

3403 PIEDMONT AVENUE PROJECT

CEQA ANALYSIS

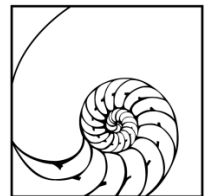


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3403 Piedmont Avenue CEQA Analysis

Pursuant to California Public Resources Code Sections 21083.3, 21094.5.5, and 21166 and CEQA Guidelines Sections 15164, 15183, and 15183.3

Date:	March 2022
Project Address:	3403 Piedmont Avenue
Project Number:	PLN21042
Zoning:	D-BV-3 (Mixed Use Boulevard Zone)
General Plan:	Community Commercial
APN:	009-0732-005-02, 009-0732-006-00
Lot Size:	17,273 square feet
Plan Area:	Broadway Valdez District Specific Plan
Applicant:	3400 Broadway, LLC 411 2 nd Street Attn: Colin Nelson (530) 966-5777
Staff Contact:	Neil Gray, Planner IV Phone: (510) 238-3878 Email: ngray@oaklandca.gov

I. EXECUTIVE SUMMARY

The project applicant, 3400 Broadway Investors, LLC, is proposing to redevelop a site within the Broadway-Valdez District Specific Plan (BVDSP or Plan) area with a mixed-use residential development. The project site is in Subdistrict 5 of the North End subarea of the Plan. The site of the proposed development is currently used as a surface parking lot for the office building at 3400 Broadway and also includes a small single-story commercial building.

The proposed 3403 Piedmont Avenue project (proposed project) would demolish the existing approximately 2,475-square-foot, single-story commercial structure and surface parking lot on site and replace it with an eight-story approximately 65,000-square-foot multi-use residential building, up to 85 feet in height at the roof level. The proposed project would include 73 residential units and approximately 1,324 square feet of ground floor commercial space along Piedmont Avenue. The office building at 3400 Broadway would remain.

The BVDSP Environmental Impact Report (EIR)¹ analyzed the environmental impacts associated with adoption and implementation of the BVDSP and, where the level of detail available was adequate for analyzing potential environmental effects, provided a project-level CEQA review of reasonably foreseeable development. This allows the use of CEQA streamlining and/or tiering provisions for projects that are developed under the BVDSP.

Applicable CEQA streamlining and/or tiering code sections are described below, each of which, separately and independently, provides a basis for CEQA compliance.

Community Plan Exemption. Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 allow streamlined environmental review for projects that are “consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project-specific significant effects that are peculiar to the project or its site.” Section 15183(c) specifies that “if an impact is not peculiar to the parcel or to the proposed 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 ..., then an additional EIR need not be prepared for the project solely on the basis of that impact.”

Qualified Infill Exemption. Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3 allow streamlining for certain qualified infill projects by limiting the topics that are subject to review at the project level, provided the effects of infill development have been addressed in a planning-level decision or by uniformly applicable development policies. Infill projects are eligible if they are located in an urban area and on a site that either has been previously developed or adjoins existing qualified urban uses on at least 75 percent of the site’s perimeter, able to satisfy the performance standards provided in CEQA Guidelines Appendix M, and consistent with the general use designation, density, building

¹ Environmental Science Associates (ESA), 2013 and 2014. *Broadway Valdez District Specific Plan, Draft Environmental Impact Report and Responses to Comments and Final EIR*. SCH No. 2012052008. These documents can be obtained at the Bureau of Planning at 250 Frank Ogawa Plaza, #3115, or online at <https://www.oaklandca.gov/topics/broadway-valdez-district-specific-plan>.

intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy. No 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.

Addendum. Public Resources Code Section 21166 and CEQA Guidelines Section 15164 state that an addendum to a certified EIR is allowed when minor changes or additions are necessary and none of the conditions for preparation of a subsequent EIR or negative declaration, per Section 15162, are satisfied.

This document includes a CEQA Checklist that evaluates the potential project-specific environmental effects of the proposed project and whether such effects were adequately covered by the BVDSP EIR to allow the above-listed streamlining and/or tiering provisions of CEQA to apply. The analysis conducted incorporates by reference the information contained in the BVDSP EIR. The proposed project is legally required to incorporate and/or comply with the applicable requirements of the mitigation measures identified in the BVDSP EIR as well as applicable City of Oakland (City) Standard Conditions of Approval (SCAs); therefore, the applicable mitigation measures and SCAs are included as part of the proposed project (see Attachment A).

The proposed project satisfies each of the foregoing CEQA provisions, as summarized below.

Community Plan Exemption. As stated in Section 1.2.3 of the BVDSP, when development proposals in the BVDSP area are brought before the City, the staff and decision-makers use the BVDSP as a guide for project review. Projects are evaluated for consistency with the intent of BVDSP policies and conformance with development regulations. The environmental review of the BVDSP was intended to expedite the processing of future projects that are consistent with the BVDSP. Therefore, consistent with Section 1.2.3 of the BVDSP and CEQA Guidelines Section 15183, this CEQA Analysis satisfies, based on the analysis conducted in this document, the requirements for a community plan exemption. The proposed project is permitted in the zoning district where the project site is located and consistent with the bulk, density, and land use standards envisioned in the BVDSP. The CEQA Checklist below concludes that the proposed project would not result in significant impacts that (1) would be peculiar to the project or project site; (2) were not identified as significant project-level, cumulative, or off-site effects in the BVDSP EIR; or (3) were previously identified as significant but later found to have a more severe adverse impact than that discussed in the EIR. Findings regarding the proposed project's consistency with the BVDSP are included as Attachment B to this document.

Qualified Infill Exemption. The analysis conducted indicates that the proposed project is eligible for a qualified infill exemption, pursuant to CEQA Guidelines Section 15183.3. The infill eligibility criteria are evaluated in Attachment C and supported by the CEQA Checklist included below.

Addendum. The analysis conducted, as described in this document, demonstrates that preparation of an Addendum to the BVDSP EIR is allowed for the proposed project.

The BVDSP EIR analyzed the Broadway Valdez Development Program (Development Program), which set new standards for development in the area and identified opportunity sites for development.² The project site was not identified as an opportunity site for development. However, identification of the opportunity sites was not intended to limit development on those or other sites. Policy LU-10.3 of the BVDSP states that the BVDSP allows for flexibility in the quantity, mix, and distribution of new development. Similarly, the EIR indicates that the intent of the BVDSP is to provide as much flexibility as is feasible in terms of precise mix of newly developed land uses and their location in the Plan Area, while conforming to the CEQA analysis and thresholds established in the EIR.

As discussed throughout the attached CEQA Analysis, the proposed project would be consistent with the BVDSP EIR analysis, findings, and conclusions and implementation of the proposed project would not substantially increase the severity of the significant impacts that were identified in the BVDSP EIR, nor would it result in new significant impacts that were not identified in the BVDSP EIR. The project would be required to implement mitigation measures and SCAs as applicable and detailed in Appendix A of the CEQA Analysis.

As detailed in Attachment B: Project Consistency with Community Plans or Zoning, the proposed project is consistent with the BVDSP and the land use designation and zoning at the site.

The analyses conducted and the conclusions reached in the BVDSP EIR that was certified by the Planning Commission on May 21, 2014, and confirmed by the City Council on June 17, 2014, remain valid, and no supplemental environmental review is required for the proposed project modifications. The proposed project would not cause new significant impacts that were not previously identified in the EIR or result in a substantial increase in the severity of previously identified significant impacts. No new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to the circumstances surrounding the original project that would cause significant environmental impacts to which the proposed project would contribute considerably, and no new information has been put forward that shows that the proposed project would cause significant environmental impacts. Therefore, no supplemental environmental review is required and the project and an addendum to the BVDSP EIR could be relied upon for CEQA clearance of the proposed project, in accordance with Public Resources Code Section 21166 and CEQA Guidelines Section 15164.

² In total, the Broadway Valdez Development Program includes approximately 3.7 million square feet of development, including approximately 695,000 square feet of office space, 1,114,000 square feet of restaurant/retail space, 1,800 residential units, a new 180-room hotel, approximately 6,500 parking spaces provided by the development program, and approximately 4,500 new jobs.

II. PROJECT DESCRIPTION

PROJECT LOCATION

The project site is located at 3403 Piedmont Avenue on the northeast corner of the triangular block bounded by Broadway to the west, Piedmont Avenue the southeast, and I-580 to the north, as shown in Figures 1 and 2. The site consists of two parcels (APN 009-0703-005-02 and 009-0732-006-00). The project site is in the Broadway Auto Row neighborhood, north of Uptown Oakland and south of Kaiser Medical Center. The site is in the Broadway Valdez District Specific Plan Area, North End Subarea, subdistrict 5.

Multiple transit routes serve the project site, including Alameda-Contra Costa County Transit District (AC Transit) Routes 51A, 57, 800, and 851. The MacArthur Bay Area Rapid Transit District (BART) station is approximately 0.65 mile northwest of the site, and the 19th Street BART station is approximately 1 mile south of the site. The project site is approximately 1.5 miles away from the Downtown Oakland city center (Broadway and 14th Street), and is also in close proximity to several major medical centers and the Piedmont Avenue commercial/retail district. The project site is accessible from Interstate 580 (I-580), approximately 20 feet to the north, and Interstate 980, approximately 2,600 feet to the west.

EXISTING CONDITIONS

The site currently consists of two parcels. The proposed project includes an application for a tentative parcel map to merge the existing parcels into once parcel. After the merge, the combined site would be approximately 17,273-square-feet. The site is relatively flat, sloping gently to the south-southwest.

The project site is currently occupied by a one-story commercial building, the five-story “Sawmill Building” offices, and a parking lot utilized by both buildings. The parking lot provides access to the Sawmill Building’s loading dock and rear entrances. The approximately 2,475-square-foot, one-story building is currently rented to a print shop. The Sawmill Building is not part of the development plans and would remain unchanged. The development site consists of the area currently used as the parking lot and the one-story building. The development site has frontage to the east on Piedmont Avenue. The development site is bordered on the west by the Sawmill Building at 3400 Broadway and to the south by an auto dealership at 3330-3360 Broadway/3301 Piedmont Avenue. The north side of the property is bordered by I-580.

As discussed further in the Cultural Resources section, the existing commercial building at 3405 Piedmont Avenue, the Sawmill Building, and the auto dealership building south of the project site are all historic-age. Only the existing commercial building at 3405 Piedmont Avenue is proposed for demolition.

The existing commercial building at 3405 Piedmont Avenue has an Oakland Cultural Heritage Survey (OCHS) rating of “F3”, which indicates that it is without historic resource potential and not within a historic district. The Sawmill Building at 3400 Broadway has an OCHS rating of D, which is a rating given by OCHS to buildings of “Minor Importance.” The auto dealership at 3330-3360 Broadway/3301 Piedmont Avenue has an OCHS rating of B, which is a rating given by OCHS to buildings of “Major

Importance”.³ The project site and these adjacent buildings are partially within the Upper Broadway/Auto Row Area of Secondary Importance (ASI)⁴. Only the auto dealership at 3330-3360 Broadway/3301 Piedmont Avenue meets applicable criteria for consideration as a historic resource under CEQA.

There are no trees on the project site or along the site’s Piedmont Avenue frontage. However, there are redwood trees offsite to the north between the project site and the raised I-580, some within 10 feet of proposed construction activities.

The General Plan land use designation for the project site is Community Commercial. This designation applies to areas suitable for a wide variety of commercial and institutional operations along the City of Oakland’s major corridors and in shopping districts or centers. The project site is zoned D-BV-3 (Mixed Use Boulevard Zone) which allows a relatively wide range of ground-floor office and other commercial activities with upper-story spaces intended to be available for a broad range of residential, office, or other commercial activities. The project site is in a height area where the maximum height permitted is 85 feet.

Surrounding land uses in the vicinity of the proposed project include automobile repair and sales, medical facilities, commercial uses, and residential uses. Sprouts Farmers Market grocery store is slightly south of the project site. An auto dealership is immediately adjacent to the site to the south. There is a mix of residential and office space directly across Piedmont Avenue, with residential neighborhoods and Oak Glen Park behind them. The raised I-580 is at the northern border of the project site with a Kaiser Permanente medical center on the other side and Mosswood Park beyond that about 400 feet to the northwest.

PROJECT CHARACTERISTICS

The proposed project would demolish the existing one-story building and a portion of the parking lot and clear the site. The project site would be redeveloped with new residential construction consisting of 73 studio and two-bedroom residential units in an 85-foot, 8-story building. The proposed project would require an emergency generator, per California Building Code requiring a back-up diesel generator for any building over 70 feet tall.

The project characteristics are shown in Table 1 (page 13), and the site plans, typical floor plans, elevations, and street view renderings are shown in Figures 3 through 9.

The ground floor frontage along Piedmont Avenue would include four small-format commercial spaces with a combined square footage of 1,324. These commercial spaces would be appropriate for light duty services, retail and/or food services that do not require a full kitchen, such as a café, sandwich shop, gym/exercise studio, and/or kiosk-type retail. The ground floor would also include the residential lobby,

³ Oakland Cultural Historic Survey, Historical and Architectural Rating System, accessed at <http://www2.oaklandnet.com/government/o/PBN/OurServices/Historic/DOWD009155>

⁴ Area of Secondary Importance is an area or district that is of local interest, but is not eligible for the National Register of Historic Places and is not considered a historical resource under CEQA. See ESA (Environmental Science Associates) *Broadway-Valdez District Specific Plan Draft EIR*, Appendix A to Appendix D, Historic Resources Inventory, July 2009, p. A-2.

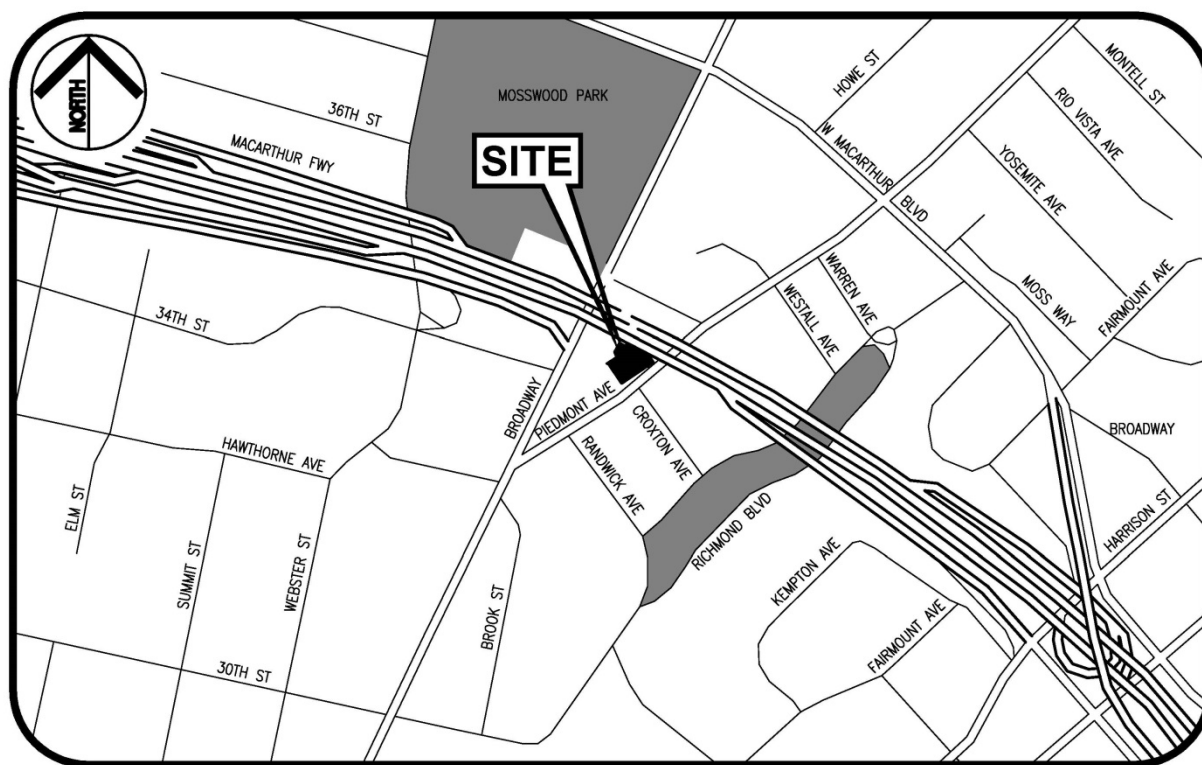


Figure 1. Project Location

Source: Project Plan Set dated 11/18/21



Figure 2. Project Context (looking southwest)

Source: Project Plan Set dated 11/18/21



Figure 3. Site Plan (Ground Floor Plan)

Source: Project Plan Set dated 11/18/21



Figure 4. Floor Plan – Typical Levels 4 - 6

Source: Project Plan Set dated 11/18/21



Figure 5. Floor Plan – Typical Levels 7 - 8 (level 8 is open above level 7 open space)

Source: Project Plan Set dated 11/18/21

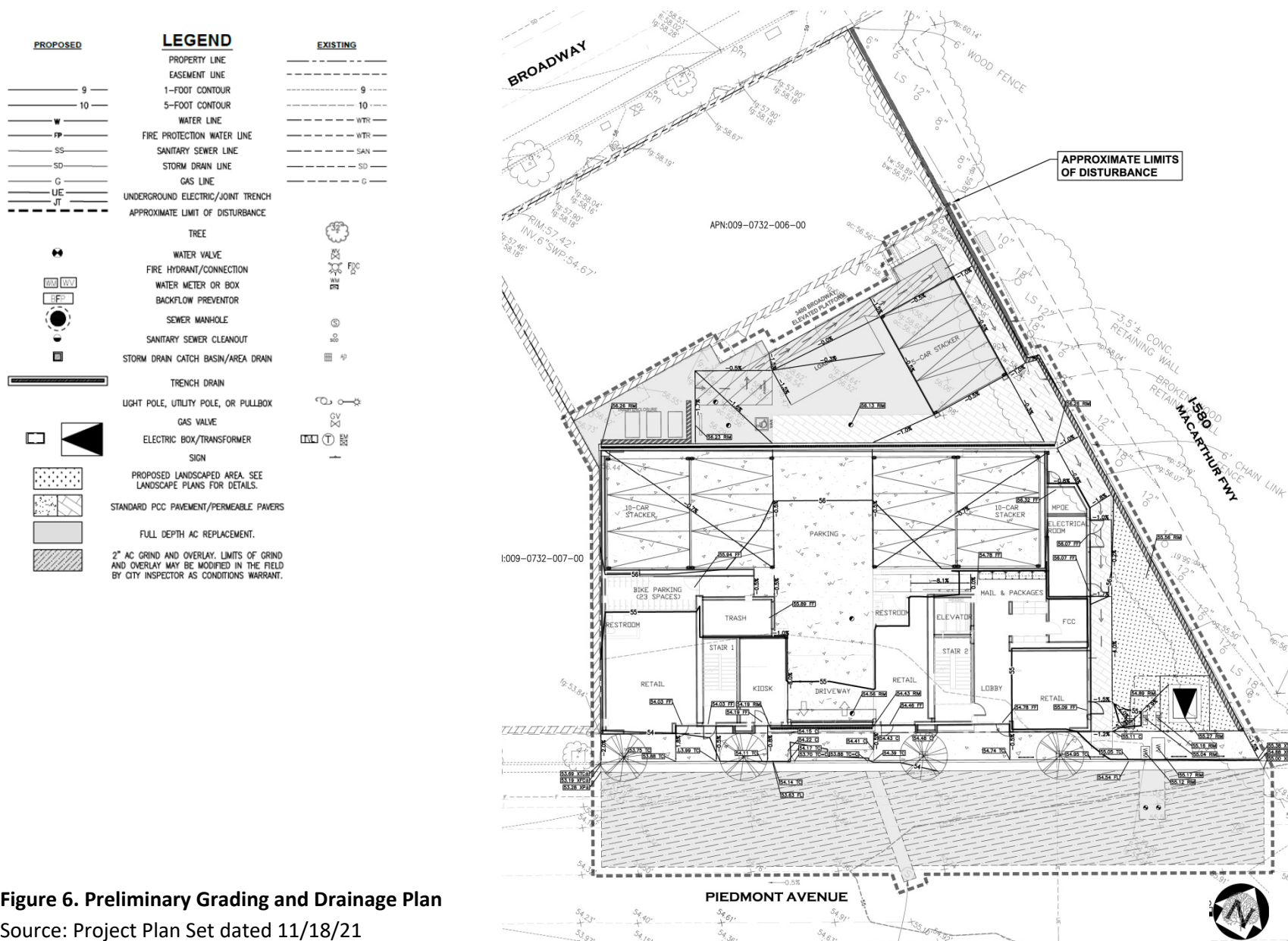




Figure 7. Southeast Elevation (Piedmont Avenue Frontage)

Source: Project Plan Set dated 11/18/21



Figure 8. Northeast Elevation (along I-580)

Source: Project Plan Set dated 11/18/21



STREET VIEW FROM BROADWAY AND PIEDMONT AVENUE INTERSECTION



STREET VIEW FROM PIEDMONT LOOKING NORTHEAST



STREET VIEW FROM PIEDMONT LOOKING SOUTHWEST

Figure 9. Street View Renderings

Source: Project Plan Set dated 11/18/21

bike storage room, stairs and elevator, as well as building utilities and maintenance, and the parking area. Vehicular entrance to the parking and loading would be from Piedmont Avenue. This entrance would also provide vehicular access to parking and loading between the proposed new building and the Sawmill Building. Residential apartments would be located on floors two through eight.

Table 1. Proposed Project Characteristics

Lot Size	17,273 square feet
Height	85 feet
Ground-Floor Commercial Space	1,324 square feet
Total Dwelling Units	73
Studio	28 (39%)
2-bedroom	45 (61%)
Parking Spaces - Cars	27
Parking Spaces - Car Share	3
Parking Spaces – Bicycles (Long-Term)	23
Open space - Lower Roof Deck	950 square feet
Open space – Lot	1,088 square feet

Source: oWOW Design, LLC, dated 10/19/2021

The project approvals would rely on the State Density Bonus Law (California Government Code Sections 65915-65918), which requires approval of additional housing units and incentives/concessions when affordable housing is included. The project is currently proposing that a total of 14 of the units (6 studios and 8 two-bedroom units) would be made available at Moderate Income levels (81-120% of the average median income), which would allow for a 16% density bonus equating to an allowance of 73 units on the site. Note that the law allows for different density bonuses depending on the level of affordability. The current proposal is presented for informational purposes but the level and number of affordable units within the same overall total number of housing units could change consistent with the State Density Bonus Law without it affecting this environmental analysis.

The project proposes to provide approximately 2,038 square feet of open space consisting of 1,088 square feet of fenced open space at the ground level and a 950 square foot seventh-floor roof deck. This is less than the 5,355 square feet of open space required for 73 units; the applicant is requesting the reduced open space area as a concession/incentive under the State Density Bonus Law.

The project proposes a total of 27 on-site parking spaces including 26 in mechanical stackers and one ADA parking space. Ten of the spaces are proposed to be reserved for existing tenants of 3400 Broadway, which would leave 17 of the spaces allocated to the residents, less than required under the Oakland Planning Code. The applicant is requesting a reduction in parking as a concession/incentive under the State Density Bonus Law.

Sidewalk/streetscape improvements would be installed as part of the proposed project, consistent with the BVDSP Public Realm Design Guidelines for Streetscape Design. Improvements would include repaving the street and sidewalk along the project's Piedmont Avenue frontage, planting four new street trees, and installing short-term bicycle parking along the sidewalk.

Project Construction

Demolition of the existing structure and grading of the site is expected to take approximately four weeks. Grading and foundation work would follow for approximately six weeks, and then above-grade construction would occur lasting approximately 12 months; the entire construction period is expected to last approximately 15 months, with the intention to begin work in 2022 and be operational as early as 2023.

The sidewalk on the Piedmont Avenue frontage would be closed for the duration of the construction period, and a walking lane would be diverted into the existing parking spaces on the street. The bike lane would remain in place. For a four-week period of off-site utilities and infrastructure, parts of the street would be closed off intermittently during construction hours and flaggers would be used to direct traffic.

No substantial excavation or subsurface floors are proposed and grading would be limited to evening the generally flat site surface and improving utilities. The existing site is almost fully covered by the existing buildings and asphalt surface parking. The applicant estimates earthwork quantities of 146 cubic yards of soil would be cut, 23 cubic yards of which would be used as fill on-site, resulting in a net of 123 cubic yards of soil that would be off-hauled from the site. Groundwater depths at the site are between 18 to 20 feet, and therefore dewatering during construction is not expected to be required. The project's engineers concluded that the proposed project can be constructed with a foundation consisting of deepened footings and no pile driving is proposed.

PROJECT APPROVALS

The proposed project would require a number of discretionary and ministerial actions and approvals, including without limitation:

ACTIONS BY THE CITY OF OAKLAND

- Planning Director – Regular Design Review (including Affordable Housing Density Bonus with concessions/incentives for reduced parking and reduced open space), Tentative Parcel Map (lot merge), and CEQA determination
- Building Bureau – Grading permit and other related onsite and offsite work permits and encroachment permits.

ACTIONS BY OTHER AGENCIES

- East Bay Municipal Utility District (EBMUD) – Approval of new service requests and new water meter installations.
- Regional Water Quality Control Board (RWQCB) - Acceptance of a Notice of Intent to obtain coverage under the General Construction Activity Storm Water Permit, and Notice of Termination after construction is complete.

III. BVDSP AND EIR

The BVDSP provides a framework for future growth and development in an approximately 95.5-acre area along Oakland's Broadway corridor between Grand Avenue and I-580. Although it does not propose specific private developments, the BVDSP establishes a Development Program to project the maximum level of feasible development that can reasonably be expected during the 25-year planning period (i.e., approximately 3.7 million square feet, including approximately 695,000 square feet of office space, 1,114,000 square feet of restaurant/retail space, 1,800 residential units, a new 180-room hotel, approximately 6,500 parking spaces, and approximately 4,500 new jobs). As described above, the BVDSP EIR analyzed the environmental impacts of adoption and implementation of the BVDSP, and where the level of detail available was adequate for analyzing potential environmental effects, the EIR provided project-level CEQA review for foreseeable and anticipated development.

On September 20, 2013, the City of Oakland released for public review the draft EIR for the BVDSP. The public review and comment period extended from September 20, 2013 through November 12, 2013. The Landmarks Preservation Advisory Board (LPAB) and the City of Oakland Planning Commission held hearings on the draft EIR, and comments received during the public review and comment period were addressed in the final EIR for the BVDSP. Prior to adoption of the final EIR, additional public hearings were held by both the LPAB and the Planning Commission. The final EIR was certified by the Planning Commission on May 21, 2014 and confirmed by the City Council on June 17, 2014.

The final EIR determined that impacts on the following resources would be less than significant or would be reduced to a less-than-significant level with implementation of mitigation measures or compliance with City of Oakland SCAs: aesthetics; biology; geology, soils, and geohazards; hazardous materials; hydrology and water quality; land use, plans, and policies; population, housing, and employment; public services and recreational facilities; and utilities and service systems. The final EIR determined that implementation of the BVDSP would have significant unavoidable impacts related to the following environmental resources: wind and shadow, air quality, cultural resources, greenhouse gases and climate change, noise, and transportation. Because of the potential for significant unavoidable impacts, a Statement of Overriding Considerations with findings was adopted as part of BVDSP approval on May 21, 2014 and confirmed by the City Council on June 17, 2014. The City Council found that, for the significant and unavoidable impacts listed above, the BVDSP EIR provided the best balance between the City's goals and objectives and the BVDSP's benefits. In addition, the City Council made the following determinations:

The BVDSP updates the goals and policies of the General Plan and provides more detailed guidance for specific areas within the Broadway Valdez District;

The BVDSP builds upon two retail enhancement studies, the Citywide Retail Enhancement Strategy and the companion Upper Broadway Strategy – A Component of the Oakland Retail Enhancement Strategy, which identified the City's need to reestablish major destination retail in Oakland as being critical to stemming the retail leakage and associated loss of tax revenue that the City suffers from annually. These reports also identified the Broadway Valdez District as the City's best opportunity to reestablish a retail core with the type of comparison shopping that once served Oakland and nearby communities and that the city currently lacks;

The BVDSP provides a policy and regulatory framework to achieve one of the primary objectives: to transform the area into an attractive regional destination for retailers, shoppers, employers

and visitors that serves, in part, the region's shopping needs and captures sales tax revenue for reinvestment in Oakland;

The BVDSP could create employment opportunities (both short-term construction jobs as well as permanent jobs), increase revenues (sales, property, and other taxes), and promote spin-off activities (as Plan Area workers spend some of their income on goods in the Plan Area);

The BVDSP Development Program promotes increased housing densities in proximity to employment-generating land uses that support City and regional objectives for achieving a jobs/housing balance and transit-oriented development;

The BVDSP design guidelines will ensure that future development contributes to the creation of an attractive pedestrian-oriented district characterized by high-quality design and a distinctive sense of place; and

The BVDSP identifies a series of needed and desired improvements related to transportation, affordable housing, historic resource preservation and enhancement, streetscape, plaza, parking, and utility infrastructure as well as regulatory tools, policies, and potential funding mechanisms to realize those improvements.

The Notice of Determination (NOD) for the BVDSP EIR was filed with the State Clearinghouse on June 18, 2014 and was not challenged. Therefore, the BVDSP EIR remains valid.

IV. SUMMARY OF FINDINGS

An evaluation of the proposed project is provided in the CEQA Checklist below. This CEQA Analysis, including attachments, supports determinations that the proposed project, as separate and independent bases, qualifies for (1) an exemption per CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan, General Plan, or Zoning); (2) streamlining provisions of CEQA under Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3 (Streamlining for In-fill Projects),); and (3) an Addendum to the Broadway Valdez District Specific Plan EIR under Public Resources Code Section 21166 and CEQA Guidelines Section 15164 (Addendum to an EIR).

Based on the evaluation in this CEQA Analysis, the following findings can be made:

The proposed project would not result in significant impacts that (1) would be peculiar to the project or project site; (2) were not previously identified as significant project-level, cumulative, or off-site effects in the BVDSP EIR; or (3) were previously identified as significant but—as a result of substantial new information that was not known at the time the BVDSP EIR was certified—would increase in severity above the level described in the EIR. Therefore, the proposed project is exempt from further environmental review in accordance with Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183.

The proposed project is a qualified infill project and would not cause any new significant impacts on the environment that were not already analyzed in the BVDSP EIR or result in more significant impacts than those that were previously analyzed in the BVDSP EIR. The effects of the proposed project have been addressed in the BVDSP EIR, and no further environmental documents are required, in accordance with Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3.

The analyses conducted and the conclusions reached in the BVDSP EIR that was certified by the Planning Commission on May 21, 2014, and confirmed by the City Council on June 17, 2014, remain valid, and no supplemental environmental review is required for the proposed project modifications. The proposed project would not cause new significant impacts that were not previously identified in the EIR or result in a substantial increase in the severity of previously identified significant impacts. No new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to the circumstances surrounding the original project that would cause significant environmental impacts to which the proposed project would contribute considerably, and no new information has been put forward that shows that the proposed project would cause significant environmental impacts. Therefore, no supplemental environmental review is required and the project and an addendum to the BVDSP EIR could be relied upon for CEQA clearance of the proposed project, in accordance with Public Resources Code Section 21166 and CEQA Guidelines Section 15164.

Each of the above findings provides a separate and independent basis for CEQA compliance.

