute for filing of an appeal as described above.

Very Truly Yours,

*Robert D Lind for Catherine Payne*  
CATHERINE PAYNE  
Acting Development Planning Manager  
Bureau of Planning

**Attachments:**

- Approved Plans
- Findings
- Conditions
- SCAMMRP (Standard Conditions of Approval Mitigation Monitoring Reporting Program)

**Cc:** City Surveyor, DOT    City Engineer, DOT    City Fire Bureau    City Public Works

Interested Parties:

BART-Val Memotti	Mallory Nestor	Chantal Reynolds	Michael Hursh
Joseph Hornof	Michael R. Lozeau	Stephen Merjavy	Manar Harb
Chao-Yi Meng	Scott Goff	Velta Savelis	Andre Owens
Matt Perry	Nancy Morosohk	Clay Kilby	Christy Booth
Adria Anderson	Jwlhyfer de Winter	Janet Laurain	Rory Ross
Christina Caro			

*Mike Rivera*  
(NAME & SIGNATURE OF PERSON PLACING IN MAIL)

*3/22/19*  
(DATE)



# **ATTACHMENT D**

*Public Notice for the February 4, 2020  
City Council Meeting*





# CITY OF OAKLAND

Bureau of Planning

Frank H. Ogawa Plaza, Suite 2114, Oakland, California, 94612-2032

## CITY OF OAKLAND NOTICE OF PUBLIC HEARING

**APPEAL TO THE CITY COUNCIL OF THE PLANNING COMMISSION APPROVAL FOR A NEW 37-STORY BUILDING WITH 5,000 SQUARE FEET OF GROUND FLOOR COMMERCIAL SPACE, 307 RESIDENTIAL UNITS ABOVE, AND A 170-SPACE PARKING GARAGE, LOCATED AT 1750 BROADWAY, AND RELATED CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) FINDINGS (CASE NUMBER PLN18369).**

Notice is hereby given that on **Tuesday, February 4, 2020, at 5:30 p.m. (or as soon thereafter as possible) in the City Council Chambers, City Hall, 1 Frank H. Ogawa Plaza**, the Oakland City Council (decision body) will conduct a public hearing to consider two separate appeals of the March 20, 2019 Planning Commission approval of a Major Conditional Use Permit, Regular Design Review, and adoption of the California Environmental Quality Act (CEQA) Findings for the project located at 1750 Broadway, Oakland, California ("Appeals") by:

- 1) "Residents of 1770 Broadway" led by Joseph Hornof (case file APL19010); and
- 2) "East Bay Residents for Responsible Development" led by Adams Broadwell Joseph Cardozo (case file APL19013).

Members of the public are welcome to attend the City Council hearing, and provide either written or oral comments regarding these Appeals. Comments can also be directed to the City Council at the following link: <https://www.oaklandca.gov/departments/oakland-city-council>. If you seek to challenge this Planning Commission approval, as appealed, in court, you may be limited to raising only those issues raised at the public hearing described above.

On Friday, January 17, 2020, the City Council agenda report will be available to the public for review at the City of Oakland Permit Center, 250 Frank H. Ogawa Plaza, and online here:

APL19010:

<https://aca.accela.com/OAKLAND/Cap/CapDetail.aspx?Module=Planning&TabName=Planning&capID1=19CAP&capID2=00000&capID3=09123&agencyCode=OAKLAND&IsToShowInspection=>

APL19013:

<https://aca.accela.com/OAKLAND/Cap/CapDetail.aspx?Module=Planning&TabName=Planning&capID1=19CAP&capID2=00000&capID3=09133&agencyCode=OAKLAND&IsToShowInspection=>

On Friday, January 24, 2020, the City Council agenda report will also be available by visiting the Oakland City Council link here: <https://oakland.legistar.com/calendar.aspx>

If you have any questions regarding this Appeal, please contact the Project Case Planner, Mike Rivera at (510) 238-6417 or [mrivera@oaklandca.gov](mailto:mrivera@oaklandca.gov).



# **ATTACHMENT E**

*ESA Memorandum-Responses, dated October 22, 2019*





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

esassoc.com

# memorandum

date October 22, 2019

to Mike Rivera, City Planner  
City of Oakland  
Bureau of Planning  
250 Frank H. Ogawa, Suite 2114  
Oakland, CA 94612  
510 238-6417  
mrivera@oaklandnet.com

from Elizabeth Kanner  
Senior Managing Associate ESA  
ekanner@esassoc.com

subject Response to 1750 Broadway Project Appeal Letters from Adams Broadwell Joseph & Cardozo /  
East Bay Residents for Responsible Development (April 1, 2019) and Joseph Hornof /  
Residents of 1770 Broadway (April 1, 2019)

This memorandum provides responses to the April 1, 2019 appeal letters from Adams Broadwell Joseph & Cardozo (hereafter, "Adams Broadwell Appeal") and Joseph Hornof / Residents of 1770 Broadway (hereafter, "1770 Appeal") containing comments on the CEQA Checklist/Exemption Report (hereafter, "CEQA Analysis") for the 1750 Broadway Mixed-Use Project (Project) that was published in February 2019 (PLN 18369). These responses are limited to the comments relating to the CEQA analysis.

## I. Adams Broadwell Appeal

The Adams Broadwell Appeal challenges the City's reliance on the series of CEQA exemptions that were used in the CEQA Analysis to satisfy environmental review of the Project under the California Environmental Quality Act (CEQA). The responses to the Adams Broadwell Appeal are organized into the following topics, which correspond with the topics in the Adams Broadwell Appeal.

### A. Response to Comment Regarding Health Risks from Construction Emissions

*The Adams Broadwell appeal letter asserts that the CEQA Analysis/Exemption Report did not adequately address construction-related health risk analysis and associated mitigation. This claim assumes the requirement for use of Tier 4 engines in all construction equipment, identified in the Project Health Risk Assessment, is non-binding and that the cumulative scenario neglected to include a nearby project.*



## **RESPONSE:**

### **Requirement to use Tier 4 equipment as binding mitigation**

The CEQA Analysis for the Project includes a detailed Construction Health Risk Assessment for the analysis of health risks from exposure to Diesel Particulate Matter (DPM), conducted using standard methodology recommended by the Bay Area Air Quality Management District (BAAQMD) and the Office of Environmental Health and Hazard Assessment (OEHHHA) (see 1750 Broadway Project CEQA Checklist/Exemption Report, Appendix C). Emission rates were estimated based on outputs from CalEEMod, the BAAQMD recommended model for estimating emissions from land use development projects such as the Project; dispersion modeling to estimate concentrations was conducted using USEPA approved AERMOD.

The HRA in itself is partial implementation of the requirements of Standard Condition of Approval (SCA) AIR-3a(i) which requires project applicants to complete an HRA to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. As stipulated by the SCA, if a project's estimated health risks exceed acceptable levels, DPM reduction measures are to be identified to reduce the health risk to acceptable levels. The Project HRA found that uncontrolled (unmitigated) health risks from exposure to Project construction emissions would exceed the City's thresholds. The Project HRA identifies use of construction equipment complying with Tier 4 Final standards as the measure to reduce Project health risks to acceptable levels. SCA AIR-3a(ii) validates the use of Tier 4 engines in off-road diesel equipment as one of the most effective Verified Diesel Emission Control Strategies (VDECS) available. Further, SCA AIR-3a(i) requires that all measures identified to reduce health risks be included as part of a Construction Emissions Minimization Plan (EMP) as detailed under SCA AIR-3b. The Construction EMP for the Project will therefore include the requirement for use of Tier 4 engines in all construction equipment and shall be submitted to the City for review and approval prior to the issuance of building permits. As required by SCA AIR-3b, the EMP will provide a detailed inventory of off-road equipment used for each phase of construction with details of the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number and include a Certification Statement that the Contractor agrees to comply fully with the EMP. The Project HRA and the EMP are both submitted to the City for review as part of SCA AIR-3 (see the Standard Conditions of Approval and Mitigation Monitoring and Reporting Program in the 1750 Broadway Project CEQA Checklist/Exemption Report, Attachment A). This ensures that the Project HRA's requirement to use Tier 4 engines in all construction equipment to reduce health risks to acceptable levels becomes a binding contract, contingent upon which building permits will be issued.

The Adams Broadwell Appeal, in Exhibit A, incorrectly states that SCA AIR-3 (City SCA 23) requires *either* an HRA or a Construction EMP and that the plan does not expressly require Tier 4. As explained above, as part of implementation of SCA AIR-3a(i), when an HRA determines the need for additional control measures to reduce risks to acceptable levels, implementation of SCA AIR-3b requiring preparation and submission of a Construction EMP becomes mandatory. The requirement to use Tier 4 construction equipment, as determined necessary by the HRA, becomes part of the Construction EMP and hence binding conditions for approval of building permits.

### **Availability of Tier 4 Final Equipment**

Regarding the availability of off-road construction equipment that meet the Tier 4 Final standards, the California Air Resources Board has gathered statewide data summary as part of compliance with the In-Use Off-Road Diesel Regulation. The data indicate the available construction equipment at various engine tier levels and show



that in 2017, 19 percent of the total construction equipment fleet statewide met the Tier 4 Final standards.<sup>1</sup> Within the Bay Area specifically, Tier 4 Final equipment constituted 16 percent of the total vehicle fleet, up from 4 percent in 2014.<sup>2</sup> The percentages are expected to have increased further by 2019. Several jurisdictions such as San Francisco, have adopted Clean Construction Ordinances requiring use of off-road equipment that operate with the most effective VDECS as certified by ARB, while acknowledging Tier 4 equipment to automatically meet this requirement. As a result, it can be concluded that requiring the use of construction equipment that meet the Tier 4 Final standards is feasible mitigation to reduce uncontrolled health risk impacts to acceptable levels.

### **Cumulative Impacts of nearby projects**

The Adams Broadwell appeal letter asserts that the CEQA analysis for the project does not take into account the cumulative impacts of construction of the 1750 Broadway project with the nearby 1900 Broadway project, which is already under construction.

The Project's individual impacts from construction are estimated in the Project HRA in the form of incremental cancer risk to occupants of 1770 Broadway, the Maximum Exposed Individual Receptor (MEIR) for the Project as determined by dispersion modeling. Though uncontrolled risks at the MEIR were found to exceed thresholds, with the use of Tier 4 Final construction equipment, which will be required as part of implementation of SCA AIR-3 during the permitting process as explained above, health risks at the MEIR would reduce to acceptable levels. The emission reductions associated with the use of construction equipment meeting the Tier 4 Final standards is based on default emission factors embedded in CalEEMod. 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 greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects and is recommended by the BAAQMD as the preferred model to estimate project emissions. Therefore, emission reductions associated with the use of construction equipment meeting the Tier 4 Final standards used in the Project HRA are not an unsupported assumption as claimed in the Adams Broadwell Appeal.

For the analysis of cumulative impacts, BAAQMD guidance considers past, existing and proposed projects within a 1,000-foot radius from the project site be included as part of the cumulative scenario.<sup>3</sup> However, due to the temporary nature of construction projects and the change in risk exposure with age of the receptors, including past construction projects would unrealistically elevate risks as explained below and are therefore typically not included as part of the cumulative analysis. When analyzing health risks to the most sensitive segment of the population (an unborn child in the 3<sup>rd</sup> trimester) as required by the current methodology used for HRAs, it is not possible to determine effects of construction of past projects on the MEIR for a current project, which is considered to be an unborn child in the 3<sup>rd</sup> trimester at the start of construction and hence that theoretical person may not have even been conceived when those past projects were being constructed.

Consistent with BAAQMD guidance, the Project HRA includes health risks from existing permitted stationary sources (derived from the BAAQMD database), major roadways and proposed stationary sources (primarily backup generators at proposed projects including the Project and the 1900 Broadway project). As noted in the Clark & Associates comment letter (Exhibit D to the Adams Broadwell Appeal), although not certain, the Project

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<sup>1</sup> California Air Resources Board, "In-Use, Off-Road Equipment, 2017 Inventory Model," April 2018.

<sup>2</sup> Ibid.

<sup>3</sup> Bay Area Air Quality Management District, "California Environmental Quality Act Air Quality Guidelines," May 2017.



has the potential to begin construction prior to completion of the 1900 Broadway project construction. In addition, the 1770 Broadway residents were also identified as the MEIR for the 1900 Broadway project based on its own construction health risk analysis. However, the Clark & Associates erroneously combines the unmitigated emissions results from each HRA and claims that the residents of 1770 Broadway would be exposed to risks greater than the project level and cumulative thresholds adopted by the City.

This is incorrect because the HRAs for both projects require the use of Tier 4 construction equipment to reduce health risks to acceptable levels. As explained above, this requirement is imposed as part of a binding contract through the implementation of SCA AIR-3, contingent upon which building permits are issued. Therefore, both projects are required to commit to use construction equipment that meet the Tier 4 Final standards. As a result, adding unmitigated risks from the two projects would be an unrealistic scenario as construction related permits would not be issued to either project. Further, it should be noted that the combined risks/concentrations from the two projects at the common MEIR is more than the simple addition of the two estimated health risk values/concentrations. Due to the temporal distribution of construction activities associated with the two projects, concentrations from the two projects affecting the common MEIR (1770 Broadway) would fluctuate each year and would affect the MEIR in different ways. As explained earlier, the MEIR is most conservatively assumed to be an unborn child in the 3<sup>rd</sup> trimester and depending on the construction schedules of the two projects, the exposure and hence associated cancer risk to this child varies as it gets older. Simplistically combining health risks (or DPM concentrations) produces an overly conservative estimate of total risk because construction schedules of the two projects would not be simultaneous and may only overlap. Having said that, even if we were to simplistically add the mitigated construction health risk at the MEIR from the 1900 Broadway Project to the cumulative scenario, the total risk would be 52.5 in a million, well below the 100 in a million threshold for cumulative impacts.

Further, the Project HRA's cumulative scenario shown in Table 9.6-5 of the CEQA Analysis includes health risk from the operation of emergency generators at the 1900 Broadway project. As project-specific risk for these generators was not available, cancer risk from the generators was conservatively assumed to be 10 in a million (the maximum allowable for BAAQMD permitted sources) and adjusted for distance to the MEIR. If we were to include construction health risks from 1900 Broadway into the Project's cumulative scenario as proposed by the Appeal, the operational health risk will need to be removed from the cumulative scenario as construction and operation of a project could not possibly happen simultaneously. As the conservatively assumed operational health risk from the 1900 Broadway generators is much higher than the construction health risk estimated for 1900 Broadway project, including construction risk (and not operational risk) as proposed in the appeal letter would in fact reduce the cumulative health risk shown in Table 9.6-5 of the CEQA Analysis/Exemption Report from 48 to 41 in a million and hence not represent the most conservative scenario.

## B. Response to Comment Regarding Construction Noise

*The Adams Broadwell Appeal letter asserts that compliance with the City's Standard Conditions of Approval (SCA) do not constitute substantial evidence supporting the conclusion of no significant impact with respect to construction noise.*



## **RESPONSE:**

The CEQA Analysis disclosed potential impacts from construction noise and identified the City's required SCAs (specifically SCA NOI-1 through SCA NOI-8) that would reduce these potential impacts to a less-than-significant level. To further support this conclusion, the Project Applicant engaged Charles M. Salter Associates, Inc. to prepare a Construction Noise Management Plan (CNMP) in compliance with SCA NOI-3a (also referred to as SCA 64-a) (see Attachment B). The CNMP clearly illustrates how compliance with the City's SCAs would adequately mitigate these potential impacts. The noise reduction measures identified and evaluated in the CNMP are considered SCA implementation measures. They are not considered additional mitigation as they are already required as a part of the City's SCAs.

The CNMP identifies SCA implementation measures customized to Project and project site. Noise measurements conducted for the CNMP show that the existing noise levels exceed the maximum allowable receiving noise level standards at the adjacent properties for long-term construction. Therefore, the existing ambient noise levels become the applicable daytime long-term construction noise standard. Note, the CNMP selected noise measurement locations to capture the existing noise environment as it would be without construction noise from the 1900 Broadway Project. This establishes the correct and more conservative threshold. The CNMP specifically calculates the Project's maximum construction noise levels at these nearby receiver locations and measures them against the compliance standard.

As required by applicable SCAs, the CNMP identifies the specific noise-reduction measures necessary to reduce construction noise to meet the City's Noise Ordinance noise limit criteria. Further, the CNMP establishes the feasibility and effectiveness of these SCA implementation measures. Consistent with the conclusions of the CEQA Analysis, existing SCAs are determined to adequately mitigate potential construction noise impacts to less-than-significant levels. Therefore, there are no exceptions that apply to the Project or its site, and the Project would not have a significant effect on the environment related to construction noise.

## **C. Response to Comment Regarding Public Transit**

*The Adams Broadwell Appeal letter asserts that the Project CEQA Analysis/Exemption Report should have evaluated the impacts of the Project on transit ridership.*

## **RESPONSE:**

A response to this claim is provided in Attachment A.

## **II. 1770 Appeal**

This memorandum responds only to the CEQA-related comments from the 1770 Appeal which are organized into the following topics.

### **A. Response to Comment Regarding CEQA Exemptions**

*The 1770 Appeal letter asserts the Project is not eligible for a CEQA exemption and thus cumulative impacts were not adequately disclosed or mitigated.*



## **RESPONSE:**

The analysis presented in the CEQA Exemption Report provides substantial evidence that the Project properly qualifies for an exemption under CEQA Guidelines Section 15332 as a Class 32 urban in-fill development, that there are no exceptions that apply to the Project or its site, and that the Project would not have a significant effect on the environment.

## **B. Response to Comment Regarding a Unique or Peculiar Project**

*The 1770 Appeal letter asserts the Project shall be considered “unusual” because it is dissimilar in size and/or scale from adjacent structures and would require a long construction timeline.*

## **RESPONSE:**

A project that is larger than adjacent buildings and that requires a two- to three-year construction schedule does not, in and of itself, constitute a peculiar project or unusual circumstances under CEQA.

As described in Section 7 of the CEQA Analysis, under specific circumstances, exceptions would apply to classes of projects categorically exempt under CEQA Guidelines Section 15332 (Class 32), such as the Project. The exceptions are defined in Guideline Section 15300.2, and include an exception titled “significant effect” (15300.2(c)). This exception precludes a project from an exemption if there is substantial evidence that, a) there is a reasonable possibility the activity or project will have a significant effect on the environment, and b) that effect is the result of unusual circumstances. Some examples of unusual circumstances are provided on the State’s website (<http://resources.ca.gov/ceqa/guidelines/art19.html>) and include inconsistencies in zoning. While the development of high-rise towers in this particular part of Oakland is relatively new, it is not unusual or peculiar and does not represent an unusual circumstance.

The Project’s consistency with the City’s land use designation and zoning is detailed in Attachment B to the CEQA Analysis. The site is located along one of the City’s major commercial corridors (Broadway) and is within the City’s Central Business District (CBD) and Central Business District Commercial and Pedestrian Retail Commercial Zones (CBD-C and CBD-P). The Project is consistent with the specific intent of the land use designation and zoning for the site and fulfills the land use and zoning goals stated in the General Plan and Municipal Code. This includes the type and density of uses as well as the building height. The CEQA Analysis correctly concluded that there are no unusual circumstances specific to the Project, compared to its surroundings and similar projects (high-rise, mixed use, in-fill development downtown) that would pose a reasonable possibility of it having a significant effect on the environment.

## **C. Response to Comment Regarding construction noise**

*The 1770 Appeal letter asserts the proximity of 1770 Broadway to the Project site render SCAs infeasible. The 1770 Appeal letter also expresses concern regarding noise from Concrete/Industrial Saws during demolition and grading.*

## **RESPONSE:**

Please see response to 1750 Broadway Project Appeal Letters from Adams Broadwell Appeal item I.B above. Specifically, the CNMP selected noise measurement locations to capture the existing noise environment as it



would be without construction noise from the 1900 Broadway Project thereby establishing the correct and more conservative daytime long-term construction noise standard. Note these SCAs also apply to cumulative projects including the 1900 Broadway Project. To estimate construction noise, the CNMP calculates the Project's maximum construction noise levels at these nearby receiver locations and measures them against the compliance standard. The CNMP concluded that compliance with the City's SCAs would adequately mitigate potential impacts from construction noise.

Note that the Health Risk Assessment prepared for the Project evaluated a preliminary construction equipment list determined to be conservative as it relates to emissions. However, the Project Applicant would not employ concrete/industrial saws during demolition or at any phase of construction. For this reason, maximum construction noise levels from these saws was not included in the CNMP.

## D. Response to Comment Regarding Shadow Analysis

*The 1770 Appeal letter asserts that, "The Bauer Apartments are historic not just for their facade, but their purpose." This statement implies that the building's residential use constitutes part of the building's historic significance. Further the appellant implies that access to sunlight is a critical feature of the residential use.*

### RESPONSE:

The assertion above is not supported in the City's records or thresholds of significance. In 1984, the City prepared Department of Parks and Recreation (DPR) 523 forms for the 1770 Broadway building to consider its eligibility as a contributor to the potential Uptown Historic District.<sup>4</sup> The narrative and form selections indicate the building architecture, as well as the architect, engineer, and owner are the characteristics holding the building's potential significance. While the building is described as an apartment building, residential use is not listed as relevant to 1770 Broadway's historic significance.

In terms shade on 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 resources that possess identified historically significant features that are sunlight-sensitive such as stained glass, elaborately carved ornamentation, or design elements that depend on the contrast between light and dark (e.g., open galleries, arcades, or recessed balconies). For example, a prolonged blockage of direct sunlight, throughout the day and year and specifically during times of worship, could materially impair the historic significance of historic places of worship where the light through stained glass windows contributes to its architectural historical significance.

The 1770 Broadway building does not possess any sunlight-sensitive features such as those described above and access to natural light is not a material character defining element of building's eligibility as a contributor to the Uptown Historic District. New shadow on the building would not materially impair the buildings historic significance by materially altering those physical characteristic that convey its historical significance and that justify its eligibility for listing in the National Register of Historic Places, California Register of Historical

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<sup>4</sup> DPR 523 forms are the State's Office of Historic Preservation form used for recording and evaluating historic resources.



Resources, Local Register of historical resources, or a historical resource survey form. Therefore, the Project's shadow would not result in significant adverse impacts with respect to historic resources.

### **III. Conclusion**

As outlined in exhausting detail, the assumptions and conclusions in the Project's CEQA Analysis are supported by substantial evidence in accordance with CEQA, while none of the assertions presented by Adams Broadwell Appeal or 1770 Appeal provides credible, persuasive, or substantial evidence that the Project would result in a new, peculiar, significant environmental impact.

Significant impacts also are not "peculiar" to a project or property where uniform policies or standards apply that would mitigate the impact. Site specific analysis is not required where, like here, Standard Conditions of Approval (SCA) apply to mitigate the impact identified and where, as indicated under Appendix M to the CEQA Guidelines, recommendations established by a qualified consultant are implemented.