V. CEQA CHECKLIST

OVERVIEW

This CEQA Checklist provides a summary of the potential environmental impacts that may result from adoption and implementation of the BVDSP, as evaluated in the BVDSP EIR. Potential environmental impacts of development under the BVDSP were analyzed and covered by the BVDSP EIR, and the EIR identified mitigation measures and SCAs⁵ to address these potential environmental impacts.

This CEQA Checklist hereby incorporates by reference the BVDSP EIR discussion and analysis of all potential environmental impact topics; only those environmental topics that could have a potential project-level environmental impact are included. The EIR significance criteria have been consolidated and abbreviated in this CEQA Checklist for administrative purposes; a complete list of the significance criteria can be found in the BVDSP EIR.

This CEQA Checklist provides a determination of whether the proposed project would result in:

- Equal or Lesser Severity of Impact Previously Identified in BVDSP EIR;
- Substantial Increase in Severity of Previously Identified Significant Impact in BVDSP EIR; or
- New Significant Impact.

Where the severity of an impact of the proposed project would be the same as or less than the severity of an impact described in the BVDSP EIR, the checkbox for Equal or Less Severity of Impact Previously Identified in BVDSP EIR is checked. Where the checkbox for Substantial Increase in Severity of Previously Identified Significant Impact in BVDSP EIR or New Significant Impact is checked, there are significant impacts that are:

- Peculiar to project or project site (per CEQA Guidelines Sections 15183 or 15183.3);
- Not identified in the previous EIR (BVDSP EIR) (per CEQA Guidelines Sections 15183 or 15183.3), including offsite and cumulative impacts (per CEQA Guidelines Section 15183);
- Due to substantial changes in the project (per CEQA Guidelines Section 15162);
- Due to substantial changes in circumstances under which the project will be undertaken (per CEQA Guidelines Section 15162); or
- Due to substantial new information not known at the time the BVDSP EIR was certified (per CEQA Guidelines Sections 15162, 15183, or 15183.3).

⁵ These are Development Standards that are incorporated into projects as SCAs, regardless of a project's environmental determination, pursuant, in part, to CEQA Guidelines Section 15183. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City, and are designed to, and will, substantially mitigate environmental effects. In reviewing project applications, the City determines which of the SCAs are applicable, based on the zoning district, community plan, and the type(s) of permit(s)/approvals(s) required for the project.

The proposed project is required to comply with applicable mitigation measures identified in the BVDSP EIR, and with applicable City of Oakland SCAs. The project sponsor has agreed to incorporate and/or implement the required mitigation measures and SCAs as part of the proposed project. This CEQA Checklist includes references to the applicable mitigation measures and SCAs.

A list of the mitigation measures and SCAs is included in Attachment A and is incorporated by reference into the CEQA Checklist analysis. Note that the SCAs included in this document are referred to using an abbreviation for the environmental topic area, numbered sequentially for each topic area, and are assigned an SCA title based on the City's master SCA list — i.e., SCA AIR-1: *Dust Controls- Construction-Related*.

If the CEQA Checklist (including Attachment A) inaccurately identifies or fails to list a mitigation measure or SCA, the applicability of that mitigation measure or SCA to the proposed project is not affected. If the language describing a mitigation measure or SCA included in the CEQA Checklist (including Attachment A) is inaccurately transcribed, the language of the mitigation measure as set forth in the BVDSP EIR or City of Oakland SCAs shall control.

Consistent with the requirements of CEQA, a determination of whether the project would have a significant impact will occur as part of the preparation of this document prior to the approval of the proposed project and, where applicable, standard conditions of approval and/or mitigation measures in the BVDSP EIR have been identified that will mitigate them. In some instances, exactly how the measures/conditions identified will be achieved awaits completion of future studies, an approach that is legally permissible where measures/conditions are known to be feasible for the impact identified, where subsequent compliance with identified federal, state or local regulations or requirements apply, where specific performance criteria is specified and required, and where the proposed project commits to developing measures that comply with the requirements and criteria identified.

1. AESTHETICS, SHADOW, AND WIND

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Have a substantial adverse effect on a public scenic vista; substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway; substantially degrade the existing visual character or quality of the site and its surroundings; or create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code Sections 25980 through 25986); or cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or, cast shadow on an historical resource, as defined by CEQA Guidelines Section 15064.5(a), such that the shadow would materially impair the resource's historic significance;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
Building Code addressing the provision of adequate light related to appropriate uses; or			
e. Create winds that exceed 36 mph for more than one hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREVIOUS CEQA DOCUMENTS FINDINGS

Scenic Vistas, Scenic Resources, and Visual Character (Criterion 1a)

The BVDSP EIR determined that potential impacts to scenic vistas and resources, visual character, and lighting and glare from development under the BVDSP would be less than significant with implementation of SCAs, and that no mitigation measures were necessary.

The Physical Height Model analyzed in the BVDSP EIR⁶ represents the conceptual massing for projects to be developed under the BVDSP, and served as the basis for massing, view corridor, shadow, and wind analysis performed in the EIR. The EIR found that new structures would partially obstruct views of the sky, but that such changes would not represent a substantial adverse effect on views, because no views considered scenic or unique (as defined by CEQA) and no visual access to protected scenic resources (as defined by the General Plan) would be obstructed. Changes anticipated under the BVDSP would generally create a more pedestrian-oriented aesthetic in the Plan Area, and the Design Guidelines would

⁶ The Broadway Valdez Development Program represents the maximum feasible development that the City has projected can reasonably be expected to occur in the Plan Area over the next 25 years, and is therefore the level of development envisioned by the Specific Plan and analyzed in the BVDSP EIR. The Broadway Valdez Development Program, together with the Specific Plan height limits, maximum base heights, and step-back requirements inform the Physical Height Model, which provides the basis for analysis in the BVDSP EIR.

ensure that development under the BVDSP would be compatible with the existing built form and architectural character of the Plan Area as a whole, and compatible with the distinctive visual character of individual areas. Development in the Plan Area would be required to comply with SCAs related to landscaping, street frontages, landscape maintenance, utility undergrounding, public right-of-way improvements, and lighting plans.

Shadow (Criteria 1b through 1d)

The BVDSP EIR determined that development under the Plan would result in less-than-significant impacts from shading, with the exception of potential shading on Temple Sinai, which is considered a historical resource. Temple Sinai is at 356 28th Street near the intersection with Webster Street. Under the BVDSP EIR, Mitigation Measure AES-4: Shadow Analysis, applies to the area bounded by Webster Street, 29th Street, Broadway, and 28th Street to reduce shadow impacts. Even with implementation of Mitigation Measure AES-4, the EIR conservatively determined that impacts may remain significant and unavoidable. Development outside this area under the BVDSP, such as at the project site, was determined to result in less-than-significant shadow impacts. Mitigation Measure AES-4 is not applicable to the project because the project's location outside of the impacted area.

Wind (Criterion 1e)

The BVDSP EIR determined that development under the BVDSP that has a height of 100 feet or greater and is in the portion of the Plan Area designated as Central Business District (which extends north from downtown to 27th Street), could result in adverse wind conditions. Under the BVDSP EIR, Mitigation Measure AES-5: Wind Analysis, applies to those projects in the Central Business District portion of the Plan Area that are over 100 feet in height. Even with implementation of Mitigation Measure AES-5, impacts would conservatively remain significant and unavoidable. To address potential cumulative impacts, under the BVDSP EIR, Mitigation Measure AES-6, which requires implementation of Mitigation Measures AES-4 and AES-5, applies to those same projects and addresses significant cumulative wind and shadow impacts. Even with implementation of Mitigation Measure AES-6, the EIR conservatively determined that cumulative impacts may remain significant and unavoidable for some projects. The project site is not in the Central Business District portion of the Plan Area and is under 100 feet high and therefore Mitigation Measures AES-5 and AES-6 do not apply to the project.

PROJECT ANALYSIS AND CONCLUSION**Scenic Vistas, Scenic Resources, and Visual Character**

Consistent with the findings of the BVDSP EIR, the project's potential impacts to scenic vistas, scenic resources, visual character, and light and glare would be less-than-significant with implementation of the SCAs, as the project is consistent with the BVDSP EIR.

Pursuant to the Design Guidelines, development within the Plan Area should contribute to the creation of a coherent, well-defined and active public realm that supports pedestrian activity and social interaction, and to the creation of a well-organized and functional private realm that supports the needs of tenant businesses. The proposed project meets this guideline by repaving sidewalks along the project site and adding street trees. The proposed project requires design review approval, pursuant to Section 17.101C.020 of the City's Planning Code. As part of the design review process, the project will be

reviewed by the City to ensure consistency with the applicable BVDSP Design Guidelines. The applicant has stated that they have designed their building to “reflect the surrounding urban and historical contexts” including a modern rendition of the vertical and symmetrical architecture of the Sawmill building and large storefront glazing at the ground level to continue the rhythm of storefronts from the adjacent auto dealership flatiron building. A solid wall along the south elevation is proposed to reflect the monolithic and light-colored southern façade of the Sawmill building and provide a unified backdrop to the auto dealership flatiron building that can be activated with lighting, signage, and/or graphics. The design review process would ensure the project would be consistent with the BVDSP standards and guidelines related to aesthetics, compatible with the existing built form and architectural character of the Plan Area as a whole, and compatible with the distinctive visual character of individual areas.

Shadow

According to City of Oakland thresholds, shadows have the potential to result in significant environmental impacts if they would substantially impair the beneficial use of any public or quasi-public park, lawn, garden, or open space; cast shadow on an historical resource such that the shadow would materially impair the resource’s historic significance; or cast substantial shadows on existing solar collectors or cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors.

The shadow study conducted for the BVDSP EIR included the existing buildings in the area and some assumed future development, but no additional building on the site currently proposed for development. Based on the BVDSP EIR shadow study, we can extrapolate that the proposed building would cast shadows in a northwesterly direction toward Mosswood Park in the mornings. However, the 12-story Kaiser Permanente Mosswood Building is between the proposed building and Mosswood Park and any substantial shadowing that may otherwise have reached the park would be blocked by the existing taller Kaiser Permanente Mosswood Building. Due to the location of the sun and related direction and extent of shadows in the northern hemisphere as demonstrated in the BVDSP EIR shadow study, the proposed building would not have the potential to substantially shadow Oak Glen Park, located about 400 feet to the east/southeast. There is no other public or quasi-public park, lawn, garden, or open space proximate to the project site.

As noted in the Previous CEQA Documents Findings section above, the only historic resource in the BVDSP area that could be materially impaired by shadowing is the Temple Sinai at 356 28th Street, approximately 2,100 feet southwest of the project site. The project site is outside of the area identified in the BVDSP EIR as having potential shading impacts on Temple Sinai and therefore, BVDSP EIR Mitigation Measure AES-4 and AES-6 (as it references AES-4) would not apply.

The shadow study conducted for the BVDSP EIR shows that there are no solar collectors in the immediate vicinity of the project site. The nearest solar collectors identified in the BVDSP EIR are approximately 350 feet south of the project site (at 32 Randwick Avenue) and other solar collectors identified on Google Earth on top of the Kaiser Permanente parking garage are 250 feet north on the other side of I-580. Because of the intervening buildings and distance from solar collectors, the proposed project would not substantially contribute to shadow impacts on solar collectors. The proposed project would be consistent with the BVDSP EIR.

Wind

Because the proposed project is not located in the Community Commercial District and is less than 100 feet in height, BVDSP EIR Mitigation Measure AES-5: Wind Analysis and AES-6 (as it references AES-5) would not apply to the project. Therefore, the project would be consistent with the BVDSP EIR and no significant wind impacts would occur.

Conclusion

Based on an examination of the analysis, findings, and conclusions in the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of the significant impacts identified in the EIR, nor would it result in new significant impacts related to aesthetics, shadows, or wind that were not identified in the BVDSP EIR. Mitigation Measures AES-4, AES-5, and AES-6 would not apply to the project as noted above. The proposed project would be required to implement SCAs related to trash and blight removal, graffiti control, landscaping, and lighting plans, as identified in Attachment A at the end of the CEQA Checklist (SCA AES-1: *Trash and Blight Removal*, SCA AES-2: *Graffiti Control*, SCA AES-3: *Landscape Plan*, and SCA AES-4: *Lighting*).

2. AIR QUALITY

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. During project construction result in average daily emissions of 54 pounds per day of ROG, NOX, or PM2.5 or 82 pounds per day of PM10; during project operation result in average daily emissions of 54 pounds per day of ROG, NOX, or PM2.5, or 82 pounds per day of PM10; result in maximum annual emissions of 10 tons per year of ROG, NOX, or PM2.5, or 15 tons per year of PM10; or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. For new sources of Toxic Air Contaminants (TACs), during either project construction or project operation expose sensitive receptors to substantial levels of TACs under project conditions resulting in (a) an increase in cancer risk level greater than 10 in one million, (b) a noncancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average PM2.5 of greater than 0.3 microgram per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM2.5 of greater than 0.8 microgram per cubic meter; or expose new sensitive receptors to substantial ambient levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in a million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM2.5 of greater than 0.8 microgram per cubic meter.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREVIOUS CEQA DOCUMENTS FINDINGS

Construction and Operational Emissions (Criterion 2a)

The BVDSP EIR determined that construction activities associated with development of projects under the BVDSP would generate air emissions from the use of heavy construction equipment; vehicle trips due to hauling materials, construction workers traveling to and from the project sites, and application of architectural coatings, such as paints; and would result in significant impacts. According to the BVDSP EIR, levels of nitrogen oxides (NO_x) primarily from construction equipment emissions were modeled above threshold levels for 2016 but would not result in significant impacts in future years as stricter emissions controls kick in, which is the case today. Levels of reactive organic gases (ROG) primarily from paving and architectural coatings were also found to be above threshold levels and were not reduced in future modeling years. SCAs related to construction air pollution controls (hereafter referred to as SCA AIR-1: *Dust Controls- Construction-Related* and SCA AIR-2: *Criteria Air Pollution Controls- Construction-Related*) would reduce emissions from construction equipment, control fugitive dust, and reduce emissions from architectural coatings. The BVDSP EIR additionally proposed implementation of Recommended Measure AIR-1, which requires construction contractors to use prefinished materials and colored stucco, if feasible, to reduce ROG emissions from architectural coatings. Even with implementation of the SCA and Recommended Measure AIR-1, the EIR conservatively estimated construction emissions of reactive organic gases (ROG) primarily from paving and architectural coatings, and nitrogen oxides (NO_x), primarily from construction equipment emissions, could exceed the BAAQMD daily significance thresholds, resulting in a significant and unavoidable impact.

The BVDSP EIR also determined operational activities associated with development in the Plan Area would result in an increase in criteria air pollutant and precursor emissions from mobile on-road sources and onsite area sources, such as natural gas combustion for space and water heating and landscape maintenance, which would have a significant impact. Operational emissions of ROG, NO_x, and particulate matter less than or equal to 10 microns in diameter (PM₁₀) would exceed significance thresholds. An SCA that requires the implementation of Parking and Transportation Demand Management (TDM) for larger projects (those with 50 or more peak hour trips) would reduce vehicular trips and operational emissions. Recommended Measure AIR-2 includes additional measures for larger projects that would also reduce emissions of criteria air pollutants. Even with implementation of the SCA and Recommended Measure AIR-2, the BVDSP EIR concluded this impact would conservatively remain significant and unavoidable for emissions of ROG, NO_x, and PM₁₀.

Toxic Air Contaminants (Criterion 2b)

The BVDSP EIR determined that development under the BVDSP could generate substantial levels of Toxic Air Contaminants (TACs), resulting in significant impacts from construction activities and project operations. Implementation of the City's SCA for construction-related air pollution controls would reduce health risks to sensitive receptors from temporary construction emissions of diesel particulate matter in accordance with recommendations from the BAAQMD's *CEQA Air Quality Guidelines*.⁷ As

⁷ BAAQMD, 2017. *CEQA Air Quality Guidelines*. Updated May 2017.

described under SCA AIR-1: *Construction-Related Air Pollution Controls (Dust and Equipment Emissions)*, basic controls for construction emissions (subsections a-j) would be implemented for all projects, and enhanced controls (subsections k-y) would be implemented for larger construction projects (more than 4 acres and/or 10,000 cubic yards of soil transport). Even with implementation of SCA AIR-1: *Construction-Related Air Pollution Controls (Dust and Equipment Emissions)*, the BVDSP EIR conservatively determined that impacts from TAC emissions during construction would remain significant and unavoidable.

New operational sources, such as backup diesel generators, could result in significant impacts on new and existing receptors. The EIR also identified Mitigation Measure AIR-4: Risk Reduction Plan, which would reduce the impacts associated with new operational sources on existing sensitive receptors. However, SCA AIR-5: *Stationary Sources of Air Pollution (Toxic Air Contaminants)* was subsequently established, which updates and replaces BVDSP EIR Mitigation Measure AIR-4. SCA AIR-4 would also reduce potential air quality impacts related to TACs in the Plan Area by requiring a Health Risk Assessment of surrounding offsite sources on new onsite sensitive receptors. Even with SCAs AIR-1, AIR-4, and AIR-5 (replacing Mitigation Measure AIR-4), the EIR conservatively determined that this impact would remain significant and unavoidable.

PROJECT ANALYSIS AND CONCLUSION

Construction and Operational Emissions and Toxic Air Contaminants

The proposed project would result in a new multi-use building with 73 residential units and approximately 1,324 square feet of ground-floor commercial space. The BVDSP EIR allows for the distribution of density and development type between categories and sub-areas and accounted for the construction and operational emissions from the development proposed on the project site within its analysis. The proposed project would be required to comply with applicable SCAs related to construction and operational source emissions. Recommended Measure AIR-1 (to reduce project construction emissions) from the BVDSP EIR would also apply as a condition of approval, as described below.

Construction emissions associated with the proposed project would not result in a more severe impact than what was previously disclosed in the BVDSP EIR. The BVDSP EIR does not indicate that an additional project-level analysis of construction-related health risks is necessary. There is no evidence that the proposed project would have peculiar or unusual impacts or impacts that are new or more significant than previously analyzed in the BVDSP EIR. Moreover, the project site's proximity to sensitive receptors is typical of other project sites in the BVDSP area and other urban areas. Sensitive receptors near the proposed project include residential dwellings to the south and southeast, as well as Kaiser Permanente Medical Center to the north. The nearest sensitive receptors are approximately 70 feet from the front of the project site, across Piedmont Avenue. Kaiser Permanente Medical Center is 300 feet north of the project site at its nearest boundary and is separated from the project site by I-580. As described in the BVDSP EIR, concentrations of mobile-source DPM emissions are typically reduced by 70 percent at a distance of approximately 500 feet. Furthermore, medical uses are common throughout the northwest portion of the Plan Area; therefore, there would be nothing unique or peculiar about the project's proximity to sensitive receptors. Consequently, the analysis and conclusions of the BVDSP EIR are still valid for this project.

As with all construction projects, the project would be required to implement controls for emissions of dust and equipment exhaust under SCA AIR-1: *Dust Controls- Construction Related* and SCA AIR-2: *Criteria Air Pollutant Controls- Construction Related*. The project would not trigger the requirements for “enhanced controls” under these SCAs as the project construction activities are below applicable screening levels. The project proposes more than 50 dwelling units and is defined as needing “Best Practices” on the BAAQMD Healthy Places Map⁸ due to its proximity to I-580 and therefore must also implement the additional measures in SCA AIR-3: *Diesel Particulate Matter Controls-Construction Related*.

Implementation of the controls under SCA AIR-1, SCA AIR-2 and SCA AIR-3 would reduce emissions of both criteria air pollutants and TACs during construction. Implementation of subsections (a) and (b) of SCA AIR-3, which require equipment and diesel trucks to be equipped with Best Available Control Technology and meet the California Air Resources Board’s most recent certification standard, would reduce emissions of diesel particulate matter during construction. In order to comply with subsections (a) and (b) of SCA AIR-3, the project sponsor would be required to ensure that construction equipment meet Tier 4 emissions standards, which can reduce emissions of diesel particulate matter by at least 85 percent relative to equipment without emission control technologies installed.⁹ SCA AIR-2 further reduces diesel emissions by minimizing idling under subsections (a) and (b); ensuring that construction equipment is running in proper condition under subsection (c); specifying that portable equipment would be powered by electricity if available under subsection (d); and requiring that equipment meet emissions and performance requirements under subsection (f).

The proposed project would require an emergency generator, per California Building Code requiring a back-up diesel generator for any building over 70 feet tall, which would be a new operational source of TACs associated with the project. The BVDSP EIR had identified Mitigation Measure AIR-4: Risk Reduction Plan, which would have required a risk reduction plan for new operational sources of TACS, including emergency generators. However, SCA AIR-5: *Stationary Sources of Air Pollution (Toxic Air Contaminants)* was subsequently established, which identifies standards to meet or requires a study to demonstrate the associated risk on sensitive receptors would not be substantial. SCA Air-5 updates and replaces BVDSP EIR Mitigation Measure AIR-4.

Additionally, since older buildings have the potential to contain asbestos, which could become airborne if not handled appropriately during demolition, the project would be subject to SCA AIR-6: *Asbestos in Structures*, which requires projects to comply with all applicable laws and regulations regarding demolition of the existing structure. Naturally-occurring asbestos has not been mapped in the project vicinity; therefore, the SCA pertaining to naturally-occurring asbestos (#27) would not apply to the project.

⁸ BAAQMD Healthy Places Map, <http://www.baaqmd.gov/plans-andclimate/planning-healthy-places>

⁹ California Air Resources Board, 2015. Frequently Asked Questions; Regulation for In-Use Off-Road Diesel-Fueled Fleets. Revised December.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the BVDSP EIR, nor would it result in new significant impacts related to air quality that were not identified in the BVDSP EIR. The proposed project would be required to implement SCAs related to air quality, as discussed above and identified in Attachment A at the end of the CEQA Checklist (SCA AIR-1: *Dust Controls- Construction-Related*, SCA AIR-2: *Criteria Air Pollutant Controls- Construction-Related*, SCA AIR-3: *Diesel Particulate Matter Controls-Construction Related*, SCA AIR-4: *Exposure to Air Pollution (Toxic Air Contaminants)*, SCA AIR-5: *Stationary Sources of Air Pollution (Toxic Air Contaminants)* and SCA AIR-6: *Asbestos in Structures*).

In addition, Recommended Measure AIR-1 from the BVDSP EIR would apply to the proposed project. (Mitigation Measure AIR-4 has been updated and replaced by SCA Air-5 so is no longer applicable and not copied here.)

Recommended Measure AIR-1: During construction, the project applicant shall require the construction contractor to use prefinished materials and colored stucco, as feasible.

Implementation of this measure would serve to reduce ROG emissions because prefinished materials would not require additional architectural coatings, which would otherwise contribute to the identified significant construction-period ROG emissions impact. Note that the proposed building surface incorporates prefinished panels and cladding and therefore represents implementation of this measure. This measure is retained as an applicable measure for reference in case changes to the building exterior are subsequently proposed.

Non-CEQA Discussion of Health Risks to the Project

CEQA requires the analysis of potential adverse effects of the project on the environment. Potential effects of the environment on the project are legally not analyzed or mitigated under CEQA. However, as a standard condition for projects proposing new sensitive uses (such as residential) near sources of health risks (such as I-580), the City requires implementation of SCA AIR-4: *Exposure to Air Pollution (Toxic Air Contaminants)*, which requires preparation of a screening-level analysis prior to the issuance of building permits to determine the level of impacts from nearby sources of TACs on the proposed project's future residential sensitive receptors.

To meet this requirement, a Community Risk Assessment was conducted. The Community Risk Assessment has informed the discussion below and is included in full as Attachment E to this document. Using conservative assumptions, the screening level analysis found that, without mitigation, the health risks to the project's sensitive receptors from existing and reasonably foreseeable future sources of TACs would exceed thresholds for cancer risk and fine particulate matter (PM_{2.5}) concentrations at the second-floor residential units, near the level of the I-580 roadway. Cancer risk from I-580 ranged from 14.69 to 9.99 per million on the second floor compared to a single-source threshold of 10 per million. PM_{2.5} concentrations ranged from 0.42 to 0.30 µg/m³ at the second floor compared to a threshold of 0.30 µg/m³. Cumulative health risks and single-source health risks at other floors would be determined to be below applicable screening levels.

Since the dwelling units on the second-floor level have predicted cancer risks and PM_{2.5} concentrations that exceed single source thresholds, control features would be required to be incorporated in accordance with the City's health risk reduction measures outlined in SCA Air-4: *Exposure to Air Pollution (Toxic Air Contaminants)*. Specifically, the Community Risk Assessment concluded that HVAC systems with high efficiency diesel particulate filters, or MERV 13 filters, should be included in the ventilation design for the second floor, along with weatherproofing windows and doors, installation of passive electrostatic filtering systems, and adoption of a maintenance plan for the HVAC and air filtration systems.

With the proposed filtration system, maximum cancer risks from I-580 on the second floor would be reduced to 6.67 per million and PM_{2.5} concentrations would be reduced to 0.12 µg/m³, both of which would be below applicable thresholds. As noted above, all other cumulative and single-source health risks were already below applicable screening levels.

3. BIOLOGICAL RESOURCES

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
<p>a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means; Substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;</p>	☒	☐	☐
<p>b. Fundamentally conflict with the City of Oakland Tree Protection Ordinance by removal of protected trees under certain circumstances; or Fundamentally conflict with the City of Oakland Creek Protection Ordinance intended to protect biological resources.</p>	☒	☐	☐

PREVIOUS CEQA DOCUMENTS FINDINGS

Special-Status Species, Wildlife Corridors, Riparian and Sensitive Habitat, Wetlands, Tree and Creek Protection (Criteria 3a and 3b)

As described in the BVDSP EIR, the Plan Area is in and surrounded by a fully developed urban environment and impacts of development on biological resources under the BVDSP would be less than significant. Few special-status animals are present in the Plan Area, and no aquatic habitats that could support migratory fish or birds are present. In addition, very little natural vegetation exists; and because this vegetation is not connected to other nearby natural habitats, it would not constitute a wildlife corridor. There are no natural sensitive communities in the Plan Area. The EIR identified landscape trees in the Plan Area as potential nursery sites for nesting birds. In addition, projects developed under the BVDSP could cause harm to birds by increasing bird collisions with buildings.

Development in the Plan Area is required to comply with SCAs related to removal and replacement of trees; tree protection during construction; and protection of nesting birds during the breeding season, which would protect natural resources from potential degradation that could result from construction of development projects under the Plan Area. Additionally, development in the Plan Area that includes a substantial vegetated or green roof, includes an existing or proposed vegetated area one acre or larger, or is adjacent to a substantial water body or a substantially vegetated recreation area larger than one acre, will be required to comply with an SCA pertaining to reducing bird collisions with buildings, which will reduce potential impacts to birds by constructing features in compliance with Best Management Practice strategies to limit bird strikes.

PROJECT ANALYSIS AND CONCLUSION

The project site is located in an urban setting on a site that is fully developed with a commercial building and a parking lot. There are no wetlands or creeks on or adjacent to the project site. There are also no trees on the project site and no proposed tree removal. However, a row of mature trees abuts the north side property line, between the site and I-580, some of which would be within 10 feet of the construction activity. As required by SCA BIO-1: *Tree Permit*, nearby trees would be required to be protected during construction activities. Four new street trees would be planted on the Piedmont Avenue frontage as part of the project.

The SCA pertaining to reducing bird collisions with buildings would not apply because the project would not be adjacent to a substantial water body or a substantially vegetated recreation area larger than one acre and also would not include a green roof or an existing or proposed vegetated area one acre or larger.

Conclusion

Based on an examination of the analysis, findings, and conclusions in the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of the significant impacts identified in that report, nor would it result in new significant impacts related to biological resources that were not identified in the BVDSP EIR. The proposed project would be required to implement SCAs related to tree protection during construction as identified in Attachment A at the end of the CEQA Checklist under SCA BIO-1: *Tree Permit*.

4. CULTURAL RESOURCES

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." The significance of an historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historic Places, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5);	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREVIOUS CEQA DOCUMENTS FINDINGS

Historical Resources (Criterion 4a)

The BVDSP EIR found that development under the BVDSP could result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources, which would be considered a significant impact. The Plan Area contains 20 individual properties, including two in an Area of Primary Importance¹⁰ that are considered historical resources for CEQA purposes. There are also many older buildings that possess architectural merit, either in Areas of Secondary Importance (ASIs)¹¹ or standing alone, that contribute to the variety and texture of the Plan Area.

The EIR identified Mitigation Measure CUL-1 and CUL-5 to reduce the impacts to historical resources throughout the Plan Area, as well as the site-specific impacts associated with the demolition of individual historical resources. The BVDSP EIR determined that significant cumulative impacts to historical resources could result from development of projects under the BVDSP, and identified Mitigation Measure CUL-5, which requires implementation of Mitigation Measure CUL-1. However, even with implementation of Mitigation Measure CUL-5, the EIR determined that cumulative impacts would remain significant and unavoidable.

In addition to the mitigation measures described above, the BVDSP EIR identified Oakland Municipal Code Section 17.136.075, Regulations for Demolition or Removal of Designated Historic Properties and Potentially Designated Historic Properties, as well as SCAs related to property relocation instead of demolition, and protection of historic structures from vibration impacts during adjacent construction projects, which will also address impacts to historical resources.

Archaeological and Paleontological Resources (Criteria 4b and 4c)

No known archaeological resources have been recorded in the Plan Area; however, the EIR determined that the Plan Area is potentially sensitive for archaeological and buried sites that are not visible due to urban development. The EIR determined that implementation of an SCA, which would ensure resources are recovered and appropriate procedures are followed in the event of accidental discovery, would minimize potential risk of impact to archaeological resources to a less-than-significant level.

The Plan Area was also identified as having low to moderate paleontological sensitivity, and it is possible that fossils would be discovered during excavation in the Plan Area. Implementation of an SCA, which would require a qualified paleontologist to document a discovery, and monitor that appropriate procedures be followed in the event of a discovery, would ensure that the potential impact to fossils discovered in the rock units would be less than significant.

¹⁰ Area of Primary Importance is an area or district that appears eligible for the National Register of Historic Places, and is considered a historical resource under CEQA.

¹¹ Area of Secondary Importance is an area or district that is of local interest, but is not eligible for the National Register of Historic Places and is not considered a historical resource under CEQA.

Human Remains (Criterion 4d)

Although the BVDSP EIR did not identify any locations of buried human remains in the Plan Area, the inadvertent discovery of human remains during ground-disturbing activities cannot be entirely discounted. In the event that human remains are discovered during excavation, implementation of an SCA, which would ensure that the appropriate procedures for handling and identifying the remains are followed, would reduce impacts to a less-than-significant level.

PROJECT ANALYSIS AND CONCLUSION**Historic Architectural Resources**

A Historic Project Evaluation was performed for this analysis by Mark Hulbert of Preservation Architecture. The Historic Project Evaluation informed the following discussion and is included in full in Attachment F to this document.

The existing building at 3405 Piedmont Avenue that is slated for demolition is a former lab building that was chopped in half diagonally and greatly altered when the freeway was constructed. It has an assigned OCHS rating of "F3", which indicates that it is without historic resource potential and not within a historic district.

The existing building at 3400 Broadway, which stands on the western portion of the project site, was designed and constructed in 1916-1917 as a storage warehouse for the Lyon Moving and Storage Company. While currently referred to as the "Sawmill Building," that name was given to the building around 1979 when the use was converted from storage to furniture manufacturing and sales.

The 3400 Broadway building is 5-1/2 stories of concrete frame and slab construction with exterior brick infill walls and a 3-story exposed steel-framed tower atop the roof. The exterior concrete frame has a wide range of integrally cast ornamentation. The tower framing is a remnant of the 3-story, campanile-like tower that was original to the building, yet its exterior construction was removed in the wake of the 1989 Loma Prieta Earthquake. Evidently, at that same time, the original and existing exterior brick was heavily repaired and heavily coated.

The existing building at 3400 Broadway is, per the City of Oakland Cultural Heritage Survey (OCHS), a D rated resource. The D rating identifies the individual resource as having "minor significance" and, as stated, does not reach the threshold for historic resource consideration under CEQA. Additionally, the OCHS rating for 3400 Broadway includes a contingency rating of b+, which indicates that the resource could achieve that higher rating were it restored, which has not occurred and is not currently proposed, so the individual D rating stands. That rating is additionally justified, as the 3400 Broadway building has experienced a range of substantial alterations, including the removal of its original campanile tower and the extensive repair and coating of all of the original exterior brick masonry, neither of which would be realistically reversible alterations. Despite some seeming errors in the record, due to the fact that the building has been so substantially altered, 3400 Broadway has previously and consistently been recorded as ineligible for historical listing on the National and California Registers and therefore would not qualify as a historic resource under CEQA. Consistent with this conclusion, the 3400 Broadway building was not included in the list of CEQA Historic Resources included in the BVDSP EIR.

While the project site does not contain a significant historic resource on site, the auto dealership flatiron building adjacent to the site to the south at 3330-3360 Broadway/3301 Piedmont Avenue is an OCHS “B” rated building, considered to be of “Major Importance” and qualifying as a historic resource under CEQA. This building is also within the Upper Broadway Auto Row Area of Secondary Importance, considered a local historic district. It is identified as historic resource #9 in Table 4.4-1 of the BVDSP EIR.

Because the auto dealership flatiron building at 3330-3360 Broadway/3301 Piedmont Avenue is a historic resource in a historic district, the potential effect that the proposed project may have on this directly adjoining historic resource was assessed in detail. In accordance with City of Oakland’s thresholds of significance, the proposed project would be considered to have a significant impact if it were to cause a “substantial adverse change in the significance” of the historic resource. A “substantial adverse change” can include physical demolition, destruction, relocation, or alteration of the resource, or its immediate surroundings, such that the significance of the historical resource would be “materially impaired.” Finally, “materially impaired” is defined to include when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance.

The existing 3330-3360 Broadway/3301 Piedmont Avenue building stands at the pointed corner of Broadway and Piedmont with fronts on each and with a prominent flat-faced corner. It is symmetrical about its corner in its southwest-northeast axis. The historic and existing auto showroom is a tall single story building, its exterior walls composed of regularly spaced brick piers infilled with large show windows and spanned by a high brick transom and parapet wall. The Broadway front is eight bays long. A single, narrow bay fronts the building corner and the façade treatment returns around the Piedmont front for three bays before giving way to a long concrete framed and partially infilled wall – with a variety of full height and upper windows and a loading door – under the continuous brick spandrel with a final brick pier at the easternmost corner.

The building’s rear (northwest) exterior wall is in two planes, each perpendicular to their respective streets, thus with a fold at the centerline and on axis with the pointed corner. The northern angled wall directly abuts and is largely concealed by the existing 3400 Broadway building while the other half faces the presently open 3403 Piedmont site. The exposed portion of this folded exterior wall is painted brick without any openings or ornamental elements. This rear wall does not contain any of the physical characteristics of the resource that convey its historic significance.

As this historic resource evaluation is for environmental planning purposes specific to CEQA, the Secretary of the Interior’s Standards for the Treatment of Historic Properties (Standards) are applied in order to determine if the project could cause a substantial adverse change on identified historic resources.

The proposed building would be independent of the two existing adjacent buildings that are to remain: 3400 Broadway which, as summarized above, is not an historic resource under CEQA; and 3330-3360 Broadway/3301 Piedmont, which is an identified historic resource. No materials, features, etc. of either of those two buildings will be directly affected by the proposed building.

As the project will add new construction directly adjacent to an historic resource (3330-3360 Broadway/3301 Piedmont), the appropriate treatment and evaluation Standard is that of Rehabilitation. The proposal does not include physical demolition, destruction, or relocation of any components of the

historic resource. As new construction adjacent to but not otherwise involving a historic resource, only Standards for Rehabilitation Numbers 9 and 10 are applicable to the project and addressed in detail below. The remainder of the Standards for Rehabilitation would only be applicable if the project was making direct changes to a historic structure or involve archaeological resources. Because neither of these are applicable to the project, the other Standards for Rehabilitation are therefore not discussed further below.¹²

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

The proposed project constitutes new construction adjacent and related to the historic 3330-3360 Broadway/3301 Piedmont Ave. building. Through coordination with City staff, the applicant has designed the building for compatibility within its block and, specifically, relative to the adjoining historic resource. Compatibility treatments include:

- The massing and design of the proposed building's southerly facing wall is similar to the existing southerly wall of the 3400 Broadway building – i.e., similarly monolithic, enframed and light colored – so those paired walls will serve as a balanced backdrop to the gore-corner building at 3330-3360 Broadway/3301 Piedmont Avenue.
- The base for the proposed building along the Piedmont Avenue frontage has been designed to maximize “active space” storefront windows and to relate to the height of the historic 3330-3360 Broadway/3301 Piedmont Avenue building.
- The vertical rhythm of the Piedmont Avenue façade of the proposed new building has also been designed to better relate to historic façades of the area and to the adjacent historic resource in particular.

Overall, the proposed new construction does not affect historic materials, features or spatial relationships that characterize the historic resource or its context. The new building on the site of the current parking lot will conceal the majority of the rear (northwest) exterior wall. But as described above, the exposed portion of this folded exterior wall is painted brick without any openings or ornamental elements and does not serve to convey its historical significant. The form and placement of the new work is clearly differentiated and, per the above, deferential to while also clearly compatible with the historic resource and its setting.

With respect to the integrity of the subject resources (based on the aspects of integrity under the National Register of Historic Places Bulletin 15):

- The Project will cause no erosion of historic location, setting, feeling or association;

¹² U.S. Department of the Interior National Park Service Technical Preservation Services, 2017, The Secretary of the Interior's Standards for the Treatment of Historic Properties, p. 76. Available at: <https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf>.

- The Project will also cause no erosion of the integrity of the historic design, materials and workmanship of the historic 3330-3360 Broadway/3301 Piedmont Avenue building.

Therefore, the proposed project meets Standard 9.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

As it will stand independent of existing buildings, including the historic 3330-3360 Broadway/ 3301 Piedmont Avenue building, were the proposed new construction removed in the future, the essential forms, elements, materials and spatial relationships of the historic resource and its setting would remain, so the integrity of the historic resource and its environment will not be impaired. Therefore, the proposed project meets Standard 10.

In conclusion, the proposed project at 3403 Piedmont Avenue complies with the Standards for Rehabilitation and would not result in significant impacts to historic resources.

Because the existing building to be removed (3405 Piedmont Avenue) is not a significant historic resource, Mitigation Measures CUL-1 and CUL-5, as outlined in the BVDSP EIR, would not apply.

Archaeological and Paleontological Resources and Human Remains

The Northwest Information Center records' search results informed the following discussion and are included in full in Attachment G to this document.

The BVDSP EIR noted that there are no known archaeological or paleontological resources in the Plan Area, but it does have some potential sensitivity for such resources to be buried but currently undiscovered. The project proposes no substantial excavation or subsurface floors and grading will even the generally flat site surface and improve utilities.

The SCAs related to archaeological and paleontological resources and human remains would apply to the proposed project and, as outlined in the outlined in the BVDSP EIR, would reduce any potential impacts to a less-than-significant level.

No known archaeological resources have been recorded in the Plan Area; however, the BVDSP EIR determined that the Plan Area is potentially sensitive for archaeological and buried sites that are not visible due to urban development. The BVDSP EIR determined that implementation of an SCA, which would ensure resources are recovered and appropriate procedures are followed in the event of accidental discovery, would minimize potential risk of impact to archaeological resources to a less-than-significant level.

The Plan Area was also identified as having low to moderate paleontological sensitivity, and it is possible that fossils would be discovered during excavation in the Plan Area. Implementation of an SCA, which would require a qualified paleontologist to document a discovery, and monitor that appropriate procedures be followed in the event of a discovery, would ensure that the potential impact to fossils discovered in the rock units would be less than significant.

As with all construction projects, the project would be required to implement standard conditions of approval to address appropriate response in the event resources or human remains are discovered at the site include SCA CUL-1: *Archaeological and Paleontological Resources – Discovery During Construction*, and SCA CUL-2: *Human Remains – Discovery During Construction*.

Tribal Cultural Resources

The Sacred Lands File search results informed the following discussion and are included in full in Attachment G to this document.

A request to the Native American Heritage Commission (NAHC) was made on June 29, 2021 in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project site. A response was received on July 22, 2021, indicating that the Sacred Lands File search produced a positive result for Native American cultural resources in the larger quadrangle¹³ in which the project is located. The NAHC included a list of 12 tribal representatives available for consultation. To ensure that all Native American knowledge and concerns over potential Tribal Cultural Resources that may be affected by implementation of the proposed project are addressed, the City of Oakland sent letters to all 12 tribal representatives on November 21, 2021. These letters provided a brief description of the proposed project, a map showing the project location, and the results of the Sacred Lands File search. The letters requested comments, concerns or information regarding tribal cultural resources or sacred sites within the area that should be considered in preparation of this CEQA Analysis. The Sacred Lands File search results and the Northwest Information Center records' search results were forwarded on December 8, 2021 to one tribal representative upon request. One tribal representative requested a subsurface survey of the site to further explore the potential for the project to disturb tribal cultural resources.

As coordinated with the commenting tribe, Ground Penetrating Radar (GPR) was used to assess the subsurface features at the site, which were compared against information about historic development of the site and the planned ground disturbance as a part of the project. The Subsurface Survey Report is included in full as Attachment H to this document. The conclusions of the report can be summarized as follows:

- Based on the history of development in the area, the entire project site has been significantly disturbed either from construction or demolition of the area. Given the previous disturbance of this area and results of the GPR analysis, there is a low potential to impact intact historic or prehistoric deposits. This is further clarified in the points below.
- The site retains subsurface remnant features associated with previously-demolished structures (piers/footings and masonry). It is probable that subsurface features are limited to debris and partial foundation remnants, which would most likely not be considered significant cultural resources under the California Environmental Quality Act (CEQA).
- There were no features identified that are likely to be associated with Native American resources. Due to the low number of features and the inclusion of metal and masonry/concrete, these features are not indicative of prehistoric burials.

¹³ The NAHC Sacred Lands File search is based on the United States Geological Survey topographic quadrangle maps, each of which covers an area between 49 and 70 square miles, and is not specific to the project site. This project is within the Oakland West Quadrangle, California.

- While not anticipated, even if the undefined subsurface features (Pit 1, Pit 2, and the masonry features) contained elements that were significant historic or prehistoric resources, due to their depth and location, these features would not be disturbed by planned construction activities.
- Therefore, other than the City's SCAs with respect to unanticipated discovery during construction (SCA-CUL-1 and SCA-CUL-2), no additional measures are recommended.

As requested by the commenting tribe, the results of the subsurface survey have been conveyed to the tribal representative and no further action has been requested.

The proposed project would be required to implement SCAs related to the discovery of archaeological and paleontological resources during construction and the discovery of human remains during construction, as identified in Attachment A at the end of the CEQA Checklist (SCA-CUL-1: *Archaeological and Paleontological Resources – Discovery During Construction*, SCA-CUL-2: *Human Remains – Discovery During Construction*), which would reduce any potential impacts to a less than significant level.

Conclusion

An examination of the analysis, findings, and conclusions of the BVDSP EIR finds that implementation of the proposed project would not substantially increase the severity of the significant impacts that were identified in the BVDSP EIR, nor would it result in new significant impacts related to cultural resources that were not identified in the BVDSP EIR. The project would be required to implement SCAs related to the discovery of archaeological and paleontological resources during construction, the discovery of human remains during construction, and property relocation, as identified in Attachment A at the end of the CEQA Checklist (SCA CUL-1: *Archaeological and Paleontological Resources – Discovery During Construction*, and SCA CUL-2: *Human Remains – Discovery During Construction*).

5. GEOLOGY, SOILS, AND GEOHAZARDS

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Expose people or structures to substantial risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; Strong seismic ground shaking; Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or Landslides;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007, as it may be revised), creating substantial risks to life or property; result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREVIOUS CEQA DOCUMENTS FINDINGS

Seismic Hazards, Expansive Soils, and Soil Erosion (Criterion 5a and 5b)

The BVDSP EIR determined that very strong ground shaking and associated liquefaction in certain soils could expose people to injury or harm during earthquakes. In addition, the soils in the Plan Area are largely composed of artificial fill material overlying natural deposits of Bay Mud. The northern half of the Plan Area is primarily underlain by streambed deposits. The BVDSP EIR identified the artificial fills and expansive soils underlying the Plan Area as presenting a potential hazard, due to the possibility of shrink-swell behavior and soil compression.

Development proposed under the BVDSP would avoid and minimize potential geologic impacts through compliance with local and state regulations governing design and construction practices, such as the Seismic Hazards Mapping Act (in liquefaction hazard zones) and the California Building Code. Implementation of SCAs

that require the preparation of soils and geotechnical reports specifying generally accepted and appropriate engineering techniques would reduce potential impacts to less-than-significant levels.

The BVDSP EIR identified no impacts related to substantial soil erosion or loss of topsoil, because the Plan Area is in a developed urban area that is paved or landscaped and served by a storm drain system. In addition, SCAs would minimize erosion and sedimentation.

PROJECT ANALYSIS AND CONCLUSION

The site is not within a liquefaction hazard zone or earthquake-induced landslides hazard zone, as designated on a map prepared by the California Geological Survey.¹⁴ Further, the geotechnical report stated that the non-liquefiable soil overlaying the potentially liquefiable soil layers is sufficiently thick and the potentially liquefiable layers are sufficiently thin beneath the project site such that the site is not likely to liquefy during a design seismic event. The geologic study included a screening investigation of lateral spreading. The assessment concluded that due to the relatively flat grade of the site and lack of any liquefaction-prone areas large enough to be a concern, lateral spreading potential is low.¹⁵

According to the preliminary geotechnical investigation prepared for the proposed project, the main geotechnical concerns include the presence of 3 to 5 feet of undocumented fill across the site and the presence of highly expansive near-surface soil.¹⁶

The project's engineers concluded that the proposed project can be constructed with a foundation consisting of deepened footings bearing on the native soil 3 to 5 feet below the undocumented fill. This (or a conventionally reinforced mat bearing on engineered fill) was determined to address the potential negative effects of the 3 to 5 feet of undocumented fill and highly expansive soil present near the surface.

The proposed project would be required to comply with the requirements of California Building Code, Seismic Hazards Mapping Act, and the City's SCAs which ensure the implementation of the recommendations from an approved soil report to prevent exposure of people or structures to substantial risk of loss, injury, or death during a large regional earthquake.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the BVDSP EIR, nor would it result in new significant impacts related to geology, soils, and geohazards that were not identified in the BVDSP EIR. The BVDSP EIR did not identify any mitigation measures related to

¹⁴ California Geologic Survey, 2003. State of California Seismic Hazard Zones, Oakland West Quadrangle Official Map. Released February 14.

¹⁵ Rockridge Geotechnical, Geotechnical Investigation Report – Proposed Mixed-Use Building 3403 Piedmont Avenue, Oakland, CA,, Sept. 16, 2021, pg 13.

¹⁶ Rockridge Geotechnical, Geotechnical Investigation Report – Proposed Mixed-Use Building 3403 Piedmont Avenue, Oakland, CA,, Sept. 16, 2021.

geology, soils, and geohazards, and none would be needed for the proposed project. SCAs related to obtaining construction-related permits and submission of a soils report would apply, as identified in Attachment A at the end of the CEQA Checklist (SCA GEO-1: *Construction-Related Permit(s)* and SCA GEO-2: *Soils Report*).

6. GREENHOUSE GAS AND CLIMATE CHANGE

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, specifically: For a project involving a land use development, produce total emissions of more than 1,100 metric tons of CO ₂ e annually AND more than 4.6 metric tons of CO ₂ e per service population annually. The service population includes both the residents and the employees of the project. The project's impact would be considered significant if the emissions exceed BOTH the 1,100 metric tons threshold and the 4.6 metric tons threshold. Accordingly, the impact would be considered less than significant if the project's emissions are below EITHER of these thresholds.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREVIOUS CEQA DOCUMENTS FINDINGS

Greenhouse Gas Emissions (Criterion 6a)

The BVDSP EIR evaluated impacts related to GHG emissions from construction and operation anticipated under the BVDSP. The EIR identified motor vehicle use, water, gas, electrical use, loss of vegetation, and construction activities as contributing to generation of GHG emissions under the implementation of the BVDSP. Future projects and development implemented under the BVDSP would be required to be consistent with the City of Oakland Energy and Climate Action Plan, and with SCAs that would reduce GHG emissions during construction and operation of projects. Even with implementation of SCAs, the BVDSP EIR determined that GHG impacts would conservatively remain significant and avoidable.

Consistency with Applicable GHG Plans (Criterion 6b)

The BVDSP EIR determined that development under the Specific Plan would not conflict with any applicable plan, policy or regulation adopted with the intent to reduce GHG emissions. Therefore, the BVDSP EIR determined that the impact related to consistency with applicable plans, policies, or regulations to reduce GHG emissions would be less than significant.

PROJECT ANALYSIS AND CONCLUSION**2030 Equity and Climate Action Plan (ECAP)**

In July of 2020, the Oakland City Council adopted the 2030 ECAP with the intention that additional policies and ordinances would be adopted to implement some of the 2030 ECAP strategies. The 2030 ECAP sets forth a detailed, equitable path toward cost-effectively reducing Oakland's local GHG emissions by a minimum of 56% below baseline 2005 GHG emission levels by 2030, transitioning away from fossil fuel dependence, removing carbon from the atmosphere through local projects, and ensuring that all of Oakland's communities are resilient to the foreseeable impacts of climate change by 2030. The current statewide goal pursuant to SB 32 is to reduce California's GHG emissions to 40 percent below 1990 levels by 2030. Oakland's adopted 2030 reductions target of 56% below Oakland's 2005 GHG emission reaches beyond that of the State's 40% target. The 2030 ECAP contains not only deeper targets, but also qualitatively different and more focused actions than those contained in the previous 2020 Energy and Climate Action Plan, including a major focus on building de-carbonization and energy resilience, fully removing natural gas from the built environment, and installing energy storage systems where appropriate and feasible. The City's 2030 ECAP does not have a specific numeric threshold for GHG emissions from individual projects. Instead, in December 2020, the City Planning Commission adopted an ECAP Checklist that every project applicant undertaking CEQA review must complete to show consistency with the 2030 ECAP, thereby establishing the following thresholds of significance.

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

1. For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO₂e annually (stationary sources are projects that require a BAAQMD permit to operate).
2. For a project involving a land use development, fail to demonstrate consistency with the 2030 Equitable Climate Action Plan adopted by the City Council on July 28, 2020 (land use developments are projects that do not require a BAAQMD permit to operate). Consistency with the 2030 ECAP can be shown by either:
 - a) Commit to all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist, or
 - b) Comply with the GHG Reduction Standard Condition of Approval that requires a project-level GHG Reduction Plan quantifying how alternative reduction measures will achieve the same or greater emissions than would be achieved by meeting the ECAP Consistency Checklist.
3. For projects that involve both a stationary source and a land use development, calculate each component separately and compare to the applicable threshold.

The project would introduce a new stationary source in a back-up diesel generator required due to the project's height. Current emergency generators produce far less than the limit of more than 10,000 metric tons of CO₂e annually so would not trigger criterion 1.

The proposed project would be required to implement SCA GHG-1: *Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist* requiring implementation of ECAP measures, as included in full in Attachment A at the end of the CEQA Checklist. The project applicants have completed an ECAP Consistency Checklist, which answers affirmatively to all applicable Checklist questions, meaning that the project fully intends to comply with the City's 2030 ECAP, and would incorporate all 2030 ECAP Consistency Checklist items into the project's design, construction, and operation. The ECAP Consistency Checklist and respective applicant answers is provided in **Table 2**.

Table 2: ECAP Consistency Checklist

Yes No

- 1. Is the proposed project substantially consistent with the City's over-all goals for land use and urban form, and/or taking advantage of allowable density and/or floor area ratio (FAR) standards in the City's General Plan?

Applicant Response: The project is fully consistent with the City's General Plan and zoning controls. The proposed development maximizes the residential unit density and utilizes the State Density Bonus to increase the density by another 16% above zoning code limits.

Yes No

- 2. For developments in "Transit Accessible Areas" as defined in the Planning Code, would the project provide: i) less than half the maximum allowable parking, ii) the minimum allowable parking, or iii) take advantage of available parking reductions?

Applicant Response: This project has direct access to the 580 Freeway and creates an excellent opportunity for car sharing and carpooling. We are taking advantage of allowable reductions and maintaining some of the existing parking to serve the offices at 3400 Broadway. 30% parking reduction because we are in a Transit oriented area and additional 30% reduction for providing (3) car share spots on the street.

Yes No

- 3. For projects including structured parking, would the structured parking be designed for future adaptation to other uses? (Examples include, but are not limited to: the use of speed ramps instead of sloped floors)

Applicant Response: The parking garage area could potentially be converted to an active space or additional commercial space at a later time. The ground floor created 3 distinct bays that could be adapted to future uses with the addition of new storefronts and infrastructure.

Yes No

N/A 4. For projects that are subject to a Transportation Demand Management Program, would the project include transit passes for employees and/or residents?

Applicant Response: Not applicable because the project isn't required to have a traffic demand management plan.

Yes No

■ 5. For projects that are not subject to a Transportation Demand Management Program, would the project incorporate one or more of the optional Transportation Demand Management measures that reduce dependency on single-occupancy vehicles? (Examples include but are not limited to transit passes or subsidies to employees and/or residents; carpooling; vanpooling; or shuttle programs; on-site car-share program; guaranteed ride home programs)

Applicant Response: We will have on-street Carshare program.

Yes No

■ 6. Does the project comply with the Plug-In Electric Vehicle (PEV) Charging Infrastructure requirements (Chapter 15.04 of the Oakland Municipal Code), if applicable?

Applicant Response: This project will provide 2 EV charging spaces as required per 15.04.03.11.130 of Oakland Municiple Code.

Yes No

■ 7. Would the project reduce or prevent the direct displacement of residents and essential businesses? (For residential projects, would the project comply with SB 330, if applicable? For projects that demolish an existing commercial space, would the project include comparable square footage of neighborhood serving commercial floor space)

Applicant Response: This project will remove one Retail space and replace it with 73 residential units 10% of which, will be affordable housing units. We are also creating ground floor active space, some of which is retail, and areas that are not retail are designed to be adapted to future retail.

Yes No

■ 8. Would the project prioritize sidewalk and curb space consistent with the City's adopted Bike and Pedestrian Plans? (The project should not prevent the City's Bike and Pedestrian Plans from being implemented. For example, do not install a garage entrance where a planned bike path would be, unless otherwise infeasible due to

Planning Code requirements, limited frontage or other constraints)

Applicant Response: This project prioritizes a pedestrian based right of way by introducing the opportunity to have a coffee shop or light service food establishment on the ground floor which caters to walk-up customers from surrounding businesses. (Kaiser, Auto dealers etc.) The sidewalks are wide and will be replaced to ensure a safe walking area for all pedestrians as well as creating an outdoor open space that can be used for gatherings.

Yes No

- 9. Does the project not create any new natural gas connections/hook-ups?

Applicant Response: The proposed project does not include any gas meters or hook ups since the Oakland Natural Gas Moratorium is in effect since Dec 2020.

Yes No

- 10. Does the project comply with the City of Oakland Green Building Ordinance (Chapter 18.02 of the Oakland Municipal Code), if applicable?

Applicant Response: The proposed design includes all applicable green building requirements as include in the project submission. The commercial spaces are on track to be LEED Silver at a minimum and the residential units will comply with tall Green Point Rating Requirements. These both meet the Chapter 18.02 requirements.

Yes No

- N/A 11. For retrofits of City-owned or City-controlled buildings, would the project be all-electric, eliminate gas infrastructure from the building, and integrate energy storage wherever technically feasible and appropriate?

Applicant Response: This property is not city owned or controlled.

Yes No

- 12 Would the project reduce demolition waste from construction and renovation and facilitate material reuse in compliance with the Construction Demolition Ordinance (Chapter 15.34 of the Oakland Municipal Code)?

Applicant Response: Yes, this project complies and will be providing a minimum of 75% C&D Diversion

Yes No

- NA 13. For City projects: Have opportunities to eliminate/minimize fossil fuel dependency been analyzed in project design and construction?

Applicant Response: Reduced parking has been provided and alternative transportation

strategies were designed to reduce emissions and dependency significantly. Additionally the primary structural component of this project is Wood, not concrete and steel. Wood is a renewable resource, while concrete and steel have added fossil fuel dependencies. Lastly the project is all electric, which eliminates the need for natural gas.

Yes No

- NA 14. For new projects in the Designated Very High Wildfire Severity Zone: Would the project incorporate wildfire safety requirements such creation of defensible space around the house, pruning, clearing and removal of vegetation, replacement of fire-resistant plants, as required in the Vegetation Management Plan?

Applicant Response: This project is not in a wild fire zone.

Yes No

- 15. Would the project replace a greater number of trees than will be removed in compliance with the Tree Preservation Ordinance (Chapter 12.36 of the Oakland Municipal Code) and Planning Code if applicable and feasible given competing site constraints?

Applicant Response: We are not removing any trees (we are preserving the 12 Sequoia Redwoods that face 580) and we will install additional street trees along Piedmont Ave as feasible.

Yes No

- 16. Does the project comply with the Creek Protection, Stormwater Management and Discharge Control Ordinance (Chapter 13.16 of the Oakland Municipal Code), as applicable?

Applicant Response: There is no creek on this site.

The ECAP Consistency Checklist serves to qualitatively demonstrate how the project aligns with the goals and actions in City's 2030 ECAP, which itself articulates a path toward the City meeting local and statewide greenhouse gas reductions by target dates. Because the project is consistent with the 2030 ECAP, the project is compliant with the City's CEQA GHG threshold of significance, and its GHG impacts would be less than significant.

The project applicants have completed the Checklist pursuant to SCA GHG-1, demonstrating their intent to fully comply with the ECAP Consistency Checklist. Therefore, the project would not be required to implement the City's SCA that would have required preparation of a GHG Reduction Plan if consistency with the checklist could not be achieved.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the BVDSP EIR, nor would it result in new significant impacts related to GHG emissions. The BVDSP EIR did not identify any mitigation measures related to GHG emissions and none would be needed for the proposed project. SCA GHG-1: *Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist* related to project implementation of applicable ECAP measures, would apply, as identified in Attachment A at the end of the CEQA Checklist, and the applicant has indicated anticipated compliance as discussed above.

7. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
<p>a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;</p> <p>Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;</p> <p>Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors;</p> <p>Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., the "Cortese List") and, as a result, would create a significant hazard to the public or the environment;</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>b. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>c. Result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions; or Fundamentally impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREVIOUS CEQA DOCUMENTS FINDINGS

Hazardous Materials Use, Storage and Disposal and Hazardous Building Materials (Criterion 7a)

The BVDSP EIR determined that development under the BVDSP could result in construction activities that use hazardous materials and have the potential to disturb hazardous building materials, such as lead-based paint, asbestos, and polychlorinated biphenyls (PCBs). Operationally, the BVDSP EIR determined that ongoing commercial activities that involve The transportation, use, and storage of all hazardous materials would be required to follow the applicable laws and regulations adopted to safeguard workers and the general public and development under the BVDSP would be subject to the City of Oakland's SCAs pertaining to best management practices for hazardous materials and removal of asbestos and lead-based paint. With compliance with applicable laws and regulations and implementation of applicable SCAs, the BVDSP EIR concluded the impact with respect to this topic would be less than significant.

Exposure to Hazardous Materials in the Subsurface (Criterion 7a)

The BVDSP EIR determined that development under the BVDSP could require excavation for installation of building foundations and underground utilities and that some of the development sites could have had past documented releases of hazardous materials that have contaminated subsurface soils and groundwater or previously unknown releases that may be discovered during excavation activities. Disturbed contaminated soils have the potential to expose construction workers and the public to contaminants potentially causing significant adverse health effects. The BVDSP EIR also indicated that a proposed land use change, such as changing a commercial building to a residential building, could require more stringent clean up levels even if the site had been considered remediated or closed based on complying with standards for its current land use. Development under the BVDSP would be subject to the City of Oakland's SCAs pertaining to hazardous materials in the subsurface, including conducting a Phase I Environmental Site Assessment (ESA) and a Phase II ESA, if warranted based on the results of the Phase I ESA; procedures for managing suspected contamination that is encountered unexpectedly during construction activities; preparation of a construction worker health and safety plan; and implementation of best management practices related to hazardous materials management. The BVDSP EIR determined that compliance with these SCAs would reduce the potential impacts related to hazardous materials in the subsurface to a less-than-significant level.

Hazardous Materials within a Quarter Mile of a School (Criterion 7b)

There are no schools in the Plan Area; however, there are five schools or daycare facilities within 0.25 miles of the Plan Area. Development under the BVDSP would be required to comply with the City of Oakland's Ordinances and General Plan Policies, which require hazardous material handlers within 1,000 feet of a school or other sensitive receptor to prepare a Hazardous Materials Assessment Report and Remediation Plan. With compliance with these requirements, the impact would be less than significant.

Emergency Access Routes (Criteria 7c)

The BVDSP EIR determined that construction under the BVDSP that would result in temporary road closures, which would require traffic control plans to ensure at least two emergency access routes are available for streets exceeding 600 feet in length, per City of Oakland's Ordinances and General Plan

Policies. Compliance with all applicable requirements would reduce potential impacts to a less-than-significant level.

PROJECT ANALYSIS AND CONCLUSION

As described above, project developments under the BVDSP, including the proposed project would be required to follow the applicable laws and regulations related to transportation, use, and storage of all hazardous materials and to safeguard workers and the general public.

Construction activities routinely use fuels and other chemicals that are considered hazardous and must be handled appropriately to prevent release, which is required through compliance with SCA HAZ-1: *Hazardous Materials Related to Construction*.

The provisions of Government Code Section 65962.5 are commonly referred to as the "Cortese List." The provisions require the Department of Toxic Substance Control (DTSC), the SWRCB, the California Department of Public Health (DPH), and the California Department of Resources Recycling and Recovery to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, leaking underground tank sites, and/or hazardous materials releases to the Secretary of California Environmental Protection Agency (CalEPA). The project site is not identified on any lists compiled pursuant to Section 65962.5 of the Government Code.¹⁷

Technical information available to support the assessment of environmental impacts in this CEQA analysis includes a Phase I Environmental Site Assessment (ESA).¹⁸ The Phase I ESA prepared for the project site did not identify any recognized environmental conditions in the current use of the property, or any record of a recognized environmental condition in the past in connection with the project site. The Phase I ESA identified a metal pipe filled with concrete in the sidewalk along the southeast side of the property as possibly indicative of an underground storage tank (UST) at the site. Golden Gate Tank Removal, Inc., performed a visual inspection of the site and concluded that there were no signs of a UST.¹⁹ Golden Gate Tank Removal clarified that the identified filled pipes are "an electrical or water utility of some type" and not a sign of USTs.²⁰ While there is no known contamination of the site, due to the age of the building that would be demolished, the ESA did note that there is the potential for asbestos-containing material and/or lead based paint. The project would be required to implement SCA HAZ-2: *Hazardous Building Materials and Site Contamination*, and SCA AIR-6: *Asbestos in Structures* pertaining to best management practices for hazardous building materials and the removal of asbestos from structures.