# **ATTACHMENT F**

*Report by Charles Salter Associates, Inc., October 22, 2019*



# **1750 Broadway Residences**

**Oakland, CA**

## **Construction Noise Management Plan**

October 22, 2019

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Salter Project Number: 19-0297



## **INTRODUCTION**

This report provides a site-specific construction noise reduction plan for the 1750 Broadway Residences project. The project is located along Broadway, between 17th Street and 19th Street in Oakland. We have reviewed the proposed construction noise equipment and schedule and predicted the noise levels expected at the nearby buildings.

Construction is estimated to begin early-2021 and be completed within approximately 26 months thereafter. Construction will occur on weekdays between the hours of 7 am and 7 pm.

The project is in the Central Business District (CBD-P & CBD-C) Zone. The adjacent buildings are residences to the north (1770 Broadway), a parking garage to the east, and a commercial building to the south. The residences to the north are the closest noise-sensitive receivers.

This report summarizes the results of our analysis and provides recommendations for construction noise reduction measures. The report consists of the following sections:

- 1.0 Executive Summary
- 2.0 Applicable Criteria
- 3.0 Construction Noise Analysis
- 4.0 Noise Reduction Measures
- Appendix A – Site Logistics Plan
- Appendix B – Noise Monitoring Equipment

### **1.0 EXECUTIVE SUMMARY**

1. Construction noise levels and duration of noise will vary depending on the type and location of the construction activities. We expect that noise levels could temporarily exceed the ordinance criteria without noise reduction measures at the nearest properties when construction is occurring close to the properties. However, noise levels are expected to meet the City noise limit criteria with the noise reduction measures recommended in this report.
2. The recommended noise-reduction measures are expected to reduce construction noise to meet the City noise limits. We will be implementing the noise-reduction measures provided in the construction noise analysis conducted by the acoustical consultant retained by the residents of 1770 Broadway. Additional noise-reduction measures, such as equipment relocation away from residential receivers and additional barriers, should be considered to further reduce the construction noise levels. This is discussed in Section 4.0.



## 2.0 APPLICABLE CRITERIA

### 2.1 Oakland Municipal Code

The City of Oakland Noise Ordinance<sup>1</sup> provides provisions for construction noise levels. These provisions are as follows:

*The daytime noise level received by any residential, commercial, or industrial land use which is produced by any non-scheduled, intermittent, short-term construction or demolition operation (less than ten days) or by any repetitively scheduled and relatively long-term construction or demolition operation (ten days or more) shall not exceed:*

**Table 1: Maximum Allowable Receiving Noise Level Standards, dBA**

	<b>Weekdays 7 am to 7 pm</b>	<b>Weekends 9 am to 8 pm</b>
Short-Term Operation		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Operation		
Residential	65	55
Commercial, Industrial	70	60

Additionally, Section 17.120.050 Part D of the Municipal Code states:

*In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the stated applicable noise level shall be adjusted so as to equal the ambient noise level.*

Construction of the project is considered long-term. This report includes recommendations to reduce noise from construction activities that exceed these long-term noise criteria.

### 2.2 Existing Noise Environment

Table 2 shows the existing noise environment at the project site during the proposed construction hours (i.e., weekdays from 7 am to 7 pm). Measurements were conducted in May 2019. Noise levels are shown as the range of hourly  $L_{eq}^2$  in dBA<sup>3</sup>. See **Figure 1** for the measurement locations, which included a monitor on the roof of the adjacent residential building at 1770 Broadway. See **Figures 2 to 4** for a graphical representation of the measured noise levels during the entire measurement period.

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1 City of Oakland Municipal Code, Chapter 17 "Noise"

2  $L_{eq}$  – The equivalent steady-state A-weighted sound level that, in a stated period of time, would contain the same acoustic energy as the time-varying sound level during the same period.

3 A-Weighted Sound Level – The A-weighted sound pressure level, expressed in decibels (dB). Sometimes the unit of sound level is written as dB(A). A weighting is a standard weighting that accounts for the sensitivity of human hearing to the range of audible frequencies. People perceive a 10 dB increase in sound level to be twice as loud.



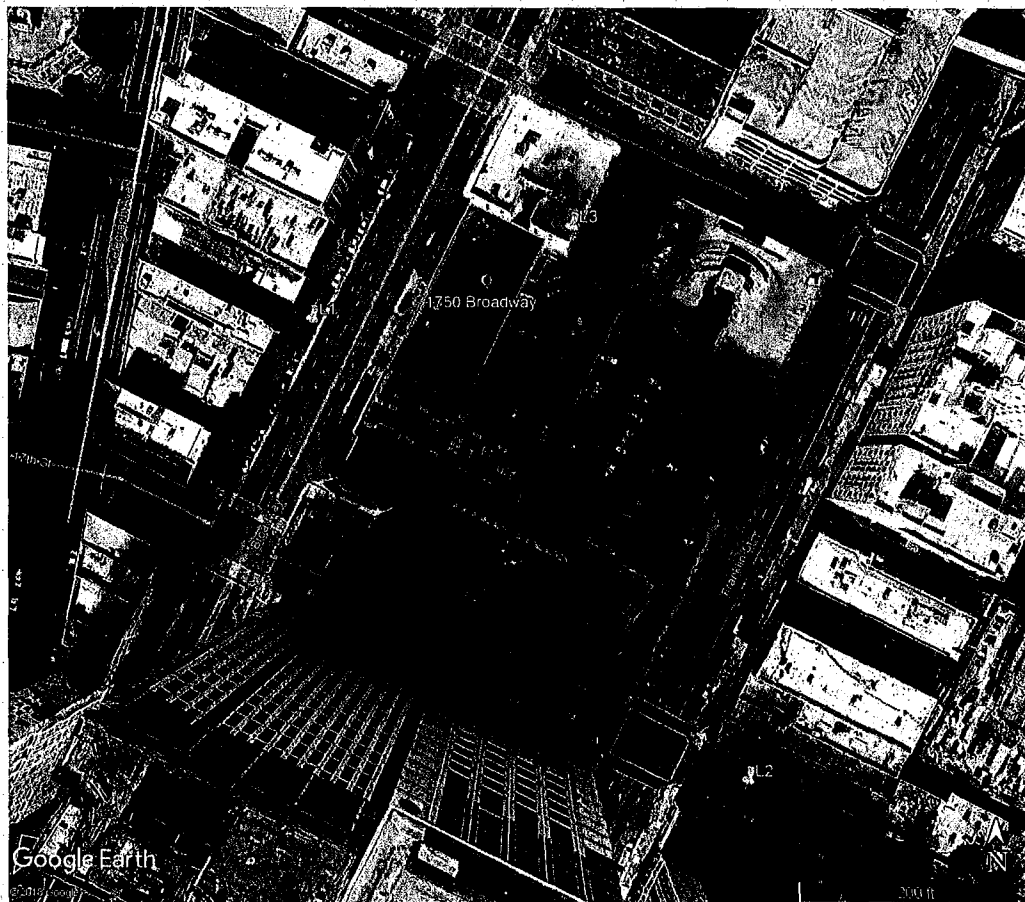
Although the construction site will be closer to 19th Street, our measurements were conducted on 17th Street due to the current construction activity on 19th Street. The measured levels represent typical conditions on 19th Street without construction activity. Future monitoring would occur on 19th Street (see Appendix A). All adjacent land uses are zoned for Central Business District (CBD-P & CBD-C).

**Table 2: Range of Existing Noise Environment During Construction Hours**

Location	Measured Hourly (7 am to 7 pm) $L_{eq}$ (dBA)	Noise Ordinance Prescribed Noise Limit (dBA)
Broadway (L1)	68 to 76	70
17th Street (L2)	63 to 77	70
North Property Line (L3)	63 to 72	65

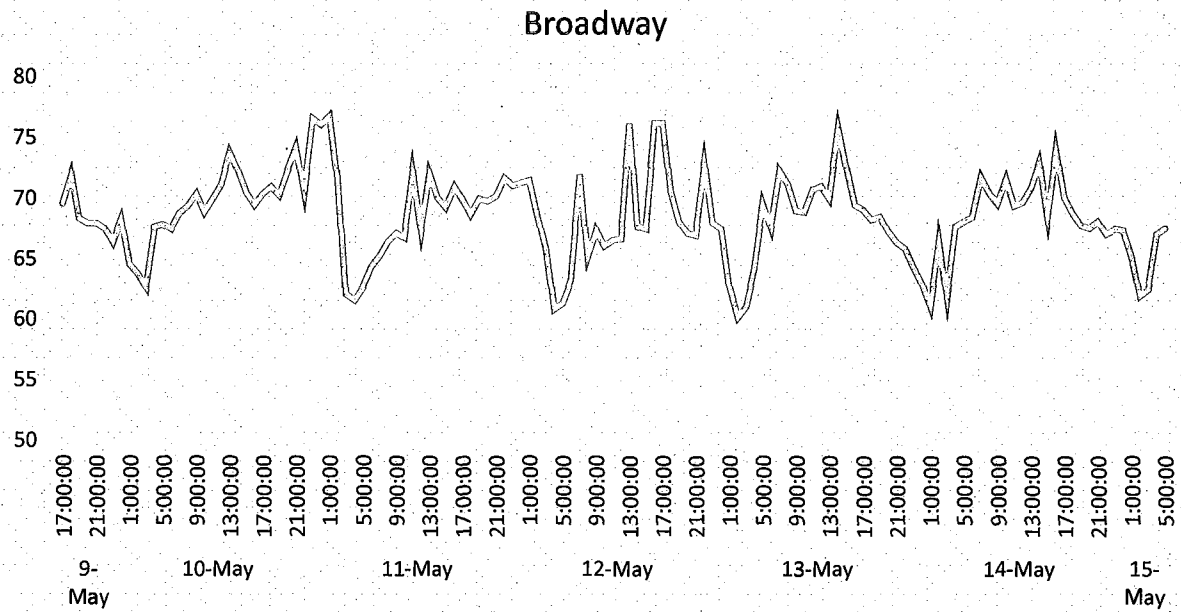
As shown, the existing noise levels exceed the maximum allowable receiving noise level standards at the adjacent properties for long-term construction. Therefore, the existing ambient noise levels are the applicable daytime long-term construction noise standard for all three locations.

**Figure 1: Existing Noise Environment Measurement Locations**

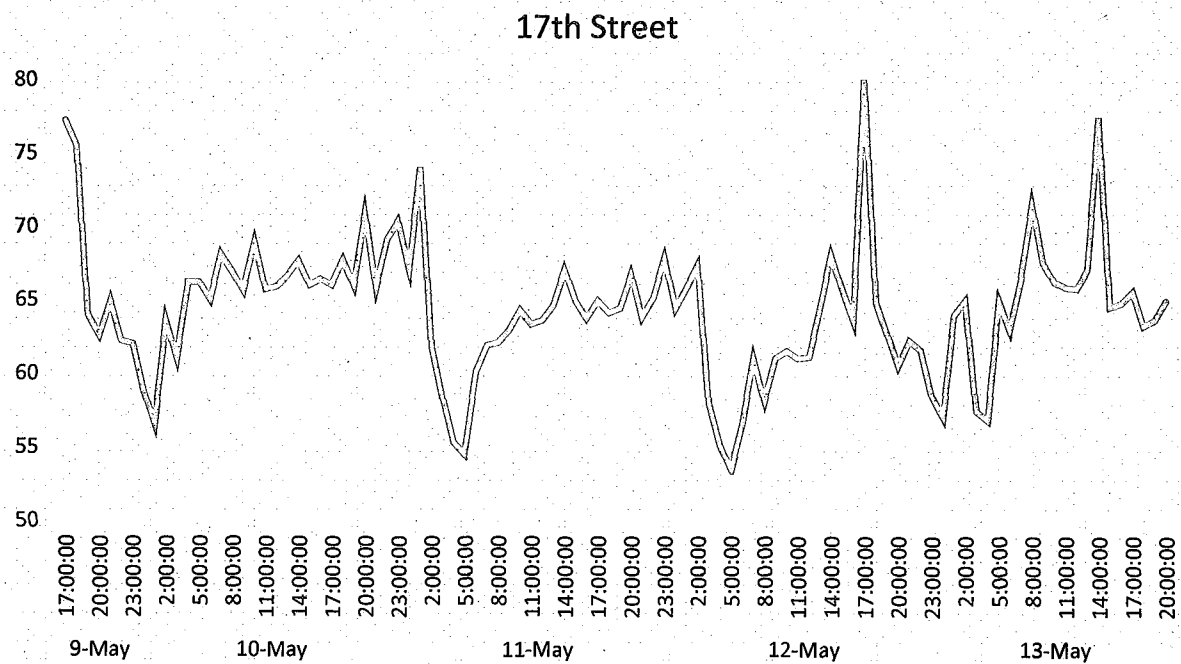




**Figure 2: Measured Hourly Noise Levels (dBA) at Broadway (L1)**

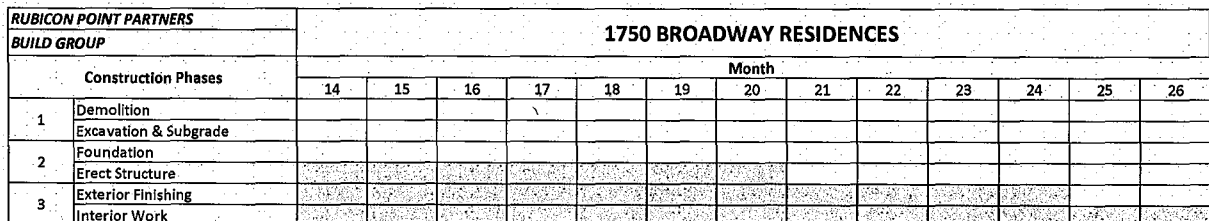


**Figure 3: Measured Hourly Noise Levels (dBA) at 17th Street (L2)**





## North Property Line





A general description of the phases and potential tools and activities that might happen on site during construction is listed below. This does not constitute a comprehensive list of activities, tools, and potential impacts. Actual tools used, activities completed, suggested areas of noise, and durations described might vary depending on site conditions, subcontractor techniques, and general sequencing of the project's schedule.

### **Phase 1: Demolition, Excavation, and Subgrade**

**Scheduled Dates:** Month 1 to Month 7

**Activities:** Phase 1 includes (but is not limited to):

- Demolition of the existing structure (Month 1 only)
- Structural and mass excavation
- Installation of foundations, temporary power lighting, utilities/facilities, and shoring
- Erection of site fencing
- Construction of concrete garage
- Site preparation and improvements

**Tools and Noise:** During this phase, air compressors, backhoes, concrete pumps, dewatering pumps, dozers, drill rig, excavators, forklifts, hand tools, loaders, rollers, and welding machines (with generator) will be used. Most noise during Phase 1 will be focused on or near grade.

### **Phase 2: Foundation and Structure Erection**

**Scheduled Dates:** Month 7 to Month 20

**Activities:** Phase 2 includes (but is not limited to):

- Site improvements
- Installation of temporary shoring and PG&E meters
- Mechanical, electrical, and plumbing rough-in and routing
- Installation of elevator
- Masonry installation
- Installation of exterior envelope
- Use of mobile crane
- Framing of the structure

**Tools and Noise:** During this phase, air compressors, concrete pumps, cranes, forklifts, hand tools, personnel hoists, scissor lifts, and welding machines (with generator) will be used. Most noise during Phase 2 will be located at grade (for deliveries and staging) as well as on and/or around the structural decks where concrete is being poured and framing is installed.

### **Phase 3: Exterior Finishing, Interior Framing and Finishes**

**Scheduled Dates:** Month 10 to Month 26

**Activities:** Phase 3 includes (but is not limited to):



- Concrete pours
- Hand tools for interior work and finishes
- Drywall, framing, tile, and painting
- Cabinet installation
- Elevator work
- Site work and landscaping
- Mobile crane demobilization
- Personnel hoist demobilization
- Mechanical, electrical, and plumbing system installation
- Fire life-safety testing
- Fire alarm testing

**Tools and Noise:** During this phase, the air compressors, concrete pumps, cranes, forklifts, hand tools, personnel hoists, scissor lift, and welding machines (with generator) will be used. Most noise during Phase 3 will be located at grade (for deliveries and staging). However, the building will have the exterior envelope installed. Therefore, much of the construction activity will be in the interior of the building.

### 3.2 Predicted Construction Equipment Noise Levels

Per the proposed construction equipment list, Table 4 indicates the expected equipment noise levels and usage factors. Concrete saws will not be used. These noise levels are the basis of our analysis.

**Table 4: Typical Noise Levels Used for the Analysis<sup>4</sup>**

Equipment	Usage Factor (%)	Hourly Average Noise Level (dBA) @ 50 Feet per Usage Factor
<i>Earthmoving</i>		
Front Loader	40	76
Backhoe	40	76
Dewatering Pump	50*	77
Dozer	40	81
Grader	40	81
Excavator	40	77
Forklift	40	79
<i>Materials Handling</i>		
Concrete Mixer	40	75
Concrete Pump	40	78
Tower Crane	50*	80
<i>Impact</i>		

<sup>4</sup> Sources: U.S. Environmental Protection Agency (1971), FHWA Construction Noise Handbook Tables 9.1 and 9.9



Compressor (pneumatic tools)	40	77
<i>Stationary</i>		
Generator	50	78
Personnel Hoist	50*	72
Scissor Lift	50*	71
Welding Machine	50*	71
<i>Other</i>		
Drill Rig (Auger)	20	77
Roller	20	67

*\*Usage factor estimated*

Based on our review of the phasing and equipment plan, as well as these equipment noise levels provided in the FHWA Construction Noise Handbook and our experience with similar equipment, we have used our own proprietary spreadsheet<sup>5</sup> to calculate the expected maximum noise levels at nearby receiver locations (see Tables 5 to 7).

The equipment was identified for each phase of construction and was assumed to be operating simultaneously at the nearest (worst-case) and furthest (best-case) positions from potential receivers. Since the measured ambient noise levels exceed the City's criterion, the applicable criterion shall be equal to the measured ambient noise level (see Section 2.1). For the purposes of this report, we analyzed noise levels at the proposed long-term monitoring locations (see Appendix A).

### **Location 1**

This location is on the west side of Broadway between 17th Street and 19th Street. It is approximately 80 feet west from the construction site. Based on the construction phasing and equipment information provided, we estimate that construction noise levels without reduction measures could be up to those shown in Table 5.

<b>Table 5: Construction Noise Analysis for Location 1 (Hourly L<sub>eq</sub>)</b>		
<b>Phase</b>	<b>Estimated Maximum Construction Noise Levels</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	82 dBA	Ambient of 68 to 76 dBA <sup>6</sup>
2	80 dBA	
3	80 dBA	

<sup>5</sup> Our model uses distance and accompanying decibel drop-off for each piece of equipment and then sums the noise levels.

<sup>6</sup> "In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the stated applicable noise level shall be adjusted so as to equal the ambient noise level."



## **Location 2**

This location is on the north side of 19th Street, between Broadway and Franklin Street. It is approximately 130 feet from the construction site. Based on the construction phasing and equipment information provided, we estimate that construction noise levels without reduction measures at this location could be up to those shown in Table 6.

<b>Table 6: Construction Noise Analysis for Location 2 (Hourly <math>L_{eq}</math>)</b>		
<b>Phase</b>	<b>Estimated Maximum Construction Noise Levels</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	80 dBA	Ambient of 63 to 77 dBA
2	78 dBA	
3	77 dBA	

## **Location 3**

This location is on the roof of the adjacent residential property at 1770 Broadway. It is at the north property line of the project site. Based on the construction phasing and equipment information provided, we estimate that construction noise levels without reduction measures at this location could be up to those shown in Table 7.

<b>Table 7: Construction Noise Analysis for Location 3 (Hourly <math>L_{eq}</math>)</b>		
<b>Phase</b>	<b>Estimated Maximum Construction Noise Levels</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	86 dBA	Ambient of 63 to 72 dBA
2	84 dBA	
3	84 dBA	

### ***3.3 Analysis***

Although the estimated noise levels exceed the construction noise thresholds set out in the Municipal Code, the levels will vary as the project progresses around the construction site and moves to the interior of the building. Additionally, measured construction noise levels will be compared to the pre-construction ambient noise levels, as described in Section 17.120.050 Part D of the Municipal Code.

Some construction activities could result in instantaneous noise levels above 90 dBA. Based on our experience, these might include air horns, material handling, air brakes, back-up beepers, and other impact-generating activities. Noise levels will be monitored during the noisiest phases of construction to refine these estimates and corresponding noise reduction measures, as necessary. All feasible techniques prescribed in Section 4.3 shall be implemented to reduce the noise impacts.



#### 4.0 NOISE REDUCTION MEASURES

##### 4.1 Standard Conditions of Approval

The following noise reduction measures are set forth and required by the City's Standard Conditions of Approval (SCA). These measures will be implemented throughout the project.

SCA Item	Requirement	Response
62	<b>Construction Days/Hours.</b> The project applicant shall comply with the following restrictions concerning construction days and hours:	
a	Construction activities are limited to between 7 am and 7 pm, Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA limited to between 8 am and 4 pm Monday through Friday.	Will comply
b	Construction activities are limited to between 9 am and 5 pm on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9 am to 5 pm 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.	Will comply
c	No construction is allowed on Sunday or federal holidays.	Will comply
63	<b>Construction Noise.</b> 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, impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically-powered wherever possible 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.	Will comply
b	Applicant shall use temporary power poles instead of generators where feasible.	Will comply



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.	Will comply
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.	Will comply
64	<b>Extreme Construction Noise.</b> Prior to any extreme noise-generating construction activities (e.g., pier-drilling, pile-driving and other activities generating greater than 90 dB), 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:	
a.i	Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings.	Will comply – see Section 4.2.1
a.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.	Piles will be drilled, not driven
a.iii	Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site.	Will comply – see Section 4.2.2
a.iv	Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by using sound blankets (for example) and implement such measure if such measures are feasible and would noticeably reduce noise impacts.	Will be provided, as needed – see Section 4.2.3
a.v	Monitor the effectiveness of noise-attenuation measures by taking noise measurements.	Will monitor noise – see Section 4.2.4
b	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.	Will comply



65	<b>Project-Specific Construction Noise Reduction Measures.</b> 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. The project applicant shall implement the approved Plan during construction.	
66	<b>Construction Noise Complaints.</b> 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.	Will comply – see Section 4.2.5
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.	Will comply – see Section 4.2.5
c	Protocols for receiving, responding to, and tracking received complaints.	Will comply – see Section 4.2.5
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.	Will comply – see Section 4.2.5

#### **4.2 Supplemental Information on Standard Conditions of Approval**

The following provides additional information and analysis of certain SCA identified in Section 4.1, including their application and expected noise reduction.

1. **SCA 64-a.i:** The sound fence around the project site should be constructed prior to any site work and erected at the project boundary on the north, south, and west sides. The fence should be 12-feet high and have a minimum surface density of 3 psf (e.g., plywood, sound blanket) with no cracks or gaps. This will help to reduce noise up to 10 dB at the typical pedestrian head-height – depending on the height of the equipment noise source (e.g., drilling is at grade, but equipment engine exhausts are above grade) – where line-of-sight to the construction activity will be broken. Gates will be used for entrances/exits to maintain a solid barrier and shall remain closed when not in use.
2. **SCA 64-a.iii:** The use of sound blankets around the building structure before the exterior facade is installed can provide up to 5 to 10 dB of noise reduction. The sound blankets should cover three floors at a time and be installed without seams or gaps (i.e., they should overlap one another).
3. **SCA 64-a.iv:** If a tenant elects to receive noise barriers at their property to reduce the impacts of the construction noise associated with the project, the project developer will provide and install sound blankets at the tenant's windows at no cost to the tenant. This sound disturbance resolution will be recorded on the neighborhood complaint log. The project developer will proactively and regularly conduct neighborhood outreach to receive feedback on the noise impacts and attenuation measures.