¹⁷ State Water Resources Control Board GeoTracker Database, website accessed 10/29/2021 at <http://geotracker.waterboards.ca.gov/>; Department of Toxic Substances Control EnviroStor Database, website accessed 10/29/2021 at <http://www.envirostor.dtsc.ca.gov/public/>.

¹⁸ Partner Engineering and Science, Inc., Phase I Environmental Site Assessment Report 3400 Broadway, Oakland, California 94611 October 29, 2019.

¹⁹ Golden Gate Tank Removal, Inc, Visual Property Inspection for Underground Fuel Tanks reports dated 10/29/10 and 7/12/21

²⁰ Personal communications with Golden Gate Tank Removal via the applicant team, July 12, 2021.

The BVDSP EIR determined that the potential risks related to hazardous materials use in the vicinity of schools would be less than significant given incorporation of SCAs and other existing regulatory requirements. The nearest school, Westlake Middle School, is approximately 0.5 miles from the project site. The proposed project would not permanently change the circulation in the area or limit emergency access or plans. Any temporary roadway closures required during construction of the proposed project would be subject to City of Oakland review and approval, to ensure consistency with City of Oakland requirements.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the BVDSP EIR, nor would it result in new significant impacts related to hazards and hazardous materials that were not identified in the BVDSP EIR. The BVDSP EIR did not identify any mitigation measures related to hazards and hazardous materials, and none would be needed for the proposed project. SCAs related to hazardous building materials and asbestos and Environmental Site Assessment reports would apply to the proposed project, as identified in Attachment A at the end of the CEQA Checklist (SCA HAZ-1: *Hazardous Materials Related to Construction*, SCA HAZ-2: *Hazardous Building Materials and Site Contamination*).

8. HYDROLOGY AND WATER QUALITY

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
<p>a. Violate any water quality standards or waste discharge requirements;</p> <p>Result in substantial erosion or siltation on or off site that would affect the quality of receiving waters;</p> <p>Create or contribute substantial runoff which would be an additional source of polluted runoff;</p> <p>Otherwise substantially degrade water quality;</p> <p>Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources.</p>	☒	☐	☐
<p>b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);</p>	☒	☐	☐
<p>c. Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems;</p> <p>Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river, or stream in a manner that would result in substantial erosion, siltation, or flooding, both on or off site.</p>	☒	☐	☐

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
<p>d. Result in substantial flooding on or off site;</p> <p>Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows;</p> <p>Place within a 100-year flood hazard area structures which would impede or redirect flood flows; or</p> <p>Expose people or structures to a substantial risk of loss, injury, or death involving flooding.</p>	☒	☐	☐

PREVIOUS CEQA DOCUMENTS FINDINGS

Water Quality, Stormwater, and Drainages and Drainage Patterns (Criteria 8a and 8c)

The BVDSP EIR determined that development in the Plan Area would result in construction activities that would require ground disturbance, resulting in impacts to hydrology and water quality. The BVDSP EIR identified several SCAs that would reduce impacts to a less-than-significant level by minimizing runoff and erosion, as well as sedimentation and degradation of stormwater and surface water quality during construction activities.

Use of Groundwater (Criterion 8b)

Potable water is supplied to the Plan Area through imported surface water by East Bay Municipal Utility District (EBMUD), and groundwater is generally not used in the Plan Area. The Plan Area is primarily developed and covered in impervious surfaces, and the amount of water able to infiltrate the aquifer in the East Bay Plain groundwater basin would not substantially change with development under the BVDSP.

PROJECT ANALYSIS AND CONCLUSION

The applicant's team has indicated that project construction activities would disturb a total area of 9,795 square feet (0.282 acres) and would not be considered a regulated project under the C.3 provisions of the National Pollutant Discharge Elimination System Municipal Regional Permit (Order R2-2009-0074, NPDES Permit No. CAS612008). If that determination changes, different SCAs than those listed subsequently would apply. Based on the provided information, the project would be required to

implement SCA HYD-1: *Erosion and Sedimentation Control Measures for Construction*, SCA HYD-2: *Site Design Measures to Reduce Stormwater Runoff*, SCA HYD-3: *Source Control Measures to Limit Stormwater Pollution*, and SCA HYD-4: *NPDES C.3 Stormwater Requirements for Small Projects* which encourage site design measures that reduce the amount of stormwater runoff and that limit pollution in stormwater runoff. With implementation of these SCA requirements, the project would not result in any violation of water quality standards, substantial erosion, siltation, or polluted runoff or otherwise degrade water quality.

Since the project site is relatively flat and completely covered with impervious surfaces, and would essentially remain so under the proposed project, the proposed project would not substantially alter drainage patterns or increase the flow of runoff from the site.

Given the estimated 20 feet depth to groundwater and that grading on the already flat site will be limited to surface preparation and utility work, it is unlikely that construction period dewatering would be required. Should groundwater be encountered during site preparation, groundwater dewatering would be limited in duration and would be subject to permits from the Regional Water Quality Control Board (RWQCB) or East Bay Municipal Utilities District (EBMUD), depending on if the discharge is to the storm or sanitary sewer system. Since proper management of dewatering effluent is covered by existing State and local regulations, and implementation of these regulations would protect receiving water quality, the project would be consistent with the BVDSP EIR.

The project site would be outside of the 100-year flood hazard zone,²¹ and therefore flooding hazards are not expected to affect the proposed project.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the BVDSP EIR, nor would it result in new significant impacts related to hydrology and water quality that were not identified in the BVDSP EIR. The BVDSP EIR identified no mitigation measures related to hydrology and water quality, and none would be required for the proposed project. The proposed project would be required to implement SCAs related to stormwater, drainages and drainage patterns, and water quality, as identified in Attachment A at the end of the CEQA Checklist (SCA HYD-1: *Erosion and Sedimentation Control Measures for Construction*, SCA HYD-2: *Site Design Measures to Reduce Stormwater Runoff*, and SCA HYD-3: *Source Control Measures to Limit Stormwater Pollution*, and SCA HYD-4: *NPDES C.3 Stormwater Requirements for Small Projects*).

²¹ Federal Emergency Management Agency, August 3, 2009. Flood Insurance Rate Map, Alameda County, California and Incorporated Areas, Panel 59 of 725, Map Number 06001C0059G.

9. LAND USE, PLANS, AND POLICIES

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Physically divide an established community;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Result in a fundamental conflict between adjacent or nearby land uses; or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREVIOUS CEQA DOCUMENTS FINDINGS

Division of Existing Community, Conflict with Land Uses, or Land Use Plans (Criteria 9a through 9c)

The BVDSP EIR determined that adoption and implementation of the BVDSP would have less-than-significant land use impacts related to the division of an established community, potential conflicts with nearby land uses, or applicable land use plans, policies, and regulations. The Plan Area is in Oakland's Central Business District, an area intended to promote a mixture of vibrant and unique uses with around-the-clock activity, continued expansion of job opportunities, and growing residential population.

PROJECT ANALYSIS AND CONCLUSION

The project's General Plan land use classification is Community Commercial, which is intended to identify, create, maintain, and enhance areas suitable for a wide variety of commercial and institutional operations along the City's major corridors and in shopping districts or centers. The proposed project is consistent with the General Plan land use designation because it would provide a mixed-use, residential building with commercial space along Piedmont Avenue, close to Broadway, a major corridor.

The project site is located in the North End subarea of the Plan Area. The site is zoned D-BV-3 (Mixed Use Boulevard Zone). The regulatory framework of D-BV-3 is intended to create, maintain, and enhance areas with direct frontage and access along Broadway, 27th Street, Piedmont Avenue, and Harrison

Street. The D-BV-3 zone allows a relatively wide range of ground-floor office and other commercial activities with upper-story spaces intended to be available for a broad range of residential, office, or other commercial activities. The proposed project would provide both residential units and commercial space and would be consistent with the zoning. The project site is also within the area where the maximum height permitted is 85 feet. The proposed building would not exceed 85 feet in height. Therefore, the proposed project would be consistent with the land use plans and policies for the site.

Based on the above, the proposed project would be consistent with the land use regulations in the BVDSP.

Conclusion

Based on an examination of the analysis, findings, and conclusions in the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of the significant impacts identified in that report, nor would it result in new significant impacts related to land uses, plans, or policies that were not identified in the BVDSP EIR. The BVDSP EIR did not identify any SCAs or mitigation measures related to land use, and none are necessary for the proposed project.

10. NOISE

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts. During the hours of 7:00 p.m. to 7:00 a.m. on weekdays and 8:00 p.m. to 9:00 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard; Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3-dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project);	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
<p>d. Expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24);</p> <p>Expose the project to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval;</p> <p>Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]); or</p>	☒	☐	☐
<p>e. During either project construction or project operation expose persons to or generate ground-borne vibration that exceeds the criteria established by the Federal Transit Administration (FTA).</p>	☒	☐	☐

PREVIOUS CEQA DOCUMENTS FINDINGS

Construction and Operational Noise and Vibration, Exposure of Receptors to Noise (Criteria 10a, 10b, 10d, and 10e)

Overall, the BVDSP EIR determined that noise and vibration impacts related to construction and operations of development under the BVDSP would be less than significant. Construction-related activities associated with development under the BVDSP would temporarily increase ambient noise levels and vibration. Implementation of SCAs would minimize construction noise impacts by limiting hours of construction activities; require best available noise control technology; require vibration monitoring for activities adjacent to historic structures; and require a project applicant and/or its contractors to notify any local residents of construction activities, and to track and respond to noise complaints.

During operations, mechanical equipment used in projects developed under the BVDSP would generate noise; however, equipment would be standardized and would be required to comply with the City of Oakland Noise Ordinance. Potential impacts would be reduced with implementation of SCAs that would require project design to achieve acceptable interior noise levels for buildings; limit ground borne vibration at the project site; and require mechanical equipment to comply with applicable noise performance standards.

As described in the BVDSP EIR, noise measurements taken at various locations in the Plan Area indicate that the ambient noise environment in the Plan Area would be in the conditionally acceptable category for residential uses, and in the normally acceptable category for commercial uses—except for 24th Street, 25th Street, and Brooks Street in the Plan Area. At these three locations, the noise environment would be in the normally acceptable category for residential uses. The BVDSP EIR identified an SCA that would ensure that project components are appropriately sound-rated to meet land use compatibility requirements throughout the Plan Area.

Traffic Noise (Criterion 10c)

The BVDSP EIR determined that development under the Specific Plan would increase noise levels adjacent to nearby roads due to additional vehicles traveling throughout the Plan Area. The increase in traffic noise from the Existing Plus Project scenario as compared to existing conditions would increase peak-hour noise levels by less than 5 A-weighted decibels (dBA) at all studied roadway segments, with the exception of 24th Street east of Broadway and 26th Street east of Broadway, where the increase in roadside noise would be 6.4 and 5.1 dBA, respectively. In addition, the increase in traffic noise between the Cumulative No Project (2035) and Cumulative Plus Project (2035) scenarios would be 5.3 dBA along 24th Street east of Broadway, and 4.9 dBA along 26th Street east of Broadway. The cumulative increases in traffic-generated noise could also combine with stationary noise sources, such as rooftop mechanical equipment and back-up generators, to result in significant cumulative impacts. The EIR determined that no feasible mitigation measures are available, and that these impacts would remain significant and unavoidable.

PROJECT ANALYSIS AND CONCLUSION

Construction activities for the proposed project are expected to occur over approximately 15 months, and would consist of phases including demolition, excavation, and above-grade construction. Since the proposed project is consistent with planned development considered for this area in the BVDSP EIR, the proposed project would not be anticipated to substantially increase the level of significance of the construction noise and vibration impact identified in the BVDSP EIR or result in new significant construction noise and vibration impacts. In addition, the proposed project would be required to implement SCA NOI-1: *Construction Days/Hours* to limit the days and hours of construction, SCA NOI-2: *Construction Noise* and SCA NOI-3: *Extreme Construction Noise* to ensure the application of noise reduction measures to reduce noise impacts and extreme construction noise, and SCA NOI-4: *Construction Noise Complaints* to provide measures to respond to and track construction noise complaints (if any).

The proposed project is located adjacent to the auto dealership flatiron building at 3330-3360 Broadway/3301 Piedmont Avenue, which is considered a significant historic resource for purposes of environmental review under CEQA. Therefore, implementation of SCA NOI-5: *Vibration Impacts on*

Adjacent Structures or Vibration-Sensitive Activities would be required to demonstrate any heavy off-road construction equipment used at the site would not result in damage to that historic building.

During operation of the proposed project, noise from mechanical equipment and increased traffic from additional trips from the residential and commercial components including truck deliveries would be generated. The proposed project would not be located along 24th Street or 26th Street east of Broadway and would not substantially contribute to the significant and unavoidable impact related to traffic noise. Since the proposed project is consistent with the Plan Area development anticipated, the proposed project would not be anticipated to substantially increase the severity of significant traffic noise impacts identified in the BVDSP EIR or result in new significant impacts. In addition, the proposed project would be required to implement SCA NOI-6: *Operational Noise* which would require all operational noise to comply with the performance standards of Chapter 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. Therefore, with the implementation of SCA NOI-6, the proposed project would not violate the City of Oakland operational noise standards and the noise generated by the mechanical equipment and delivery trucks at the project site would be less than significant and consistent with the finding in the BVDSP EIR.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the BVDSP EIR, and since the proposed project is consistent with Plan Area development anticipated in the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the BVDSP EIR, nor would it result in new significant impacts related to noise that were not identified in the BVDSP EIR. The BVDSP EIR did not identify any mitigation measures related to noise and vibration, and none would be necessary for the proposed project. The proposed project would be required to implement SCAs to reduce construction noise and vibration, achieve interior noise standards, and require mechanical equipment to meet applicable noise performance standards. Related SCAs are provided in Attachment A at the end of the CEQA Checklist (SCA NOI-1: *Construction Days/Hours*, SCA NOI-2: *Construction Noise*, SCA NOI-3: *Extreme Construction Noise*, SCA NOI-4: *Construction Noise Complaints*, SCA NOI-5: *Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities*, and SCA NOI-6: *Operational Noise*).

Non-CEQA Discussion of Noise Levels at the Project

CEQA requires the analysis of potential adverse effects of the project on the environment. Potential effects of the environment on the project are legally not required to be analyzed or mitigated under CEQA. However, this document nevertheless analyzes potential effects of the environment on the project in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City Standard Conditions of Approval and/or project-specific non-CEQA recommendations to address these issues. SCA NOI-7: *Exposure to Community Noise* would apply to the project and would require a noise reduction plan prepared by a qualified acoustical engineer 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 proposed project is not located adjacent to any active rail line and, therefore, the SCA pertaining to exposure of new dwelling units to vibration (*Exposure to Vibration*) would not apply to the proposed project.

An Environmental Noise Study was submitted as part of the project application. The project site is directly next to an I-580 freeway overpass (which is approximately 23 feet above grade), which means residential floors above 23 feet have a direct line-of-sight to the freeway. The existing noise level at the second floor (below the freeway) was measured to be DNL 73 dBA. The existing noise level at the third and fourth floors (directly exposed to I-580 traffic) was measured to be DNL 84 dBA.²²

The Oakland General Plan Noise Element indicates acceptability of different noise levels for different types of uses. The ambient noise levels discussed above puts the project site within the “Normally Unacceptable” to “Clearly Unacceptable” range for residential uses. The ground level open space area and the project’s rooftop amenity deck would be shielded from the I-580 freeway and would not be expected to be exposed to “Clearly Unacceptable” noise levels. The Environmental Noise Study identified noise reduction features to ensure interior spaces within the project building are not exposed to noise levels that exceed the applicable standards, which include sound-rated windows and exterior partitions. The Environmental Noise study concluded that with the recommended features, noise reductions could be achieved such that the project would meet the interior residential standard of DNL 45 dBA.

While the Environmental Noise Study did not address noise from the mechanical parking stackers directly, the preparers of that document, CSDA Design Group, clarified that they have measured the noise from this type of stacker and found it not to be audible even in units directly above the system.²³

²² CSDA Design Group, 3400 Broadway, Oakland Multi-Family Residential Environmental Noise Study, July 8, 2021.

²³ Email communications with CSDA Design Group via the applicant team, July 12, 2021.

11. POPULATION AND HOUSING

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Induce substantial unplanned population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element; or Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREVIOUS CEQA DOCUMENTS FINDINGS

Population Growth and Displacement of Housing and People (Criteria 11a and 11b)

The BVDSP EIR determined that impacts related to population growth and displacement of housing and people would be less than significant. Development under the BVDSP would add up to 1,800 dwelling units and 3,230 residents to the Plan Area. Although adoption and development under the BVDSP could require the demolition of existing housing units, existing regulations such as Housing Element policies, the Housing Crisis Act (Government Code Section 66300, enacted subsequent to adoption of the BVDSP), the Ellis Act (Government Code Sections 7060 through 7060.7), and the City of Oakland's Ellis Act Ordinance (Oakland Municipal Code Sections 8.22.400 through 8.22.480) would prevent significant impacts.

PROJECT ANALYSIS AND CONCLUSION

The proposed project would demolish the existing building at the project site, which includes a retail space. It would construct a new mixed-use building with up to 73 residential units and approximately

1,324 square feet of ground-floor commercial space. No housing units would be demolished, and no residents would be displaced.

The proposed project would result in an increase of approximately 137 residents and a few jobs.²⁴ While the proposed project, in combination with other proposed projects in the Plan Area, could result in more than 1,800 dwelling units, the BVDSP allows for flexibility with respect to the quantity and type of future development. Additionally, a housing development in this area including an affordable housing component is consistent with Housing Element policies. As such, the proposed project would not be considered “unplanned” population growth and would not have a significant impact in this regard.

Conclusion

Based on an examination of the analysis, findings, and conclusions in the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of the significant impacts identified in that report, nor would it result in new significant impacts related to population and housing that were not identified in the BVDSP EIR. The BVDSP EIR did not identify any mitigation measures or SCAs related to population and housing, and none would be required for the proposed project.

²⁴ Based on the population density from the BVDSP EIR of approximately 1.87 residents per dwelling unit.

12. PUBLIC SERVICES, PARKS, AND RECREATION FACILITIES

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: Fire protection; Police protection; Schools; or Other public facilities.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or Include recreational facilities or require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREVIOUS CEQA DOCUMENTS FINDINGS

Public Services and Parks and Recreation (Criteria 12a and 12b)

The BVDSP EIR determined that impacts related to fire and police protection, schools, and other public facilities would be less than significant. Although development under the BVDSP would increase density and population in the Plan Area, any corresponding increase in crime and need for police protection would likely be counteracted by the revitalization of the area, as envisioned by the BVDSP. The EIR identified SCAs that would reduce the potential impacts related to the increased need for fire protection

by requiring all projects to implement safety features, and to comply with all applicable codes and regulations. Adherence to the General Plan's Open Space, Conservation and Recreation Element policies 3.1, 3.3, and 3.10 would reduce potential impacts to recreational facilities. In addition, any increases in need for police protection, fire protection, schools, or other public facilities would be mitigated by adherence to General Plan policies N.12.1, N.12.2, N.12.5, FI-1, and FI-2. No additions or expansions of parks or recreational facilities are proposed under the BVDSP, and no new parks or recreational facilities, or expansion of existing parks or recreational facilities, were determined to be required under the BVDSP.

PROJECT ANALYSIS AND CONCLUSION

The proposed project would construct 73 residential units and 1,324 square feet of ground-floor commercial space. The Illustrative Development Program in the BVDSP EIR envisioned both commercial and residential uses on the project site. The BVDSP did not prescribe or assume exact land uses on a site-by-site basis and instead established a maximum density based on trip generation and traffic capacity. The proposed project is within that capacity; therefore, the increase in residential units in the Plan Area, including the 73 residential units proposed for the project, and the proposed project's increase in demand for public services are consistent with the analysis in the BVDSP EIR. The proposed project would be required to implement SCA PUB-1: *Capital Improvements Impact Fee* which would require applicable payment of fees per Section 15.74 of the Oakland Municipal Code, including fees toward public services improvements.

Specifically, the proposed project would most likely increase student enrollment at local schools. Pursuant to Senate Bill 50, the project sponsor would be required to pay school impact fees, which are established to offset potential impacts from new development on school facilities. This would be deemed full and complete mitigation by law. The proposed project could also cause a minor increase in demand for police and fire protection services; however, the project site is within the service area for these services and as described in the BVDSP EIR, adherence to General Plan policies N.12.1, N.12.2, N.12.5, FI-1, and FI-2 would mitigate potential impacts.

The proposed project would provide approximately 2,038 square feet of open space for the future residents. This open space is less than the 5,355 square feet required from the BVDSP and the Planning Code, but the applicant is requesting the reduced open space area as a concession/incentive under the State Density Bonus Law and would pay capital improvement fees for off-site improvements.

Conclusion

Based on an examination of the analysis, findings, and conclusions in the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of the significant impacts identified in that report, nor would it result in new significant impacts related to the provision of public services or park and recreational facilities that were not identified in the BVDSP EIR. The BVDSP EIR did not identify any mitigation measures related to public services or park and recreational facilities, and none would be required for the proposed project. The proposed project would be required to implement SCA PUB-1: *Capital Improvements Impact Fee* which requires applicable payment of fees per Section 15.74 of the Oakland Municipal Code, including fees toward public services improvements.

13. TRANSPORTATION AND CIRCULATION

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Cause substantial additional vehicle miles traveled (VMT) per capita, per service population, or other appropriate efficiency measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREVIOUS CEQA DOCUMENTS FINDINGS

On September 21, 2016, the City of Oakland's Planning Commission directed staff to update the City of Oakland's California Environmental Quality Act (CEQA) Thresholds of Significance Guidelines related to transportation impacts in order to implement the directive from Senate Bill 743 (Steinberg 2013) to modify local environmental review processes by removing automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA. The Planning Commission direction aligns with draft proposed guidance from the Governor's Office of Planning and Research and the City's approach to transportation impact analysis with adopted plans and policies related to transportation, which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. Thus, this Section evaluates the impacts of the proposed project with respect to VMT, rather than the LOS-based congestion analysis that was included in the BVDSP EIR.

The BVDSP EIR determined that no significant impacts to transit, pedestrian, bicycle, or other related topics would occur.

The BVDSP EIR identified SCAs that require City review and approval of all improvements in the public right-of-way, reduction of vehicle traffic and parking demand generated by development projects, and construction traffic and parking management, which will also address transportation and circulation impacts.

PROJECT ANALYSIS AND CONCLUSIONS

Vehicle Miles Travelled (VMT)

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

Considering these travel behavior factors, most of Oakland has a lower VMT per capita and VMT per employee ratios than the nine-county San Francisco Bay Area region. In addition, some neighborhoods of the city have lower VMT ratios than other areas of the city.

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

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

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

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

The daily VMT output from the MTC Travel Model for residential uses comes from a tour-based analysis. The tour-based analysis examines the entire chain of trips over the course of a day, not just trips to and from the project site. In this way, all of the VMT for an individual resident or employee is included; not just trips into and out of the person's home or workplace. For example: a resident leaves her apartment

in the morning, stops for coffee, and then goes to the office. In the afternoon she heads out to lunch, and then returns to the office, with a stop at the drycleaners on the way. After work she goes to the gym to work out, and then joins some friends at a restaurant for dinner before returning home. The tour-based approach would add up the total amount driven and assign the daily VMT to this resident for the total number of miles driven on the entire “tour”.

According to the *City of Oakland Transportation Impact Review Guidelines* dated April 14, 2017, the following are thresholds of significance related to substantial additional VMT:

- For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent.
- For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per employee minus 15 percent.
- For retail projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per employee minus 15 percent.

The project is a mixed-use residential project with ground floor commercial (retail and related) uses. However, because the project will remove more retail square footage than it will construct, there would be a net decrease in the amount of trips and VMT associated with the non-residential portion of the project. Therefore, the assessment below conservatively focuses on the residential portion of the project only.

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

1. Small Projects: The project generates fewer than 100 vehicle trips per day;

The project would result in an estimated 251 daily trips, 17 A.M. peak hour trips, and 20 P.M. peak hour trips.²⁵ Because this is more than 100 daily trips, the project would not qualify under this criterion. (However, because the project would generate less than 50 peak hour trips, some Oakland requirements are not triggered, including a Transportation Demand Management Plan.)

2. Low-VMT Areas: The project meets map-based screening criteria by being located in an area that exhibits below threshold VMT, or 15 percent or more below the regional average; or

According to maps prepared by MTC, the project site is located in TAZ #972, which has an average VMT rate of 7.07 VMT per capita. The VMT threshold is at least 15 percent below the regional year 2030 average of 14.4 VMT per capita (or 12.24 VMT per capita). At 7.07 VMT per capita, the project meets the map-based screening criteria for low VMT, and VMT impacts of the project are presumed to be less than significant based on this criteria. If the farther 2040 year was considered, the

²⁵ Based on Institute of Transportation Engineers trip rates for Use 221: Mid-Rise Residential and City of Oakland Transportation Impact Review Guidelines non-vehicle mode share of 36.7% for projects between 0.5 and 1 mile of a BART station.

project's average VMT per capita would be 6.77 compared to a threshold of 11.73 and the conclusion would remain the same.²⁶

3. Near Transit Stations: The project is located in a Transit Priority Area or within a one-half mile of a Major Transit Corridor or Stop and satisfies the following:
- Has a Floor Area Ratio (FAR) of more than 0.75;
 - Includes less parking for use by residents, customers, or employees of the project than other typical nearby uses, or more than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site)
 - Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Transportation Commission).

The project site is not located in a Transit Priority Area²⁷ or within one-half mile from a Major Transit Corridor or Stop²⁸. Therefore, the project would not qualify under this criterion.

As indicated above, the project meets the screening criteria for determining a less than significant VMT impact as a project in a Low-VMT Area. The project would therefore have a less than significant impact with respect to VMT.

Potential Conflict with the Safety or Performance of the Circulation System

The project would not cause a significant impact by conflicting with adopted plans, ordinances or policies addressing the safety and performance of the circulation system, including transit, roadways, bicycle lanes and pedestrian paths. The City General Plan, the Public Transit and Alternative Mode policies, and Complete Streets policies all state a strong preference for encouraging the use of non-automobile transportation modes such as transit, bicycling and walking. The project would encourage the use of non-auto transportation modes by providing residential and retail uses in a dense, walkable urban environment that is well-served by both local and regional transit.

The project would not make any modifications to existing pedestrian or bicycle facilities in the surrounding area, and would not adversely affect installation of planned future facilities. The project would provide long-term bicycle parking for residents in the ground floor of the building and short-term bicycle parking at bike rack along the sidewalk.

²⁶ <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=5dac76d69b3d41e583882e146491568b>

²⁷ Metropolitan Transportation Commission, 2021, Transit Priority Area, accessed at: <https://www.arcgis.com/home/item.html?id=370de9dc4d65402d992a769bf6ac8ef5>

²⁸ A major transit corridor or stop is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. The closest BART (rail) station, MacArthur station, is approximately 0.65 miles northwest of the site. AC Transit bus lines 51A and 57 intersect within a half mile of the project site, however, line 57 runs every 18 minutes during the peak hour and therefore this stop would not qualify as a major transit stop.

The project would therefore be consistent with BVDSP EIR conclusions that no significant impacts to transit, pedestrian, bicycle, or other related topics would occur.

The project would be required to implement applicable standard conditions related to transportation and circulation, including SCA TRA-1: *Construction Activity in the Public Right-of-Way*, requiring an obstruction permit and/or Traffic Control Plan for any temporary construction-related obstruction in the public right-of-way, SCA TRA-2: *Bicycle Parking* requiring compliance with the City of Oakland bicycle parking requirements, and SCA TRA-3: *Transportation Impact Fee* requiring payment of City of Oakland Transportation Impact Fees pursuant to Chapter 15.74 of the Oakland Municipal Code, and SCA TRA-4 *Plug-In Electric Vehicle (PEV) Charging Infrastructure* requiring parking spaces with electrical vehicle charging.²⁹

Increasing Physical Roadway Capacity

The project would not modify the roadway network surrounding the project site. It would not increase the physical roadway capacity or add new roadways to the network, and would therefore not induce additional automobile traffic. The project would have no impact in this regard.

Conclusion

Based on an examination of the analysis, findings, and conclusions in the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of the significant impacts identified in the EIR, nor would it result in new significant impacts related to transportation and circulation that were not identified in the BVDSP EIR. The proposed project would be required to implement SCAs related to temporary construction-related obstruction of public right-of-way, compliance with bicycle requirements, and payment of applicable fees, as identified in Attachment A at the end of the CEQA Checklist (SCA TRA-1: *Construction Activity in the Public Right-of-Way*, SCA TRA-2: *Bicycle Parking*, and SCA TRA-3: *Transportation Impact Fee*).

²⁹ Since the project does not generate 50 or more net new a.m. or p.m. peak hour vehicle trips, the SCA requiring a Transportation and Parking Demand Management Plan is not applicable. Additionally, since the project does not require on- or off-site transportation-related improvements, the SCA requiring implementation of such improvements is also not applicable.

14. UTILITIES AND SERVICE SYSTEMS

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
<p>a. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board;</p> <p>Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects;</p> <p>Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>b. Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects;</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>c. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects;</p> <p>Violate applicable federal, state, and local statutes and regulations related to solid waste;</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Would the project:	Equal or Less Severity of Impact Previously Identified in BVDSP EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
<p>d. Violate applicable federal, state and local statutes and regulations relating to energy standards; or</p> <p>Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.</p>	☒	☐	☐

PREVIOUS CEQA DOCUMENTS FINDINGS

Water, Wastewater, and Stormwater (Criteria 14a and 14b)

As described in the BVDSP EIR, EBMUD has accounted for the water demand projections associated with development under the BVDSP; and the BVDSP EIR determined that development under the BVDSP would not require new water supply entitlements, resources, facilities, or expansion of existing facilities beyond those already planned, and that impacts related to water supplies would be less than significant.

The BVDSP EIR also determined that development under the BVDSP would have less-than-significant impacts related to stormwater and wastewater facilities. Much of the Plan Area is composed of impervious surfaces, and new development would likely decrease storm-drain runoff, because proposed projects would be required to incorporate additional pervious areas through landscaping, in compliance with City of Oakland requirements.

On the other hand, development projects may increase sewer capacity demand. Implementation of SCAs requiring stormwater control during and after construction would address potential impacts on stormwater treatment and sanitary sewer infrastructure.

Solid Waste Services (Criterion 14c)

As described in the BVDSP EIR, impacts associated with solid waste would be less than significant. Nonhazardous solid waste in the Plan Area is ultimately hauled to the Altamont Landfill and Resource Facility. The Altamont Landfill would have sufficient capacity to accept waste generated by development

under the BVDSP. In addition, implementation of an SCA pertaining to waste reduction and recycling would reduce waste through compliance with the City of Oakland's Recycling Space Allocation Ordinance (Oakland Municipal Code, Chapter 17.118).

Energy (Criterion 14d)

Development under the BVDSP would result in less-than-significant impacts related to energy standards and use. Developments would be required to comply with the standards of Title 24 of the California Code of Regulations. SCAs pertaining to compliance with the green building ordinance would require construction projects to incorporate energy-conserving design measures.

PROJECT ANALYSIS AND CONCLUSION

The water and sanitary sewer demand and stormwater facilities, as well as solid waste and energy associated with the proposed project, are consistent with the Development Program analyzed in the BVDSP EIR. All on-site utilities would be designed in accordance with applicable codes and current engineering practices. However, the proposed project would pay a sewer mitigation fee, which would either contribute to the cost of replacing pipes for the local collection system to increase capacity or be used to perform inflow and infiltration rehabilitation projects outside of the Plan Area, as described in the BVDSP EIR.

A pad mounted electrical transformer is proposed at the northeastern corner of the site. This is anticipated to be required based on the applicant's experience with AT&T requirements and the anticipated electrical loads for an all-electrical (no natural gas) project of this type and size. If not ultimately required by AT&T, this area would become additional open space. Oakland requires utilities to be underground when feasible. The applicants have indicated that it is not feasible to underground a utility of this size and type per PG&E standards and this would need to be coordinated with the City during the plan check process.

Conclusion

Based on an examination of the analysis, findings, and conclusions in the BVDSP EIR, implementation of the proposed project would not substantially increase the severity of the significant impacts identified in that report, nor would it result in new significant impacts related to utilities and service systems that were not identified in the BVDSP EIR. The BVDSP EIR did not identify any mitigation measures related to utilities and service systems, and none would be required for the proposed project. The proposed project would be required to implement SCAs related to construction and demolition waste reductions and recycling, underground utilities, recycling collection and storage space, "green" building requirements, a sanitary sewer system, and the storm drain system, as identified in Attachment A at the end of the CEQA checklist (SCA UTIL-1: *Construction and Demolition Waste Reduction and Recycling*, SCA UTIL-2: *Underground Utilities*, SCA UTIL-3: *Recycling Collection and Storage Space*, SCA UTIL-4: *Green Building Requirements*, SCA UTIL-5: *Sanitary Sewer System*, and SCA UTIL-6: *Storm Drain System*).

ATTACHMENT A: 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 the CEQA Analysis prepared for the 3403 Piedmont Avenue mixed-use residential development.

This SCA MMRP is in compliance with Section 15097 of the CEQA Guidelines, which requires that the Lead Agency “adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects.” The SCA MMRP lists mitigation measures (“MM”) recommended in the EIR and identifies mitigation monitoring requirements, as well as the City’s Standard Conditions of Approval (“SCA”) identified in the EIR as measures that would minimize potential adverse effects that could result from implementation of the project, to ensure the conditions are implemented and monitored. The SCA number that corresponds to the City’s master SCA list is provided at the end of the SCA title — i.e., SCA AIR-1: *Dust Controls - Construction Related* (#20).

All MMs and SCAs identified in the CEQA Analysis, which is consistent with the measures and conditions presented in the BVDSP EIR, are included herein. To the extent that there is any inconsistency between the SCA and MM, the more restrictive conditions shall govern; to the extent any MM and/or SCA identified in the CEQA Analysis were inadvertently omitted, they are automatically incorporated herein by reference.

The first column identifies the SCA and MM 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.

The project sponsor is responsible for compliance with any recommendations in approved technical reports, all applicable mitigation measures adopted and with all conditions of approval set forth herein at its sole cost and expense, unless otherwise expressly provided in a specific mitigation measure or condition of approval, and subject to the review and approval of the City of Oakland. Overall monitoring and compliance with the mitigation measures 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.

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
Aesthetics, Shadow and Wind			
SCA AES-1: Trash and Blight Removal (#16). 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 multifamily residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.	Ongoing	N/A	Bureau of Building
SCA AES-2: Graffiti Control (#17). a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation: i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces. ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces. iii. Use of paint with anti-graffiti coating. iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED). v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement. b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include: i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system. ii. Covering with new paint to match the color of the surrounding surface. iii. Replacing with new surfacing (with City permits if required).	Ongoing	N/A	Bureau of Building
SCA AES-3: Landscape Plan (#18). a. <i>Landscape Plan Required</i> 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 Planting Guidelines and with any applicable streetscape plan.	Prior to approval of construction-related permit Prior to building permit final Ongoing	Bureau of Planning Bureau of Planning N/A	N/A Bureau of Building Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>b. <i>Landscape Installation</i></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>c. <i>Landscape Maintenance</i></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>SCA AES-4: Lighting (#19).</p> <p>Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.</p>	Prior to building permit final	N/A	Bureau of Building
Air Quality			
<p>BVDSP Recommended Measure AIR 1: During construction, the project applicant shall require the construction contractor to use prefinished materials and colored stucco, as feasible.</p>	Prior to building permit final	N/A	Bureau of Building
<p>SCA AIR-1: Dust Controls- Construction Related (#20).</p> <p>The project applicant shall implement all of the following applicable dust control measures during construction of the project:</p> <p>a. Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.</p> <p>b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).</p> <p>c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.</p> <p>d. Limit vehicle speeds on unpaved roads to 15 miles per hour.</p> <p>e. All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.</p>	During construction	N/A	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>f. All trucks and equipment, including tires, shall be washed off prior to leaving the site.</p> <p>g. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.</p> <p>[Note that additional “enhanced controls” are not applicable to the project as the construction site is less than 4 acres and involves less than 10,000 cubic yards of soil transport.]</p>			
<p>SCA AIR-2: Criteria Air Pollutant Controls- Construction-Related (#21).</p> <p>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> <p>a. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.</p> <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 electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and 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 shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations (“California Air Resources Board Off-Road Diesel Regulations”) and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met.</p>	During construction	N/A	Bureau of Building

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	When Required	Initial Approval	Monitoring/ Inspection
[Note that additional “enhanced controls” are not applicable to the project as the project size is below applicable emissions screening levels.]			
<p>SCA AIR-3: Diesel Particulate Matter Controls-Construction Related (#22)</p> <p>a. Diesel Particulate Matter Reduction Measures</p> <p>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>b. Construction Emissions Minimization Plan (if required by a above)</p> <p>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> <p>i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment</p>	<p>Prior to issuance of a construction related permit (i), during construction (ii)</p> <p>Prior to issuance of a construction related permit</p>	<p>Bureau of Planning</p> <p>Bureau of Planning</p>	<p>Bureau of Building</p> <p>Bureau of Building</p>

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	When Required	Initial Approval	Monitoring/ Inspection
<p>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.</p> <p>ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.</p>			
<p>SCA AIR-4: Exposure to Air Pollution (Toxic Air Contaminants) (#23).</p> <p>a. Health Risk Reduction Measures</p> <p>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.</p> <p>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 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. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.</p> <p>- or -</p> <p>ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:</p> <ul style="list-style-type: none"> • 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. • Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph). • Phasing of residential developments when proposed within 500 feet 	<p>Prior to approval of construction-related permit</p> <p>Ongoing</p>	<p>Bureau of Planning</p> <p>N/A</p>	<p>Bureau of Building</p> <p>Bureau of Building</p>

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	When Required	Initial Approval	Monitoring/ Inspection
<p>of freeways such that homes nearest the freeway are built last, if feasible.</p> <ul style="list-style-type: none"> • The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods. • Sensitive receptors shall be located on the upper floors of buildings, if feasible. • Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (<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>). • Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible. • Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible. • Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible: <ul style="list-style-type: none"> o Installing electrical hook-ups for diesel trucks at loading docks. o Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards. o Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels. o Prohibiting trucks from idling for more than two minutes. o 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. <p>b. Maintenance of Health Risk Reduction Measures</p> <p>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>SCA AIR-5: Stationary Sources of Air Pollution (Toxic Air Contaminants) (#24). 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</p>	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

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	When Required	Initial Approval	Monitoring/ Inspection
<p>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 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. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.</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> <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>SCA AIR-6: Asbestos in Structures (#26). 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	Applicable regulatory agency with jurisdiction
Biological Resources			
<p>SCA BIO-1: Tree Permit (#30).</p> <p>a. Tree Permit required.</p> <p>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>b. Tree Protection during construction.</p> <p>Adequate protection shall be provided during the construction period</p>	<p>Prior to approval of construction-related permit</p> <p>During construction</p>	<p>Permit approval by Public Works Department, Tree Division; evidence of approval submitted to Bureau of Building</p>	<p>Bureau of Building</p> <p>Bureau of Building</p>

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	When Required	Initial Approval	Monitoring/ Inspection
<p>for any trees which are to remain standing, including the following, plus any recommendations of an arborist:</p> <p>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>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, filing, 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>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>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>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>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>		Public Works Department, Tree Division	

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	When Required	Initial Approval	Monitoring/ Inspection
Cultural Resources			
<p>SCA CUL-1: Archaeological and Paleontological Resources – Discovery During Construction (#32). Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.</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 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.</p>	During construction	N/A	Bureau of Building

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SCA CUL-2: Human Remains – Discovery During Construction (#34). Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.	During construction	N/A	Bureau of Building
Geology, Soils and Geohazards			
SCA GEO-1: Construction-Related Permit(s) (#36). The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
SCA GEO-2: Soils Report (#37). The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
GREENHOUSE GAS EMISSIONS / GLOBAL CLIMATE CHANGE			
SCA GHG-1: Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist (#41). The project applicant shall implement all the measures in the Equitable Climate Action Plan (ECAP) Consistency Checklist that was submitted during the Planning entitlement phase. a. For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction related permits. b. For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be implemented during construction.	Prior to approval of construction-related permit During construction Ongoing	Bureau of Planning Bureau of Planning N/A	Bureau of Planning Bureau of Building Bureau of Planning

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c. For ECAP Consistency Checklist measures that are operational but not otherwise covered by these SCAs, including but not limited to the requirement for transit passes or additional Transportation Demand Management measures, the applicant shall provide notice of these measures to employees and/or residents and post these requirements in a public place such as a lobby or work area accessible to the employees and/or residents.			
Hazards and Hazardous Materials			
<p>SCA HAZ-1: Hazardous Materials Related to Construction (#43). 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> <ul style="list-style-type: none"> a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b. Avoid overtopping construction equipment fuel gas tanks; c. During routine maintenance of construction equipment, properly contain and remove grease and oils; d. Properly dispose of discarded containers of fuels and other chemicals; e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature Effective December 16, 2020 Page 37 and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate. 	During construction	N/A	Bureau of Building
<p>SCA HAZ-2: Hazardous Building Materials and Site Contamination (#44)</p> <p>a. Hazardous Building Materials Assessment</p> <p>The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental</p>	Prior to approval of demolition, grading, or building permits	Bureau of Building	Bureau of Building

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	When Required	Initial Approval	Monitoring/ Inspection
<p>professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.</p> <p>b. Environmental Site Assessment Required</p> <p>The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.</p> <p>c. Health and Safety Plan Required</p> <p>The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan.</p> <p>d. Best Management Practices (BMPs) Required for Contaminated Sites</p> <p>[Item d text omitted because it is not applicable to the project, which is not on a contaminated site.]</p>	<p>Prior to approval of construction-related permit.</p> <p>Initial Approval: Applicable regulatory agency with jurisdiction</p> <p>Monitoring/Inspection: Applicable regulatory agency with jurisdiction</p>	<p>Applicable regulatory agency with jurisdiction</p>	<p>Applicable regulatory agency with jurisdiction</p>
Hydrology and Water Quality			
<p>SCA HYD-1: Erosion and Sedimentation Control Measures for Construction (#48).</p> <p>The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. At a minimum, the project applicant shall provide filter materials deemed acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City's storm drain system and creeks.</p>	During construction	N/A	Bureau of Building
<p>SCA HYD-2: Site Design Measures to Reduce Stormwater Runoff (#52).</p> <p>Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit</p>	Ongoing	N/A	N/A

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<p>issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is Effective December 16, 2020 Page 43 encouraged to incorporate appropriate site design measures into the project to reduce the amount of stormwater runoff. These measures may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> a. Minimize impervious surfaces, especially directly connected impervious surfaces and surface parking areas; b. Utilize permeable paving in place of impervious paving where appropriate; c. Cluster structures; d. Direct roof runoff to vegetated areas; e. Preserve quality open space; and f. Establish vegetated buffer areas. 			
<p>SCA HYD-3: <i>Source Control Measures to Limit Stormwater Pollution</i> (#53) Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate source control measures to limit pollution in stormwater runoff. These measures may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> a. Stencil storm drain inlets “No Dumping – Drains to Bay;” b. Minimize the use of pesticides and fertilizers; c. Cover outdoor material storage areas, loading docks, repair/maintenance bays and fueling areas; d. Cover trash, food waste, and compactor enclosures; and e. Plumb the following discharges to the sanitary sewer system, subject to City approval: f. Discharges from indoor floor mats, equipment, hood filter, wash racks, and, covered outdoor wash racks for restaurants; g. Dumpster drips from covered trash, food waste, and compactor enclosures; h. Discharges from outdoor covered wash areas for vehicles, equipment, and accessories; i. Swimming pool water, if discharge to on-site vegetated areas is not feasible; and j. Fire sprinkler test water, if discharge to on-site vegetated areas is not feasible. 	Ongoing	N/A	N/A
<p>SCA HYD-4: <i>NPDES C.3 Stormwater Requirements for Small Projects</i> (#55). Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant shall incorporate one or more of the following site design measures into the project:</p>	Prior to approval of construction-related permit	Bureau of Planning; Bureau of Building	Bureau of Building

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<p>a. Direct roof runoff into cisterns or rain barrels for reuse;</p> <p>b. Direct roof runoff onto vegetated areas;</p> <p>c. Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas;</p> <p>d. Direct runoff from driveways and/or uncovered parking lots onto vegetated areas;</p> <p>e. Construct sidewalks, walkways, and/or patios with permeable surfaces; or</p> <p>f. Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces.</p> <p>The project drawings submitted for construction-related permits shall include the proposed site design measure(s) and the approved measure(s) shall be installed during construction. The design and installation of the measure(s) shall comply with all applicable City requirements.</p>			
Noise and Vibration			
<p>SCA NOI-1: Construction Days/Hours (#62).</p> <p>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</p>	During construction	N/A	Bureau of Building

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	When Required	Initial Approval	Monitoring/ Inspection
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>SCA NOI-2: Construction Noise (#63). 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> <p>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.</p> <p>b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.</p> <p>c. Applicant shall use temporary power poles instead of generators where feasible.</p> <p>d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.</p> <p>e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.</p>	During construction	N/A	Bureau of Building
<p>SCA NOI-3: Extreme Construction Noise (#64).</p> <p><i>a. Construction Noise Management Plan Required</i></p> <p>Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:</p>	<p>Prior to approval of construction-related permit</p> <p>During construction</p>	Bureau of Building	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;</p> <p>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;</p> <p>iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;</p> <p>iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and</p> <p>v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.</p> <p><i>b. Public Notification Required</i></p> <p>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>SCA NOI-4: Construction Noise Complaints (#66). 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> <p>a. Designation of an on-site construction complaint and enforcement manager for the project;</p> <p>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;</p> <p>c. Protocols for receiving, responding to, and tracking received complaints; and</p> <p>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.</p>	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
<p>SCA NOI-5: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities (#70). 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</p>	Prior to construction	Bureau of Building	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located at 3330-3360 Broadway/3301 Piedmont Avenue. 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.			
SCA NOI-6: Operational Noise (#68). Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.	Ongoing	N/A	Bureau of Building
SCA NOI-7: Exposure to Community Noise (#67). The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the following: a. 45 dBA: Residential activities, civic activities, hotels b. 50 dBA: Administrative offices; group assembly activities c. 55 dBA: Commercial activities d. 65 dBA: Industrial activities	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
Noise and Vibration			
SCA PUB-1: Capital Improvements Impact Fee (#73). The project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).	Prior to issuance of building permit	Bureau of Building	N/A
Transportation and Circulation			
SCA TRA-1: Construction Activity in the Public Right-of-Way (#75). a. Obstruction Permit Required 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 and sidewalks. b. Traffic Control Plan Required In the event of obstructions to vehicle or bicycle travel lanes, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The	Prior to approval of construction-related permit Prior to approval of construction-related permit Prior to building permit final	Bureau of Building Public Works Department, Transportation Services Division N/A	Bureau of Building Bureau of Building Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>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 detours, including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The project applicant shall implement the approved Plan during construction.</p> <p>c. Repair of City Streets</p> <p>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>			
SCA TRA-2: Bicycle Parking (#76). The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
SCA TRA-4: Transportation Impact Fee (#79). The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).	Prior to issuance of building permit	Bureau of Building	N/A
<p>SCA TRA-5: Plug-In Electric Vehicle (PEV) Charging Infrastructure (#81). 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>[Note the measure above reflects the PEV-Capable requirements for projects with 11 or more on-site spaces.]</p>	Prior to Issuance of Building Permit	Bureau of Building	Bureau of Building
Utilities and Service Systems			
SCA UTIL-1: Construction and Demolition Waste Reduction and Recycling (#82). 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	Prior to approval of construction-related permit	Public Works Department, Environmental Services Division	Public Works Department, Environmental Services Division

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.			
SCA UTIL-2: <i>Underground Utilities</i> (#83). The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.	During construction	N/A	Bureau of Building
SCA UTIL-3: <i>Recycling Collection and Storage Space</i> (#84). 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 cubic feet of storage and collection space per residential unit is required, with a minimum of ten cubic feet. For nonresidential projects, at least two cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten cubic feet.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
SCA UTIL-4: <i>Green Building Requirements</i> (#85). <i>a. Compliance with Green Building Requirements During Plan-Check</i> The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code). <i>i. The following information shall be submitted to the City for review and approval with the application for a building permit:</i> <ul style="list-style-type: none"> • Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. • Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. • Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit. • Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below. • Copy of the signed statement by the Green Building Certifier 	Prior to approval of construction-related permit During construction After project completion as specified	Bureau of Building N/A Bureau of Planning	N/A Bureau of Building Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance.</p> <ul style="list-style-type: none"> Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. <p>ii. The set of plans in subsection (i) shall demonstrate compliance with the following:</p> <p>CALGreen mandatory measures.</p> <p>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.</p> <p>Minimum of 23 points per the appropriate checklist approved during the Planning entitlement process.</p> <p>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.</p> <p>The required green building point minimums in the appropriate credit categories.</p> <p><i>b. Compliance with Green Building Requirements During Construction</i></p> <p>The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project.</p> <p>The following information shall be submitted to the City for review and approval:</p> <p>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.</p> <p>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.</p> <p>iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.</p> <p><i>c. Compliance with Green Building Requirements After Construction</i></p>			

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
Prior to the final Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.			
SCA UTIL-5: Sanitary Sewer System (#87). The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.	Prior to approval of construction-related permit	Public Works Department, Department of Engineering and Construction	N/A
SCA UTIL-6: Storm Drain System (#88). The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building

ATTACHMENT B: PROJECT CONSISTENCY WITH COMMUNITY PLANS OR ZONING, PER CEQA GUIDELINES SECTION 15183

Section 15183(a) of the California Environmental Quality Act (CEQA) Guidelines states that “...projects which are consistent with the development density established by the existing zoning, community plan, or general plan policies for which an Environmental Impact Report (EIR) was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site.”

Proposed Project. The proposed project would be located in the Broadway Valdez District Specific Plan (BVDSP)³⁰ area (Plan Area). It would demolish the existing building on site, which is not considered an historic resource for the purposes of CEQA. The new building would be approximately 48,000 gross square feet in size and would have eight floors and would reach a height of 85 feet at the roof line. The project would include up to 73 residential units and up to 1,324 square feet of ground floor commercial space.

Project Consistency. The BVDSP EIR was prepared for the BVDSP; it was certified by the Planning Commission on May 21, 2014 and confirmed by the City Council on June 17, 2014. As determined by the City of Oakland Bureau of Planning, the proposed project is permitted in the zoning district in which it is located, and is consistent with the bulk, density, and land uses envisioned in the Plan Area, as outlined below.

- The land use designation for the site is Community Commercial; this designation applies to areas suitable for a wide variety of commercial and institutional operations along the City of Oakland’s major corridors and in shopping district or centers. The proposed mixed-use project would be consistent with this designation.
- The project is zoned D-BV-3 (Mixed Use Boulevard Zone). The D-BV-3 Zone allows a wide range of ground-floor retail and other commercial activities with upper-story spaces intended to be available for residential and office or other commercial activities. Residential uses are permitted as-of-right in the D-BV-3 zone except on the ground floor within 60 feet of any street-abutting property line facing Broadway, 27th Street, or Piedmont Avenue. Incidental pedestrian entries leading to these activities in stories above the ground are exempt from this restriction. The proposed residential component of the project would be consistent with this designation.
- The D-BV-3 zone is intended to allow a wide range of ground-floor commercial activities, and target uses of general retail sales, limited-service restaurant/café, and recreational assembly would be permitted as-of-right. The proposed commercial component of the project would be consistent with this designation.

³⁰ City of Oakland, 2014. Broadway Valdez District Specific Plan. Adopted June 17, 2014.

- The permitted Floor Area Ratio (FAR) for a project in the 85-foot height area is 4.5 for the non-residential areas of the project site. The project site is approximately 17,273 square feet, and therefore the maximum non-residential FAR allowed would be 63,706 square feet. The proposed project would provide approximately 1,324 square feet of commercial space. Combined with the Sawmill building commercial space at 3400 Broadway, the total non-residential square footage would be 27,202 for an FAR of 1.57, which is within the FAR allowance of 4.5 for the site. Therefore, the proposed project would comply with the amount of non-residential FAR allowed under the Planning Code.
- With respect to residential density, the 85-foot height area allows 1 dwelling unit per 275 square feet of lot area. For mixed-use projects, the maximum residential density is based on the total lot area and any square footage occupied by a non-residential use is included in the lot area calculation. The project site is approximately 17,273 square feet in size; and as such, the base maximum residential density on the project site would be 63 dwelling units. With the proposed affordable housing component (21% of the units at the Moderate Affordability level), the State Density Bonus Law would afford an additional 16% residential density for an overall allowance of 73 units at the site. This density would be consistent with the provisions of the BVDSP and the City's Planning Code with application of the required State Density Bonus Law.
- With regard to building height, the project site is in the 85-foot height area, which sets the maximum height at 85 feet and the number of stories above grade at eight. The proposed project would be 85 feet in height and would have eight stories. Therefore, the height of the proposed project complies with the BVDSP.

Therefore, the proposed project is eligible for consideration of an exemption under California Public Resources Code Section 21083.3, and Section 15183 of the CEQA Guidelines.

ATTACHMENT C: INFILL PERFORMANCE STANDARDS, PER CEQA GUIDELINES SECTION 15183.3

California Environmental Quality Act (CEQA) Guidelines Section 15183.3(b) and CEQA Guidelines Appendix M establish eligibility requirements for projects to qualify as infill projects. Table C-1, on the pages following, shows how the proposed project satisfies each of the applicable requirements.

Table C-1 Project Infill Eligibility		
CEQA Eligibility Criteria		Eligible?/Notes for Proposed Project
1.	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 75 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 right-of-way. (CEQA Guidelines Section 15183.3[b][1])	Yes The project site has been previously developed with commercial uses and adjoins existing urban uses.
2.	Satisfy the performance Standards provided in Appendix M (CEQA Guidelines Section 15183.3[b][2]) as presented in 2a and 2b below:	—
	<i>2a. Performance Standards Related to Project Design.</i> All projects must implement all of the following:	—
	<p>Renewable Energy.</p> <p><i>Non-Residential Projects.</i> All nonresidential projects shall include onsite renewable power generation, such as solar photovoltaic, solar thermal, and wind power generation, or clean back-up power supplies, where feasible.</p> <p><i>Residential Projects.</i> Residential projects are also encouraged to include such onsite renewable power generation.</p>	<p>Not Applicable</p> <p>According to Section IV (G) of CEQA Appendix M, for mixed-use projects "...the performance standards in this section that apply to the predominant use shall govern the entire project." Because the predominant use is residential, the proposed project is not required to include onsite renewable power generation.</p>

Table C-1 Project Infill Eligibility	
CEQA Eligibility Criteria	Eligible?/Notes for Proposed Project
<p>Soil and Water Remediation.</p> <p>If the project site is included on any list compiled pursuant to Section 65962.5 of the Government Code, the project shall document how it has remediated the site, if remediation is completed. Alternatively, the project shall implement the recommendations provided in a preliminary endangerment assessment or comparable document that identifies remediation appropriate for the site.</p>	<p>Not Applicable.</p> <p>The project site does not contain known contamination and no remediation is proposed or required.</p>
<p>Residential Units Near High-Volume Roadways and Stationary Sources.</p> <p>If a project includes residential units located within 500 feet, or other distance determined to be appropriate by the local agency or air district based on local conditions, of a high volume roadway or other significant sources of air pollution, the project shall comply with any policies and standards identified in the local general plan, specific plan, zoning code, or community risk reduction plan for the protection of public health from such sources of air pollution.</p> <p>If the local government has not adopted such plans or policies, the project shall include measures, such as enhanced air filtration and project design, that the lead agency finds, based on substantial evidence, will promote the protection of public health from sources of air pollution. Those measures may include, among others, the recommendations of the California Air Resources Board, air districts, and the California Air Pollution Control Officers Association.</p>	<p>Yes</p> <p>The proposed project would include residential units within 1,000 feet of three major roadways (I-580, Broadway, and Piedmont Avenue) and four stationary sources of air pollution; all four sources are back-up diesel generators, with three located at Kaiser Permanente Medical Center campus and one on the project site. These sources of air pollution within 1,000 feet of the project could cause the excess cancer risk, chronic HI, and PM2.5 concentrations at the project site to be greater than the City of Oakland's cumulative thresholds. Implementation of SCA AIR-4 and SCA AIR-5 is required for the proposed project and would effectively reduce the potential health risk to below acceptable levels.</p>

Table C-1 Project Infill Eligibility	
CEQA Eligibility Criteria	Eligible?/Notes for Proposed Project
<p>2b. <i>Additional Performance Standards by Project Type.</i> In addition to implementing all the features described in criterion 2a above, the project must meet eligibility requirements provided below by project type.</p>	
<p>Residential. A residential project must meet <u>one</u> of the following:</p> <p><i>A. Projects achieving below average regional per capita vehicle miles traveled.</i> A residential project is eligible if it is located in a “low vehicle travel area” within the region;</p> <p><i>B. Projects located within ½ mile of an Existing Major Transit Stop or High Quality Transit Corridor.</i> 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; <u>or</u></p> <p><i>C. Low – Income Housing.</i> 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.</p>	<p>Yes</p> <p>The proposed project is eligible under Section (A). The project site has a 2030 average vehicle miles traveled of 7.07 per capita, which is more than 50% below the regional average of 14.4 and would therefore qualify as a “low vehicle travel area”.</p>

Table C-1 Project Infill Eligibility	
CEQA Eligibility Criteria	Eligible?/Notes for Proposed Project
<p>Commercial/Retail. A commercial/retail project must meet <u>one</u> of the following:</p> <p>A. <i>Regional Location.</i> A commercial project with no single-building floor-plate greater than 50,000 square feet is eligible if it locates in a “low vehicle travel area”; <u>or</u></p> <p>B. <i>Proximity to Households.</i> A project with no single-building floor-plate greater than 50,000 square feet located within ½ mile of 1,800 households is eligible.</p>	<p>Not Applicable</p> <p>According to Section IV (G) of CEQA Appendix M, for mixed-use projects “...the performance standards in this Section that apply to the predominant use shall govern the entire project.” Because the predominant use is residential, the requirements for commercial/retail projects do not apply.</p>
<p>Office Building. An office building project must meeting <u>one</u> of the following:</p> <p>A. <i>Regional Location.</i> Office buildings, both commercial and public, are eligible if they locate in a low vehicle travel area; <u>or</u></p> <p>B. <i>Proximity to a Major Transit Stop.</i> Office buildings, both commercial and public, within ½ mile of an existing major transit stop, or ¼ mile of an existing stop along a high quality transit corridor, are eligible.</p>	<p>Not Applicable</p>
<p>Schools.</p> <p>Elementary schools within 1 mile of 50 percent of the projected student population are eligible. Middle schools and high schools within 2 miles of 50 percent of the projected student population are eligible. Alternatively, any school within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor is eligible.</p> <p>Additionally, to be eligible, all schools shall provide parking and storage for bicycles and scooters, and shall comply with the requirements of Sections 17213, 17213.1,</p>	<p>Not Applicable</p>

Table C-1 Project Infill Eligibility		
CEQA Eligibility Criteria		Eligible?/Notes for Proposed Project
	and 17213.2 of the California Education Code.	
	Transit. Transit stations, as defined in Section 15183.3(e)(1), are eligible.	Not Applicable
	Small Walkable Community Projects. Small walkable community projects, as defined in Section 15183.3, subdivision (e)(6), that implement the project features in 2a above are eligible.	Not Applicable
3.	<p>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 in CEQA Guidelines Sections 15183.3(b)(3)(A) or (b)(3)(B) below:</p> <p>(b)(3)(A). 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; or</p> <p>(b)(3)(B). 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” in CEQA Guidelines §15183.3(f)(5).</p> <p>(CEQA Guidelines Section 15183.3[b][3])</p>	<p>Yes</p> <p>The project is consistent with the applicable land use designation and zoning and Plan Bay Area 2040 (see detailed explanation below table)</p>

Explanation for Eligibility Criteria 3 – The adopted Plan Bay Area 2040 serves as the sustainable communities strategy for the Bay Area, per Senate Bill 375.³¹ As defined by the Plan, Priority Development Areas (PDAs) are areas where new development will support the needs of residents and workers in a pedestrian-friendly environment served by transit. As stated in the BVDSP, the Broadway Valdez District is considered a PDA. The proposed project is consistent with the general land use designation, density, building intensity, and applicable policies specified in the BVDSP and described further below.

The land use designation for the site is Community Commercial; this designation applies to areas suitable for a wide variety of commercial and institutional operations along the City of Oakland's major corridors and in shopping district or centers. The proposed mixed-use project would be consistent with this designation.

The project is zoned D-BV-3 (Mixed Use Boulevard Zone). The D-BV-3 Zone allows a wide range of ground-floor retail and other commercial activities with upper-story spaces intended to be available for residential and office or other commercial activities. Residential uses are permitted as-of-right in the D-BV-3 zone except on the ground floor within 60 feet of any street-abutting property line facing Broadway, 27th Street, or Piedmont Avenue. Incidental pedestrian entries leading to these activities in stories above the ground are exempt from this restriction. The proposed residential component of the project would be consistent with this designation.

The D-BV-3 zone is intended to allow a wide range of ground-floor commercial activities, and target uses of general retail sales, limited-service restaurant/café, and recreational assembly would be permitted as-of-right. The proposed commercial component of the project would be consistent with this designation.

The permitted Floor Area Ratio (FAR) for a project in the 85-foot height area is 4.5 for the non-residential areas of the project site. The project site is approximately 17,273 square feet, and therefore the maximum non-residential FAR allowed would be 63,706 square feet. The proposed project would provide approximately 1,324 square feet of commercial space. Combined with the Sawmill building commercial space at 3400 Broadway, the total non-residential square footage would be 27,202 for an FAR of 1.57, which is within the FAR allowance of 4.5 for the site. Therefore, the proposed project would comply with the amount of non-residential FAR allowed under the Planning Code.