At the adjacent 1770 Broadway residences, use construction noise control blankets along the property line (e.g., Acoustical Surfaces BBC-13X-2) to reduce noise intrusion. Pending approval from the landlord, additional noise reduction can be achieved by installing new sound-rated windows or additional storm windows<sup>7</sup> in conjunction with the existing windows. These measures would provide 10 to 20 dB of additional noise reduction (depending on how well the existing windows are sealed).

4. **SCA 64-a.v:** During construction, noise will be monitored continuously at three locations with bi-weekly reporting of the noise levels during construction hours. Hourly  $L_{eq}$  will be reported and compared to the ambient hourly  $L_{eq}$  measured before construction commenced, which varied over time (see **Figures 2 to 4**). If hourly  $L_{eq}$  during construction are greater than 3 dB above the previously measured ambient noise levels for that particular hour of the day, the exceedance recordings will be used to identify what activities (e.g., construction, traffic, sirens) caused noise levels to rise.

Additionally, if noise levels exceed 90 dB outside of the approved construction hours, the project developer will be notified to adjust the construction activity accordingly. Reports will be submitted within one week of the measurements being taken. This tool will be used to fine tune the proposed noise reduction measures, as needed. See Appendix B for the noise monitoring equipment.

5. **SCA 66:** The following procedures will be implemented to address construction noise complaints:
  - a. Designation of Enforcement Manager. Any complaints received with respect to construction noise shall be forwarded to the Compliance Manager [TBD]. Contact Number: [TBD].
  - b. Signage. 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. Example signage provided as **Appendix C**.
  - c. Notifications. Notify adjacent property owners and occupants located within 300 feet of the project site at least 14 days prior to commencement of activities. SCA NOI-1 only requires notifications for construction activity outside of standard hours.
  - d. Complaints. The noise and compliance enforcement manager for the project, shall ensure response and corrective action to complaints within the same working day if the complaint is received during the noise-related incident and from sensitive receptors residing within 100 feet of the project site. Otherwise, response and corrective action to complaints shall occur within 48 hours. A complaint log shall be maintained by the Compliance Manager indicating the date and time of each received noise complaint, the noise source of concern, and how the issue was resolved. Example complaint log provided as **Appendix D**.

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7 Storm windows are an additional operable pane of glass installed in conjunction with the existing window assembly to provide additional noise reduction.



#### ***4.3 Site-Specific Noise Reduction Measures (All Phases)***

The following are noise reduction measures that will be implemented by the project applicant throughout construction. These techniques are in line with the recommendations in the Construction Noise Analysis report prepared for the neighbors at 1770 Broadway by Wilson Ihrig on April 1, 2019.

##### ***All Phases:***

- 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) for equipment and trucks
- Locate stationary noise sources as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds or incorporate insulation barriers to provide noise reduction
- Use hydraulic or electric-powered impact tools wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools
- Use "quiet" gasoline or electric-powered compressors
- Use electric forklifts
- Manage truck traffic to reduce idling (see the Site Logistics Plan in Appendix A)
- Proactively and regularly evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by using sound blankets
- Use back-up beepers only when required by law. Spotters or flaggers should be used in lieu of back-up beepers to direct backing operations when allowable
- Minimize drop height when loading excavated materials onto trucks
- Minimize drop height when unloading or moving materials on-site
- Sequence the noisiest activities to coincide with the noisiest ambient hours

##### ***Phase 1:***

- Erect temporary plywood noise barriers around the construction site
- Erect localized barriers around noisy stationary equipment at-grade (e.g., pumps, generator)
- Erect a barrier around the drill rig that is tall enough to block line-of-sight to the adjacent residences with no cracks or gaps. The interior of the barrier should be lined with a sound-absorptive material (e.g., duct liner, black-faced insulation). Actual design of the barrier would be developed in conjunction with the contractor.
- Only operate the drill rig during the noisiest time of the day
- Install noise control blankets to reduce noise intrusion at 1770 Broadway
- Install temporary "storm windows" over existing windows in habitable rooms at 1770 Broadway with direct line-of-sight to the project site

##### ***Phase 2:***

- Utilize sound blankets around the building structure as construction moves vertically above the plywood noise barriers at-grade

##### ***Phase 3:***

- Locate noisy equipment within the building structure once the exterior facade is installed



#### 4.4 Estimated Noise Levels with Noise Reduction Measures

The following tables show the estimated noise levels at each location during each phase with the noise reduction measures prescribed in the SCA and the Noise Reduction Measures in Section 4.3.

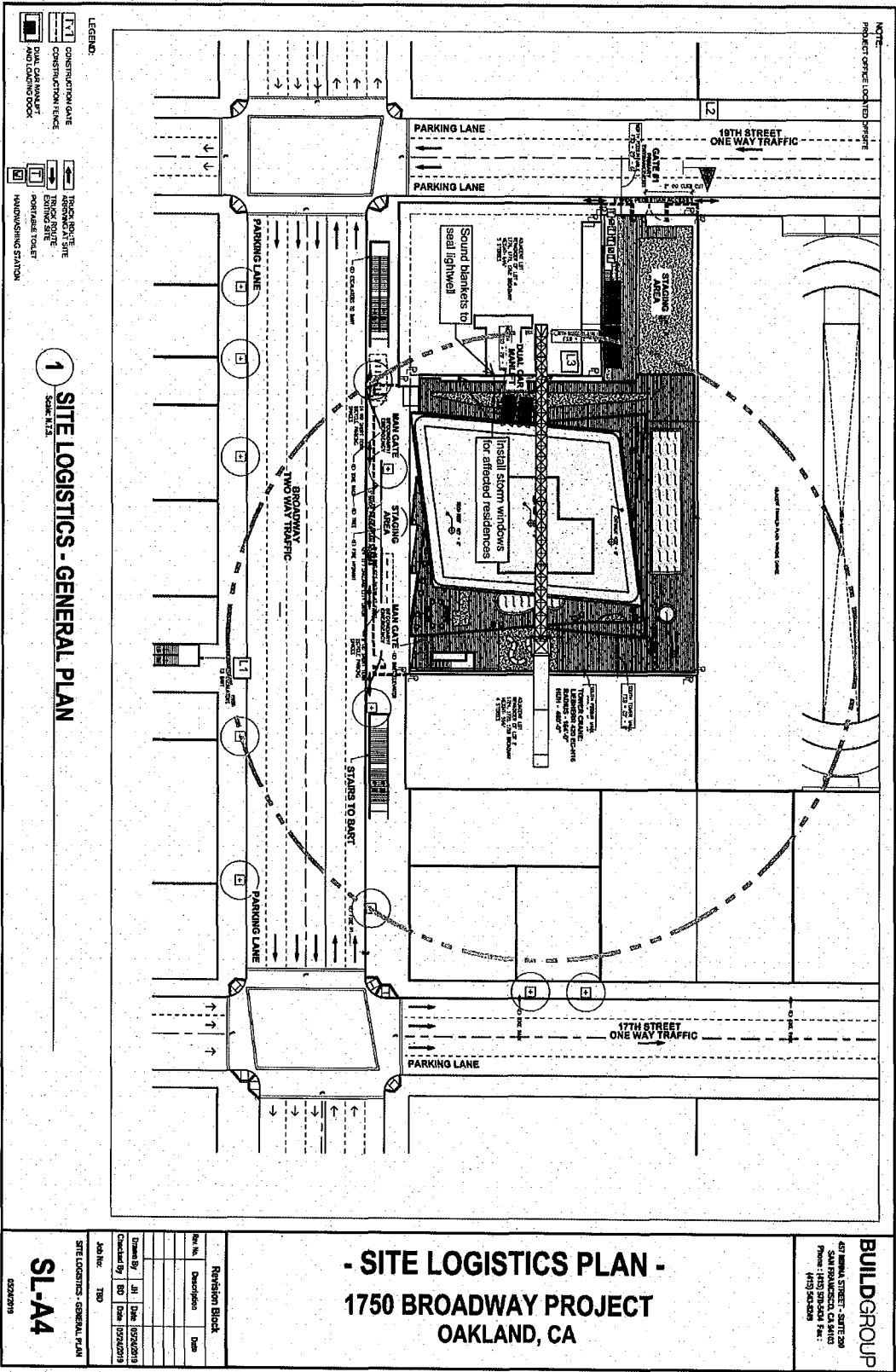
<b>Table 8: Construction Noise Analysis for Location 1 (Hourly Leq)</b>		
<b>Phase</b>	<b>Estimated Noise Levels with Noise Reduction</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	72 to 76 dBA	Ambient of 68 to 76 dBA
2	70 to 75 dBA	
3	70 to 75 dBA	

<b>Table 9: Construction Noise Analysis for Location 2 (Hourly Leq)</b>		
<b>Phase</b>	<b>Estimated Noise Levels with Noise Reduction</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	70 to 75 dBA	Ambient of 63 to 77 dBA
2	63 to 70 dBA	
3	62 to 69 dBA	

<b>Table 10: Construction Noise Analysis for Location 3 (Hourly Leq)</b>		
<b>Phase</b>	<b>Estimated Noise Levels with Noise Reduction</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	69 to 72 dBA	Ambient of 63 to 72 dBA
2	64 to 69 dBA	
3	64 to 69 dBA	

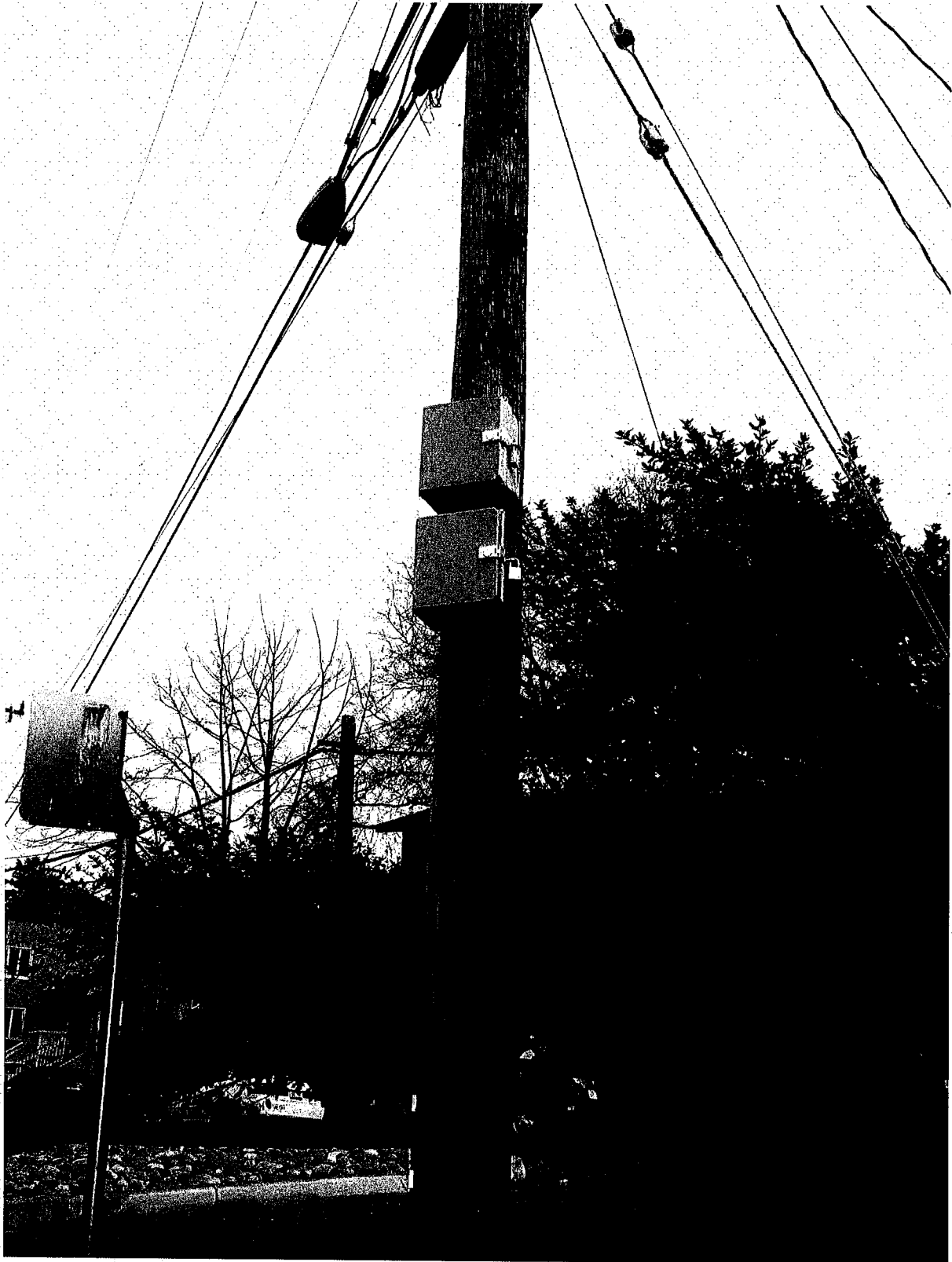


APPENDIX A – SITE LOGISTICS PLAN





## **APPENDIX B – SOUND MONITORING EQUIPMENT**





## **APPENDIX C - SIGNAGE**

### **SIGN REQUIREMENTS FOR POSTING CONSTRUCTION HOURS**

Contractor shall post a sign at all entrances to the construction site upon commencement of construction. Sign(s) shall be posted in a conspicuous place visible from the public right-of-way near the entrance to the job site, at least five (5) feet above ground level, and shall be of a white background, with legible black lettering. Lettering shall be a minimum of one and one-half (1-1/2) inches in height. The sign shall read as follows:

**ADDRESS: 1750 Broadway**

#### **CONSTRUCTION HOURS (includes any and all deliveries)**

MONDAY-FRIDAY 7:00 a.m. to 7:00 p.m.

SATURDAY 9:00 a.m. to 5:00 p.m.

SUNDAY/HOLIDAYS Prohibited

**RESPONSIBLE PARTY CONTACT: [NAME TBD] [PHONE NUMBER TBD] [EMAIL ADDRESS TBD]**

This sign and construction hours posting requirement is for the purpose of informing all contractors and subcontractors, their employees, agents, material, men and all other persons at the construction site. Construction includes: alteration, demolition, maintenance of construction equipment, deliveries of materials or equipment, or repair activities.

### **NOISE LIMITS**

The construction site noise level at any point outside of the construction property line shall not exceed ninety (90) dBA. Violation of the construction hours and/or noise limits may be enforced as either an infraction or a misdemeanor punishable by fines or jail time or both or by an administrative citation with a fine, or by a civil action with a monetary penalty, injunction and/or other remedies.



## APPENDIX D – COMPLAINT LOG

## CONSTRUCTION NOISE COMPLAINT LOG

[illegible]



# **ATTACHMENT G**

*Fehr & Peers-Transit Ridership Memo, May 30, 2019*





## MEMORANDUM

Date: May 30, 2019  
To: Elizabeth Kanner, ESA  
From: Sam Tabibnia  
Subject: **1750 Broadway – Transit Ridership Analysis**

OK17-0212

This memorandum is in response to the appeal letter dated April 1, 2019 regarding the approval of the 1750 Broadway Project. The appeal letter claims that the Project CEQA document should have evaluated the impacts of the proposed Project on transit ridership. This memorandum explains why transit ridership and loads are not considered an environmental impact under CEQA. In addition, although transit ridership is not an environmental topic, the memorandum presents the estimated transit trips generated by the Project and their potential affect on AC Transit and BART operations, and lists the transit improvement included in the Project Transportation and Parking Demand Management (TDM) Plan.

### TRANSIT RIDERSHIP UNDER CEQA

The latest guidance provided by the Office of Planning and Research (OPR) in the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018), states the following regarding evaluating transit ridership in CEQA documents:

When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact. An infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network.

Therefore, the effect of the proposed Project on transit ridership need not be considered a significant environmental impact under CEQA unless it would cause significant secondary effects,





such as causing the construction of new permanent transit facilities which in turn causes physical effects on the environment.

Furthermore, an increase in transit ridership is an environmental benefit, not an adverse impact, consistent with the following State objectives to reduce vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions.

- Assembly Bill 32 (AB 32), which requires statewide GHG reductions to 1990 levels by 2020, and continued reductions beyond 2020.
- Senate Bill (SB) 375 and California Air Resources Board established GHG reduction targets for metropolitan planning organizations to achieve in Regional Transportation Plans and Sustainable Community Strategies. Targets for the largest metropolitan planning organizations range from 13 percent to 16 percent reduction by 2035.
- SB 391 requires the California Transportation Plan to support an 80 percent reduction in GHGs below 1990 levels by 2050.
- Executive Order B-30-15, which sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030. Executive Order S-3-05, which sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050. Executive Order B-16-12, which specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation
- SB 743 which added Public Resources Code Section 21099 to CEQA, to change the manner that transportation impacts are analyzed in CEQA documents to better align local environmental review with statewide objectives described above, encourage infill mixed-use development in designated priority development areas, reduce regional sprawl development, and reduce vehicle miles traveled in California.

In addition, one of the stated goals in City of Oakland General Plan Land Use and Transportation Element (LUTE) is the promotion of transit ridership and encouragement of transit accessibility and improvement of transit service throughout Oakland. Any increase in transit ridership would also be consistent with the City's Public Transit and Alternative Modes (i.e., "Transit First") and Complete Street Policies, which promote transit, as well as walking and bicycling, over driving.

Furthermore, transit load is not part of the permanent physical environment and transit service changes over time in response to a variety of factors, including ridership, funding availability, and street congestion. The supply (transit service) and demand (transit ridership) for both AC Transit bus and BART service change over time. Over the last few years, AC Transit has eliminated, added, or modified bus routes and bus stops, as well as changed hours of operations, service frequency, and/or type of bus used on various routes, and BART has changed frequency of service and/or the





number of cars in trains. External factors such as cost and availability of parking especially in major employment areas such as downtowns, cost of fuel, employer TDM incentives such as free or partially subsidized transit employee costs, and availability of transportation network companies (Uber and Lyft) also affect transit ridership.

Since transit loads are not part of the permanent physical environment and consistent with the OPR guidelines and the City's objectives to increase transit ridership, the City of Oakland does not consider transit ridership or load factors an environmental impact under CEQA and the City's adopted Thresholds of Significance do not include thresholds for transit ridership or load factors.

The City of Oakland's *Transportation Impact Review Guidelines* (TIRG, April 2017) require estimation of transit trip generation for all development projects (Section 3.1.1). However, the TIRG requires a more detailed analysis of a project impact on transit only for projects that generate at least 800 peak hour vehicle trips or 400 peak hour transit trips. Since the City does not consider transit ridership an environmental impact topic, the transit analysis would be completed as part of the planning related non-CEQA analysis.

Since the proposed Project would generate 97 peak hour vehicle trips and 54 peak hour transit trips, the TIRG does not require additional analysis of Project impacts on transit.

## PROJECT TRANSIT RIDERSHIP

The *1750 Broadway – Transportation Impact Review (non-CEQA) Memorandum* dated May 30, 2018 and provided as Appendix B in the *1750 Broadway Project CEQA Checklist/Exemption Report* provides the trip generation for various travel modes based on the methodology recommended in the City's TIRG. As shown in Table 2 of the memorandum, the 1750 Broadway Project is estimated to generate about 600 daily, 40 AM peak hour, and 54 PM peak hour transit trips. Table 1 presents the Project trip generation for AC Transit and BART based on latest available Census data for the areas surrounding the project site, which shows that about 18 percent of the transit trips are by AC Transit buses and about 82 percent are by BART.





TABLE 1 TRANSIT TRIP GENERATION SUMMARY				
Mode	Mode Share <sup>1</sup>	Daily	Weekday AM Peak Hour	Weekday PM Peak Hour
Bus (AC Transit)	18%	110	7	10
Rail (BART)	82%	490	33	44
Total Transit Trips <sup>2</sup>		600	40	54
1. Based on US Census 2017 American Community Survey 5-Year Estimates, Census Tracts 4013, 4028- 4031, and 4035.01. 2. Based on Table 2 in the <i>1750 Broadway – Transportation Impact Review (non-CEQA)</i> Memorandum (May 30, 2018) Source: Fehr & Peers, 2019.				

### AC Transit Ridership

It is estimated that the proposed Project would generate about 110 AC Transit bus trips on a typical weekday, including seven bus trips during the AM peak hour and ten bus trips during the PM peak hour. About 50 buses per hour operate within one block of the Project site during the peak hours. Thus, it is expected that ridership on buses in the Project vicinity would increase by approximately 0.1 rider per bus during the peak hours. This level of increase would not have a substantial effect on AC Transit ridership or load factors.

### BART Ridership

It is estimated that the proposed Project would generate about 490 BART trips on a typical weekday, including 33 BART trips during the AM peak hour and 44 BART trips during the PM peak hour. Considering that the Project site is adjacent to the 19th Street BART Station, it is expected that all Project BART riders would use this station. More than 30 trains per hour serve the 19th Street Station during peak hours. Thus, the Project would result in 1.1 to 1.4 additional passengers on each BART train during the peak hours. This level of increase would not have a substantial effect on BART ridership or load factors.

### PROJECT TRANSIT IMPROVEMENT

Furthermore, the non-CEQA transportation impact review completed for the project and included in Appendix B of the Project CEQA document includes a qualitative assessment of the transportation infrastructure around the project site, for various travel modes including transit. The assessment includes the following improvement, which is also incorporated in the Transportation and Parking Demand Management (TDM) Plan prepared for the project, and provided as Appendix A in the *Project CEQA Document*:





- Coordinate with City of Oakland and AC Transit to explore the feasibility and if feasible, install bus stop amenities such as shelter, bench, and trash receptacle at the bus stops on northbound Broadway just north of 17th Street and on southbound Broadway just north of 19th Streets and midblock between 15th and 17th Streets.

## CONCLUSIONS

The Project's effects on both AC Transit and BART ridership are not considered CEQA impacts due to the transitory nature of both transit ridership and service in general and because they are not impacts to the physical environment. In addition, various other factors contribute to both transit ridership and service as described in this memorandum. Furthermore, development of the proposed Project would result in an increase in property and sales taxes which will contribute to the operating budget for both AC Transit and BART which can be used to increase transit service.

Although transit ridership is not considered a CEQA impact, the estimated transit trips generated by the proposed Project would not have a noticeable affect on AC Transit or BART operations.

Please contact Sam ([stabibnia@fehrandpeers.com](mailto:stabibnia@fehrandpeers.com) or 510-835-1943) with questions or comments.