With respect to residential density, the 85-foot height area allows 1 dwelling unit per 275 square feet of lot area. For mixed-use projects, the maximum residential density is based on the total lot area and any square footage occupied by a non-residential use is included in the lot area calculation. The project site is approximately 17,273 square feet in size; and as such, the base maximum residential density on the project site would be 63 dwelling units. With the proposed affordable housing component (21% of the units at the Moderate Affordability level), the State Density Bonus Law would afford an additional 16% residential density for an overall allowance of 73 units at the site. This density would be consistent with

³¹ Metropolitan Transportation Commission and Association of Bay Area Governments, adopted July 26 2017, Plan Bay Area 2040.

the provisions of the BVDSP and the City's Planning Code with application of the required State Density Bonus Law.

The project site is in the 85 foot height area, where the maximum height is 85 feet and the number of stories permitted, not including underground construction, is eight. The proposed project would be up to 85 feet in height with eight stories. The height of the proposed project would comply with the BVDSP.

Consequently, in accordance with Section 15183.3 of the CEQA Guidelines, the proposed project is consistent with the BVDSP.

ATTACHMENT D: CRITERIA FOR USE OF ADDENDUM, PER CEQA GUIDELINES SECTIONS 15164 AND 15162

Section 15164(a) of the California Environmental Quality Act (CEQA) Guidelines states that “a lead agency or responsible agency shall prepare an addendum to a previously certified EIR [Environmental Impact Report] if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.” Section 15164(e) states that “a brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR.”

Project Modifications. The Broadway Valdez District Specific Plan (BVDSP) EIR analyzed the Broadway Valdez Development Program (Development Program), which set new standards for development in the area and identified opportunity sites for development.³² The project site was not identified as an opportunity site for development.

However, identification of the opportunity sites were not intended to limit development on those or other sites. The EIR indicates that intent of the BVDSP is to provide as much flexibility as is feasible in terms of precise mix of newly developed land uses and their location in the Plan Area, while conforming to the CEQA analysis and thresholds established in the EIR.

As discussed throughout the attached CEQA Analysis, the proposed project would be consistent with the BVDSP EIR analysis, findings, and conclusions and implementation of the proposed project would not substantially increase the severity of the significant impacts that were identified in the BVDSP EIR, nor would it result in new significant impacts that were not identified in the BVDSP EIR. The project would be required to implement mitigation measures and SCAs as applicable and detailed in Appendix A of the CEQA Analysis.

As detailed in Attachment B: Project Consistency with Community Plans or Zoning, the proposed project is consistent with the BVDSP and the land use designation and zoning at the site.

Conditions for Addendum. None of the following conditions for preparation of a subsequent EIR per Section 15162(a) apply to the proposed project:

- (1) Substantial changes are proposed in the project, which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant 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 or Negative Declaration due to

³² In total, the Broadway Valdez Development Program includes approximately 3.7 million square feet of development, including approximately 695,000 square feet of office space, 1,114,000 square feet of restaurant/retail space, 1,800 residential units, a new 180-room hotel, approximately 6,500 parking spaces provided by the development program, and approximately 4,500 new jobs.

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.

Project Consistency with Section 15162 of the CEQA Guidelines. Since the certification of the BVDSP EIR, no changes have occurred in the circumstances under which the revised project would be implemented, that would change the severity of the proposed project's physical impacts as explained in the CEQA Checklist above, and no new information has emerged that would materially change the analyses or conclusions set forth in the BVDSP EIR.

Furthermore, as demonstrated in the CEQA Analysis, the proposed project would not result in any new significant environmental impacts, result in any substantial increases in the significance of previously identified effects, or necessitate implementation of additional or considerably different mitigation measures than those identified in the EIR, nor render any mitigation measures or alternatives found not to be feasible, feasible. The effects of the proposed project would be substantially the same as those reported for the BVDSP EIR, as applicable to the proposed project and site.

ATTACHMENT E: COMMUNITY RISK ASSESSMENT

3404 PIEDMONT STREET RESIDENTIAL PROJECT AIR QUALITY COMMUNITY RISK ASSESSMENT

Oakland, California

July 20, 2021

Prepared for:

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I&R Project: 21-099

Introduction

This report provides the results of a toxic air contaminant (TAC) health risk analysis (HRA) for the proposed development of a new eight story, 73-unit residential multi-family building with surface parking on an approximately 0.33-acre site adjacent to Interstate 580 (I-580) at 3404 Piedmont Avenue in Oakland, California. The site is currently being used as a parking lot for the office tenants of the Sawmill Building at 3400 Broadway, which shares the parcel, as well as a small commercial building which would be demolished. The project site is within the Broadway Valdez Specific Plan (Specific Plan), and based on the project description, the project is generally consistent with relevant policies and regulations and development density. Twenty-six parking spaces would be provided in 2-level, on-grade mechanical stackers located on the ground floor of the building and internal courtyard with one additional surface-level ADA parking space provided. In addition to parking, the ground floor will contain resident amenities and a small (382 square feet) commercial storefront fronting Piedmont Avenue.

This assessment predicts community risk impacts with respect to the City of Oakland Standard Conditions of Approval (SCA). Since the project includes residential units near TAC sources, the project is subject to the City's SCA for air quality that is provided as *Attachment 1*. The following condition applies:

SCA #19. Exposure to Air Pollution (Toxic Air Contaminants) - Health Risk Reduction Measures.

This measure requires projects near sources of toxic air contaminants to perform a health risk assessment and, if necessary, incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants.

This project is not located in the "West Oakland" area, and therefore not part of the specific emissions reduction plan developed and adopted by the Bay Area Air Quality Management District (BAAQMD) under Assembly Bill 617 (AB 617) (i.e., *Owning Our Air: The West Oakland Community Action Plan*). That community action plan includes an area in West Oakland bounded by the Port of Oakland, the Union Pacific rail yard, and the I-580, I-880, and I-980 freeways. This project is located approximately 0.4 miles east of I-980 and, therefore not included in BAAQMDS' community action plan.

Setting

The project site is in Alameda County which is a part of San Francisco Bay Area Air Basin. Air quality in the region is affected by natural factors such as proximity to the Bay and ocean, topography, and meteorology, as well as proximity to sources of air pollution. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards except for ground-level ozone, respirable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}).

Air Pollutants and TACs

Particulate Matter

Particulate matter (PM) is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. Particles 10 microns or less in diameter are defined as "respirable particulate matter" or "PM₁₀." Fine particles are 2.5 microns or less in diameter (PM_{2.5}) and, while also respirable, can contribute significantly to regional haze and reduction of visibility. Inhalable particulates come from smoke, dust, aerosols, and metallic oxides. Although particulates are found naturally in the air, most particulate matter found in the vicinity of the project site is emitted either directly or indirectly by motor vehicles, industry, construction, and wind erosion of disturbed areas. Most PM_{2.5} is comprised of combustion products such as smoke. Extended exposure to PM can increase the risk of chronic respiratory disease.^{1, 2} PM exposure is also associated with increased risk of premature deaths, especially in the elderly and people with pre-existing cardiopulmonary disease.

Toxic Air Contaminants

TACs are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer or serious illness) and include but are not limited to criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to that for criteria air pollutants that have established ambient air quality standards. TACs are regulated or evaluated based on risk to human health rather than comparison to an ambient air quality standard or emission-based threshold.

Diesel exhaust is the predominant cancer-causing TAC in California. The California Air Resources Board (CARB) estimates that about 70% of total known cancer risk related to air toxics in California is attributable to DPM.³ According to CARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the state's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to

¹ BAAQMD 2016. *Planning Healthy Places*. May. Accessed at http://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en on August 24, 2016.

² Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

³ CAEB. *Summary: Diesel Particulate Matter Health Impacts*. https://www.arb.ca.gov/research/diesel/diesel-health_summ.htm

Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.⁴ In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the Federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented several regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and PM_{2.5} emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_x emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and nitrogen oxides (NO_x) exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent Federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_x.

Sensitive Receptors

“Sensitive receptors” are defined as places where sensitive population groups, such as children, the elderly, the acutely ill, and the chronically ill, are likely to live or spend a significant amount of time. These land uses include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. This project would introduce new sensitive receptors to the area in the form of new residences. For the purposes of a thorough health risk assessment, residences of the project site are assumed to include all types: 3rd-trimester fetus, infant, child, and adult.

TAC and PM_{2.5} Impact Analysis

Oakland uses the BAAQMD California Environmental Quality Act (CEQA) Air Quality Guidelines to consider exposure of sensitive receptors to air pollutant levels that result in an unacceptable cancer risk or hazards. For cancer risk, which is a concern for DPM and other mobile-

⁴ California Air Resources Board. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October 2000.

source TACs, the BAAQMD considers an increased risk of contracting cancer that is 10.0 in one million chances or greater, to be a threshold for a single source. The BAAQMD CEQA Guidelines also consider single-source TAC exposure to be excessive if annual fine particulate matter (PM_{2.5}) concentrations exceed 0.3 micrograms per cubic meter (µg/m³) or if the computed non-cancer risk hazard index (HI) is greater than 1.0. Cumulative exposure is assessed by combining the risks and annual PM_{2.5} concentrations for a maximum exposed individual (MEI) for all sources within 1,000 feet of a project. The thresholds for cumulative exposure are an excess cancer risk of 100 in one million, annual PM_{2.5} concentrations of 0.8 µg/m³, and a HI greater than 10.0. These thresholds were used to address impacts from TAC sources that could affect future project residents. The methodology for computing cancer risk, annual PM_{2.5} concentrations, and HI is contained in *Attachment 2*. Note that this methodology was finalized by the State Office of Environmental Health Hazards Assessment (OEHHA) and provides greater protections for infants and children.

TAC Sources within the Project Area

A review of the project site has identified six (6) potential air pollutant or TAC sources within 1,000 feet of the site that could adversely affect the site: I-580, Broadway, Piedmont Avenue, and three diesel powered emergency power generators used the nearby Kaiser Permanente Medical Center. I-580, Broadway and Piedmont Avenue are estimated to have average daily traffic (ADT) volumes above 10,000. All other roadways are anticipated to have ADTs below 10,000 and not considered significant sources of TACs.

A summary of the predicted impacts of these sources on the project are shown in Table 1. Locations of these sources and the project are shown in in Figure 1. Discussion of how these risks were computed and predicted are included below.

Table 1. TAC Impacts from Single Sources within 1,000 feet on Project

Source	MEI Cancer Risk (per million)*	Maximum Annual PM _{2.5} (µg/m ³)*	Maximum Hazard Index*
I-580	14.69	0.42	<0.01
Broadway	0.67	0.05	<0.01
Piedmont Avenue	0.39	0.03	<0.01
Facility #1529-27 (Kaiser Permanente Medical Center Generator)	0.62	<0.01	<0.01
Facility #1529-28 (Kaiser Permanente Medical Center Generator)	0.62	<0.01	<0.01
Facility #1529-50 (Kaiser Permanente Medical Center Generator)	0.36	<0.01	<0.01
<i>BAAQMD Single-Source Threshold</i>	<i>>10.0</i>	<i>>0.3</i>	<i>>1.0</i>
<i>Exceed Threshold?</i>	<i>Yes</i>	<i>Yes</i>	<i>No</i>

*On-site MEI located on 2nd Floor. Bold text indicates BAAQMD Threshold(s) and any exceedances.

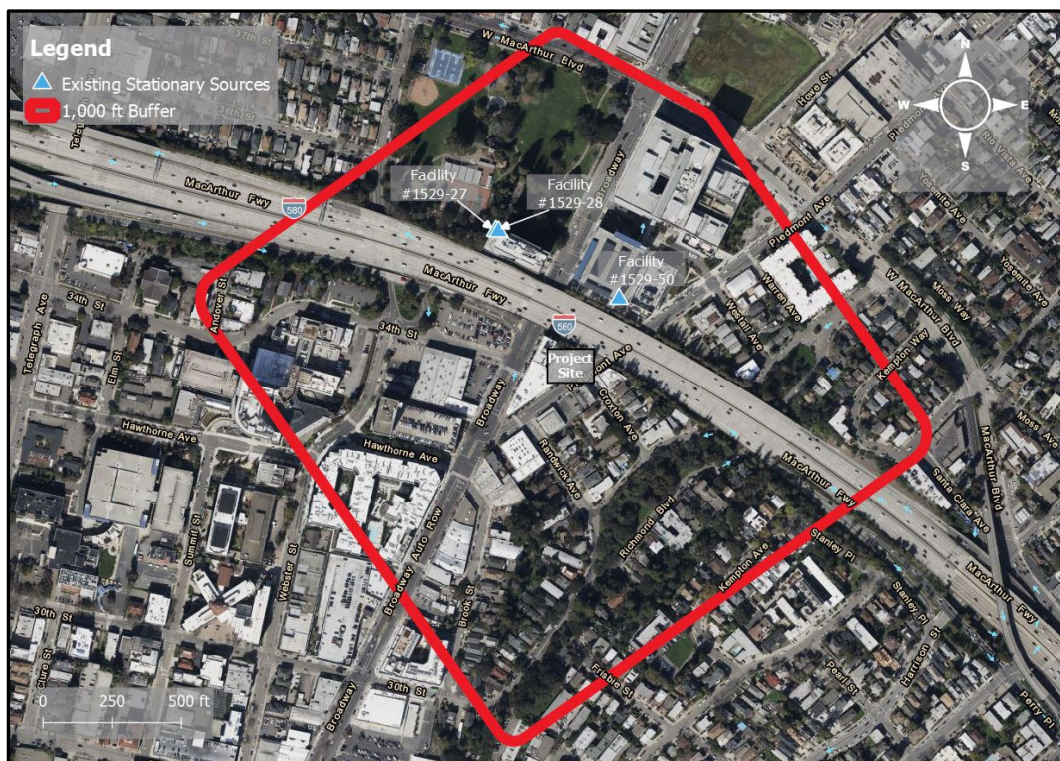
Freeways – I-580

An analysis of the impacts of TACs and PM_{2.5} from I-580 on the maximally exposed individual (MEI) living at the new residences provided by the project is necessary to evaluate potential cancer risks and PM_{2.5} concentrations associated with its proximity to the freeway. A review of the AADT

information provided by California Department of Transportation (Caltrans) indicates this portion of I-580 had an average annual daily traffic (AADT) volume of 187,300 vehicles per day based on 2019 measurements.⁵ This traffic volume estimate was increased by three percent (one percent each year except for 2020) to obtain estimates for the analysis year (2023).

A review of the traffic information reported by the California Department of Transportation (Caltrans) through its Performance Measurement System (PeMS)⁶ indicates that I-580 nearest the project site had a truck percentage of 1.6 percent based on 2019 measurements, with 1.2 percent considered heavy duty trucks and 0.4 percent considered medium duty trucks.⁷ PeMS data are collected in real-time from nearly 40,000 individual detectors spanning the freeway system across all major metropolitan areas of California.⁸ Note that large trucks are prohibited from using this portion of I-580⁹.

Figure 1. Project Site and Nearby TAC and PM_{2.5} Sources



⁵ Caltrans Traffic Census Program, Traffic Volumes: Annual Average Daily Traffic (AADT), 2019-AADT (XLSX), accessed July 2021. <https://dot.ca.gov/programs/traffic-operations/census>

⁶ Caltrans. 2020. Planning Analysis Report for I-880-N and I-880-S @ CA PM R33.15 (Abs PM 43.4) Jan 1, 2019 – Dec. 31, 2019.

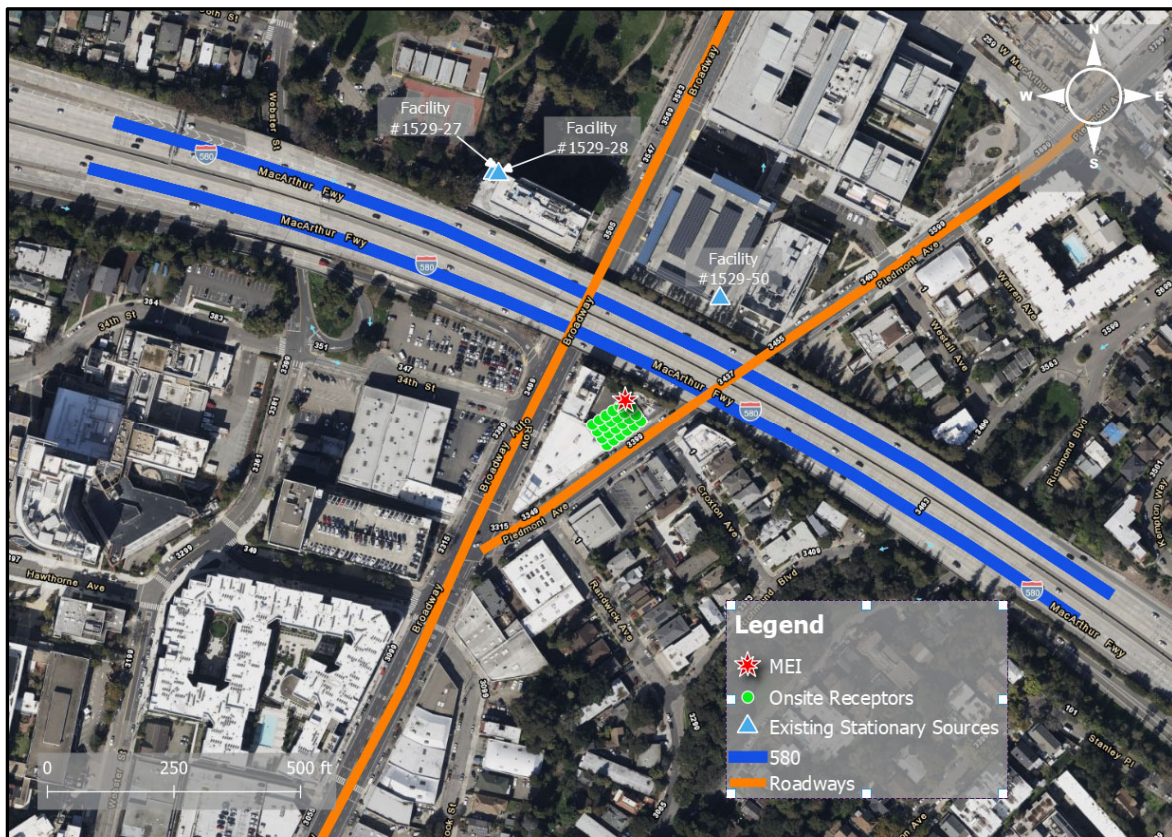
⁷ Estimate provided by CT-EMFAC2017 using an overall truck percentage of 1.6. Truck percentage provided by Caltrans PeMS data.

⁸ <https://dot.ca.gov/programs/traffic-operations/mpr/pems-source>

⁹ Caltrans: No trucks over 9,000 pounds, except passenger buses and paratransit vehicles allowed on an 8.7-mile segment of Interstate 580 from Foothill Blvd. in San Leandro to Grand Ave. in Oakland (PM 34.89 to 43.76 in Alameda County) See CVC Section 35655.5.

TAC and PM_{2.5} concentrations were calculated at receptor locations placed throughout the site using a grid of receptors with 16.4-foot (5-meter) spacing. Residential units in the project building would be on the second through eight floors with the first floor containing building offices and amenities. Therefore, I-580 impacts were modeled for the second through eight floor levels, as the first floor will contain no residential areas. Residential receptor heights were established based on the floor heights provided by the applicant and an approximately 4-foot 11-inch (1.5m) person height, which was added to the floor elevation to represent the breathing heights of residents. Therefore, total receptor heights for the second through eighth floors respectively were: 6.1 meters (20 feet), 9.1 meters (29.8 feet), 12.2 meters (40.0 feet), 15.2 meters (49.9 feet), 18.3 meters (60.0 feet), 21.3 meters (69.9 feet), and 24.4 meters (80.1 feet). Figure 2 shows the freeway links used for the modeling and receptor locations at the project site where concentrations were calculated.

Figure 2. TAC Sources, On-Site Sensitive Receptors, and MEI



Modeling I-580 Emissions

Analysis of I-580 involved developing emissions estimates of DPM, organic TACs (as TOG), and PM_{2.5} emissions for the first operational year of the project, assumed to be 2023 or later. Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Overall vehicle emissions, in particular diesel truck emissions, will decrease in the future. Therefore, the earlier the year analyzed, the higher the

emission rates produced. Therefore, year 2023 emissions were conservatively assumed as being representative of future conditions over the period that cancer risks are evaluated (30 years).

The fraction of traffic volume each hour on I-580 was calculated and applied to the 2023 AADT to estimate hourly traffic emission rates for I-580. Hourly traffic distributions specific to I-580 at Broadway were obtained from Caltrans PeMS. For all hours of the day, other than during peak periods, an average speed of 65 mph was used for westbound and eastbound travel based on weekday 2019 speed data from PeMS. The average speed for westbound traffic reduced to 50 mph during the a.m. peak hours and 60 mph during the midday and evening hours. For the eastbound direction, the average traffic speed was 65 mph until midday, when it reduced to between 60 and 45 mph. During the p.m. peak period, the speed reduced to 30 mph.

Analysis of the impacts from I-580 required developing emissions rates for DPM and organic TACs (as TOG). The latest version of CARB's EMFAC emissions model (EMFAC2021) was used to develop the emissions rates needed. EMFAC2021 includes the latest data on California's car and truck fleets and travel activity. However, because EMFAC2021 only produces emissions rates using county-wide vehicle populations and does not provide specific emissions rates for DPM, CT-EMFAC2017 was also used to aid in the development of emissions rates used in the analysis. CT-EMFAC2017 is the Caltrans version of the CARB's EMFAC2017 emissions model and provides emission factors for mobile source criteria pollutants and TACs, including DPM, based on specific truck fractions input by the user. EMFAC2017 became available for use in March 2018 and approved by the EPA in August 2019. EMFAC2021 has not yet been approved by U.S. EPA at the time this report was prepared.

CT-EMFAC2017 was used to estimate the fraction of gasoline and diesel vehicles in three vehicle categories (i.e., Non-Truck, Truck 1, and Truck 2) based on the truck percentage of 1.6 percent. These CT-EMFAC2017 fractions were then applied to the EMFAC2021 emissions rates and aggregated to provide one emissions factor for each pollutant and speed needed. The ratio of DPM to PM_{2.5} produced by CT-EMFAC2017 was used to derive a DPM emissions rate using EMFAC2021 for each speed needed. Emission processes modeled for the analysis include running exhaust for DPM and TOG and running evaporative losses for TOG. Inputs to the emissions models (both EMFAC2021 and CT-EMFAC2017) include region (i.e., Alameda County), type of road (i.e., freeway), year of analysis (i.e., 2023), and season (i.e., annual).

Hourly emissions rates were developed for DPM, organic TACs, and PM_{2.5} emissions for 2023 traffic along the applicable segment of I-580. TAC and PM_{2.5} concentrations at the MEI location were developed using the hourly emissions rates with an air quality dispersion model (AERMOD). Maximum increased lifetime cancer risks and annual PM_{2.5} concentrations for the receptors were then computed using modeled TAC and PM_{2.5} concentrations and the BAAQMD methods and exposure parameters described in *Attachment 2*.

Dispersion Modeling

Dispersion modeling of TAC and PM_{2.5} emissions was conducted using the U.S. EPA AERMOD dispersion model, which is recommended by the BAAQMD for this type of analysis. Westbound and eastbound traffic on I-580 near the project site was evaluated with the model. Emissions from

vehicle traffic were modeled in AERMOD using a series of volume sources along a line (line volume sources), with line segments used to represent each direction of travel on I-580. The modeling used a five-year data set (2013-2017) of hourly meteorological data from the Oakland Airport in Oakland, CA prepared by the BAAQMD for use with the AERMOD model. Other inputs to the model included road geometry and elevations, hourly traffic emissions, and receptor locations and heights. Figure 2 shows the links used for the modeling I-580, receptor locations, and the MEI where health risks were calculated.

Computed Cancer and Non-Cancer Health Impacts

The calculation of risk impacts from I-580 was developed for an individual that resides at the project site starting as a third trimester fetus, to infant, child, and adult over a 30-year period. Therefore, age-appropriate sensitivity factors were applied. The highest concentrations from I-580 occurred at the northern-most corner of the site on the second floor (i.e., MEI). Concentrations on the third through eighth floors were also estimated for comparison purposes and possible filtration recommendations. The increased cancer risk at the second floor MEI from I-580 was computed as 14.69 in one million, and the PM_{2.5} concentration at the second floor MEI from I-580 was 0.42 µg/m³. Both estimates are above the BAAQMD single source thresholds of less than 10 per million cancer risk and less than 0.3 µg/m³ for PM_{2.5}. The predicted annual DPM concentration from I-580 traffic at the second floor MEI was 0.015 µg/m³. This concentration is lower than the REL and the HI would be less than 0.01.

Cancer risk from I-580 ranged from 14.69 to 9.99 on the second floor. PM_{2.5} concentrations ranged from 0.42 to 0.30 µg/m³. The range of cancer risks and PM_{2.5} concentrations for the second through eight floor levels of the project are shown in Table 2.

Table 2. I-580 Cancer Risk and PM_{2.5} Concentration Ranges by Floor

Source/Receptor Locations	Cancer Risk Range (per million)	BAAQMD Single-Source Threshold	Exceed Threshold?	PM _{2.5} Concentration Range (µg/m ³)	BAAQMD Single-Source Threshold	Exceed Threshold?
2 nd Floor Level	14.69 to 9.99	<10.0	<i>Yes</i>	0.42 to 0.30	<0.30 µg/m ³	<i>Yes</i>
3 rd Floor Level	9.38 to 7.20		<i>No</i>	0.24 to 0.20		<i>No</i>
4 th Floor Level	5.44 to 4.60		<i>No</i>	0.14 to 0.12		<i>No</i>
5 th Floor Level	3.24 to 2.84		<i>No</i>	0.08 to 0.07		<i>No</i>
6 th Floor Level	2.03 to 1.77		<i>No</i>	0.05 to 0.05		<i>No</i>
7 th Floor Level	1.39 to 1.19		<i>No</i>	0.04 to 0.03		<i>No</i>
8 th Floor Level	0.02 to 0.02		<i>No</i>	0.03 to 0.02		<i>No</i>

Values in Bold exceed Threshold

Local Roadways – Broadway and Piedmont Avenue

A refined analysis of the impacts of TACs and PM_{2.5} from the adjacent local roadways upon new residences provided by the project is necessary to evaluate potential cancer risks and PM_{2.5} concentrations associated with its proximity to roadways with an ADT of 10,000 vehicles or more. Current daily traffic count data for these two roadways was not available. Therefore, ADT on both Broadway and Piedmont Avenue were estimated using the Alameda County Transportation

Commission Countywide Travel Demand Model 2020 daily forecast plots of the North Planning Area.¹⁰ This method resulted in ADT estimates on Broadway of 13,000 and 11,000 on Piedmont Avenue. The same truck percentages identified for I-580 (1.6 percent) were used for both roadways.

TAC and PM_{2.5} concentrations were calculated at receptor locations placed throughout the site using the same grid of receptors described above in the I-580 analysis. Figure 2 shows the roadway links used for the modeling and receptor locations at the project site where concentrations were calculated.

Modeling Roadway Emissions

Analysis of roadway TAC impacts involved developing estimates of annual DPM, organic TACs (as TOG), and PM_{2.5} roadway emissions. For this analysis, annual emissions are based on 2020 travel demand model volumes and 2023 emissions rates. Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Overall vehicle emissions, in particular diesel truck emissions, will decrease in the future. Therefore, the earlier the year analyzed, the higher the emission rates produced. Therefore, year 2023 emissions were conservatively assumed as being representative of future conditions over the period that cancer risks are evaluated (30 years).

Hourly traffic distributions for Broadway and Piedmont Avenue were estimated from the average distributions of traffic on westbound and eastbound I-580 at Broadway. Hourly traffic distributions on I-580 at Broadway were obtained from Caltrans PeMS data, as previously described. The fraction of traffic volume each hour was calculated for both roadways and applied to the ADT to estimate hourly traffic emission rates for each of the roadways.

For all hours of the day, other than during peak a.m. and p.m. periods on Piedmont Avenue, an average speed of 30 mph was assumed for all vehicles. This is the posted speed limit on both roadways. For the 2-hour a.m. and 2-hour p.m. peak periods on Piedmont Avenue, an average travel speed of 25 mph was used. This reflects the amount of access to and from Piedmont.

As was done for estimating emissions from I-580, the latest version of CARB's EMFAC emissions model (EMFAC2021) was used to develop the emissions rates needed. However, because EMFAC2021 only produces emissions rates using county-wide vehicle populations and does not provide specific emissions rates for DPM, CT-EMFAC2017 was also used to aid in the development of emissions rates used in the analysis.

CT-EMFAC2017 estimated the fraction of gasoline and diesel vehicles in three vehicle categories (i.e., Non-Truck, Truck 1, and Truck 2) based on the truck percentage of 1.6 percent. These fractions were then applied to the EMFAC2021 emissions rates and aggregated to provide one emissions factor for each pollutant and speed needed. Inputs to the emissions models (both

¹⁰ Alameda County Transportation Commission. Countywide Travel Demand Model. Daily plots for Planning Area 1, 2020. Accessed February 2021. <https://www.alamedactc.org/planning/congestion-management/countywide-travel-demand-model/>

EMFAC2021 and CT-EMFAC2017) include region (i.e., Alameda County), type of road (i.e., major/collector), year of analysis (i.e., 2023), and season (i.e., annual).

Hourly emissions rates were developed for DPM, organic TACs, and PM_{2.5} emissions for 2023 traffic along the roadways. TAC and PM_{2.5} concentrations were developed using the hourly emissions rates with an air quality dispersion model (AERMOD). Increased lifetime cancer risks and annual PM_{2.5} concentrations for the receptors were then computed using modeled TAC and PM_{2.5} concentrations and the BAAQMD methods and exposure parameters described in *Attachment 2*. Broadway and Piedmont Avenue emissions calculations are included in *Attachment 3*.

Dispersion Modeling

Dispersion modeling of TAC and PM_{2.5} emissions was conducted using the U.S. EPA AERMOD dispersion model in the same manner as was conducted for modeling impacts from I-580. Traffic on Broadway and Piedmont Avenue near the project site was evaluated using a series of area sources along a line (line area sources), with line segments used to represent all lanes of each roadway. Figure 2 shows the roadway links used for the modeling.

Computed Cancer and Non-Cancer Health Impacts

The calculation of risk impacts from Broadway and Piedmont Avenue was developed for an individual that resides at the project site starting as a third trimester fetus, growing to be an infant, child, and adult over a 30-year period. Therefore, age-appropriate sensitivity factors were applied. The highest concentrations of TACs from both Broadway and Piedmont Avenue occurred at the same location, the northern-most corner of the site on the second floor. This location is also the MEI for the proposed building. The health risk calculations for the roadways are included in *Attachment 4*.

The maximum increased cancer risk from Broadway emissions was computed as 0.67 in one million, below the BAAQMD single source threshold of 10 in a million. The maximum total PM_{2.5} concentration from Broadway was 0.05 µg/m³, below the BAAQMD single source threshold of 0.3 µg/m³. The maximum predicted annual DPM concentration from Broadway was less than 0.001 µg/m³ resulting in an HI less than 0.001.

The maximum increased cancer risk from Piedmont Avenue emissions was computed as 0.39 in one million, below the BAAQMD single source threshold of 10 in a million. The maximum total PM_{2.5} concentration from Piedmont Avenue was 0.03 µg/m³, below the BAAQMD single source threshold of 0.3 µg/m³. The maximum predicted annual DPM concentration from Piedmont Avenue was less than 0.001 µg/m³ resulting in an HI less than 0.001.