# **ATTACHMENT H**

*Pelosi Law Group, letter received on November 15, 2019*





November 14, 2019

Mike Rivera  
Planner II  
City of Oakland Planning & Building Department  
250 Frank H. Ogawa Plaza, Suite 2114  
Oakland, CA 94612

**Re: Appeal of PLN18369 (1750 Broadway)**

Dear Mr. Rivera:

I am writing on behalf of my client, Rubicon Point Partners ("Rubicon"), the project sponsor for the proposed development at 1750 Broadway ("Project").

As you are aware, in the near future, the City Council will consider two appeals to the Planning Commission's March 20, 2019, unanimous adoption/approval of a California Environmental Quality Act ("CEQA") analysis and related findings, and approval of a Major Conditional Use Permit and Regular Design Review (collectively referred to herein as "Entitlements") for the Project. The appeals were filed by Adams, Broadwell, Joseph & Cardozo on behalf of East Bay Residents for Responsible Development ("Adams Broadwell Appeal") and by the Residents of 1770 Broadway on behalf of multiple residents residing at 1770 Broadway ("1770 Broadway Appeal") (collectively referred to as the "Appeals" and the "Appellants"). The Adams Broadwell Appeal focuses on the Planning Commission's use of three (3) streamlining provisions under CEQA, claiming that the streamlining provisions are legally inappropriate or inadequate and that a higher level of CEQA review is required. The 1770 Broadway Appeal focuses on the potential impact of the Project on adjacent residents, raising concerns regarding displacement, community engagement, transparency, shadow, noise and other issues.

**As detailed below, neither of the Appeals establishes that the Planning Commission committed an error or abused its discretion in approving the Entitlements or that the Planning Commission's decision is not supported by substantial evidence.<sup>1</sup>** The claims raised by the Appellants do not meet the legal standard to overturn the Planning Commission's decision, but Rubicon takes its neighbor's concerns very seriously. Rubicon has been working diligently in recent months to meet with the residents of 1770 Broadway to hear their concerns and to develop construction policies and procedures that go above and beyond City requirements to address those concerns. Rubicon will be submitting a separate letter summarizing these efforts and the resulting policies that will be put in place. Rubicon is committed to working with the residents of 1770

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<sup>1</sup> This is the standard established under Planning Code Sections 17.134.070(A) and 17.136.090





Broadway regarding their concerns. For all these reasons, we therefore respectfully request that the City Council deny the Appeals and uphold the decision of the Planning Commission.

### **SUMMARY**

The Project is a 36-story mixed-use building at Broadway and 17<sup>th</sup> Street in the Central Business District Commercial and Pedestrian (CBD-C and CBD-P) zones. It includes 307 residential units, 5,000 square feet of ground floor retail and 170 parking spaces in a high quality 418-foot tower. The Project has had three public hearings including two before the Design Review Committee (January 31, 2018 and December 5, 2018) and one hearing before the Planning Commission (March 20, 2019) during which the Project was unanimously approved. On March 20, 2019, the Planning Commission approved the Project and on April 1, 2019, the Appeals were filed. While both Appeals challenge the Planning Commission's decision, they focus on different issues.

The Adams Broadwell Appeal focuses on the Project's CEQA compliance. Specifically, it alleges that the Planning Commission's reliance on a CEQA exemption and two streamlining provisions was legally inappropriate and not supported by substantial evidence. As discussed below, we disagree. The administrative record before the Planning Commission included substantial evidence supporting the determination that the Project would not result in significant air quality, noise or public transit impacts and establishing that there are no unusual circumstances that would create the possibility of significant cumulative cancer risk to local sensitive receptors. The appeal raises a variety of issues including that the Project's potential shadow impacts have not been adequately analyzed and that the imposition of standard conditions of approval on the Project by the City is mitigation that prevents the Project from using an exemption or streamlining provision under CEQA. The claims raised by the Adams Broadwell Appeal are without merit and do not meet the legal standards or requirements to establish either an abuse of discretion by the Planning Commission or that substantial evidence does not exist in the record to support the Planning Commission's decision on the Project.

The 1770 Broadway Appeal generally focuses on issues and concerns raised by neighbors regarding the Project's potential impact on them during construction, the impact of a tower adjacent to their building, the entitlement process and general concerns regarding changes in the City. Some of the issues raised also pertain to the Project's CEQA compliance. While we understand and appreciate the concerns of the 1770 Broadway Appeal, Rubicon and fully intends to work closely with its neighbors to address their concerns throughout construction, the issues raised do not render the decision by the Planning Commission legally inadequate. Construction at any time and at any scale can be disruptive and inconvenient to adjacent property owners, but that does not mean it should not occur or that the Planning Commission in approving that construction committed an error or abused its discretion or made a decision that is not supported by substantial evidence.

The Project is in the City's downtown core. It is immediately adjacent to the 19<sup>th</sup> Street BART station and is a high-density, transit-oriented development. It replaces a 3-story former bank with 307 residential units. **It complies with all applicable planning and zoning laws and satisfied all public notice and hearing requirements. It underwent an extensive public process with multiple opportunities for public participation, and the decision by the Planning Commission should be upheld.**





## **I. PROJECT BACKGROUND**

The Project is located on an approximately 0.63-acre parcel at 1750 Broadway, midblock between 17<sup>th</sup> Street and 19<sup>th</sup> Street, in Uptown Oakland immediately adjacent to 1770 Broadway. The Project site is currently occupied by a 3-story commercial building and surface parking lot.

The Project proposes to develop the site with a 36-story mixed-use building containing approximately 307 residential units, 5,000 square feet of ground-level retail, 170 vehicle parking stalls on five above-ground levels, and two residential off-street loading spaces. Designed by Handel Architects, the 496,000-square foot, approximately 418-foot-high building would contain a mix of studio, one-bedroom, one plus-bedroom, two-bedroom, and three-bedroom units along with ground floor retail. Units would range from approximately 400 square feet (studio) to 1,670 square feet (three-bedroom), and the intent of Rubicon is to have a local business and neighborhood serving use in the ground floor retail space.

At approximately 418 feet tall, the residential tower is Type 1 construction (high rise). Rubicon has executed an agreement with the Northern California Carpenters Regional Council and is committed to using union carpenters on the Project, which means a minimum of 70% of the project will be constructed with union labor. Rubicon is also continuing to work with and discuss options with the other trades, requesting the names of 3-4 union sub-contractors per specialty trade from which it can request bids for the work.

Finally, as detailed in a report prepared by Linda Hausrath and Rubicon Point Partners, which is attached as Attachment 1, in addition to approximately \$13 million in impact fees and one-time funding, the Project will generate approximately \$2 million per year in new property tax revenue to the City of Oakland and approximately \$8.5 million in annual spending at local retailers and business services, as well as create 22 new on-site retail and management jobs and 3,600 worker-months of construction labor over 26 months, averaging approximately 128 workers per month, including union construction jobs.

## **II. CEQA ANALYSIS**

The City has certified three Environmental Impact Reports (“EIRs”) in the past that are applicable to the Project. Specifically, in 1998, the City certified the EIR for its General Plan Land Use and Transportation Element (“LUTE”). Subsequently, in 2010, the City certified an EIR for the 2007-2014 Housing Element.<sup>2</sup> Then, in 2011, The City prepared and certified an EIR for proposed amendments to the Central District Urban Renewal Plan.

All three EIRs were designated as Program EIRs under CEQA Guidelines Section 15168 and, in the case of the EIR for the Central District Urban Renewal Plan, CEQA Guidelines Section 15180.<sup>3</sup> As set forth in Section 15168(b)(5), one of the advantages of a Program EIR is to allow reduction in paperwork. Section 15168(c)(5) further provides:

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<sup>2</sup> In 2014, the City adopted an Addendum to that 2010 EIR for the 2015-2023 Housing Element.

<sup>3</sup> Unless otherwise noted, all future section references are to the CEQA Guidelines.





A program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the program EIR, and **no further environmental documents would be required.** (Emphasis added.)

Given this statutory guidance and the fact that not one but three Program EIRs are applicable to the site, the City could have undertaken an analysis to show that the Project was within the scopes of the Program EIRs, and, therefore, no further environmental document was required. However, the City opted to go above and beyond and prepare a detailed “CEQA Analysis” to evaluate whether the Project could utilize a CEQA exemption and/or a CEQA streamlining provision.

The Adams Broadwell Appeal and the 1770 Broadway Appeal both raise claims under CEQA. The Adams Broadwell Appeal includes very detailed and specific legal and technical arguments, while the 1770 Broadway Appeal is more general in nature. The information provided below responds to claims raised by both Appeals with specific aspects of each noted, as appropriate.

**A. The City’s Reliance on the CEQA Exemption and Streamlining Provisions is Appropriate and Supported by Substantial Evidence**

ESA, a leading CEQA consulting firm, was hired to prepare the CEQA Analysis for the Project. Under the City’s direction, ESA, in collaboration with other technical experts in noise, air quality, traffic, etc., prepared technical studies to analyze whether the Project would have a peculiar or new significant environmental impact that was not identified in the prior Program EIRs. Based on that analysis and evidence, the Project, which is consistent with the Central District Urban Renewal Plan, was determined to qualify for streamlined review under Projects Consistent with a Community Plan, General Plan, or Zoning (Section 15183). In addition, the Project was also determined to qualify for a Class 32 In-Fill Development Projects exemption (Section 15332) and for streamlined review under Streamlining for Infill Projects (Section 15183.3).<sup>4</sup> A CEQA Analysis was then prepared, documenting the analyses and findings, including reference to and inclusion of the various technical studies and reports. Based on this substantial evidence in the record, the Planning Commission appropriately determined that the CEQA exemption and streamlining provisions applied, as discussed below.

**1. Class 32 In-Fill Development Projects (CEQA Guidelines Section 15332)**

Categorical exemptions are descriptions of types of projects which the Secretary of the Resources Agency has determined do not usually have a significant effect on the environment. There are approximately 30 “classes” or types of categorical exemptions. Class 32 is the categorical exemption for In-Fill Development Projects set forth in CEQA Guidelines Section 15332 (hereafter referred to as “the Class 32 Exemption”) that exempts infill development within urbanized areas if it meets certain criteria. The Class 32 Exemption consists of environmentally benign infill projects that are consistent

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<sup>4</sup> The Adams Broadwell Appeal also contends that the City inappropriately relied on a CEQA Addendum for the Project, but this assertion is misplaced as the City did not rely on an Addendum. We believe this error calls into question the overall accuracy of the Adams Broadwell Appeal and whether it is simply a regurgitation of the many other appeals filed by Adams Broadwell against similar documents.





with the general plan and zoning requirements. This class is not intended for projects that would result in any significant traffic, noise, air quality, or water quality impacts. The exemption is not limited to any use type and may apply to residential, commercial, industrial, public facility, and/or mixed-use projects.

Categorical exemptions are not absolute. There are exceptions to the exemptions depending on the nature or location of the project. For a proposed project to qualify, none of the following exceptions (set forth in Section 15300.2) can apply to the project:

- a. The project and successive projects of the same type in the same place will result in cumulative impacts;
- b. There are unusual circumstances creating the reasonable possibility of significant effects;
- c. The project may result in damage to scenic resources, including, but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within an officially designated scenic highway;
- d. The project is located on a site that the Department of Toxic Substances Control and the Secretary of the Environmental Protection have identified, pursuant to Government Code section 65962.5, as being affected by hazardous wastes or clean-up problems; or
- e. The project may cause a substantial adverse change in the significance of an historical resource.

The CEQA Analysis conducted an extensive study of the Project and its potential impacts to determine whether the Project would qualify for the Class 32 Exemption. The information on which the determination is based is set forth in two checklists: one for the criteria set forth in Section 15332, and a second for the criteria set forth in Section 15300.2 regarding exceptions to the exemption. In total, the checklists present 57 pages of substantial evidence used by the City to reach the conclusion that the Class 32 Exemption applies and none of the exceptions are present.

Despite the extensive amount of substantial evidence in support of the City's determination, the Adams Broadwell Appeal alleges that the City's reliance on the Class 32 Exemption is unsupported because the Project has significant air quality and noise impacts. The Adams Broadwell Appeal further contends that the Class 32 Exemption is inapplicable because of the alleged significant cancer risk on infants that requires the use of Tier 4 equipment, plus the construction of two 35+ story buildings within a block of each other, are unusual circumstances that create the possibility of significant cumulative cancer risk to local sensitive receptions. Finally, the Adams Broadwell Appeal claims the City's Standard Conditions of Approval ("SCAs") are mitigation measures that prevent the City from relying on a categorical exemption. **For the reasons set forth below, these arguments are without legal merit and the Planning Commission correctly determined, based on substantial evidence in the record, that the Class 32 Exemption was appropriate.**

**a. The Project Would Not Result in any Significant Air Quality or Noise Impacts**

The CEQA Exemption Checklist in the CEQA Analysis includes thorough discussions on whether approval of the Project would result in any significant effects relating to traffic, noise, air quality, or water quality, pursuant to CEQA Guidelines Section 15332(d) (see pages 23-68). Specifically, the CEQA Exemption Checklist presents technical analyses, significance thresholds, and assumptions for





traffic, noise, shadow, and air quality (including health risk), among other impact areas. In each area, the CEQA Analysis determined that based on the results of the analysis, the Project would not result in any significant impacts. The CEQA analysis then considered, in detail, whether any of the exceptions to the Class 32 Exemption were present and determined that none of the exceptions were present, including the unusual circumstances exception (see pages 69-80).

The Adams Broadwell Appeal disagrees with the CEQA Analysis, alleging that the Project would have significant, unmitigated health risks from construction emissions and is likely to have significant, unmitigated noise impacts on local receptors during Project construction.

With respect to health risks, the crux of the Adam Broadwell Appeal's argument is that there is no evidence in the record demonstrating that the Project will use Tier 4 equipment during construction. The Appeal takes umbrage with language in SCA AIR-3 and Conditions of Approval No. 13, claiming that neither expressly requires the use of Tier 4 equipment and, therefore, its use cannot be guaranteed. We disagree with the Adams Broadwell Appeal's interpretation as it relates to the bottom-line impact. As noted in the Adams Broadwell Appeal, SCA AIR-3 requires the project applicant to either prepare a health risk assessment or agree to use Verified Diesel Emission Control Strategies ("VDECS") for construction equipment, which may include Tier 4 engines. Indeed, SCA AIR-3 does not expressly require the use of Tier 4 equipment, but that is because it requires the use of the "most effective VDECS" available. At this current time, that is Tier 4 equipment. However, by the time the Project goes into construction, it is possible that more effective VDECS will be available that would reduce emissions even more than Tier 4 equipment. The purpose of providing flexibility in the language is to allow the City to "force" the applicant to use whatever best measures are available – be it Tier 4 or some new technology. Regardless of which technology is used in the end, it will be at least as effective in reducing the maximum health risks from Project construction as Tier 4 equipment, thereby ensuring the impact results documented in the CEQA Analysis will hold (and possibly be improved).

In addition, the Project has agreed and will use VDECS, which will include the use of Tier 4 equipment or the most effective VDECS available. Based upon this information, the claims raised by the Adams Broadwell Appeal are without merit and substantial evidence exists in the record to support a determination that the Project will not have a significant air quality impact.

Regarding noise, the Adam Broadwell Appeal raises essentially three arguments contending the CEQA Analysis' conclusions were incorrect: (1) the CEQA Analysis' reliance on local and State noise regulations is insufficient to conclude that the Project will not have significant noise impacts; (2) the SCAs will not adequately reduce potential noise impacts during construction and additional mitigation is necessary; and (3) additional feasible mitigation measures would reduce noise impacts for the residents of 1770 Broadway during demolition and construction. These same issues are also generally raised by the 1770 Broadway Appeal.

These allegations are without merit and not supported by any substantial evidence. However, there is substantial evidence to support a conclusion that the Project will not have significant noise impacts. This evidence is set forth in the CEQA Analysis, which documents that the Project will not have a significant noise impact, not only because of compliance with local and State regulations, but also because of implementation of the City's SCAs, one of which requires the Project to prepare a





Construction Noise Management Plan. While typically this plan is prepared prior to construction, Rubicon retained Salter Noise Consultants to prepare it now. The Construction Noise Management Plan concludes that the Project will meet the City's regulatory standards related to construction noise with the implementation of appropriate noise reduction measures. A copy of the plan is included as Attachment 2.

As shown in the plan, even without the Project, the existing noise levels exceed maximum allowable receiving noise level standards at residential properties for long-term construction. The plan then calculated the expected maximum noise levels from Project construction at three nearby receiver locations. Based upon these noise levels, the plan set forth noise reduction measures that the Project must implement to reduce the noise impacts. These measures included noise reduction measures required by the City's SCAs, specifically SCAs 62-66. In addition, under the plan, the Project will implement site-specific noise reduction measures throughout construction that are consistent with the recommendations in the Construction Noise Analysis report prepared for 1770 Broadway by Wilson Ihrigh. The numerous techniques include measures that will be implemented during all phases of construction, as well as techniques that will be implemented during specific phases. For example, during the first phase of construction, the Project will erect temporary plywood noise barriers around the construction site and localized barriers around noisy stationary equipment at-grade, among other measures. During the second phase, the Project will utilize sound blankets around the building structure as construction moves vertically above the plywood noise barriers at-grade. Finally, in the third and final phase of construction, the Project will locate noise equipment within the building structure once the exterior façade is installed. Implementation of these and other measures will reduce noise impacts to within the noise limit/typical ambient noise level during construction hours at all measured locations, as evidenced by the Construction Noise Management Plan prepared by Salter Noise Consultants.

**b. There are No Unusual Circumstances that Create the Possibility of Significant Cumulative Cancer Risk to Local Sensitive Receptions**

The Adams Broadwell Appeal alleges that unusual circumstances prohibit the City from using the Class 32 Exemption. However, the Adams Broadwell Appeal conveniently fails to set forth any of the legal standards that apply when claiming that exception to an exemption applies – presumably because once the legal standards are examined, the unusual circumstances exception does not apply.

*Berkeley Hillside Preservation v. City of Berkeley* (2015) 60 Cal.4th 1086 is a seminal case providing key guidance on the unusual circumstances exception. In that case, the Supreme Court concluded that a potentially significant effect on the environment is not itself sufficient to constitute unusual circumstances, but that the impact on the environment must be due to unusual circumstances. (*Berkeley Hillside*, 60 Cal.4th at 1098.) Without unusual circumstances, the exemption stands and no additional CEQA analysis is required.

Here, the City has concluded, based on substantial evidence, that the Project does not present any unusual circumstances. As discussed throughout the CEQA Analysis and expressly addressed in the discussion regarding unusual circumstances, “there are no unusual circumstances specific to the Proposed Project, compared to its surroundings and similar projects (high-rise, mixed-use, in-fill





development downtown) that would pose a reasonable possibility of it having a significant effect on the environment.” (CEQA Analysis, page 70.)

The Adams Broadwell Appeal contends that the required use of Tier 4 equipment and the construction of two 35+ story buildings within a block of each other are “unusual circumstances,” but provides no evidence establishing how those situations are “unusual.” In fact, it would be nonsensical to conclude that the construction of two 35+ story buildings within a block of each other in an urban setting where construction is frequent and the underlying zoning allows that size is an unusual circumstance that requires CEQA review. More importantly, the Adams Broadwell Appeal fails to show that the record contains no substantial evidence to support the City’s determination that the Project presents no unusual circumstances – likely because there is, in fact, such substantial evidence in the record.

**c. The SCAs are not Mitigation Measures and Therefore the City May Rely on a Categorical Exemption**

The Adams Broadwell Appeal alleges that the SCAs applied to the Project are mitigation measures designed to reduce the Project’s potentially significant impacts. Because categorical exemptions cannot require the imposition of mitigation measures, the Adams Broadwell Appeal therefore contends the City could not have relied on the Class 32 Exemption.

It is well established that a condition of approval is not taken to mitigate any significant effect of a project and, therefore, is not a mitigation measure that would prevent reliance on an exemption.

For example, in *Protect Telegraph Hill v. City and County of San Francisco* (2017) 16 Cal.App.5<sup>th</sup> 261, the First District Court of Appeal rejected an argument that conditions imposed by the City of San Francisco on the project’s conditional use approval to mitigate pedestrian and traffic safety disruption effects during and after construction were CEQA mitigation measures demonstrating that the project would have significant environmental effects. The court found that the conditions were not the basis for the City’s conclusion that the project qualified for a categorical exemption and, therefore, did not constitute CEQA mitigation.

Similarly, here, the SCAs do not mitigate any significant effect caused by the Project. The SCAs incorporate policies and standards from various adopted plans, policies, and ordinances, which have been found to substantially mitigate environmental effects. They are adopted as requirements of an individual project when it is approved by the City. The SCAs address situations that may arise when construction activity occurs and impose requirements for project sponsors to obey all laws. Moreover, the City did not rely on the SCAs in determining that the Project falls within the Class 32 Exemption – that determination was based on evidence that the Project would not result in any significant impacts due to unusual circumstances. Therefore, the City may rely on the Class 32 Exemption.

**2. Projects Consistent with a Community Plan, General Plan, or Zoning (CEQA Guidelines Section 15183)**

While the City could rely exclusively on the Class 32 Exemption, CEQA streamlining provisions were also analyzed as part of the CEQA Analysis to determine if they apply. This layering of CEQA





exemptions and streamlining provisions is legally appropriate where each exemption or streamlining provision wholly applies and is supported by substantial evidence in the record.

Section 15183 **mandates** a streamlined environmental review process for projects that are consistent with the densities established by existing zoning, community plan or general plan policies with a certified EIR, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. Section 15183 specifies that examination of environmental effects shall be limited to those effects that:

- a. Are peculiar to the project or the parcel on which the project would be located,
- b. Were not analyzed as significant effects in a prior EIR on the zoning action, general plan or community plan with which the project is consistent,
- c. Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action, or
- d. Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR.

Section 15183(c) provides that “[**if an impact is not peculiar to the parcel or to the project**, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards, as contemplated by subdivision (e) below, **then an additional EIR need not be prepared for the project solely** on the basis of that impact.” (Emphasis added.) Section 15183(f) then explains that “[a]n effect of a project on the environment shall not be considered peculiar to the project or the parcel for the purposes of this section if uniformly applied development policies or standards have been previously adopted by the city or county with a finding that the development policies or standards will substantially mitigate that environmental effect when applied to future projects, unless substantial new information shows that the policies or standards will not substantially mitigate the environmental effect. The finding shall be based on substantial evidence which need not include an EIR.”

As detailed in Attachment B to the CEQA Analysis, the Project is consistent with the existing CBD-P (Central Business District Pedestrian Retail) and CBD-C (Central Business District General Commercial) zoning and the General Plan. Attachment B further demonstrates how there are no impacts peculiar to the Project or Project site that were not disclosed in the Program EIRs, and how there is no new information that was not known at the time the Program EIRs were certified that would cause more severe adverse impacts than discussed in the Program EIRs. Substantial evidence therefore exists and is in the record to support this determination. Thus, further CEQA review is not required.