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2018* GIS website,¹¹ which identifies the location of nearby

¹¹ BAAQMD,

stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance. Three stationary sources were identified near the project, all of which were diesel-powered emergency generators used by the nearby Kaiser Permanente Medical Center: Facility ID 1529-27, Facility ID 1529-28, and Facility ID 1529-50. The risk values provided on the website were adjusted for distance using the appropriate BAAQMD *Distance Multiplier Tool for Diesel Internal Combustion Engines, Gasoline Dispensing Facilities (GDFs), or Generic Sources*. Distance-adjusted risk values for each of the stationary sources at the project site are listed in Table 1. The stationary source screening calculations are included in *Attachment 5*.

Cumulative Cancer Risk, Hazard Index and Annual PM_{2.5} Concentrations

Impacts from all sources at the receptor most affected by TAC sources (i.e., MEI) is reported in Table 3. The MEI receptor occurred on the second floor at the northern-most corner of the site. Impacts from each source at the MEI location were added to compute the maximum cumulative impact from all nearby TAC sources. Cumulative cancer risk is below the BAAQMD cumulative source threshold of 100 chances per million, below the annual cumulative source PM_{2.5} concentration threshold of 0.8 µg/m³, and below the cumulative HI of 10.0.

Table 3. Cumulative TAC Impacts within 1,000 feet on Project

Source	MEI Cancer Risk (per million)	MEI Annual PM _{2.5} (µg/m ³)	MEI Hazard Index*
I-580	14.69	0.42	<0.01
Broadway	0.67	0.05	<0.01
Piedmont Avenue	0.39	0.03	<0.01
Facility #1529-27 (Kaiser Permanente Medical Center Generator)	0.62	<0.01	<0.01
Facility #1529-28 (Kaiser Permanente Medical Center Generator)	0.62	<0.01	<0.01
Facility #1529-50 (Kaiser Permanente Medical Center Generator)	0.36	<0.01	<0.01
Cumulative	17.35	<0.53	<0.06
<i>BAAQMD Cumulative-Source Threshold</i>	<i>>100.0</i>	<i>>0.8</i>	<i>>10</i>
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>

This analysis does not take into consideration any background TAC concentration resulting from the heavy-duty trucks and cars that travel on the roadways and freeways beyond 1,000 feet from the project, nor does it include any background concentrations associated with stationary sources beyond a 1,000-foot radius from the project site.

Conclusions and Recommendations

Table 1 summarized the maximum increased cancer risks and annual PM_{2.5} concentrations at the project site, resulting from I-580, Broadway, Piedmont Avenue, and the other existing stationary

<https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65>

sources of TACs within 1,000 feet of the proposed project site. Since the dwelling units on the second-floor level have predicted cancer risks and/or PM_{2.5} concentrations that exceed single source thresholds, control features should be incorporated on the second floor in accordance with the City's health risk reduction measures outlined in SCA 19: *Exposure to Air Pollution (Toxic Air Contaminants)*. Specifically, HVAC systems with high efficiency diesel particulate filters, or MERV 13 filters, should be included in the ventilation design for that floor, along with weatherproofing windows and doors, installation of passive electrostatic filtering systems, and adoption of a maintenance plan for the HVAC and air filtration systems. A building ventilation design that pulls air from the top of the building (i.e., above the eighth floor) to the second floor would also reduce DPM and PM_{2.5} concentrations to below BAAQMD single source thresholds.

The U.S. EPA reports particle size removal efficiency for filters rated MERV 13 of 90 percent for particles in the size range of 1 to 3 µm and less than 75 percent for particles 0.3 to 1 µm.^{12,13} The BAAQMD's *Planning Healthy Places* guidance indicates that MERV 13 air filtration devices installed on an HVAC air intake system can remove 80-90 percent of indoor particulate matter (greater than 0.3 microns in diameter).¹⁴

A properly installed and operated ventilation system with MERV 13 air filters would reduce DPM and PM_{2.5} concentrations from traffic by 80 percent or greater indoors when compared to outdoors. The calculations for overall effectiveness of the system must take into consideration time spent outside and the outdoor exposure of each affected unit. The U.S. EPA reports that people, on average, spend 90 percent of their time indoors.¹⁵ The overall effectiveness calculations take into effect time spent outdoors. Assuming two hours of outdoor exposure onsite plus one hour of open windows (calculated as outdoor exposure) per day, the overall effectiveness of the MERV 13 filtration systems would be 70 percent. This assumes the intake is at the receptor position (i.e., second floor). Therefore, these calculations assume the treated air is at a ventilation system intake on the second floor, while untreated air is at the receptor position. The design of this control system must consider that increased cancer risk is the result of primarily exposure to DPM. However, TACs in total organic gases (TOGs) also contribute to increased cancer risk. While high-efficiency filtration systems can filter DPM, there are no assumptions for reducing TACs from TOG in this assessment.

Table 4 summarizes the maximum increased cancer risks on the second floor from I-580 with the use of MERV 13 filtration. With the filtration system, maximum cancer risks from I-580 on the second floor are estimated to be below the BAAQMD single-source cancer risk threshold of less than 10 in a million and the single-source PM_{2.5} concentration threshold of less than 0.3 µg/m³. Filtration is not needed to meet the cumulative-source thresholds or the single source thresholds

12 American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., 2007. *Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size*. ANSI/ASHRAE Addendum b to Standard 52.2-2007.

13 United States Environmental Protection Agency (U.S. EPA), 2009. *Residential Air Cleaners (Second Edition): A Summary of Available Information*. U.S. EPA 402-F-09-002. Revised August 2009.

14 Bay Area Air Quality Management District (BAAQMD), 2016. *Planning Healthy Places, A Guidebook for addressing local sources of air pollutants in community planning*. May.

15 Klepeis, N.E., Nelsen, W.C., Ott, W.R., Robinson, J.P., Tsang, A.M., Switzer, P., Behar, J.V., Hern, S.C., and Engelmann, W.H. 2001. *The National Human Activity Pattern Survey (NHAPS): a resource for assessing exposure to environmental pollutants*. J. Expo Anal Environ Epidemiol. 2001 May-Jun;11(3):231-52.

for floors other than the second floor.

Table 4. Maximum 2nd Floor Impacts from I-580 with MERV 13 Filtration

Impact	With MERV 13	BAAQMD Single-Source Threshold	Exceed Threshold?
Cancer Risk	6.67 per million	<i>>10.0 per million</i>	No
PM _{2.5} Concentration	0.12 µg/m ³	<i>>0.30 µg/m³</i>	No

Attachments

The supporting screening calculations and modeling information are provided in attachments to this report:

- Attachment 1: Applicable City of Oakland SCAs
- Attachment 2: Health Impact Evaluation Methodology
- Attachment 3: Roadway Emissions
- Attachment 4: Roadway Health Risk Calculations
- Attachment 5: Stationary Sources

Attachment 1: Applicable City of Oakland SCAs

19. Exposure to Air Pollution (Toxic Air Contaminants)

a. *Health Risk Reduction Measures*

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

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

- or -

- ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:
 - Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 [insert MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.
 - Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph).
 - Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.
 - The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods.
 - Sensitive receptors shall be located on the upper floors of buildings, if feasible.

- Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid poplar (*Populus deltoids X trichocarpa*), and Redwood (*Sequoia sempervirens*).
- Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.
- Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.
- Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible:
 - Installing electrical hook-ups for diesel trucks at loading docks.
 - Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.
 - Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.
 - Prohibiting trucks from idling for more than two minutes.
 - Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

b. ***Maintenance of Health Risk Reduction Measures***

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

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

Attachment 2: Health Impact Evaluation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.¹⁶ These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.¹⁷ This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.¹⁸ Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs are calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency and duration of exposure. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day). As recommended by the BAAQMD for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

16 OEHHA, 2015 *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

17 CARB, 2015 *Risk Management Guidance for Stationary Sources of Air Toxics* July 23.

18 BAAQMD, 2016 *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines* December 2016.

30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity that would have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

$$\text{Cancer Risk (per million)} = CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 10^6$$

Where:

CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

$$\text{Inhalation Dose} = C_{\text{air}} \times DBR \times A \times (EF/365) \times 10^{-6}$$

Where:

C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

The health risk parameters used in this evaluation are summarized as follows:

Parameter	Exposure Type →	Infant		Child		Adult
	Age Range →	3 rd Trimester	0<2	2 < 9	2 < 16	16 - 30
DPM Cancer Potency Factor (mg/kg-day) ⁻¹		1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80 th Percentile Rate		273	758	631	572	261
Daily Breathing Rate (L/kg-day) 95 th Percentile Rate		361	1,090	861	745	335
Inhalation Absorption Factor		1	1	1	1	1
Averaging Time (years)		70	70	70	70	70
Exposure Duration (years)		0.25	2	14	14	14
Exposure Frequency (days/year)		350	350	350	350	350
Age Sensitivity Factor		10	10	3	3	1
Fraction of Time at Home		0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73

Non-Cancer Hazards

Non-cancer health risk is usually determined by comparing the predicted level of exposure to a chemical to the level of exposure that is not expected to cause any adverse effects (reference exposure level), even to the most susceptible people. Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). The HI value represents the maximum concentration at which no adverse health effects to the respiratory system are anticipated to occur. OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

Annual PM_{2.5} Concentrations

While not a TAC, fine particulate matter (PM_{2.5}) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for PM_{2.5} (project level and cumulative) are in terms of an increase in the annual average concentration. When considering PM_{2.5} impacts, the contribution from all sources of PM_{2.5} emissions should be included. For projects with potential impacts from nearby local roadways, the PM_{2.5} impacts should include those from vehicle exhaust emissions, PM_{2.5} generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 3: Roadway Emissions

EFs

Vehicle Category	VTM Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category									
Truck 1	0.004	0.463	0.537									
Truck 2	0.012	0.958	0.029									
Non-Truck	0.984	0.014	0.962									
				25	30	35	40	45	50	55	60	65
PM2_5 Ex												
Dsl												
NonTruck		0.000228337	0.000199932	0.000183598	0.000177	0.00017956	0.000190111	0.000209	0.000234	0.000266		
Truck1		0.017989868	0.014939858	0.012527282	0.010696	0.00941483	0.00867013	0.008462	0.008805	0.009732		
Truck2		0.007361948	0.007119308	0.007680855	0.009047	0.01121778	0.014196033	0.017984	0.022403	0.027356		
Gas												
NonTruck		0.001906029	0.001488297	0.00122525	0.001063	0.00097305	0.000938663	0.000955	0.001024	0.001158		
Truck1		0.000694238	0.000577568	0.000500531	0.000454	0.00043372	0.000436504	0.000462	0.00051	0.000585		
Truck2		4.1329E-05	3.22892E-05	2.6609E-05	2.31E-05	2.1203E-05	2.05002E-05	2.09E-05	2.25E-05	2.55E-05		
PM2.5 Running Exh		0.002263792	0.001809106	0.001530908	0.001374	0.00130843	0.001317739	0.001397	0.001544	0.00177		
DPM Running Exha		0.00025589	0.00023801	0.000238214	0.000253	0.0002842	0.000329709	0.00039	0.000463	0.000548		
TOG Ex												
Dsl												
NonTruck		0.000902637	0.000738531	0.000623681	0.000543	0.00048669	0.000451235	0.000433	0.000434	0.000447		
Truck1		0.100743338	0.085093406	0.072240322	0.061849	0.05373403	0.047813432	0.044089	0.042647	0.043677		
Truck2		0.023093909	0.018647362	0.015312098	0.013063	0.0118803	0.011744364	0.012638	0.014285	0.016416		
Gas												
NonTruck		0.035691358	0.028134992	0.023347501	0.020391	0.01874198	0.018127359	0.018452	0.019769	0.022298		
Truck1		0.029015639	0.023240548	0.019462648	0.017109	0.01586227	0.015568457	0.016197	0.017829	0.020683		
Truck2		0.004336995	0.003402596	0.002815003	0.002456	0.00225814	0.002189084	0.002237	0.002409	0.002734		
TOG Running Exha		0.036856698	0.029109482	0.02417198	0.021101	0.01936906	0.018702066	0.019003	0.020322	0.022869		
PM2_5 BW												
Dsl												
NonTruck		0.00022923	0.000226347	0.000221739	0.000215	0.00020341	0.000192587	0.000187	0.000184	0.000181		
Truck1		0.013276325	0.013276325	0.013276325	0.013276	0.01327633	0.013276325	0.013276	0.013276	0.013276		
Truck2		0.036647097	0.03574816	0.030665815	0.027152	0.02363825	0.021108331	0.021108	0.021108	0.021108		
Gas												
NonTruck		0.004418881	0.004533186	0.00464729	0.004185	0.00314427	0.002102249	0.001425	0.00111	0.000795		
Truck1		0.014956841	0.014956841	0.014956841	0.014957	0.01495684	0.014956841	0.014957	0.014957	0.014957		
Truck2		0.000514398	0.000459872	0.00042946	0.000428	0.00042632	0.000425195	0.000425	0.000425	0.000425		
PM2.5 BW (grams/		0.005132611	0.00523081	0.005277201	0.004773	0.00369582	0.002629454	0.001957	0.001644	0.001332		
PM2_5 TW												
Dsl												
NonTruck		5.19485E-05										
Truck1		0.001389										
Truck2		0.00711457										
Gas												
NonTruck		0.001921344										
Truck1		0.001074										
Truck2		8.76248E-05										
PM2_5 TW		0.002037998										
TOG Running Loss Emissions Factor (grams/veh-hour)												
Gas												
NonTruck		1.20576668										
Truck1		0.009799218										
Truck2		0.031117683										
TOG Running Loss		1.246683581										

Traffic and EFS

Road Link	Description	Direction	No. Lanes	Link Length (miles)	Link Width (ft) (m)	Release Height (ft) (m)	Initial Vertical Dimention (m)	Initial Vertical Dispersion (m)	Average Speed (mph)	Average Vehicles per Day
WB_580_DPM	DPM Westbound I-580	NW	5	0.41	53 16.29	11.15 3.4	6.8	3.16	65mph off peak, 55mph AM , 60 mph Mid-Day, 60mph PM	98,832
EB_580_DPM	DPM Eastbound I-580	SE	5	0.40	60 18.29	11.15 3.4	6.8	3.16	65mph off peak, 65mph AM , 65 mph Mid-Day, 30mph PM	94,087
WB_580_XXX	XXX Westbound I-580	NW	5	0.41	53 16.29	4.27 1.3	2.67	1.24	65mph off peak, 55mph AM , 60 mph Mid-Day, 60mph PM	98,832
EB_580_XXX	XXX Eastbound I-580	SE	5	0.40	60 18.29	4.27 1.3	2.67	1.24	65mph off peak, 65mph AM , 65 mph Mid-Day, 30mph PM	94,087
Broad_DPM	DPM from Broadway	Both	5	0.39	60 18.29	11.15 3.4	6.8	3.16	30mph off peak, 30mph AM Peak, 30mph PM peak period	13,000
Broad_XXX	XXX from Broadway	Both	5	0.39	60 18.29	4.27 1.3	2.86	1.33	30mph off peak, 30mph AM Peak, 30mph PM peak period	13,000
Pied_DPM	DPM from Piedmont	Both	2	0.28	24 7.32	11.15 3.4	6.80	3.16	30mph off peak, 25mph AM Peak, 25mph PM peak period	11,000
Pied_XXX	XXX from Piedmont	Both	2	0.28	24 7.32	4.27 1.3	2.86	1.33	30mph off peak, 25mph AM Peak, 25mph PM peak period	11,000

Emission Factors

	Speed Category	1	2	3	4	5	6	7	8	9
	Travel Speed (mph)	25	30	35	40	45	50	55	60	65
Emissions per vehicle (g/VMT)	DPM	0.000256	0.000238	0.000238	0.000253	0.0002842	0.0003297	0.0003901	0.0004633	0.0005483
	PM2.5	0.002264	0.0018091	0.001531	0.001374	0.0013084	0.0013177	0.0013966	0.0015441	0.0017703
	TOG Exhaust	0.035919	0.0283585	0.023549	0.020564	0.0188851	0.0182431	0.0185436	0.0198396	0.0223418
	TOG Evap	0.049867	0.0415561	0.03562	0.031167	0.0277041	0.0249337	0.022667	0.0207781	0.0191797
	Fugitive PM2.5	0.02107	0.0211678	0.01429	0.01379	0.01271	0.01164	0.01097	0.0106572	0.0103447

		I-580	Broadway	Piedmont	XXX	XXX	XXX	XXX
Vehicle	Truck 1 (MDT)	772	52	44	-	0	0	0
Type	Truck 2 (HDT)	2,315	156	132	-	0	0	0
	Non-Truck	189,832			-	0	0	0
Total	2023 ADT		192,919	12,792	10,824			
Directional	WB	98,832						
Volume	EB	94,087						

DPM

2023 Hourly Traffic Volumes and DPM Emissions -
Fraction Per

Hour	Hour	VPH	g/s
	0	0.00845729	836 0.000052
	1	0.00536836	531 3.31331E-05
	2	0.00464663	459 2.86786E-05
	3	0.00790453	781 4.87861E-05
	4	0.02149941	2125 0.000132693
	5	0.03469857	3429 0.000214157
	6	0.05264601	5203 0.000324927
	7	0.07427584	7341 0.000387361

DPM Westbound I-580
Fraction Per

Hour	Hour	VPH	g/s
	8	0.0752985	7442 0.000279444
	9	0.0695617	6875 0.000305418
	10	0.0595829	5889 0.000261605
	11	0.0538371	5321 0.00028077
	12	0.0539734	5334 0.00028148
	13	0.0552816	5464 0.000288303
	14	0.0555479	5490 0.000289692
	15	0.056302	5564 0.000293625

Fraction Per

Hour	Hour	VPH	g/s
	16	0.05624805	5559 0.000347159
	17	0.05435021	5372 0.000335445
	18	0.05018814	4960 0.000309757
	19	0.04392092	4341 0.000271077
	20	0.03584231	3542 0.000221216
	21	0.03127517	3091 0.000193028
	22	0.02377929	2350 0.000146764
	23	0.01551411	1533 9.57519E-05
	TOTAL		98,832

2023 Hourly Traffic Volumes and DPM Emissions -
Fraction Per

Hour	Hour	VPH	g/s
	0	0.01443017	1358 8.35989E-05
	1	0.0091342	859 5.29175E-05
	2	0.00664877	626 3.85186E-05
	3	0.00475971	448 2.75746E-05
	4	0.00642769	605 3.72378E-05
	5	0.01272044	1197 7.36938E-05
	6	0.02416325	2273 0.000139986
	7	0.04395669	4136 0.000254656

DPM Eastbound I-580
Fraction Per

Hour	Hour	VPH	g/s
	8	0.0509244	4791 0.000295023
	9	0.0451113	4244 0.000261345
	10	0.047011	4423 0.000272351
	11	0.0513099	4828 0.000297256
	12	0.0580964	5466 0.000336573
	13	0.0632747	5953 0.000366572
	14	0.0752	7075 0.000368125
	15	0.0714484	6722 0.000214541

Fraction Per

Hour	Hour	VPH	g/s
	16	0.06232079	5864 0.000156851
	17	0.05780497	5439 0.000145362
	18	0.06524472	6139 0.000174702
	19	0.06251107	5881 0.000306009
	20	0.05269448	4958 0.000305277
	21	0.04863678	4576 0.00028177
	22	0.03942216	3709 0.000228386
	23	0.02674804	2517 0.000154961
	TOTAL		94,087

2023 Hourly Traffic Volumes and DPM Emissions -
Fraction Per

Hour	Hour	VPH	g/s
	0	0.01144373	149 0.000004
	1	0.00725128	94 2.46067E-06
	2	0.0056477	73 1.9165E-06
	3	0.00633212	82 2.14876E-06
	4	0.01396355	182 4.73842E-06
	5	0.0237095	308 8.04564E-06
	6	0.03840463	499 1.30323E-05
	7	0.05911627	769 2.00607E-05

DPM from Broadway
Fraction Per

Hour	Hour	VPH	g/s
	8	0.0631115	820 2.14164E-05
	9	0.0573365	745 1.94567E-05
	10	0.053297	693 1.80859E-05
	11	0.0525735	683 1.78404E-05
	12	0.0560349	728 1.9015E-05
	13	0.0592782	771 2.01156E-05
	14	0.065374	850 2.21842E-05
	15	0.0638752	830 2.16756E-05

Fraction Per

Hour	Hour	VPH	g/s
	16	0.05928442	771 2.01177E-05
	17	0.05607759	729 1.90457E-05
	18	0.05771643	750 1.96023E-05
	19	0.05321599	692 1.80584E-05
	20	0.0442684	575 1.50221E-05
	21	0.03995597	519 1.35588E-05
	22	0.03160072	411 1.07235E-05
	23	0.02113107	275 7.17067E-06

DPM

TOTAL 13,000

2023 Hourly Traffic Volumes and DPM Emissions -

Fraction Per			
Hour	Hour	VPH	g/s
	0	0.01144373	126 0.000002
	1	0.00725128	80 1.45655E-06
	2	0.0056477	62 1.13444E-06
	3	0.00633212	70 1.27192E-06
	4	0.01396355	154 2.80483E-06
	5	0.0237095	261 4.76248E-06
	6	0.03840463	422 7.71427E-06
	7	0.05911627	650 1.27664E-05

DPM from Piedmont

Fraction Per			
Hour	Hour	VPH	g/s
	8	0.0631115	694 1.36292E-05
	9	0.0573365	631 1.15171E-05
	10	0.053297	586 1.07057E-05
	11	0.0525735	578 1.05603E-05
	12	0.0560349	616 1.12556E-05
	13	0.0592782	652 1.19071E-05
	14	0.065374	719 1.31315E-05
	15	0.0638752	703 1.28305E-05

Fraction Per			
Hour	Hour	VPH	g/s
	16	0.05928442	652 1.28028E-05
	17	0.05607759	617 1.21102E-05
	18	0.05771643	635 1.15934E-05
	19	0.05321599	585 1.06894E-05
	20	0.0442684	487 8.89211E-06
	21	0.03995597	440 8.02588E-06
	22	0.03160072	348 6.34758E-06
	23	0.02113107	232 4.24456E-06

TOTAL 11,000

PM2.5

2023 Hourly Traffic Volumes and PM2.5 Emissions - XXX Westbound I-580

Fraction Per				Fraction Per				Fraction Per					
Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s		
	0	0.00695214	687	0.000139	8	0.0667843	6600	0.000990564	16	0.05370871	5308	0.001070188	
	1	0.00488662	483	9.737E-05	9	0.0646059	6385	0.00101558	17	0.05465666	5402	0.001089077	
	2	0.00520251	514	0.0001037	10	0.0599728	5927	0.00094275	18	0.04604345	4551	0.000917452	
	3	0.01001724	990	0.0001996	11	0.0542761	5364	0.000943306	19	0.03638457	3596	0.000724991	
	4	0.03136998	3100	0.0006251	12	0.0526475	5203	0.000915001	20	0.03063355	3028	0.000610397	
	5	0.06154274	6082	0.0012263	13	0.052499	5189	0.00091242	21	0.02768323	2736	0.00055161	
	6	0.07052278	6970	0.0012257	14	0.0532575	5264	0.000925603	22	0.0206492	2041	0.000411452	
	7	0.0704674	6964	0.0012247	15	0.0528339	5222	0.000918241	23	0.01240226	1226	0.000247125	
										TOTAL	98,832		

2023 Hourly Traffic Volumes and PM2.5 Emissions - XXX Eastbound I-580

Fraction Per				Fraction Per				Fraction Per					
Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s		
0	0.01946075	1831	0.000364	8	0.0523883	4929	0.000979847	16	0.05785339	5443	0.000935763		
1	0.01657434	1559	0.00031	9	0.0491976	4629	0.00092017	17	0.05726714	5388	0.001094605		
2	0.01619527	1524	0.0003029	10	0.0503522	4737	0.000941766	18	0.05394692	5076	0.000783271		
3	0.01644906	1548	0.0003077	11	0.0525833	4947	0.000983494	19	0.0485037	4564	0.000791275		
4	0.01960691	1845	0.0003667	12	0.0540821	5088	0.001011528	20	0.04334347	4078	0.000810677		
5	0.02785364	2621	0.000521	13	0.0577707	5435	0.001080517	21	0.03811877	3586	0.000712957		
6	0.0408568	3844	0.0007642	14	0.0605973	5701	0.000988567	22	0.03256324	3064	0.000609049		
7	0.04944408	4652	0.0009248	15	0.0601467	5659	0.000831478	23	0.02484438	2338	0.000464678		
										TOTAL	94,087		

2023 Hourly Traffic Volumes and PM2.5 Emissions - XXX from Broadway

Fraction Per				Fraction Per				Fraction Per			
Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s
0	0.01320645	172	0.000034	8	0.0595863	775	0.000153692	16	0.05578105	725	0.000143877
1	0.01073048	139	2.768E-05	9	0.0569017	740	0.000146767	17	0.0559619	728	0.000144343
2	0.01069889	139	2.76E-05	10	0.0551625	717	0.000142281	18	0.04999519	650	0.000128953
3	0.01323315	172	3.413E-05	11	0.0534297	695	0.000137812	19	0.04244414	552	0.000109477
4	0.02548845	331	6.574E-05	12	0.0533648	694	0.000137645	20	0.03698851	481	9.54049E-05
5	0.04469819	581	0.0001153	13	0.0551348	717	0.00014221	21	0.032901	428	8.4862E-05
6	0.05568979	724	0.0001436	14	0.0569274	740	0.000146834	22	0.02660622	346	6.86258E-05
7	0.05995574	779	0.0001546	15	0.0564903	734	0.000145706	23	0.01862332	242	4.80354E-05
TOTAL										13,000	

PM2.5

2023 Hourly Traffic Volumes and PM2.5 Emissions - XXX from Piedmont

Fraction Per				Fraction Per				Fraction Per			
Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s
0	0.01320645	145	0.000020	8	0.0595863	655	0.00011384	16	0.05578105	614	0.00010657
1	0.01073048	118	1.638E-05	9	0.0569017	626	8.68766E-05	17	0.0559619	616	0.000106916
2	0.01069889	118	1.633E-05	10	0.0551625	607	8.42212E-05	18	0.04999519	550	7.63318E-05
3	0.01323315	146	2.02E-05	11	0.0534297	588	8.15755E-05	19	0.04244414	467	6.4803E-05
4	0.02548845	280	3.892E-05	12	0.0533648	587	8.14765E-05	20	0.03698851	407	5.64734E-05
5	0.04469819	492	6.824E-05	13	0.0551348	606	8.41789E-05	21	0.032901	362	5.02327E-05
6	0.05568979	613	8.503E-05	14	0.0569274	626	8.69157E-05	22	0.02660622	293	4.06219E-05
7	0.05995574	660	0.0001145	15	0.0564903	621	8.62484E-05	23	0.01862332	205	2.84338E-05
										TOTAL	11,000

TOG Ex

2023 Hourly Traffic Volumes and TOG Exhaust Emisssions -
Fraction Per

Hour	Hour	VPH	g/s
0	0.00695214	687	0.001748
1	0.00488662	483	0.0012289
2	0.00520251	514	0.0013083
3	0.01001724	990	0.0025191
4	0.03136998	3100	0.0078888
5	0.06154274	6082	0.0154766
6	0.07052278	6970	0.0177349
7	0.0704674	6964	0.0157362

XXX Westbound I-580
Fraction Per

Hour	Hour	VPH	g/s
8	0.0667843	6600	0.013713582
9	0.0646059	6385	0.013484839
10	0.0599728	5927	0.012517808
11	0.0542761	5364	0.0121205
12	0.0526475	5203	0.011756815
13	0.052499	5189	0.011723652
14	0.0532575	5264	0.011893035
15	0.0528339	5222	0.01179844

Fraction Per

Hour	Hour	VPH	g/s
16	0.05370871	5308	0.013506501
17	0.05465666	5402	0.01374489
18	0.04604345	4551	0.011578865
19	0.03638457	3596	0.00914988
20	0.03063355	3028	0.00770363
21	0.02768323	2736	0.006961692
22	0.0206492	2041	0.005192797
23	0.01240226	1226	0.003118882
TOTAL		98,832	

2023 Hourly Traffic Volumes and TOG Exhaust Emisssions -
Fraction Per

Hour	Hour	VPH	g/s
0	0.01946075	1831	0.0045937
1	0.01657434	1559	0.0039124
2	0.01619527	1524	0.0038229
3	0.01644906	1548	0.0038828
4	0.01960691	1845	0.0046282
5	0.02785364	2621	0.0065749
6	0.0408568	3844	0.0096443
7	0.04944408	4652	0.0116714

XXX Eastbound I-580
Fraction Per

Hour	Hour	VPH	g/s
8	0.0523883	4929	0.012366335
9	0.0491976	4629	0.011613168
10	0.0503522	4737	0.011885725
11	0.0525833	4947	0.012412367
12	0.0540821	5088	0.012766174
13	0.0577707	5435	0.013636861
14	0.0605973	5701	0.012702055
15	0.0601467	5659	0.012001008

Fraction Per

Hour	Hour	VPH	g/s
16	0.05785339	5443	0.014394239
17	0.05726714	5388	0.017158381
18	0.05394692	5076	0.011720988
19	0.0485037	4564	0.010167066
20	0.04334347	4078	0.010231294
21	0.03811877	3586	0.008997996
22	0.03256324	3064	0.007686606
23	0.02484438	2338	0.005864555
TOTAL		94,087	

2023 Hourly Traffic Volumes and TOG Exhaust Emisssio XXX from Broadway

Hour	Hour	VPH	g/s
0	0.01320645	172	0.000534
1	0.01073048	139	0.0004339
2	0.01069889	139	0.0004326
3	0.01323315	172	0.000535
4	0.02548845	331	0.0010305
5	0.04469819	581	0.0018072
6	0.05568979	724	0.0022516
7	0.05995574	779	0.0024241

Fraction Per

Hour	Hour	VPH	g/s
8	0.0595863	775	0.002409179
9	0.0569017	740	0.002300639
10	0.0551625	717	0.00223032
11	0.0534297	695	0.002160258
12	0.0533648	694	0.002157635
13	0.0551348	717	0.0022292
14	0.0569274	740	0.002301676
15	0.0564903	734	0.002284003

Fraction Per

Hour	Hour	VPH	g/s
16	0.05578105	725	0.002255328
17	0.0559619	728	0.00226264
18	0.04999519	650	0.002021395
19	0.04244414	552	0.001716092
20	0.03698851	481	0.001495512
21	0.032901	428	0.001330246
22	0.02660622	346	0.001075737
23	0.01862332	242	0.000752974

TOTAL 13,000

2023 Hourly Traffic Volumes and TOG Exhaust Emissio XXX from Piedmont

Fraction Per				Fraction Per				Fraction Per			
Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s
0	0.01320645	145	0.000316	8	0.0595863	655	0.001806258	16	0.05578105	614	0.001690909
1	0.01073048	118	0.0002568	9	0.0569017	626	0.001361826	17	0.0559619	616	0.001696392
2	0.01069889	118	0.0002561	10	0.0551625	607	0.001320202	18	0.04999519	550	0.001196532
3	0.01323315	146	0.0003167	11	0.0534297	588	0.001278729	19	0.04244414	467	0.001015813
4	0.02548845	280	0.00061	12	0.0533648	587	0.001277177	20	0.03698851	407	0.000885244
5	0.04469819	492	0.0010698	13	0.0551348	606	0.001319539	21	0.032901	362	0.000787418
6	0.05568979	613	0.0013328	14	0.0569274	626	0.00136244	22	0.02660622	293	0.000636765
7	0.05995574	660	0.0018175	15	0.0564903	621	0.001351978	23	0.01862332	205	0.000445711
								TOTAL 11,000			