The Adams Broadwell Appeal alleges that the City could not rely on Section 15183 because the Project has impacts peculiar to the Project that are new or more significant than previously analyzed.<sup>5</sup> The Adams Broadwell Appeal asserts the Project will result in significant health risk, construction noise,

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<sup>5</sup> The 1770 Broadway Appeal also raises issues regarding the Project being peculiar and unique, but those issues were not specifically related to CEQA.





and public transit impacts. As addressed above, the Project will not result in air quality or noise impacts.

With respect to public transit impacts, for purposes of CEQA, the applicable threshold in determining if a project will have a significant impact is whether the project would conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit. Here, the CEQA Analysis determined that the Project is consistent with applicable plans, ordinances, and policies, and therefore would not cause a significant impact on the circulation system, including transit. In support, the CEQA Analysis discusses how the Project is consistent with the LUTE, as well as the City's Public Transit and Alternative Mode and Complete Streets policies.

The Adams Broadway Appeal alleges that there is "abundant evidence" demonstrating that public transit in the City is already at or above existing capacity; however, in support of this allegation, it provides only two references, which can hardly be classified as "abundant evidence."

In sum, the Adam Broadwell Appeal fails to provide the required substantial evidence documenting how the alleged air quality, noise and public transit impacts are peculiar to the Project or the site, or how they were not analyzed in the Program EIRs, or how the SCAs, which are uniformly applied development policies/standards, fail to address the alleged impacts. As a result, even if the alleged impacts could occur (which we contend is not the case), the Adams Broadwell Appeal's claim that the City's reliance on Section 15183 is misplaced must be rejected.

### **3. Streamlining for Infill Projects (CEQA Guidelines Section 15183.3)**

The CEQA Analysis indicates that the Project also qualifies for streamlined environmental under Section 15183.3. To be eligible for the streamlining procedures prescribed in Section 15183.3, an infill project must:

- a. Be located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least seventy-five percent of the site's perimeter. For the purpose of this subdivision "adjoin" means the infill project is immediately adjacent to qualified urban uses, or is only separated from such uses by an improved public right-of-way;
- b. Satisfy the performance standards provided in Appendix M; and,
- c. Be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, except as provided below:
  - o Only where an infill project is proposed within the boundaries of a metropolitan planning organization for which a sustainable communities strategy or an alternative planning strategy will be, but is not yet in effect, a residential infill project must have a density of at least 20 units per acre, and a retail or commercial infill project must have a floor area ratio of at least 0.75.





- Where an infill project is proposed outside of the boundaries of a metropolitan planning organization, the infill project must meet the definition of a small walkable community project.

The performance standards in Appendix M for Residential Projects provide that a project must satisfy one of the following:

- Projects achieving below average regional per capita vehicle miles traveled (VMT). A residential project is eligible if it is located in a “low vehicle travel area” within the region.
- Projects located within ½ mile of an Existing Major Transit Stop or High-Quality Transit Corridor. A residential project is eligible if it is located within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
- Low-Income Housing. A residential or mixed-use project consisting of 300 or fewer residential units all of which are affordable to low income households is eligible if the developer of the development project provides sufficient legal commitments to the lead agency to ensure the continued availability and use of the housing units for lower income households, as defined in Section 50079.5 of the Health and Safety Code, for a period of at least 30 years, at monthly housing costs, as determined pursuant to Section 50053 of the Health and Safety Code.

Section 15183.3(c) makes it clear that “CEQA does not apply to the effects of an eligible infill project under two circumstances.” These circumstances are:

- First, if an effect was addressed as a significant effect in a prior EIR for a planning-level decision, then, with some exceptions, that effect need not be analyzed again for an individual infill project even when that effect was not reduced to a less than significant level in the prior EIR.
- Second, an effect need not be analyzed, even if it was not analyzed in a prior EIR or is more significant than previously analyzed, if uniformly applicable development policies or standards, adopted by the lead agency or a city or county, apply to the infill project and would substantially mitigate that effect.

As stated in Section 15183.3(d)(2)(A), “[n]o additional environmental review is required if the infill project would not cause any new specific effects or more significant effects, or if uniformly applicable development policies or standards would substantially mitigate such effects.”

The CEQA Analysis presents substantial evidence showing that the Project satisfies the In-Fill Performance Standards per CEQA Guidelines Section 15183.3. Specifically, as detailed in Attachment C to the CEQA Analysis, the Project is within an urban area, on a previously developed site, has been shown to satisfy the performances standards of Appendix M to the CEQA Guidelines (for example, the Project is located within ½ mile of a BART station and several bus stops), and is consistent with the general plan designation and density and building intensity for the Project site.





Further, the effects of the Project were adequately addressed in the Program EIRs. Moreover, as shown by the CEQA Analysis, the Project would not cause any new specific effects or more significant effects. As such, the Project qualifies for an exemption pursuant to 15183.3 and no further environmental review is required.

As with Section 15183, the Adams Broadwell Appeal alleges that the City could not rely on Section 15183.3 because the Project has health risk, construction noise, and public transit impacts peculiar to the Project that are new or more significant than previously analyzed. As discussed above, the Adams Broadwell Appeal fails to provide the required substantial evidence documenting how these alleged impacts are peculiar to the Project or the site, or how they were not analyzed in the Program EIRs, or how the SCAs fail to address the alleged impacts. As a result, the Adams Broadwell Appeal's claim that the City's reliance on Section 15183.3 is misplaced must also be rejected.

For all these reasons, the City has determined that the Project is not required to prepare an additional environmental document, including an EIR, based upon not one, but three CEQA Guideline sections. The City has presented substantial evidence in support of its findings regarding each of these sections, any of which would be sufficient to support the determination on its own. The claims raised by Adams Broadwell in the Appeal are without merit. The CEQA Analysis prepared and relied upon by the Planning Commission in unanimously approving the Project was legally adequate and is supported by substantial evidence in the record.

#### **B. The Project's Shadow Impacts were Adequately Analyzed**

A shadow analysis was prepared by Adam Phillips of PreVision to evaluate the potential impact of shadow from the Project on surrounding historic resources, parks and solar collectors. As detailed in the shadow analysis, a Project is determined to have a shadow impact if it would cast substantial shadow on existing solar collectors; substantially impact the function of a building using passive solar heat collection; substantially impair the beneficial use of any public or quasi-public park, lawn, garden, or open space; or cast shadow on an historic resource 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.

1770 Broadway appears to be a historic resource. As shown on the California Department of Parks and Recreation (DPR) Form, it is a contributor to the Uptown Historic District and may be individually significant as an early 20<sup>th</sup> century commercial structure with renaissance and baroque ornamentation. 1770 Broadway is, however, not significant for any characteristic related to light. For this reason, any shadow cast by the Project on 1770 Broadway could not have a significant impact.

The Planning Commission adequately considered the impact of shadow from the Project under the standards established by the City and correctly concluded the Project would not have a shadow impact.

### **III. Planning and Zoning**

The Appeals also raised issues and concerns regarding the planning and entitlement process for the Project. None of claims support or indicate an error or abuse of discretion by the Planning





Commission in approving the Project. As discussed below, the Planning Commission acted within its legal authority and in compliance with the law when it unanimously approved the Project. The issues, concerns and claims raised in the Appeals do not render the Planning Commission's action legally inadequate.

#### **A. The Planning Process Complied with All Legal Standards**

In the 1770 Broadway Appeal, several concerns were raised regarding the planning process, its transparency and the community engagement undertaken by Rubicon. The concerns expressed frustration with the process but failed to raise any substantive issues related to legal non-compliance or irregularities that indicate an abuse of discretion on the part of the Planning Commission.

As required, the Project was reviewed by the Design Review Committee ("DRC") of the Planning Commission before being heard by the full Planning Commission. In fact, the Project was heard twice by DRC (January 31, 2018 and November 28, 2018) and once by the Planning Commission (March 20, 2019). Each hearing was properly noticed in compliance with the City's legal requirements and at each hearing, the public was provided the opportunity to comment. As noted in the 1770 Broadway Appeal, the appellants attended these hearings, submitting comments and oral testimony. While the Planning Commission did not directly respond to each comment that was raised, changes were made to the Project in response to the comments. For example, the building was set back from the 1770 Broadway property line and, as shown in Attachment 3, a new lightwell has been added across from the 1770 Broadway lightwell. Other changes include (1) limiting the height of the building on the 19<sup>th</sup> Street side to one story, which allows the units on that side of 1770 Broadway to maintain substantially the same views, light, and air; and (2) eliminating a full level of parking, which reduces the overall building height and the height of the podium.

The Project also included the preparation of a detailed and thorough CEQA Analysis that was made available to the public for review more than 17 days before the Planning Commission hearing on the Project. In short, the Project underwent a thorough and detail review and afforded the public ample opportunity for public participation, in full compliance with all applicable legal standards.

The 1770 Broadway Appeal does raise one issue that we believe warrants a response, even though it does not raise a legal concern. Specifically, the appellants assert that the absence of three (3) Planning Commissioners from the March 20, 2019 hearing resulted in the Planning Commission that heard the Project not closely reflecting the "perspectives, identities and interest of downtown Oakland residents." (1770 Broadway Appeal, p. 5.) This comment is inappropriate and disrespectful to the Planning Commissioners in attendance and the Planning Commission as a whole. The Planning Commission is comprised of seven (7) members appointed by the Mayor and confirmed by the City Council. Planning Commissioners reflect a broad and diverse set of interests and experience within the City, and each Commissioner volunteers his/her time and knowledge on behalf of the City. Because of schedules and other obligations, it is not always possible for every Planning Commissioner to attend every Planning Commission meeting. Understanding this, Roberts Rules of Order and City policy establishes that items can be heard and acted upon by the Planning Commission if a quorum is present. On March 20, 2019, a quorum was present. Three (3) Planning Commissioners were absent, but four (4) Planning Commissioners were in attendance, comprising a quorum. The Planning





Commission therefore acted within its legal authority in unanimously approving the Project and, contrary to the concerns raised by the 1770 Broadway Appeal, represented the residents of Oakland.

#### **B. The Project's Design Meets City Standards and Requirements**

The Project was reviewed twice by the DRC before being heard by the Planning Commission. During the DRC hearing, careful review was conducted of the Project's compliance with City design standards and Planning Code requirements. Changes were made to the Project both at the DRC hearing and the Planning Commission hearing to address Planning Commissioners' concerns as well as concerns raised by the public, including the 1770 Broadway Appeal appellants.

At the March 20, 2019, hearing, the Planning Commission included a condition in response to the appellant's concerns regarding the lightwell at 1770 Broadway. The new Condition of Approval requests the Project to consider including a lightwell across from the 1770 Broadway in the Project. The addition of such a condition at the hearing is legally appropriate and within the power and authority of the Planning Commission. Following the hearing, Rubicon directed Handel architects to revise the plans to include a lightwell. Images of the revised design with the lightwell are included in Attachment 3.

At the Planning Commission hearing, comments were also raised regarding the garage ventilation and the distance between the 1770 Broadway and 1750 Broadway buildings. While the original design of the garage ventilation met all building code and air quality requirements, Rubicon has elected to revise the garage ventilation to further assuage concerns raised in the 1770 Broadway Appeal. Since the Planning Commission hearing, the ventilation has been relocated to as far away as possible from 1770 Broadway. As shown in Attachment 4, the ventilation now exits the garage over 38 feet away from 1770 Broadway and above the roof line of 1770 Broadway. Note that the garage is continuously ventilated, as shown on Page 2 of Attachment 4, by drawing in outside air from Broadway, directing it through the garage with a set of transfer fans to the 19<sup>th</sup> Street side of the building, and venting the air above the roof line of 1770 Broadway. The ventilation system was designed by a licensed mechanical engineer to meet all building code and air quality requirements.

Attachment 4 shows an additional voluntary accommodation that Rubicon has made to address concerns raised by the 1770 Broadway Appeal. Pages 2 and 3 of Attachment 4 show that HVAC mechanical equipment has been moved to be over 53 feet away from the south side of 1770 Broadway. The 1770 Broadway Appeal raised concerns about the proximity of the mechanical equipment to 1770 Broadway. Although the previous location of the equipment would have met all building code and noise ordinance requirements, Rubicon elected to move the equipment as an accommodation to the concerns raised by the residents of 1770 Broadway.

The 1770 Broadway Appeal also raised questions regarding the distance between 1770 Broadway and the future building at 1750 Broadway. This distance has not changed and was accurately presented to the Planning Commissioners. Attachment 3, which also shows the new lightwell, clearly shows the buildings are separated by 1.3 to 3 feet, depending on the point of measurement. Because the cornice of 1770 Broadway crosses the property line, Rubicon entered into a separate easement agreement with the owner of 1770 Broadway to allow the encroachment of the cornice.





Regarding the lot line windows in 1770 Broadway, these windows are not protected, as clearly stated by the Planning Commission at the March 20, 2019, hearing. There is no legal right for their continued operation and use, and despite the existence of many such windows downtown, their legal status remains the same. As a result, the windows are not to be taken into consideration when evaluating a project. That said, as noted above, Rubicon voluntarily set the new development back 3 feet from the property line where these windows exist, and Rubicon has revised the podium design to include a lightwell that mirrors the lightwell at 1770 Broadway.

The 1770 Broadway Appeal also raises concerns regarding construction impacts due to the Project being adjacent to 1770 Broadway. The potential impact of construction on 1770 Broadway was studied in the CEQA Analysis, as discussed above. The CEQA Analysis assessed, among other things, the noise, vibration, and air quality impacts during construction, and the Project approvals included multiple SCAs to address construction impacts. In addition, the Project will be required to comply with all applicable legal and regulatory requirements related to construction. With respect to concerns raised by the 1770 Broadway Appeal about crane lifts occurring over 1770 Broadway during construction, Rubicon will require its general contractor to have limit switches on the tower crane to physically prevent anything from being lifted over 1770 Broadway. Moreover, construction in the City is not unique, and the ability to construct a large, complex structure adjacent to existing uses, including residential uses, is feasible and does not by itself create a presumption of harm or damage to buildings, residents, or occupants. In any event, any potential for harm or damage has been evaluated, and the Planning Commission acted within its legal authority based on the evidence before it approved the Project.

The Project also includes 23 Conditions of Approval (“COAs”) and is required to comply with the City’s SCAs, which are approved and incorporated into the Project. These COAs and SCAs cover all aspects of the development of the Project and ensure compliance with the rules, regulations and requirements of the City.

The appellant has raised specific concerns regarding the impact of construction on the 1770 Broadway building. The Project will be required to comply with all City SCAs related to construction including SCA NOI-1, SCA NOI-2, SCA NOI-3, SCA NOI-4 and SCA NOI-5. In addition, the Project will be required to comply with SCA-NOI-8 (Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities), which will eliminate any potential vibration or structural impact to 1770 Broadway by requiring preparation of a vibration analysis by a technical expert prior to construction, monitoring during construction and implementation of design means and methods during construction. These and other COAs and SCAs specifically address the concerns raised in the 1770 Broadway Appeal. Comments regarding displacement or loss of residential units is not applicable to the Project as it is replacing commercial uses and will construct 307 residential units.

For all these reasons, as we have shown, despite the claims made by the appellants, the Project’s design is consistent the City’s Standards and Requirements.





**C. The Project is Consistent with the General Plan and Zoning**

The 1770 Broadway Appeal raises several issues concerning the Project's consistency with the General Plan and Zoning and the ability of the Planning Commission to make the necessary findings for approval. As detailed in the staff report and motion acted upon by the Planning Commission on March 20, 2019, the Project is consistent with both the General Plan and the Central Business District zoning. The findings made by the Planning Commission in approving the Project were legally adequate and within the authority of the Planning Commission.

\* \* \* \* \*

In sum, the City has determined that the Project is not required to prepare an additional environmental document, including an EIR, based upon not one, **but three** CEQA Guideline sections. The City has presented substantial evidence in support of its findings regarding each of these sections, any of which would be sufficient to support the determination **on its own**. The CEQA Analysis prepared and relied upon by the Planning Commission in unanimously approving the Project was therefore legally adequate and is supported by substantial evidence in the record. In addition, the Project has complied with all applicable planning and zoning laws. As a result, the Planning Commission did not commit an error or abuse its discretion in approving the Entitlements, and the claims in the Appeals are without merit.

For all these reasons, we respectfully request that the City Council reject the Appeals and uphold the Planning Commission's decision on the Project.

Very truly yours,

A handwritten signature in black ink, appearing to read "Alexis M. Pelosi", written in a cursive style.

Alexis M. Pelosi

Attachments.

cc: City Council



# ATTACHMENT 1



## **SUMMARY OF ECONOMIC BENEFITS OF 1750 BROADWAY RESIDENTIAL PROJECT IN DOWNTOWN OAKLAND**

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### **♦ The Project**

- 307 new housing units
- 307 additional households with 450 residents
- 5,000 sq. ft. retail space
- 22 jobs on-site plus support for employment by contractors serving the project

### **♦ Economic Benefits Upfront and During Construction Period**

- Impact Fees and Other One-Time Funding totaling \$13.002 million
  - \$6.754 million to City of Oakland Housing Trust Fund from affordable housing impact fee. With leveraging Federal, State, and other funding sources, funds could provide approximately 40 new units for very low- and low- income households
  - \$1.441 million to City of Oakland for transportation, capital improvements, and sewer mitigation impact fees, bedroom tax, and public art
  - \$1.268 million for impact fees to Oakland Unified School District
  - \$3.538 million in other fees paid to the City of Oakland related to permitting, inspection, and other services
- Construction Period Employment and Spending
  - 3,600 worker-months of construction labor over 28 months; averaging approximately 128 workers per month
  - Additional employment and spending associated with project spending for materials, supplies, services, etc.; some in Oakland

### **♦ Permanent, On-Going Economic Benefits to the City and Oakland Community** (quantified for stabilized occupancy in 2021 dollars)

- Business Activity, Employment, and Payroll Supported by New Household Spending
  - \$6.0 million in annual household spending for retail goods in Oakland, to support businesses downtown and in the rest of the City
  - \$2.45 million in annual household spending for a variety of services in Oakland including health care, personal services, household and vehicle maintenance and repair services, and recreation/entertainment
- Higher Tax Revenues to City of Oakland
  - \$2.09 million in annual tax revenues; a substantial revenue stream over life of the project
  - Substantial increase over current tax revenues from the site of \$92,532
  - Higher tax revenues are key to addressing projected expenditure growth, improving public services, and providing other public benefits
  - Ongoing property tax allocation for affordable housing to be generated by the project is estimated in the range of \$4 million (NPV over 40 years). This funding is in addition to the project's affordable housing impact fee paid up front and will support production of additional affordable housing units in Oakland over time.



# ATTACHMENT 2



# **1750 Broadway Residences**

**Oakland, CA**

## **Construction Noise Management Plan**

October 22, 2019

*Prepared for:*

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Salter Project Number: 19-0297



## **INTRODUCTION**

This report provides a site-specific construction noise reduction plan for the 1750 Broadway Residences project. The project is located along Broadway, between 17th Street and 19th Street in Oakland. We have reviewed the proposed construction noise equipment and schedule and predicted the noise levels expected at the nearby buildings.

Construction is estimated to begin early-2021 and be completed within approximately 26 months thereafter. Construction will occur on weekdays between the hours of 7 am and 7 pm.

The project is in the Central Business District (CBD-P & CBD-C) Zone. The adjacent buildings are residences to the north (1770 Broadway), a parking garage to the east, and a commercial building to the south. The residences to the north are the closest noise-sensitive receivers.

This report summarizes the results of our analysis and provides recommendations for construction noise reduction measures. The report consists of the following sections:

- 1.0 Executive Summary
- 2.0 Applicable Criteria
- 3.0 Construction Noise Analysis
- 4.0 Noise Reduction Measures
- Appendix A – Site Logistics Plan
- Appendix B – Noise Monitoring Equipment

### **1.0 EXECUTIVE SUMMARY**

1. Construction noise levels and duration of noise will vary depending on the type and location of the construction activities. We expect that noise levels could temporarily exceed the ordinance criteria without noise reduction measures at the nearest properties when construction is occurring close to the properties. However, noise levels are expected to meet the City noise limit criteria with the noise reduction measures recommended in this report.
2. The recommended noise-reduction measures are expected to reduce construction noise to meet the City noise limits. We will be implementing the noise-reduction measures provided in the construction noise analysis conducted by the acoustical consultant retained by the residents of 1770 Broadway. Additional noise-reduction measures, such as equipment relocation away from residential receivers and additional barriers, should be considered to further reduce the construction noise levels. This is discussed in Section 4.0.



## 2.0 APPLICABLE CRITERIA

### 2.1 Oakland Municipal Code

The City of Oakland Noise Ordinance<sup>1</sup> provides provisions for construction noise levels. These provisions are as follows:

*The daytime noise level received by any residential, commercial, or industrial land use which is produced by any non-scheduled, intermittent, short-term construction or demolition operation (less than ten days) or by any repetitively scheduled and relatively long-term construction or demolition operation (ten days or more) shall not exceed:*

**Table 1: Maximum Allowable Receiving Noise Level Standards, dBA**

	<b>Weekdays 7 am to 7 pm</b>	<b>Weekends 9 am to 8 pm</b>
Short-Term Operation		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Operation		
Residential	65	55
Commercial, Industrial	70	60

Additionally, Section 17.120.050 Part D of the Municipal Code states:

*In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the stated applicable noise level shall be adjusted so as to equal the ambient noise level.*

Construction of the project is considered long-term. This report includes recommendations to reduce noise from construction activities that exceed these long-term noise criteria.

### 2.2 Existing Noise Environment

Table 2 shows the existing noise environment at the project site during the proposed construction hours (i.e., weekdays from 7 am to 7 pm). Measurements were conducted in May 2019. Noise levels are shown as the range of hourly  $L_{eq}$ <sup>2</sup> in dBA<sup>3</sup>. See **Figure 1** for the measurement locations, which included a monitor on the roof of the adjacent residential building at 1770 Broadway. See **Figures 2 to 4** for a graphical representation of the measured noise levels during the entire measurement period.

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1 City of Oakland Municipal Code, Chapter 17 "Noise"

2  $L_{eq}$  – The equivalent steady-state A-weighted sound level that, in a stated period of time, would contain the same acoustic energy as the time-varying sound level during the same period.

3 A-Weighted Sound Level – The A-weighted sound pressure level, expressed in decibels (dB). Sometimes the unit of sound level is written as dB(A). A weighting is a standard weighting that accounts for the sensitivity of human hearing to the range of audible frequencies. People perceive a 10 dB increase in sound level to be twice as loud.



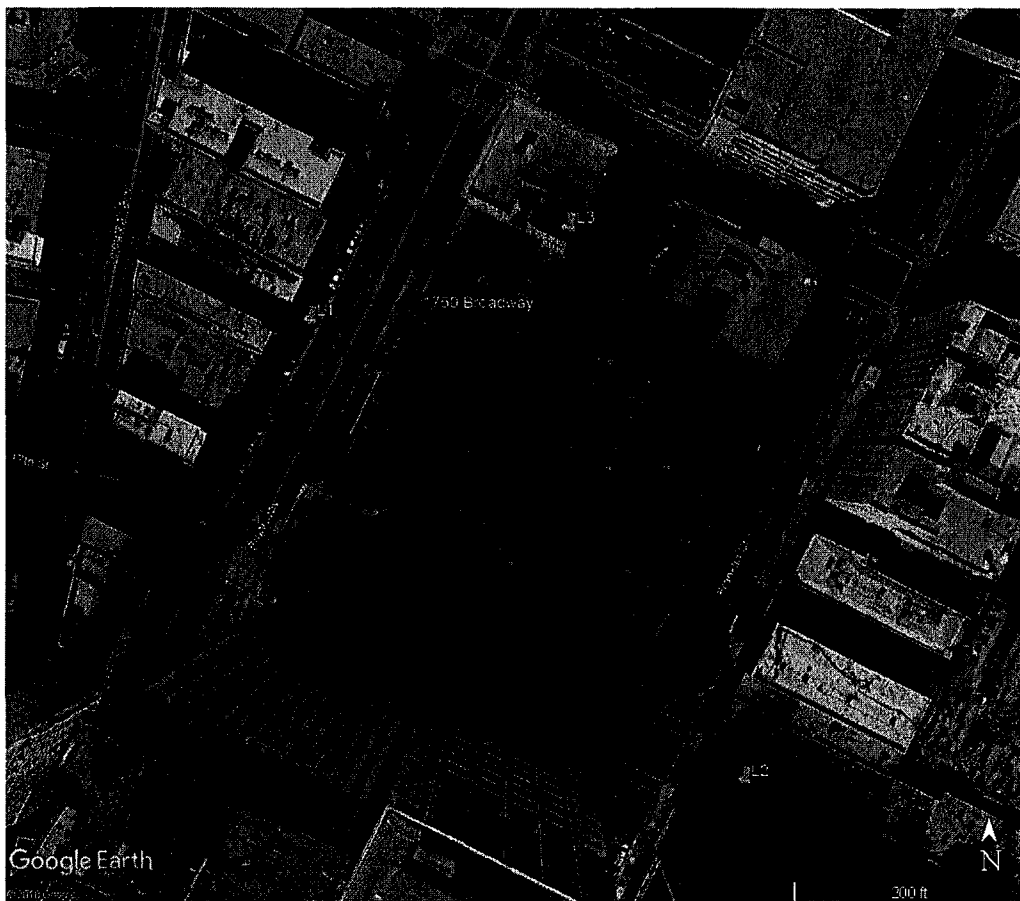
Although the construction site will be closer to 19th Street, our measurements were conducted on 17th Street due to the current construction activity on 19th Street. The measured levels represent typical conditions on 19th Street without construction activity. Future monitoring would occur on 19th Street (see Appendix A). All adjacent land uses are zoned for Central Business District (CBD-P & CBD-C).

**Table 2: Range of Existing Noise Environment During Construction Hours**

Location	Measured Hourly (7 am to 7 pm) $L_{eq}$ (dBA)	Noise Ordinance Prescribed Noise Limit (dBA)
Broadway (L1)	68 to 76	70
17th Street (L2)	63 to 77	70
North Property Line (L3)	63 to 72	65

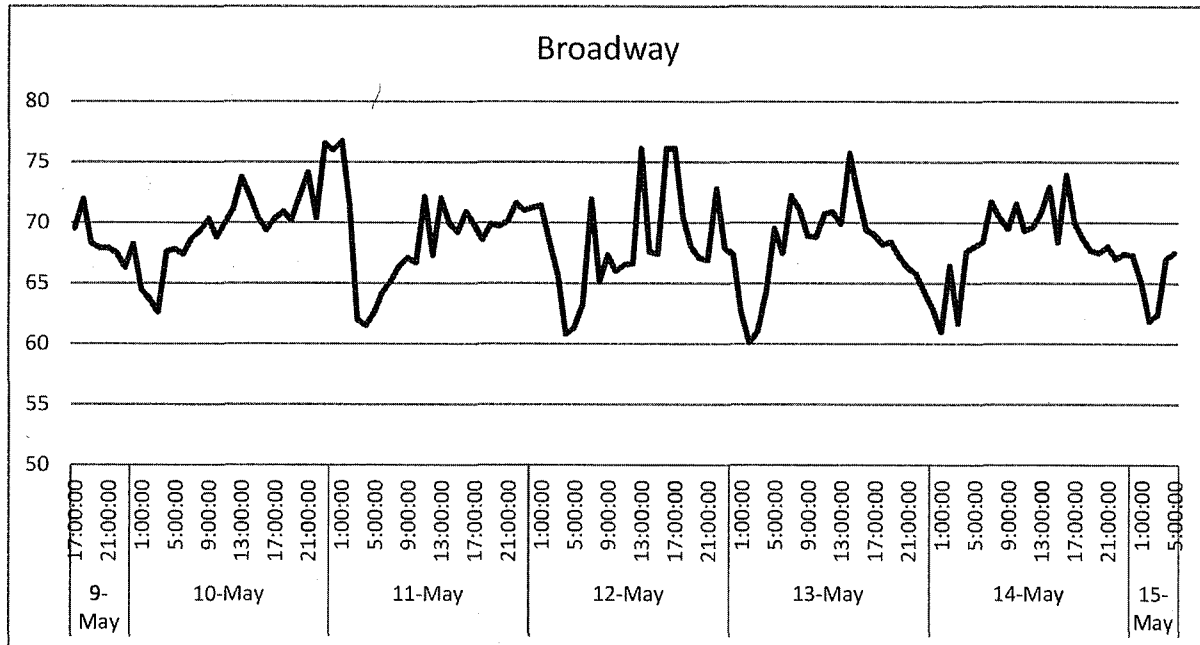
As shown, the existing noise levels exceed the maximum allowable receiving noise level standards at the adjacent properties for long-term construction. Therefore, the existing ambient noise levels are the applicable daytime long-term construction noise standard for all three locations.

**Figure 1: Existing Noise Environment Measurement Locations**

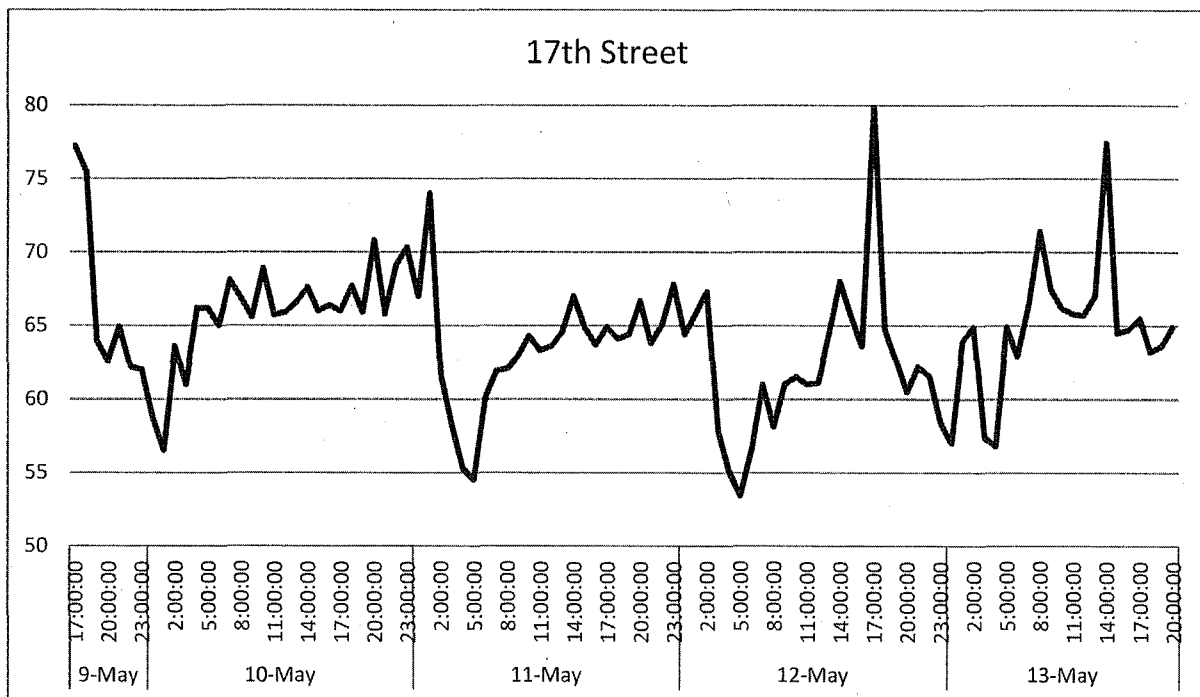




**Figure 2: Measured Hourly Noise Levels (dBA) at Broadway (L1)**



**Figure 3: Measured Hourly Noise Levels (dBA) at 17th Street (L2)**





North Property Line

Date/Time	Temperature
8-May 15:00:00	65
8-May 19:00:00	70
8-May 23:00:00	60
9-May 3:00:00	61
9-May 7:00:00	64
9-May 11:00:00	72
9-May 15:00:00	65
9-May 19:00:00	61
9-May 23:00:00	60
10-May 3:00:00	61
10-May 7:00:00	64
10-May 11:00:00	67
10-May 15:00:00	63
10-May 19:00:00	68
10-May 23:00:00	62
11-May 3:00:00	60
11-May 7:00:00	72
11-May 11:00:00	67
11-May 15:00:00	72
11-May 19:00:00	62
11-May 23:00:00	61
12-May 3:00:00	59
12-May 7:00:00	60
12-May 11:00:00	68
12-May 15:00:00	61
12-May 19:00:00	67
12-May 23:00:00	60
13-May 3:00:00	59
13-May 7:00:00	64
13-May 11:00:00	68

### 3.1 Phases of Construction

We understand that the construction will be completed in three main phases across 26 months with multiple activities in each phase. Phase 1 will include demolition and earthwork. Phase 2 will include the foundation and erection of the structure. Phase 3 will include the enclosure of the building and interior work. The detailed construction schedule is shown in Table 3.

### Table 3: Construction Schedule by Phase

[illegible]



A general description of the phases and potential tools and activities that might happen on site during construction is listed below. This does not constitute a comprehensive list of activities, tools, and potential impacts. Actual tools used, activities completed, suggested areas of noise, and durations described might vary depending on site conditions, subcontractor techniques, and general sequencing of the project's schedule.

### **Phase 1: Demolition, Excavation, and Subgrade**

**Scheduled Dates:** Month 1 to Month 7

**Activities:** Phase 1 includes (but is not limited to):

- Demolition of the existing structure (Month 1 only)
- Structural and mass excavation
- Installation of foundations, temporary power lighting, utilities/facilities, and shoring
- Erection of site fencing
- Construction of concrete garage
- Site preparation and improvements

**Tools and Noise:** During this phase, air compressors, backhoes, concrete pumps, dewatering pumps, dozers, drill rig, excavators, forklifts, hand tools, loaders, rollers, and welding machines (with generator) will be used. Most noise during Phase 1 will be focused on or near grade.

### **Phase 2: Foundation and Structure Erection**

**Scheduled Dates:** Month 7 to Month 20

**Activities:** Phase 2 includes (but is not limited to):

- Site improvements
- Installation of temporary shoring and PG&E meters
- Mechanical, electrical, and plumbing rough-in and routing
- Installation of elevator
- Masonry installation
- Installation of exterior envelope
- Use of mobile crane
- Framing of the structure

**Tools and Noise:** During this phase, air compressors, concrete pumps, cranes, forklifts, hand tools, personnel hoists, scissor lifts, and welding machines (with generator) will be used. Most noise during Phase 2 will be located at grade (for deliveries and staging) as well as on and/or around the structural decks where concrete is being poured and framing is installed.

### **Phase 3: Exterior Finishing, Interior Framing and Finishes**

**Scheduled Dates:** Month 10 to Month 26

**Activities:** Phase 3 includes (but is not limited to):



- Concrete pours
- Hand tools for interior work and finishes
- Drywall, framing, tile, and painting
- Cabinet installation
- Elevator work
- Site work and landscaping
- Mobile crane demobilization
- Personnel hoist demobilization
- Mechanical, electrical, and plumbing system installation
- Fire life-safety testing
- Fire alarm testing

**Tools and Noise:** During this phase, the air compressors, concrete pumps, cranes, forklifts, hand tools, personnel hoists, scissor lift, and welding machines (with generator) will be used. Most noise during Phase 3 will be located at grade (for deliveries and staging). However, the building will have the exterior envelope installed. Therefore, much of the construction activity will be in the interior of the building.

### 3.2 Predicted Construction Equipment Noise Levels

Per the proposed construction equipment list, Table 4 indicates the expected equipment noise levels and usage factors. Concrete saws will not be used. These noise levels are the basis of our analysis.

**Table 4: Typical Noise Levels Used for the Analysis<sup>4</sup>**

Equipment	Usage Factor (%)	Hourly Average Noise Level (dBA) @ 50 Feet per Usage Factor
<i>Earthmoving</i>		
Front Loader	40	76
Backhoe	40	76
Dewatering Pump	50*	77
Dozer	40	81
Grader	40	81
Excavator	40	77
Forklift	40	79
<i>Materials Handling</i>		
Concrete Mixer	40	75
Concrete Pump	40	78
Tower Crane	50*	80
<i>Impact</i>		

<sup>4</sup> Sources: U.S. Environmental Protection Agency (1971), FHWA Construction Noise Handbook Tables 9.1 and 9.9



Compressor (pneumatic tools)	40	77
<i>Stationary</i>		
Generator	50	78
Personnel Hoist	50*	72
Scissor Lift	50*	71
Welding Machine	50*	71
<i>Other</i>		
Drill Rig (Auger)	20	77
Roller	20	67

\*Usage factor estimated

Based on our review of the phasing and equipment plan, as well as these equipment noise levels provided in the FHWA Construction Noise Handbook and our experience with similar equipment, we have used our own proprietary spreadsheet<sup>5</sup> to calculate the expected maximum noise levels at nearby receiver locations (see Tables 5 to 7).

The equipment was identified for each phase of construction and was assumed to be operating simultaneously at the nearest (worst-case) and furthest (best-case) positions from potential receivers. Since the measured ambient noise levels exceed the City's criterion, the applicable criterion shall be equal to the measured ambient noise level (see Section 2.1). For the purposes of this report, we analyzed noise levels at the proposed long-term monitoring locations (see Appendix A).

### **Location 1**

This location is on the west side of Broadway between 17th Street and 19th Street. It is approximately 80 feet west from the construction site. Based on the construction phasing and equipment information provided, we estimate that construction noise levels without reduction measures could be up to those shown in Table 5.

<b>Table 5: Construction Noise Analysis for Location 1 (Hourly L<sub>eq</sub>)</b>		
<b>Phase</b>	<b>Estimated Maximum Construction Noise Levels</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	82 dBA	Ambient of 68 to 76 dBA <sup>6</sup>
2	80 dBA	
3	80 dBA	

<sup>5</sup> Our model uses distance and accompanying decibel drop-off for each piece of equipment and then sums the noise levels.

<sup>6</sup> "In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the stated applicable noise level shall be adjusted so as to equal the ambient noise level."



## **Location 2**

This location is on the north side of 19th Street, between Broadway and Franklin Street. It is approximately 130 feet from the construction site. Based on the construction phasing and equipment information provided, we estimate that construction noise levels without reduction measures at this location could be up to those shown in Table 6.

<b>Table 6: Construction Noise Analysis for Location 2 (Hourly <math>L_{eq}</math>)</b>		
<b>Phase</b>	<b>Estimated Maximum Construction Noise Levels</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	80 dBA	Ambient of 63 to 77 dBA
2	78 dBA	
3	77 dBA	

## **Location 3**

This location is on the roof of the adjacent residential property at 1770 Broadway. It is at the north property line of the project site. Based on the construction phasing and equipment information provided, we estimate that construction noise levels without reduction measures at this location could be up to those shown in Table 7.

<b>Table 7: Construction Noise Analysis for Location 3 (Hourly <math>L_{eq}</math>)</b>		
<b>Phase</b>	<b>Estimated Maximum Construction Noise Levels</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	86 dBA	Ambient of 63 to 72 dBA
2	84 dBA	
3	84 dBA	

### ***3.3 Analysis***

Although the estimated noise levels exceed the construction noise thresholds set out in the Municipal Code, the levels will vary as the project progresses around the construction site and moves to the interior of the building. Additionally, measured construction noise levels will be compared to the pre-construction ambient noise levels, as described in Section 17.120.050 Part D of the Municipal Code.

Some construction activities could result in instantaneous noise levels above 90 dBA. Based on our experience, these might include air horns, material handling, air brakes, back-up beepers, and other impact-generating activities. Noise levels will be monitored during the noisiest phases of construction to refine these estimates and corresponding noise reduction measures, as necessary. All feasible techniques prescribed in Section 4.3 shall be implemented to reduce the noise impacts.



#### 4.0 NOISE REDUCTION MEASURES

##### 4.1 Standard Conditions of Approval

The following noise reduction measures are set forth and required by the City's Standard Conditions of Approval (SCA). These measures will be implemented throughout the project.

SCA Item	Requirement	Response
62	<b>Construction Days/Hours.</b> The project applicant shall comply with the following restrictions concerning construction days and hours:	
a	Construction activities are limited to between 7 am and 7 pm, Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA limited to between 8 am and 4 pm Monday through Friday.	Will comply
b	Construction activities are limited to between 9 am and 5 pm on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9 am to 5 pm 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.	Will comply
c	No construction is allowed on Sunday or federal holidays.	Will comply
63	<b>Construction Noise.</b> 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, impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically-powered wherever possible 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.	Will comply
b	Applicant shall use temporary power poles instead of generators where feasible.	Will comply



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.	Will comply
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.	Will comply
64	<b>Extreme Construction Noise.</b> Prior to any extreme noise-generating construction activities (e.g., pier-drilling, pile-driving and other activities generating greater than 90 dB), 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:	
a.i	Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings.	Will comply – see Section 4.2.1
a.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.	Piles will be drilled, not driven
a.iii	Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site.	Will comply – see Section 4.2.2
a.iv	Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by using sound blankets (for example) and implement such measure if such measures are feasible and would noticeably reduce noise impacts.	Will be provided, as needed – see Section 4.2.3
a.v	Monitor the effectiveness of noise-attenuation measures by taking noise measurements.	Will monitor noise – see Section 4.2.4
b	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.	Will comply



65	<b>Project-Specific Construction Noise Reduction Measures.</b> 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. The project applicant shall implement the approved Plan during construction.	
66	<b>Construction Noise Complaints.</b> 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.	Will comply – see Section 4.2.5
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.	Will comply – see Section 4.2.5
c	Protocols for receiving, responding to, and tracking received complaints.	Will comply – see Section 4.2.5
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.	Will comply – see Section 4.2.5

#### ***4.2 Supplemental Information on Standard Conditions of Approval***

The following provides additional information and analysis of certain SCA identified in Section 4.1, including their application and expected noise reduction.

1. **SCA 64-a.i:** The sound fence around the project site should be constructed prior to any site work and erected at the project boundary on the north, south, and west sides. The fence should be 12-feet high and have a minimum surface density of 3 psf (e.g., plywood, sound blanket) with no cracks or gaps. This will help to reduce noise up to 10 dB at the typical pedestrian head-height – depending on the height of the equipment noise source (e.g., drilling is at grade, but equipment engine exhausts are above grade) – where line-of-sight to the construction activity will be broken. Gates will be used for entrances/exits to maintain a solid barrier and shall remain closed when not in use.
2. **SCA 64-a.iii:** The use of sound blankets around the building structure before the exterior facade is installed can provide up to 5 to 10 dB of noise reduction. The sound blankets should cover three floors at a time and be installed without seams or gaps (i.e., they should overlap one another).
3. **SCA 64-a.iv:** If a tenant elects to receive noise barriers at their property to reduce the impacts of the construction noise associated with the project, the project developer will provide and install sound blankets at the tenant's windows at no cost to the tenant. This sound disturbance resolution will be recorded on the neighborhood complaint log. The project developer will proactively and regularly conduct neighborhood outreach to receive feedback on the noise impacts and attenuation measures.



At the adjacent 1770 Broadway residences, use construction noise control blankets along the property line (e.g., Acoustical Surfaces BBC-13X-2) to reduce noise intrusion. Pending approval from the landlord, additional noise reduction can be achieved by installing new sound-rated windows or additional storm windows<sup>7</sup> in conjunction with the existing windows. These measures would provide 10 to 20 dB of additional noise reduction (depending on how well the existing windows are sealed).

4. **SCA 64-a.v:** During construction, noise will be monitored continuously at three locations with bi-weekly reporting of the noise levels during construction hours. Hourly  $L_{eq}$  will be reported and compared to the ambient hourly  $L_{eq}$  measured before construction commenced, which varied over time (see **Figures 2 to 4**). If hourly  $L_{eq}$  during construction are greater than 3 dB above the previously measured ambient noise levels for that particular hour of the day, the exceedance recordings will be used to identify what activities (e.g., construction, traffic, sirens) caused noise levels to rise.

Additionally, if noise levels exceed 90 dB outside of the approved construction hours, the project developer will be notified to adjust the construction activity accordingly. Reports will be submitted within one week of the measurements being taken. This tool will be used to fine tune the proposed noise reduction measures, as needed. See Appendix B for the noise monitoring equipment.

5. **SCA 66:** The following procedures will be implemented to address construction noise complaints:
  - a. Designation of Enforcement Manager. Any complaints received with respect to construction noise shall be forwarded to the Compliance Manager [TBD]. Contact Number: [TBD].
  - b. Signage. 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. Example signage provided as **Appendix C**.
  - c. Notifications. Notify adjacent property owners and occupants located within 300 feet of the project site at least 14 days prior to commencement of activities. SCA NOI-1 only requires notifications for construction activity outside of standard hours.
  - d. Complaints. The noise and compliance enforcement manager for the project, shall ensure response and corrective action to complaints within the same working day if the complaint is received during the noise-related incident and from sensitive receptors residing within 100 feet of the project site. Otherwise, response and corrective action to complaints shall occur within 48 hours. A complaint log shall be maintained by the Compliance Manager indicating the date and time of each received noise complaint, the noise source of concern, and how the issue was resolved. Example complaint log provided as **Appendix D**.

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<sup>7</sup> Storm windows are an additional operable pane of glass installed in conjunction with the existing window assembly to provide additional noise reduction.



#### ***4.3 Site-Specific Noise Reduction Measures (All Phases)***

The following are noise reduction measures that will be implemented by the project applicant throughout construction. These techniques are in line with the recommendations in the Construction Noise Analysis report prepared for the neighbors at 1770 Broadway by Wilson Ihrig on April 1, 2019.

##### *All Phases:*

- 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) for equipment and trucks
- Locate stationary noise sources as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds or incorporate insulation barriers to provide noise reduction
- Use hydraulic or electric-powered impact tools wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools
- Use "quiet" gasoline or electric-powered compressors
- Use electric forklifts
- Manage truck traffic to reduce idling (see the Site Logistics Plan in Appendix A)
- Proactively and regularly evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by using sound blankets
- Use back-up beepers only when required by law. Spotters or flaggers should be used in lieu of back-up beepers to direct backing operations when allowable
- Minimize drop height when loading excavated materials onto trucks
- Minimize drop height when unloading or moving materials on-site
- Sequence the noisiest activities to coincide with the noisiest ambient hours

##### *Phase 1:*

- Erect temporary plywood noise barriers around the construction site
- Erect localized barriers around noisy stationary equipment at-grade (e.g., pumps, generator)
- Erect a barrier around the drill rig that is tall enough to block line-of-sight to the adjacent residences with no cracks or gaps. The interior of the barrier should be lined with a sound-absorptive material (e.g., duct liner, black-faced insulation). Actual design of the barrier would be developed in conjunction with the contractor.
- Only operate the drill rig during the noisiest time of the day
- Install noise control blankets to reduce noise intrusion at 1770 Broadway
- Install temporary "storm windows" over existing windows in habitable rooms at 1770 Broadway with direct line-of-sight to the project site

##### *Phase 2:*

- Utilize sound blankets around the building structure as construction moves vertically above the plywood noise barriers at-grade

##### *Phase 3:*

- Locate noisy equipment within the building structure once the exterior facade is installed



#### ***4.4 Estimated Noise Levels with Noise Reduction Measures***

The following tables show the estimated noise levels at each location during each phase with the noise reduction measures prescribed in the SCA and the Noise Reduction Measures in Section 4.3.

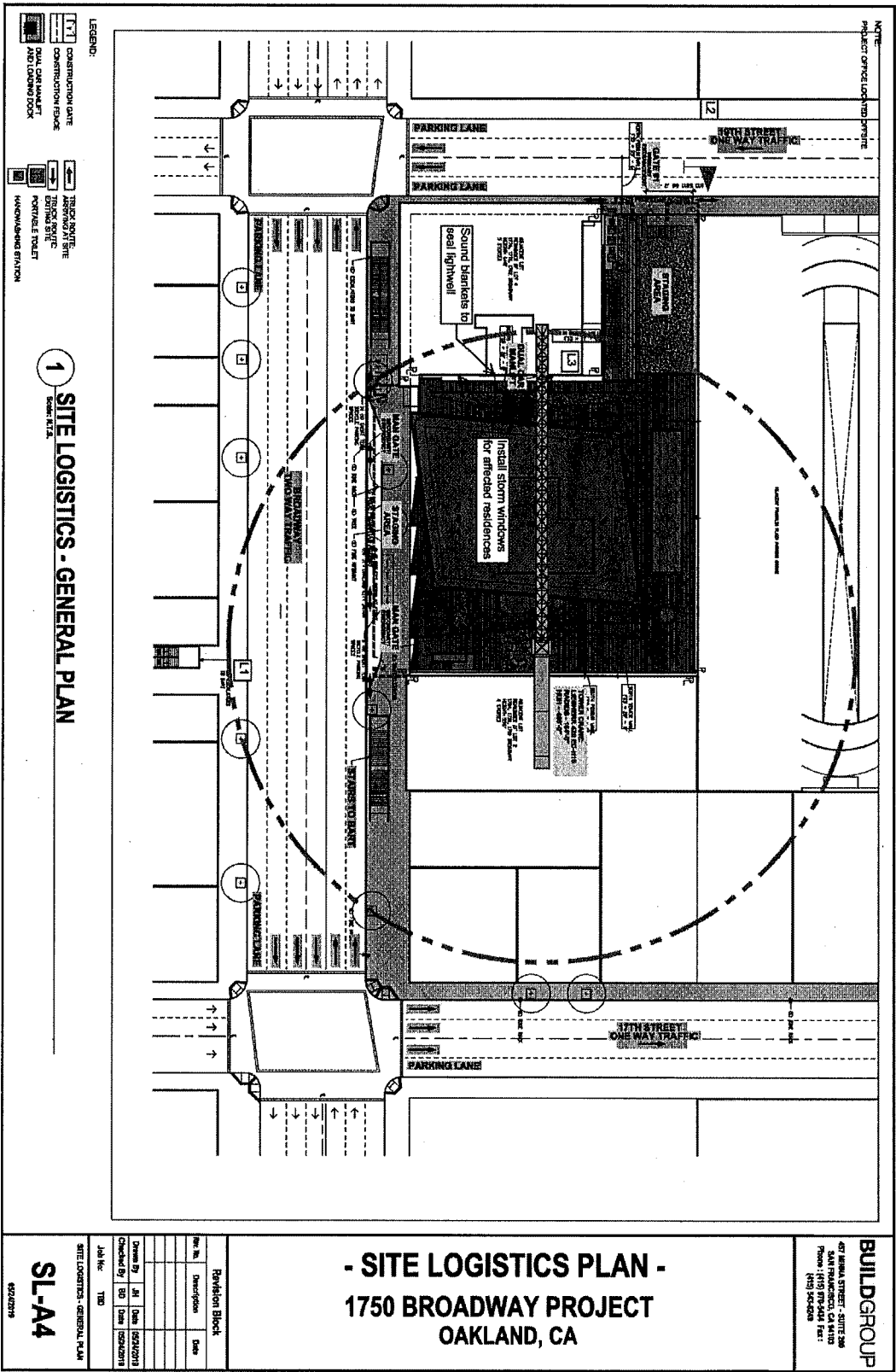
<b>Table 8: Construction Noise Analysis for Location 1 (Hourly L<sub>eq</sub>)</b>		
<b>Phase</b>	<b>Estimated Noise Levels with Noise Reduction</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	72 to 76 dBA	Ambient of 68 to 76 dBA
2	70 to 75 dBA	
3	70 to 75 dBA	

<b>Table 9: Construction Noise Analysis for Location 2 (Hourly L<sub>eq</sub>)</b>		
<b>Phase</b>	<b>Estimated Noise Levels with Noise Reduction</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	70 to 75 dBA	Ambient of 63 to 77 dBA
2	63 to 70 dBA	
3	62 to 69 dBA	

<b>Table 10: Construction Noise Analysis for Location 3 (Hourly L<sub>eq</sub>)</b>		
<b>Phase</b>	<b>Estimated Noise Levels with Noise Reduction</b>	<b>Noise Limit/Typical Ambient Noise Level During Construction Hours</b>
1	69 to 72 dBA	Ambient of 63 to 72 dBA
2	64 to 69 dBA	
3	64 to 69 dBA	

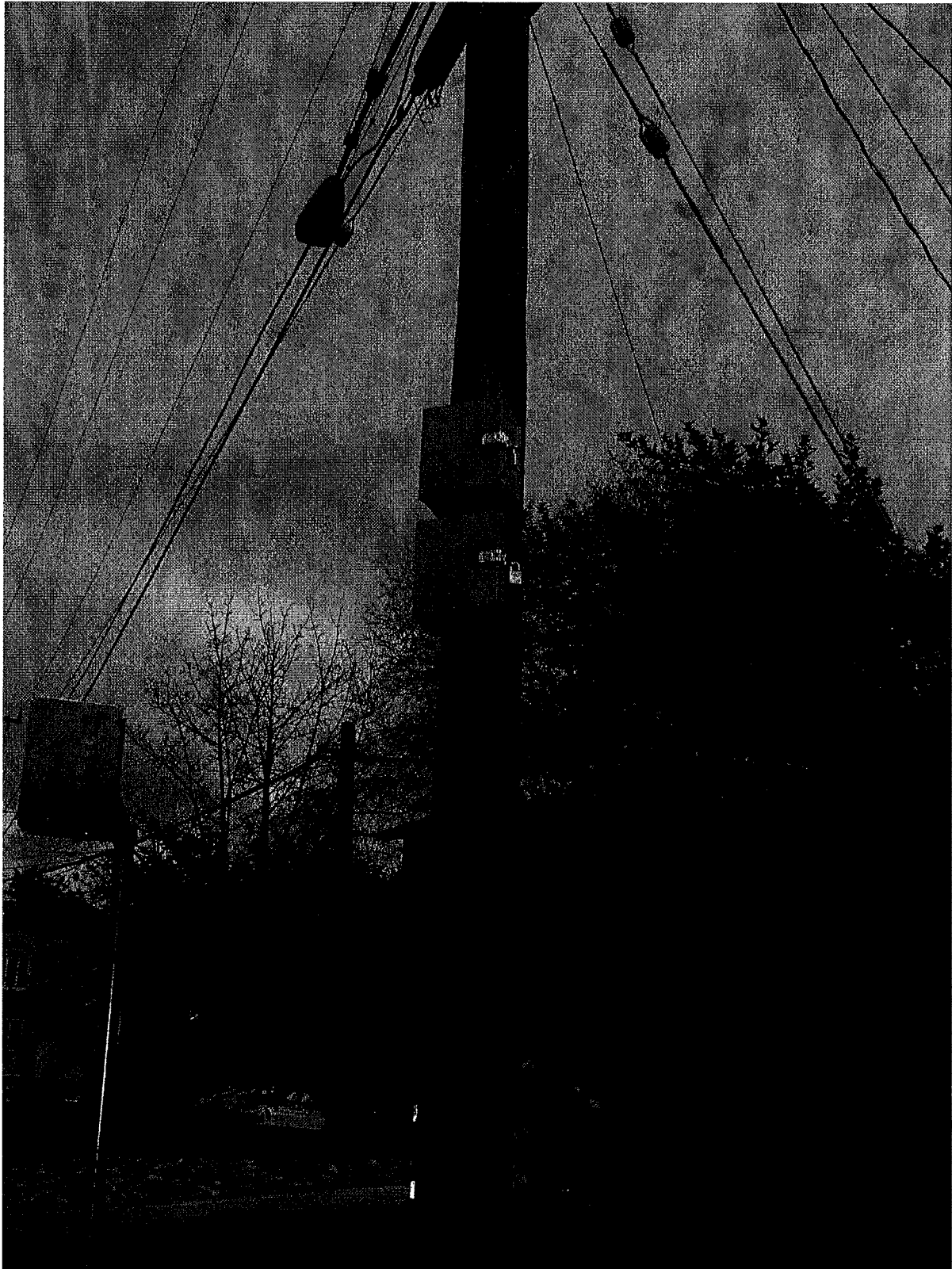


APPENDIX A – SITE LOGISTICS PLAN





## APPENDIX B – SOUND MONITORING EQUIPMENT





## **APPENDIX C - SIGNAGE**

### **SIGN REQUIREMENTS FOR POSTING CONSTRUCTION HOURS**

Contractor shall post a sign at all entrances to the construction site upon commencement of construction. Sign(s) shall be posted in a conspicuous place visible from the public right-of-way near the entrance to the job site, at least five (5) feet above ground level, and shall be of a white background, with legible black lettering. Lettering shall be a minimum of one and one-half (1-1/2) inches in height. The sign shall read as follows:

**ADDRESS: 1750 Broadway**

#### **CONSTRUCTION HOURS (includes any and all deliveries)**

MONDAY-FRIDAY 7:00 a.m. to 7:00 p.m.

SATURDAY 9:00 a.m. to 5:00 p.m.

SUNDAY/HOLIDAYS Prohibited

**RESPONSIBLE PARTY CONTACT: [NAME TBD] [PHONE NUMBER TBD] [EMAIL ADDRESS TBD]**

This sign and construction hours posting requirement is for the purpose of informing all contractors and subcontractors, their employees, agents, material, men and all other persons at the construction site. Construction includes: alteration, demolition, maintenance of construction equipment, deliveries of materials or equipment, or repair activities.

### **NOISE LIMITS**

The construction site noise level at any point outside of the construction property line shall not exceed ninety (90) dBA. Violation of the construction hours and/or noise limits may be enforced as either an infraction or a misdemeanor punishable by fines or jail time or both or by an administrative citation with a fine, or by a civil action with a monetary penalty, injunction and/or other remedies.



# CONSTRUCTION NOISE COMPLAINT LOG

[illegible]



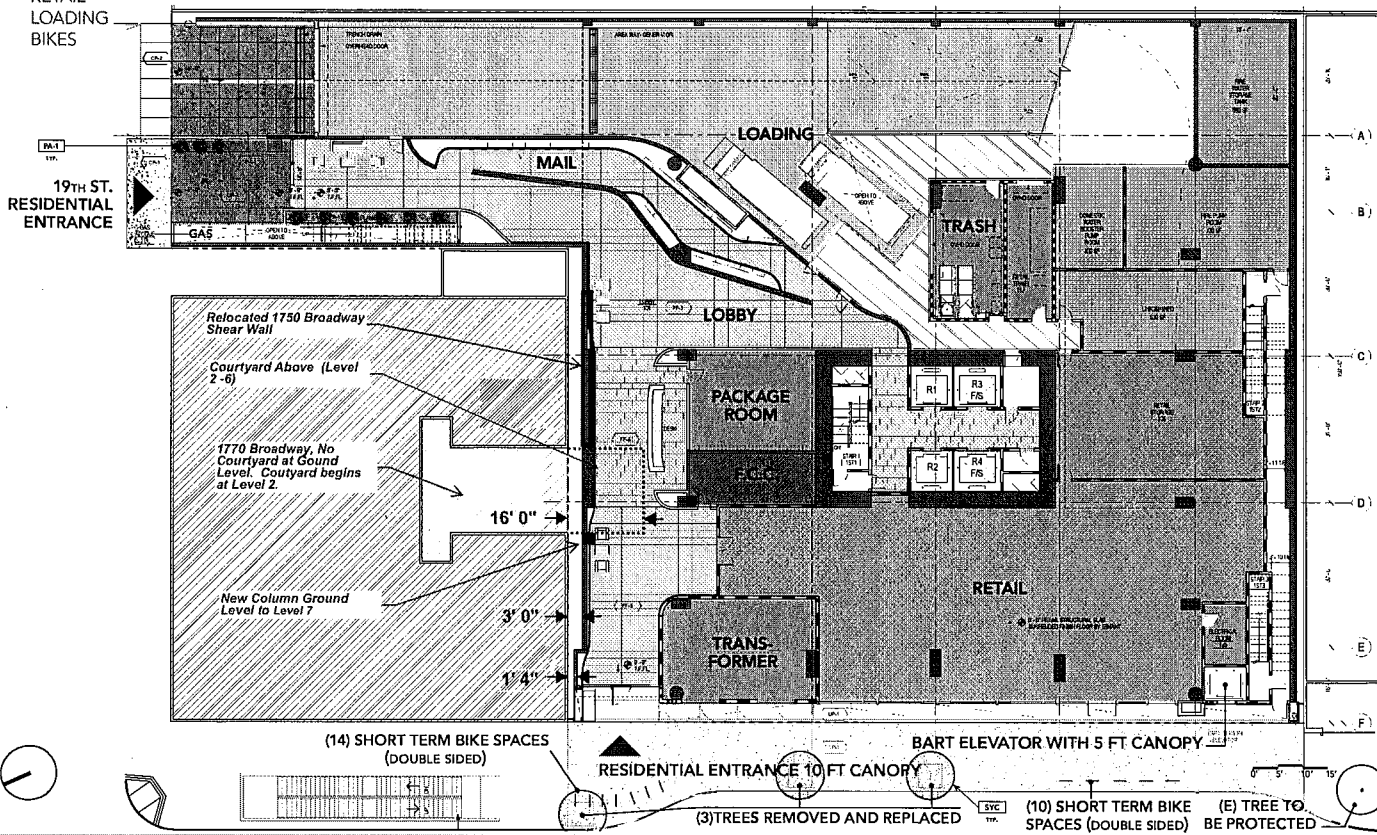
# ATTACHMENT 3



# GROUND FLOOR PLAN

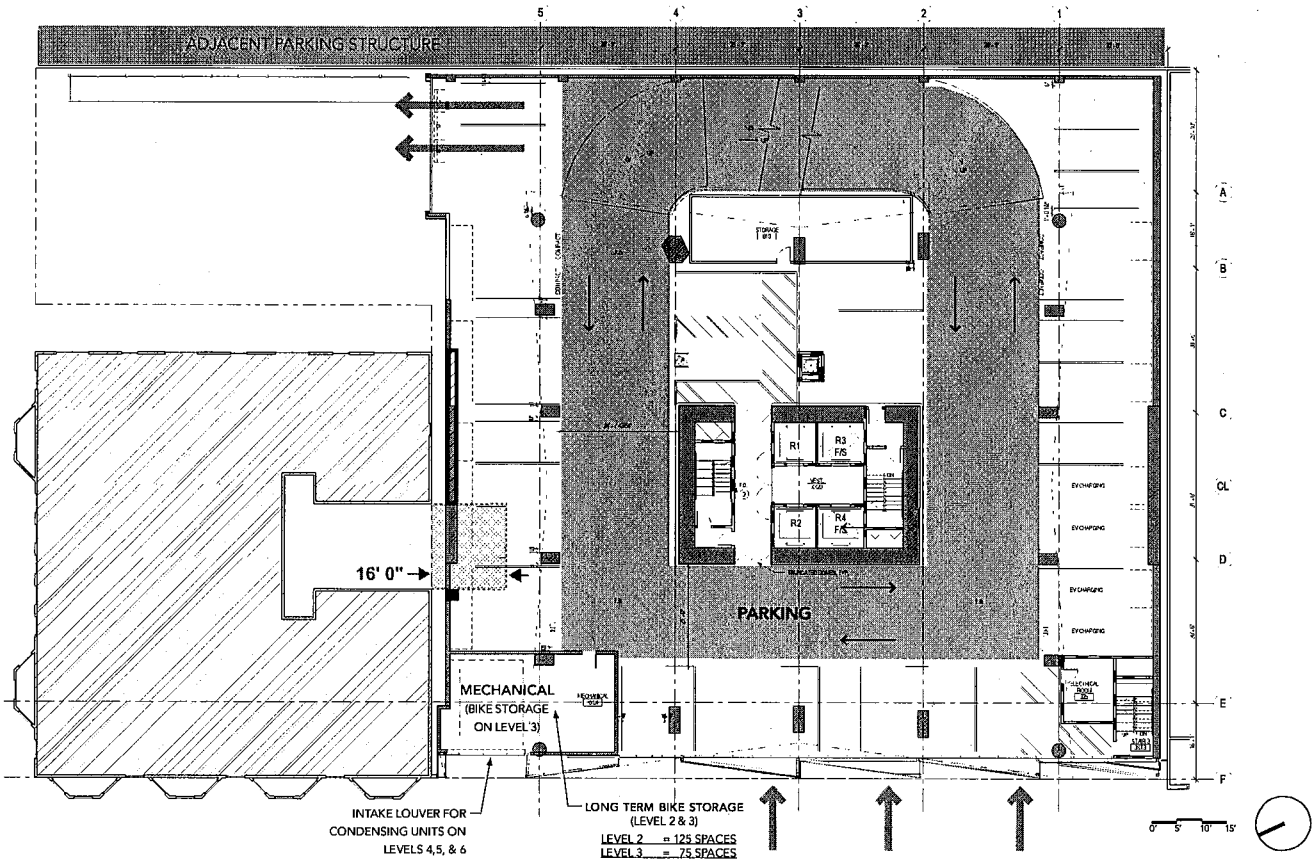
APARTMENT LOBBY

RETAIL  
LOADING  
BIKES





LEVEL 3-6 PLAN





## LEVEL 7 PLAN AMENITY

FITNESS GYM  
PILATES / YOGA / FLEX  
LAP POOL  
LOUNGE AND TERRACE  
GARDENS  
CHILDREN'S ACTIVITY AND PLAY AREA

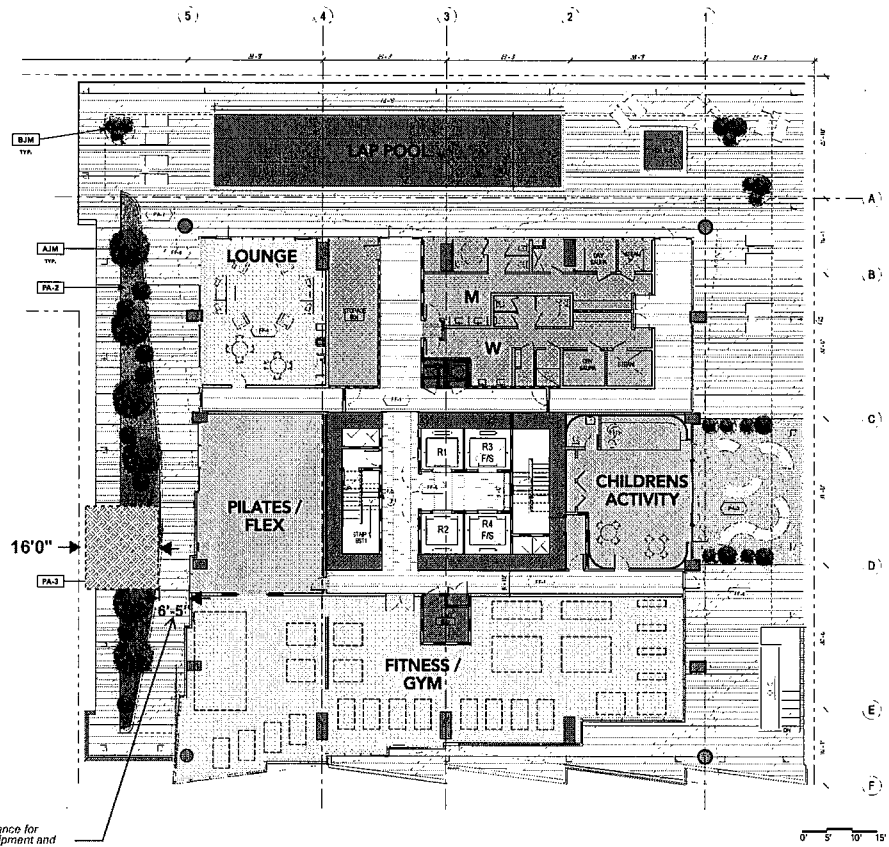
### OPEN SPACE SUMMARY

COMMON OPEN SPACE LEVEL 2 = 3,155 SF  
COMMON OPEN SPACE LEVEL 8 = 9,060 SF  
COMMON OPEN SPACE LEVEL 38 = 2,985 SF  
TOTAL COMMON OPEN SPACE = 15,200 SF

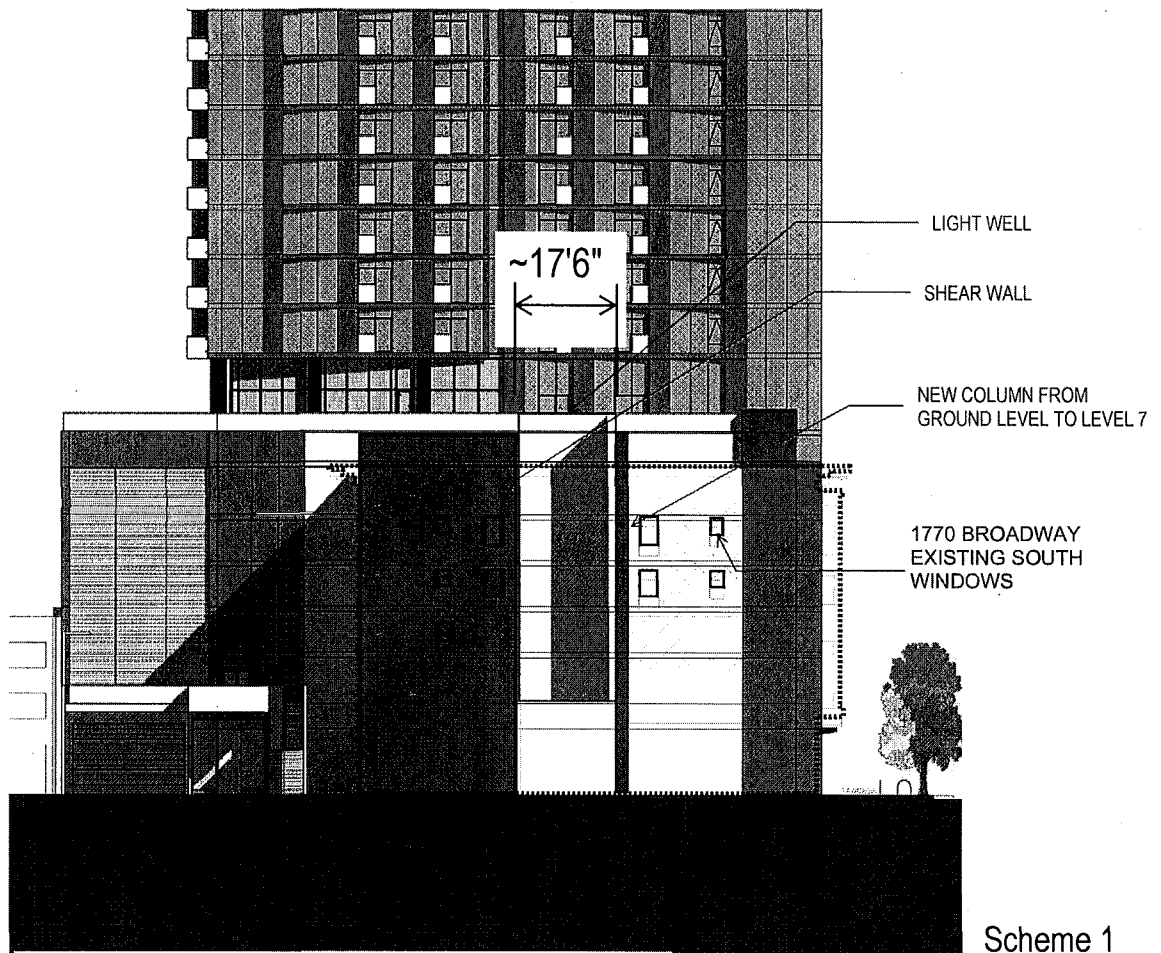
PRIVATE OPEN SPACE LEVEL 26 = 309 SF  
PRIVATE OPEN SPACE LEVEL 36 = 754 SF  
PRIVATE OPEN SPACE LEVEL 37 = 115 SF  
TOTAL PRIVATE OPEN SPACE = 1,178 SF

TOTAL OPEN SPACE = 16,378 SF

Maintain Clearance for  
Maintenance Equipment and  
Egress.



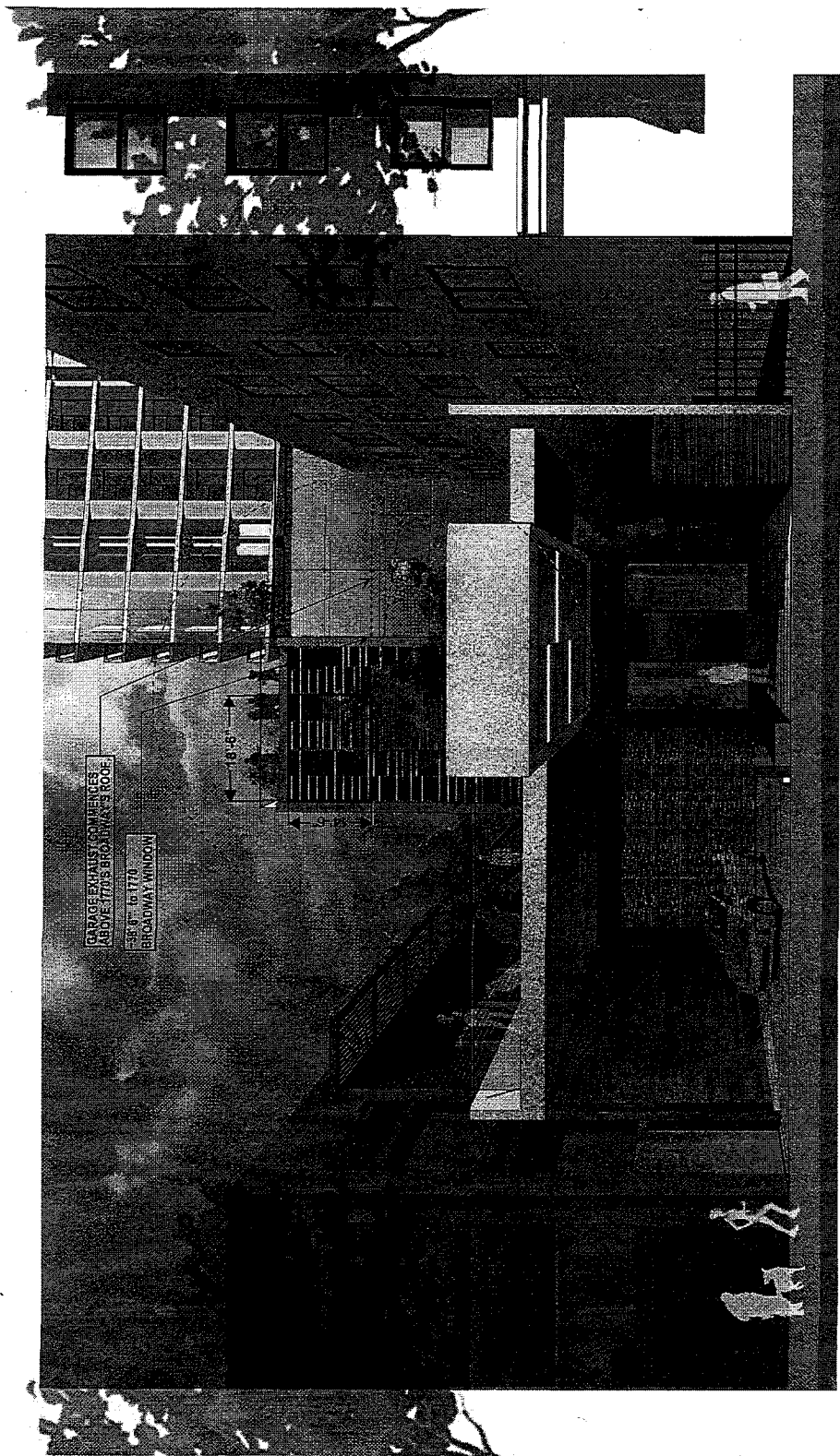






## ATTACHMENT 4





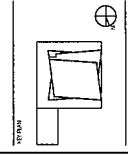




1750 BROADWAY  
NEW YORK, NY 10019

OWNER	THE NEW YORK PUBLIC LIBRARY
ARCHITECT	THE NEW YORK PUBLIC LIBRARY
ENGINEER	THE NEW YORK PUBLIC LIBRARY
MECHANICAL ENGINEER	THE NEW YORK PUBLIC LIBRARY
ELECTRICAL ENGINEER	THE NEW YORK PUBLIC LIBRARY
PLUMBING ENGINEER	THE NEW YORK PUBLIC LIBRARY
STRUCTURAL ENGINEER	THE NEW YORK PUBLIC LIBRARY
INTERIOR DESIGNER	THE NEW YORK PUBLIC LIBRARY
LANDSCAPE ARCHITECT	THE NEW YORK PUBLIC LIBRARY
SCULPTOR	THE NEW YORK PUBLIC LIBRARY
PAINTER	THE NEW YORK PUBLIC LIBRARY
WALLPAPER HANGER	THE NEW YORK PUBLIC LIBRARY
FURNITURE UPHOLSTERER	THE NEW YORK PUBLIC LIBRARY
STATIONER	THE NEW YORK PUBLIC LIBRARY
BOOKBINDER	THE NEW YORK PUBLIC LIBRARY
LIBRARIAN	THE NEW YORK PUBLIC LIBRARY

NO.	DATE	DESCRIPTION
1	10/1/79	PRELIMINARY
2	10/1/79	REVISION
3	10/1/79	REVISION
4	10/1/79	REVISION
5	10/1/79	REVISION
6	10/1/79	REVISION
7	10/1/79	REVISION
8	10/1/79	REVISION
9	10/1/79	REVISION
10	10/1/79	REVISION
11	10/1/79	REVISION
12	10/1/79	REVISION
13	10/1/79	REVISION
14	10/1/79	REVISION
15	10/1/79	REVISION
16	10/1/79	REVISION
17	10/1/79	REVISION
18	10/1/79	REVISION
19	10/1/79	REVISION
20	10/1/79	REVISION



SCALE: 1/4" = 1'-0"  
DATE: 10/1/79  
LEVEL 3 - (IS SIMILAR)  
FLOOR PLAN  
MECHANICAL  
M203

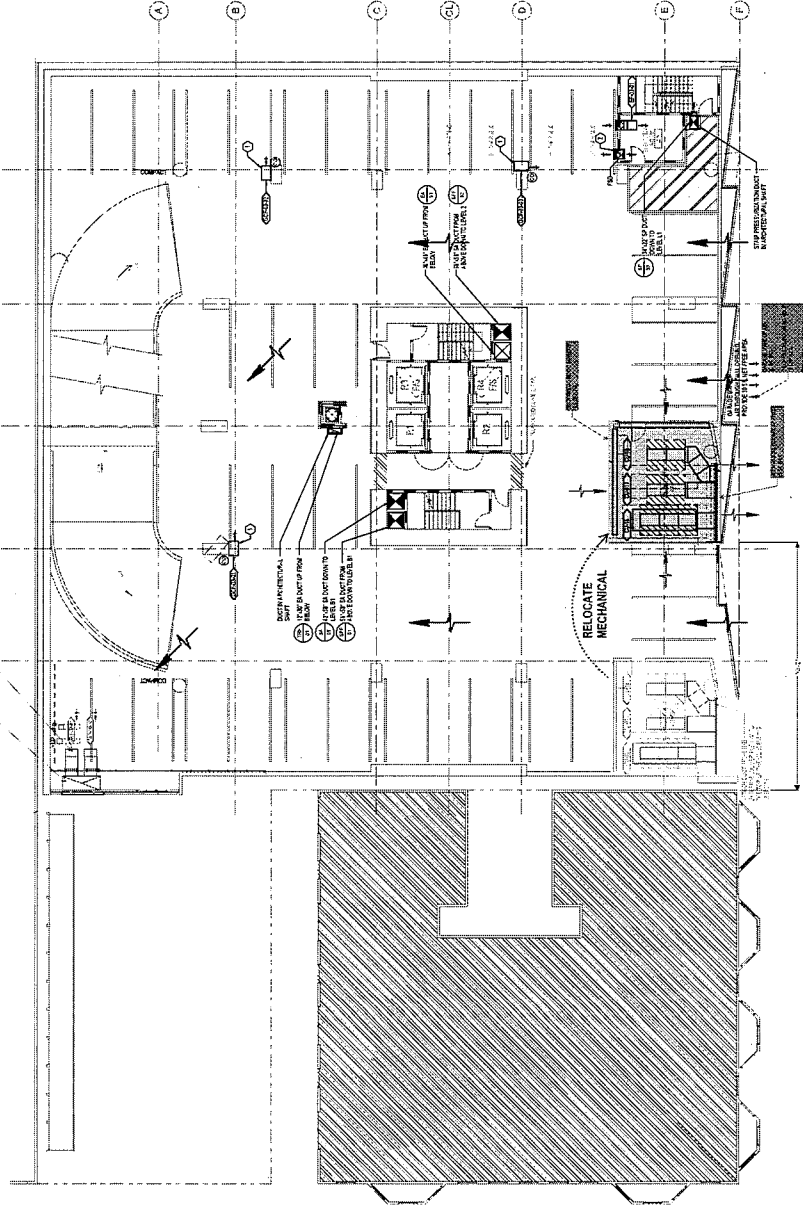
GENERAL NOTES:  
1. SEE MECHANICAL SCHEDULE FOR EQUIPMENT SCHEDULE.  
2. SEE MECHANICAL SCHEDULE FOR EQUIPMENT SCHEDULE.  
3. SEE MECHANICAL SCHEDULE FOR EQUIPMENT SCHEDULE.  
4. SEE MECHANICAL SCHEDULE FOR EQUIPMENT SCHEDULE.  
5. SEE MECHANICAL SCHEDULE FOR EQUIPMENT SCHEDULE.

COMMENTS:

1. SEE MECHANICAL SCHEDULE FOR EQUIPMENT SCHEDULE.
2. SEE MECHANICAL SCHEDULE FOR EQUIPMENT SCHEDULE.
3. SEE MECHANICAL SCHEDULE FOR EQUIPMENT SCHEDULE.
4. SEE MECHANICAL SCHEDULE FOR EQUIPMENT SCHEDULE.
5. SEE MECHANICAL SCHEDULE FOR EQUIPMENT SCHEDULE.

NOT BE DOWN DUCT FROM LEVEL 2 TO LEVEL 3 TO BE AT LEVEL 2

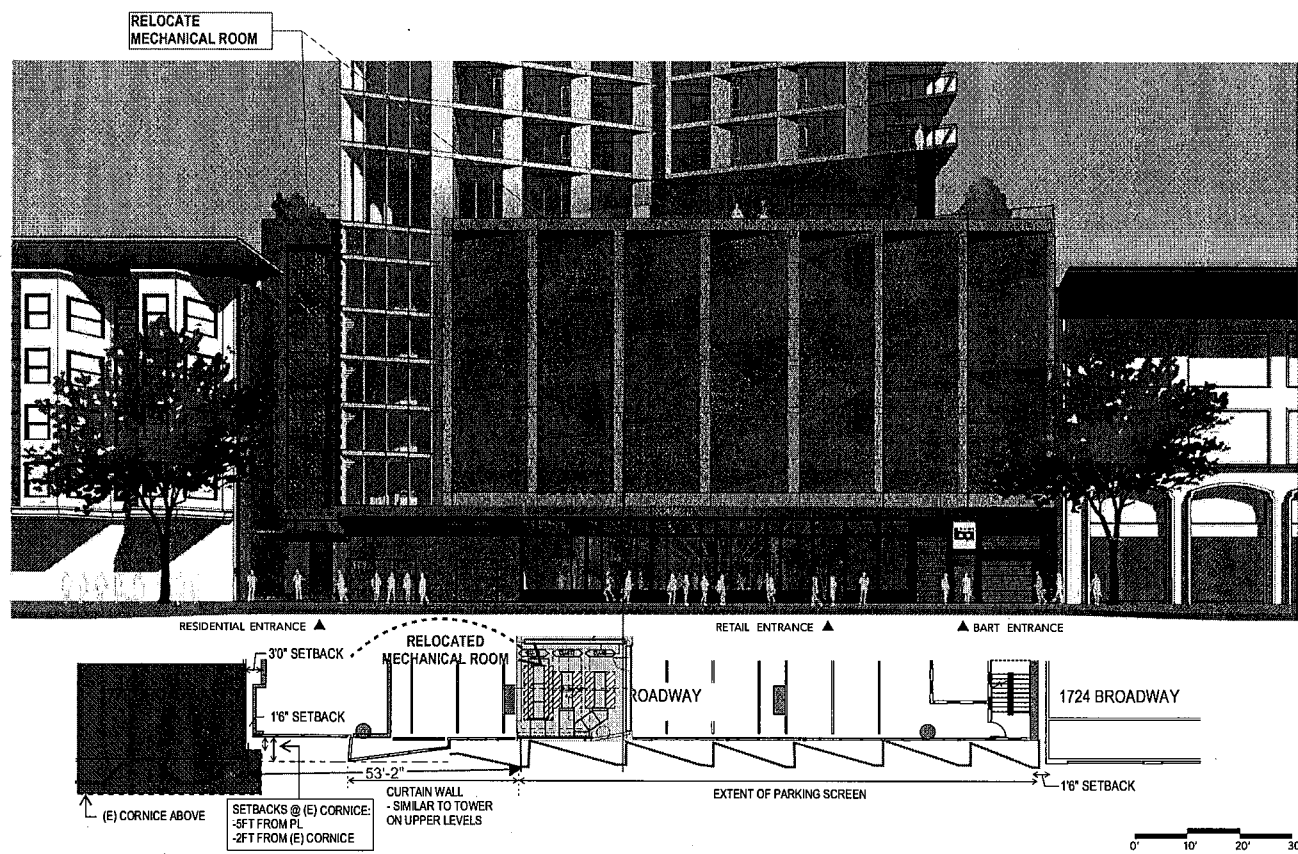
2" FAN ARRAY



1. MECHANICAL FLOOR PLAN MECHANICAL



PODIUM FACADE





2020 JAN 22 PM 4:26

  
City Attorney's Office

## OAKLAND CITY COUNCIL

RESOLUTION NO. \_\_\_\_\_ C.M.S.

INTRODUCED BY COUNCILMEMBER [IF APPLICABLE]

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**A RESOLUTION DENYING THE APPEAL (APL19013) BY EAST BAY RESIDENTS FOR RESPONSIBLE DEVELOPMENT (EBRRD) LED BY ADAMS BROADWELL, JOSEPH & CARDOZO AND UPHOLDING THE PLANNING COMMISSION'S ENVIRONMENTAL DETERMINATION AND APPROVAL OF A MAJOR CONDITIONAL USE PERMIT FOR BUILDING CONSTRUCTION OVER 200,000 SQUARE FEET AND REGULAR DESIGN REVIEW FOR THE PROJECT LOCATED AT 1750 BROADWAY, OAKLAND CA (PLN18369).**

**WHEREAS**, the Project applicant, Rubicon Point Partners, filed an application on September 4, 2018 to construct a 37-story building with 307 market-rate residential units, approximately 5,000 square feet of retail space, and a five-level parking garage for 170 parking spaces to be accessed from 19<sup>th</sup> Street, and located at 1750 Broadway, Oakland, CA (PLN18369) (the Project); and

**WHEREAS**, the Design Review Committee (DRC) reviewed the application at its January 31, 2018 and November 28, 2018 meetings and considered the design review aspects of the Project at its duly noticed public meetings, and forwarded the application to the Planning Commission; and

**WHEREAS**, the City's Planning Commission took testimony and considered the Project at its duly noticed public meeting of March 20, 2019; adopted California Environmental Quality Act (CEQA) Findings related to the Project; and approved 1) A Major Conditional Use Permit (CUP) for Building Construction over 200,000 square feet, and 2) A Regular Design Review for the Proposed Project; and

**WHEREAS**, on April 1, 2019, an appeal of the Planning Commission's approval and a statement setting forth the basis of the appeal was timely filed by East Bay Residents for Responsible Development (EBRRD) led by Christina Caro (Appellant); and

**WHEREAS**, after giving due notice to the Appellant, the Applicant, all interested parties and the public, the Appeal came before the City Council at a duly noticed public hearing on February 4, 2020; and



**WHEREAS**, the Appellant, the Applicant, supporters of the application, those opposed to the application and interested neutral parties were given ample opportunity to participate in the public hearing by submittal of oral and/or written comments; and

**WHEREAS**, the public hearing on the Appeal was closed by the City Council on February 4, 2020; now, therefore be it

**RESOLVED:** That, the City Council hereby independently finds and determines that the requirements of CEQA Guidelines Sections: 15183 - Projects Consistent with a Community Plan, General Plan, or Zoning; 15183.3 - Streamlining for Infill Projects; and 15332 - Urban Infill Development. Each of the foregoing provides a separate and independent basis for CEQA compliance; and be it

**FURTHER RESOLVED:** That, the City Council, having heard, considered and weighed all the evidence in the record presented on behalf of all parties and being fully informed of the Application, the Planning Commission's decision, and the Appeals, finds that the Appellant has not shown, by reliance on evidence already contained in the record before the City Planning Commission, that the Planning Commission's decision on March 20, 2019 was made in error, that there was an abuse of discretion by the Planning Commission or that the Commission's decision was not supported by substantial evidence in the record, based on the March 20, 2019 Staff Report to the Planning Commission and the February 4, 2020 City Council Agenda Report hereby incorporated by reference as if fully set forth herein. Accordingly, the Appeal is denied, the Planning Commission's CEQA Determination, approval of the major CUP, and Regular Design Review findings are upheld, based upon the March 20, 2019 Staff Report to the City's Planning Commission and the February 4, 2020 City Council Agenda Report, each of which is hereby separately and independently adopted by this City Council in full; and be it

**FURTHER RESOLVED:** That, in support of the Planning Commission's decision to approve the Project, the City Council affirms and adopts the March 20, 2019 Staff Report to the City's Planning Commission (including without limitation the discussion, findings, conclusions and conditions of approval each of which is hereby separately and independently adopted by this Council in full), as well as the February 4, 2020 , City Council Agenda Report, (including without limitation the discussion, findings, conclusions and conditions of approval, each of which is hereby separately and independently adopted by this Council in full), except where otherwise expressly stated in this Resolution; and be it

**FURTHER RESOLVED:** That, the City Council finds and determines that this Resolution complies with CEQA and the Environmental Review Officer is directed to cause to be filed a Notice of Exemption (NOE) and Notice of Determination (NOD) with the appropriate agencies; and be it

**FURTHER RESOLVED:** That, the record before this Council relating to this application and appeal includes, without limitation, the following:

1. The application, including all accompanying maps and papers;
2. All plans submitted by the Applicant and their representatives;



3. The notice of appeal and all accompanying statements and materials;
4. All final Staff reports, final decision letters and other final documentation and information produced by or on behalf of the City, including without limitation and all related/supporting final materials, and all final notices relating to the application and attendant hearings;
5. All oral and/or written evidence received by the City's Planning Commission and City Council during the public hearings on the appeal; and all written evidence received by relevant City Staff before and during the public hearings on the application and appeal; and
6. All matters of common knowledge and all official enactments and acts of the City, including, without limitation (a) the General Plan; (b) Oakland Municipal Code; (c) Oakland Planning Code; (d) other applicable City policies and regulations; and, (e) all applicable state and federal laws, rules and regulations; and be it

**FURTHER RESOLVED:** That, the custodians and locations of the documents or other materials which constitute the record of proceedings upon which the City Council's decision is based are respectively: (a) Department of Planning & Building, Bureau of Planning, 250 Frank H. Ogawa Plaza, 2<sup>nd</sup> floor, Suite 2114, Oakland CA.; and (b) Office of the City Clerk, 1 Frank H. Ogawa Plaza, 1<sup>st</sup> floor, Oakland, CA; and be it

**FURTHER RESOLVED:** That, the recitals contained in this Resolution are true and correct and are an integral part of the City Council's decision.

IN COUNCIL, OAKLAND, CALIFORNIA,

PASSED BY THE FOLLOWING VOTE:

AYES - FORTUNATO BAS, GALLO, GIBSON MCELHANEY, KALB, REID, TAYLOR, THAO AND  
PRESIDENT KAPLAN

NOES -

ABSENT -

ABSTENTION -

ATTEST: \_\_\_\_\_

LATONDA SIMMONS  
City Clerk and Clerk of the Council of the  
City of Oakland, California