TOG Evap

2023 Hourly Traffic Volumes and TOG Evaporative Emissions -

XXX Westbound I-580

Hour	Hour	Fraction Per	VPH	g/s	Hour	Hour	Fraction Per	VPH	g/s	Hour	Hour	Fraction Per	VPH	g/s
	0	0.00695214	687	0.001501		8	0.0667843	6600	0.018743009		16	0.05370871	5308	0.011594889
	1	0.00488662	483	0.0010549		9	0.0646059	6385	0.016483321		17	0.05465666	5402	0.011799538
	2	0.00520251	514	0.0011231		10	0.0599728	5927	0.015301262		18	0.04604345	4551	0.009940077
	3	0.01001724	990	0.0021626		11	0.0542761	5364	0.012693827		19	0.03638457	3596	0.007854873
	4	0.03136998	3100	0.0067723		12	0.0526475	5203	0.012312939		20	0.03063355	3028	0.006613315
	5	0.06154274	6082	0.0132861		13	0.052499	5189	0.012278207		21	0.02768323	2736	0.005976385
	6	0.07052278	6970	0.0164935		14	0.0532575	5264	0.012455602		22	0.0206492	2041	0.004457846
	7	0.0704674	6964	0.0164806		15	0.0528339	5222	0.012356533		23	0.01240226	1226	0.002677458
														TOTAL
														98,832

2023 Hourly Traffic Volumes and TOG Evaporative Emissions -

XXX Eastbound I-580

Hour	Hour	Fraction Per	VPH	g/s	Hour	Hour	Fraction Per	VPH	g/s	Hour	Hour	Fraction Per	VPH	g/s
	0	0.01946075	1831	0.0039436		8	0.0523883	4929	0.010616094		16	0.05785339	5443	0.021772324
	1	0.01657434	1559	0.0033587		9	0.0491976	4629	0.009969525		17	0.05726714	5388	0.025143649
	2	0.01619527	1524	0.0032819		10	0.0503522	4737	0.010203506		18	0.05394692	5076	0.017764408
	3	0.01644906	1548	0.0033333		11	0.0525833	4947	0.010655611		19	0.0485037	4564	0.010647991
	4	0.01960691	1845	0.0039732		12	0.0540821	5088	0.010959342		20	0.04334347	4078	0.008783232
	5	0.02785364	2621	0.0056443		13	0.0577707	5435	0.011706799		21	0.03811877	3586	0.007724485
	6	0.0408568	3844	0.0082793		14	0.0605973	5701	0.013302891		22	0.03256324	3064	0.0065987
	7	0.04944408	4652	0.0100195		15	0.0601467	5659	0.017605286		23	0.02484438	2338	0.005034529
														TOTAL
														94,087

2023 Hourly Traffic Volumes and TOG Evaporative Emissions -

XXX from Broadway

Hour	Hour	Fraction Per	VPH	g/s	Hour	Hour	Fraction Per	VPH	g/s	Hour	Hour	Fraction Per	VPH	g/s
	0	0.01320645	172	0.000782		8	0.0595863	775	0.003530377		16	0.05578105	725	0.003304925
	1	0.01073048	139	0.0006358		9	0.0569017	740	0.003371324		17	0.0559619	728	0.003315641
	2	0.01069889	139	0.0006339		10	0.0551625	717	0.00326828		18	0.04999519	650	0.002962124
	3	0.01323315	172	0.000784		11	0.0534297	695	0.003165611		19	0.04244414	552	0.002514738
	4	0.02548845	331	0.0015101		12	0.0533648	694	0.003161768		20	0.03698851	481	0.002191502
	5	0.04469819	581	0.0026483		13	0.0551348	717	0.003266638		21	0.032901	428	0.001949324
	6	0.05568979	724	0.0032995		14	0.0569274	740	0.003372844		22	0.02660622	346	0.00157637
	7	0.05995574	779	0.0035523		15	0.0564903	734	0.003346946		23	0.01862332	242	0.001103398

TOG Evap

TOTAL 13,000

2023 Hourly Traffic Volumes and TOG Evaporative Emissions - XXX from Piedmont

Fraction Per				Fraction Per				Fraction Per			
Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s
0	0.01320645	145	0.000463	8	0.0595863	655	0.002507699	16	0.05578105	614	0.002347556
1	0.01073048	118	0.0003763	9	0.0569017	626	0.001995601	17	0.0559619	616	0.002355167
2	0.01069889	118	0.0003752	10	0.0551625	607	0.001934605	18	0.04999519	550	0.001753381
3	0.01323315	146	0.0004641	11	0.0534297	588	0.001873832	19	0.04244414	467	0.001488558
4	0.02548845	280	0.0008939	12	0.0533648	587	0.001871557	20	0.03698851	407	0.001297224
5	0.04469819	492	0.0015676	13	0.0551348	606	0.001933633	21	0.032901	362	0.001153871
6	0.05568979	613	0.0019531	14	0.0569274	626	0.0019965	22	0.02660622	293	0.000933107
7	0.05995574	660	0.0025232	15	0.0564903	621	0.00198117	23	0.01862332	205	0.000653138
TOTAL										11,000	

FUG 2.5

2023 Hourly Traffic Volumes and Fugitive PM2.5 Emissions -

XXX Westbound I-580

Fraction Per				Fraction Per				Fraction Per					
Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s		
	0	0.00695214	687	0.000809	8	0.0667843	6600	0.008751803	16	0.05370871	5308	0.006253744	
	1	0.00488662	483	0.000569	9	0.0646059	6385	0.007977189	17	0.05465666	5402	0.006364122	
	2	0.00520251	514	0.0006058	10	0.0599728	5927	0.007405125	18	0.04604345	4551	0.005361215	
	3	0.01001724	990	0.0011664	11	0.0542761	5364	0.006510765	19	0.03638457	3596	0.004236553	
	4	0.03136998	3100	0.0036527	12	0.0526475	5203	0.006315404	20	0.03063355	3028	0.003566914	
	5	0.06154274	6082	0.0071659	13	0.052499	5189	0.00629759	21	0.02768323	2736	0.003223384	
	6	0.07052278	6970	0.0082115	14	0.0532575	5264	0.006388577	22	0.0206492	2041	0.002404355	
	7	0.0704674	6964	0.008453	15	0.0528339	5222	0.006337764	23	0.01240226	1226	0.001444097	
										TOTAL	98,832		

2023 Hourly Traffic Volumes and Fugitive PM2.5 Emissions -

XXX Eastbound I-580

Fraction Per				Fraction Per				Fraction Per						
Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s			
	0	0.01946075	1831	0.002127		8	0.0523883	4929	0.005725827		16	0.05785339	5443	0.008734838
	1	0.01657434	1559	0.0018115		9	0.0491976	4629	0.005377098		17	0.05726714	5388	0.012807643
	2	0.01619527	1524	0.0017701		10	0.0503522	4737	0.005503296		18	0.05394692	5076	0.007857769
	3	0.01644906	1548	0.0017978		11	0.0525833	4947	0.005747141		19	0.0485037	4564	0.005461439
	4	0.01960691	1845	0.002143		12	0.0540821	5088	0.00591096		20	0.04334347	4078	0.004737266
	5	0.02785364	2621	0.0030443		13	0.0577707	5435	0.006314103		21	0.03811877	3586	0.004166228
	6	0.0408568	3844	0.0044655		14	0.0605973	5701	0.006823158		22	0.03256324	3064	0.003559032
	7	0.04944408	4652	0.005404		15	0.0601467	5659	0.008076156		23	0.02484438	2338	0.002715391
										TOTAL	94,087			

2023 Hourly Traffic Volumes and Fugitive PM2.5 Emi: XXX from Broadway

Fraction Per					Fraction Per					Fraction Per					
Hour	Hour	VPH	g/s		Hour	Hour	VPH	g/s		Hour	Hour	VPH	g/s		
	0	0.01320645	172	0.000399		8	0.0595863	775	0.001798299		16	0.05578105	725	0.001683459	
	1	0.01073048	139	0.0003238		9	0.0569017	740	0.001717281		17	0.0559619	728	0.001688917	
	2	0.01069889	139	0.0003229		10	0.0551625	717	0.001664793		18	0.04999519	650	0.001508843	
	3	0.01323315	172	0.0003994		11	0.0534297	695	0.001612495		19	0.04244414	552	0.001280954	
	4	0.02548845	331	0.0007692		12	0.0533648	694	0.001610538		20	0.03698851	481	0.001116304	
	5	0.04469819	581	0.001349		13	0.0551348	717	0.001663956		21	0.032901	428	0.000992944	
	6	0.05568979	724	0.0016807		14	0.0569274	740	0.001718055		22	0.02660622	346	0.00080297	
	7	0.05995574	779	0.0018095		15	0.0564903	734	0.001704863		23	0.01862332	242	0.000562047	
										TOTAL		13,000			

FUG 2.5

2023 Hourly Traffic Volumes and Fugitive PM2.5 Emi: XXX from Piedmont

Fraction Per				Fraction Per				Fraction Per			
Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s	Hour	Hour	VPH	g/s
0	0.01320645	145	0.000236	8	0.0595863	655	0.001059536	16	0.05578105	614	0.000991873
1	0.01073048	118	0.0001917	9	0.0569017	626	0.001016517	17	0.0559619	616	0.000995089
2	0.01069889	118	0.0001911	10	0.0551625	607	0.000985447	18	0.04999519	550	0.000893135
3	0.01323315	146	0.0002364	11	0.0534297	588	0.00095449	19	0.04244414	467	0.00075824
4	0.02548845	280	0.0004553	12	0.0533648	587	0.000953332	20	0.03698851	407	0.000660778
5	0.04469819	492	0.0007985	13	0.0551348	606	0.000984952	21	0.032901	362	0.000587757
6	0.05568979	613	0.0009949	14	0.0569274	626	0.001016975	22	0.02660622	293	0.000475305
7	0.05995574	660	0.0010661	15	0.0564903	621	0.001009166	23	0.01862332	205	0.000332695
										TOTAL	11,000

Attachment 4: Roadway Health Risk Calculations

3400 Broadway & 3404 Piedmont, Oakland, CA
AERMOD Risk Modeling Parameters and Maximum Onsite Concentrations
at Project MEI Receptor - 2nd Floor

Emissions Year 2023

Receptor Information

Number of Receptors 24

Receptor Height (in m) = 1.5 (6.1m)

Receptor Distances = 5m

Meteorological Conditions

BAAQMD Oakland Airport Met Data 2013 - 2017

Land Use Classification urban

Wind Speed = variable

Wind Direction = variable

2nd Floor MEI Concentrations from I580

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.0154	0.71958	0.69839

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.41626	0.36101	0.05525

2nd Floor MEI Concentrations from Broadway

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00049	0.06653	0.09748

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.0539	0.04966	0.00424

2nd Floor MEI Concentrations from Piedmont

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00027	0.04189	0.06049

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.03208	0.02942	0.00266

3400 Broadway & 3404 Piedmont, Oakland, CA
AERMOD Risk Modeling Parameters and Maximum Onsite Concentrations
at Project MEI Receptor - 3rd Floor

Emissions Year 2023

Receptor Information

Number of Receptors 24

Receptor Height (in m) = 1.5 (9.1m)

Receptor Distances = 5m

Meteorological Conditions

BAAQMD Oakland Airport Met Data 2013 - 2017

Land Use Classification urban

Wind Speed = variable

Wind Direction = variable

3rd Floor MEI Concentrations from I580

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.01013	0.40873	0.40063

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.23767	0.20635	0.03132

3rd Floor MEI Concentrations from Broadway

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00036	0.03614	0.05296

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.02929	0.02698	0.00231

3rd Floor MEI Concentrations from Piedmont

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.0002	0.02322	0.03353

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.01779	0.01631	0.00148

3400 Broadway & 3404 Piedmont, Oakland, CA
AERMOD Risk Modeling Parameters and Maximum Onsite Concentrations
at Project MEI Receptor - 4th Floor

Emissions Year 2023

Receptor Information

Number of Receptors 24

Receptor Height (in m) = 1.5 (12.2m)

Receptor Distances = 5m

Meteorological Conditions

BAAQMD Oakland Airport Met Data 2013 - 2017

Land Use Classification urban

Wind Speed = variable

Wind Direction = variable

4th Floor MEI Concentrations from I580

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00591	0.23113	0.22993

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.13554	0.11786	0.01768

4th Floor MEI Concentrations from Broadway

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00025	0.01872	0.02743

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.01516	0.01397	0.00119

4th Floor MEI Concentrations from Piedmont

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00014	0.01261	0.0182

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.00964	0.00884	0.0008

3400 Broadway & 3404 Piedmont, Oakland, CA
AERMOD Risk Modeling Parameters and Maximum Onsite Concentrations
at Project MEI Receptor - 5th Floor

Emissions Year 2023

Receptor Information

Number of Receptors 24

Receptor Height (in m) = 1.5 (15.2m)

Receptor Distances = 5m

Meteorological Conditions

BAAQMD Oakland Airport Met Data 2013 - 2017

Land Use Classification urban

Wind Speed = variable

Wind Direction = variable

5th Floor MEI Concentrations from I580

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.0035	0.141	0.14232

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.08338	0.07262	0.01076

5th Floor MEI Concentrations from Broadway

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00016	0.01065	0.0156

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.00863	0.00795	0.00068

5th Floor MEI Concentrations from Piedmont

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00009	0.00726	0.01047

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.00553	0.00507	0.00046

3400 Broadway & 3404 Piedmont, Oakland, CA
AERMOD Risk Modeling Parameters and Maximum Onsite Concentrations
at Project MEI Receptor - 6th Floor

Emissions Year 2023

Receptor Information

Number of Receptors 24

Receptor Height (in m) = 1.5 (18.3m)

Receptor Distances = 5m

Meteorological Conditions

BAAQMD Oakland Airport Met Data 2013 - 2017

Land Use Classification urban

Wind Speed = variable

Wind Direction = variable

6th Floor MEI Concentrations from I580

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00218	0.09084	0.09289

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.05414	0.04721	0.00693

6th Floor MEI Concentrations from Broadway

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.0001	0.00653	0.00957

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.0053	0.00488	0.00042

6th Floor MEI Concentrations from Piedmont

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00005	0.00427	0.00615

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.00323	0.00296	0.00027

3400 Broadway & 3404 Piedmont, Oakland, CA**AERMOD Risk Modeling Parameters and Maximum Onsite Concentrations
at Project MEI Receptor - 7th Floor****Emissions Year** 2023**Receptor Information**

Number of Receptors 24

Receptor Height (in m) = 1.5 (21.3m)

Receptor Distances = 5m

Meteorological Conditions

BAAQMD Oakland Airport Met Data 2013 - 2017

Land Use Classification urban

Wind Speed = variable

Wind Direction = variable

7th Floor MEI Concentrations from I580

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00149	0.06333	0.06538

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.03795	0.03313	0.00482

7th Floor MEI Concentrations from Broadway

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00006	0.00439	0.00643

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.00356	0.00328	0.00028

7th Floor MEI Concentrations from Piedmont

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00003	0.00265	0.00381

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.00199	0.00182	0.00017

3400 Broadway & 3404 Piedmont, Oakland, CA**AERMOD Risk Modeling Parameters and Maximum Onsite Concentrations
at Project MEI Receptor - 8th Floor****Emissions Year** 2023**Receptor Information**

Number of Receptors 24

Receptor Height (in m) = 1.5 (24.4m)

Receptor Distances = 5m

Meteorological Conditions

BAAQMD Oakland Airport Met Data 2013 - 2017

Land Use Classification urban

Wind Speed = variable

Wind Direction = variable

8th Floor MEI Concentrations from I580

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00107	0.04629	0.04809

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.02786	0.02433	0.00353

8th Floor MEI Concentrations from Broadway

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00004	0.00311	0.00455

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.00252	0.00232	0.0002

8th Floor MEI Concentrations from Piedmont

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00002	0.0017	0.00244

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.00126	0.00115	0.00011

3400 Broadway & 3404 Piedmont, Oakland, CA - I-580 Impacts**Maximum DPM Cancer Risk and PM2.5 Calculations From I-580 on Site MEI Impacts at On-Site Residence - 2nd Floor, 1.5 meter receptor height****Cancer Risk Calculation Method**

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate ($\text{L/kg body weight-day}$)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure			Age Sensitivity Factor		Exhaust	Evaporative	DPM	Exhaust TOG	Evaporative TOG	
	Duration (years)	Age	Year		DPM	TOG	TOG				
0	0.25	-0.25 - 0*	2023	10	0.0154	0.7196	0.6984	0.209	0.056	0.0032	0.27
1	1	0 - 1	2023	10	0.0154	0.7196	0.6984	2.529	0.675	0.0386	3.24
2	1	1 - 2	2024	10	0.0154	0.7196	0.6984	2.529	0.675	0.0386	3.24
3	1	2 - 3	2025	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
4	1	3 - 4	2026	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
5	1	4 - 5	2027	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
6	1	5 - 6	2028	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
7	1	6 - 7	2029	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
8	1	7 - 8	2030	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
9	1	8 - 9	2031	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
10	1	9 - 10	2032	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
11	1	10 - 11	2033	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
12	1	11 - 12	2034	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
13	1	12 - 13	2035	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
14	1	13 - 14	2036	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
15	1	14 - 15	2037	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
16	1	15 - 16	2038	3	0.0154	0.7196	0.6984	0.398	0.106	0.0061	0.51
17	1	16-17	2039	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
18	1	17-18	2040	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
19	1	18-19	2041	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
20	1	19-20	2042	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
21	1	20-21	2043	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
22	1	21-22	2044	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
23	1	22-23	2045	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
24	1	23-24	2046	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
25	1	24-25	2047	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
26	1	25-26	2048	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
27	1	26-27	2049	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
28	1	27-28	2050	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
29	1	28-29	2051	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
30	1	29-30	2052	1	0.0154	0.7196	0.6984	0.044	0.012	0.0007	0.057
Total Increased Cancer Risk								11.46	3.058	0.175	14.69

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0031 0.42

3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Broadway
Maximum DPM Cancer Risk and PM2.5 Calculations From Broadway on Site MEI
Impacts at On-Site Residence - 2nd Floor, 1.5 meter receptor height

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate ($\text{L/kg body weight-day}$)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure	Age	Year	Age Sensitivity Factor		Exhaust	Evaporative	DPM	Exhaust TOG	Evaporative TOG	
	Duration (years)				DPM	TOG	TOG				
0	0.25	-0.25 - 0*	2023	10	0.0005	0.0665	0.0975	0.007	0.005	0.0004	0.01
1	1	0 - 1	2023	10	0.0005	0.0665	0.0975	0.080	0.062	0.0054	0.15
2	1	1 - 2	2024	10	0.0005	0.0665	0.0975	0.080	0.062	0.0054	0.15
3	1	2 - 3	2025	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
4	1	3 - 4	2026	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
5	1	4 - 5	2027	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
6	1	5 - 6	2028	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
7	1	6 - 7	2029	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
8	1	7 - 8	2030	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
9	1	8 - 9	2031	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
10	1	9 - 10	2032	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
11	1	10 - 11	2033	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
12	1	11 - 12	2034	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
13	1	12 - 13	2035	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
14	1	13 - 14	2036	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
15	1	14 - 15	2037	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
16	1	15 - 16	2038	3	0.0005	0.0665	0.0975	0.013	0.010	0.0008	0.02
17	1	16-17	2039	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
18	1	17-18	2040	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
19	1	18-19	2041	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
20	1	19-20	2042	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
21	1	20-21	2043	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
22	1	21-22	2044	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
23	1	22-23	2045	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
24	1	23-24	2046	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
25	1	24-25	2047	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
26	1	25-26	2048	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
27	1	26-27	2049	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
28	1	27-28	2050	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
29	1	28-29	2051	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
30	1	29-30	2052	1	0.0005	0.0665	0.0975	0.001	0.001	0.0001	0.003
Total Increased Cancer Risk								0.36	0.283	0.024	0.67

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0001 0.05

3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Piedmont
Maximum DPM Cancer Risk and PM2.5 Calculations From Piedmont on Site MEI
Impacts at On-Site Residence - 2nd Floor, 1.5 meter receptor height

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: $CPF = \text{Cancer potency factor (mg/kg-day)}^{-1}$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day^{-1})

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure	Age	Year	Age Sensitivity Factor		Exhaust	Evaporative	DPM	Exhaust TOG	Evaporative TOG	
	Duration (years)				DPM	TOG	TOG				
0	0.25	-0.25 - 0*	2023	10	0.0003	0.0419	0.0605	0.004	0.003	0.0003	0.01
1	1	0 - 1	2023	10	0.0003	0.0419	0.0605	0.044	0.039	0.0033	0.09
2	1	1 - 2	2024	10	0.0003	0.0419	0.0605	0.044	0.039	0.0033	0.09
3	1	2 - 3	2025	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
4	1	3 - 4	2026	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
5	1	4 - 5	2027	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
6	1	5 - 6	2028	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
7	1	6 - 7	2029	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
8	1	7 - 8	2030	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
9	1	8 - 9	2031	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
10	1	9 - 10	2032	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
11	1	10 - 11	2033	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
12	1	11 - 12	2034	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
13	1	12 - 13	2035	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
14	1	13 - 14	2036	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
15	1	14 - 15	2037	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
16	1	15 - 16	2038	3	0.0003	0.0419	0.0605	0.007	0.006	0.0005	0.01
17	1	16-17	2039	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
18	1	17-18	2040	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
19	1	18-19	2041	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
20	1	19-20	2042	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
21	1	20-21	2043	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
22	1	21-22	2044	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
23	1	22-23	2045	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
24	1	23-24	2046	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
25	1	24-25	2047	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
26	1	25-26	2048	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
27	1	26-27	2049	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
28	1	27-28	2050	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
29	1	28-29	2051	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
30	1	29-30	2052	1	0.0003	0.0419	0.0605	0.001	0.001	0.0001	0.002
Total Increased Cancer Risk								0.20	0.178	0.015	0.39

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0001 0.03

3400 Broadway & 3404 Piedmont, Oakland, CA - I-580 Impacts
Maximum DPM Cancer Risk and PM2.5 Calculations From I-580 on Site MEI
Impacts at On-Site Residence - 3rd Floor 1.5 meter receptor height

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: $CPF = \text{Cancer potency factor (mg/kg-day)}^{-1}$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0101	0.4087	0.4006	0.138	0.032	0.0018	0.17
1	1	0 - 1	2023	10	0.0101	0.4087	0.4006	1.664	0.383	0.0221	2.07
2	1	1 - 2	2024	10	0.0101	0.4087	0.4006	1.664	0.383	0.0221	2.07
3	1	2 - 3	2025	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
4	1	3 - 4	2026	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
5	1	4 - 5	2027	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
6	1	5 - 6	2028	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
7	1	6 - 7	2029	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
8	1	7 - 8	2030	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
9	1	8 - 9	2031	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
10	1	9 - 10	2032	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
11	1	10 - 11	2033	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
12	1	11 - 12	2034	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
13	1	12 - 13	2035	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
14	1	13 - 14	2036	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
15	1	14 - 15	2037	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
16	1	15 - 16	2038	3	0.0101	0.4087	0.4006	0.262	0.060	0.0035	0.33
17	1	16-17	2039	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
18	1	17-18	2040	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
19	1	18-19	2041	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
20	1	19-20	2042	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
21	1	20-21	2043	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
22	1	21-22	2044	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
23	1	22-23	2045	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
24	1	23-24	2046	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
25	1	24-25	2047	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
26	1	25-26	2048	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
27	1	26-27	2049	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
28	1	27-28	2050	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
29	1	28-29	2051	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
30	1	29-30	2052	1	0.0101	0.4087	0.4006	0.029	0.007	0.0004	0.036
Total Increased Cancer Risk								7.54	1.737	0.100	9.4

* Third trimester of pregnancy

Maximum
 Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
 0.0020 0.24

3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Broadway
Maximum DPM Cancer Risk and PM2.5 Calculations From Broadway on Site MEI
Impacts at On-Site Residence - 3rd Floor, 1.5 meter receptor height

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0004	0.0361	0.0530	0.005	0.003	0.0002	0.01
1	1	0 - 1	2023	10	0.0004	0.0361	0.0530	0.059	0.034	0.0029	0.10
2	1	1 - 2	2024	10	0.0004	0.0361	0.0530	0.059	0.034	0.0029	0.10
3	1	2 - 3	2025	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
4	1	3 - 4	2026	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
5	1	4 - 5	2027	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
6	1	5 - 6	2028	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
7	1	6 - 7	2029	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
8	1	7 - 8	2030	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
9	1	8 - 9	2031	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
10	1	9 - 10	2032	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
11	1	10 - 11	2033	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
12	1	11 - 12	2034	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
13	1	12 - 13	2035	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
14	1	13 - 14	2036	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
15	1	14 - 15	2037	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
16	1	15 - 16	2038	3	0.0004	0.0361	0.0530	0.009	0.005	0.0005	0.02
17	1	16-17	2039	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
18	1	17-18	2040	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
19	1	18-19	2041	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
20	1	19-20	2042	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
21	1	20-21	2043	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
22	1	21-22	2044	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
23	1	22-23	2045	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
24	1	23-24	2046	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
25	1	24-25	2047	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
26	1	25-26	2048	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
27	1	26-27	2049	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
28	1	27-28	2050	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
29	1	28-29	2051	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
30	1	29-30	2052	1	0.0004	0.0361	0.0530	0.001	0.001	0.0001	0.002
Total Increased Cancer Risk								0.27	0.154	0.013	0.4

* Third trimester of pregnancy

Maximum
 Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
 0.0001 0.03

**3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Piedmont
Maximum DPM Cancer Risk and PM2.5 Calculations From Piedmont on Site MEI
Impacts at On-Site Residence - 3rd Floor, 1.5 meter receptor height**

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate ($\text{L/kg body weight-day}$)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0002	0.0232	0.0335	0.003	0.002	0.0002	0.00
1	1	0 - 1	2023	10	0.0002	0.0232	0.0335	0.033	0.022	0.0019	0.06
2	1	1 - 2	2024	10	0.0002	0.0232	0.0335	0.033	0.022	0.0019	0.06
3	1	2 - 3	2025	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
4	1	3 - 4	2026	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
5	1	4 - 5	2027	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
6	1	5 - 6	2028	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
7	1	6 - 7	2029	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
8	1	7 - 8	2030	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
9	1	8 - 9	2031	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
10	1	9 - 10	2032	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
11	1	10 - 11	2033	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
12	1	11 - 12	2034	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
13	1	12 - 13	2035	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
14	1	13 - 14	2036	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
15	1	14 - 15	2037	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
16	1	15 - 16	2038	3	0.0002	0.0232	0.0335	0.005	0.003	0.0003	0.01
17	1	16-17	2039	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
18	1	17-18	2040	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
19	1	18-19	2041	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
20	1	19-20	2042	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
21	1	20-21	2043	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
22	1	21-22	2044	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
23	1	22-23	2045	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
24	1	23-24	2046	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
25	1	24-25	2047	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
26	1	25-26	2048	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
27	1	26-27	2049	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
28	1	27-28	2050	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
29	1	28-29	2051	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
30	1	29-30	2052	1	0.0002	0.0232	0.0335	0.001	0.000	0.0000	0.001
Total Increased Cancer Risk								0.15	0.099	0.008	0.3

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0000 0.02

3400 Broadway & 3404 Piedmont, Oakland, CA - I-580 Impacts
Maximum DPM Cancer Risk and PM2.5 Calculations From I-580 on Site MEI
Impacts at On-Site Residence - 4th Floor 1.5 meter receptor height

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: CPF = Cancer potency factor (mg/kg-day)¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0059	0.2311	0.2299	0.080	0.018	0.0011	0.10
1	1	0 - 1	2023	10	0.0059	0.2311	0.2299	0.971	0.217	0.0127	1.20
2	1	1 - 2	2024	10	0.0059	0.2311	0.2299	0.971	0.217	0.0127	1.20
3	1	2 - 3	2025	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
4	1	3 - 4	2026	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
5	1	4 - 5	2027	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
6	1	5 - 6	2028	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
7	1	6 - 7	2029	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
8	1	7 - 8	2030	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
9	1	8 - 9	2031	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
10	1	9 - 10	2032	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
11	1	10 - 11	2033	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
12	1	11 - 12	2034	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
13	1	12 - 13	2035	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
14	1	13 - 14	2036	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
15	1	14 - 15	2037	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
16	1	15 - 16	2038	3	0.0059	0.2311	0.2299	0.153	0.034	0.0020	0.19
17	1	16-17	2039	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
18	1	17-18	2040	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
19	1	18-19	2041	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
20	1	19-20	2042	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
21	1	20-21	2043	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
22	1	21-22	2044	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
23	1	22-23	2045	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
24	1	23-24	2046	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
25	1	24-25	2047	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
26	1	25-26	2048	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
27	1	26-27	2049	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
28	1	27-28	2050	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
29	1	28-29	2051	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
30	1	29-30	2052	1	0.0059	0.2311	0.2299	0.017	0.004	0.0002	0.021
Total Increased Cancer Risk								4.40	0.982	0.058	5.4

* Third trimester of pregnancy

Maximum
 Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
 0.0012 0.14

3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Broadway
Maximum DPM Cancer Risk and PM2.5 Calculations From Broadway on Site MEI
Impacts at On-Site Residence - 4th Floor, 1.5 meter receptor height

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: $CPF = \text{Cancer potency factor (mg/kg-day)}^1$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0003	0.0187	0.0274	0.003	0.001	0.0001	0.00
1	1	0 - 1	2023	10	0.0003	0.0187	0.0274	0.041	0.018	0.0015	0.06
2	1	1 - 2	2024	10	0.0003	0.0187	0.0274	0.041	0.018	0.0015	0.06
3	1	2 - 3	2025	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
4	1	3 - 4	2026	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
5	1	4 - 5	2027	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
6	1	5 - 6	2028	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
7	1	6 - 7	2029	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
8	1	7 - 8	2030	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
9	1	8 - 9	2031	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
10	1	9 - 10	2032	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
11	1	10 - 11	2033	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
12	1	11 - 12	2034	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
13	1	12 - 13	2035	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
14	1	13 - 14	2036	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
15	1	14 - 15	2037	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
16	1	15 - 16	2038	3	0.0003	0.0187	0.0274	0.006	0.003	0.0002	0.01
17	1	16-17	2039	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
18	1	17-18	2040	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
19	1	18-19	2041	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
20	1	19-20	2042	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
21	1	20-21	2043	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
22	1	21-22	2044	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
23	1	22-23	2045	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
24	1	23-24	2046	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
25	1	24-25	2047	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
26	1	25-26	2048	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
27	1	26-27	2049	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
28	1	27-28	2050	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
29	1	28-29	2051	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
30	1	29-30	2052	1	0.0003	0.0187	0.0274	0.001	0.000	0.0000	0.001
Total Increased Cancer Risk								0.19	0.080	0.007	0.3

* Third trimester of pregnancy

Maximum
 Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
 0.0001 0.02

**3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Piedmont
Maximum DPM Cancer Risk and PM2.5 Calculations From Piedmont on Site MEI
Impacts at On-Site Residence - 4th Floor, 1.5 meter receptor height**

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate ($\text{L/kg body weight-day}$)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure	Age	Year	Age Sensitivity Factor		Exhaust	Evaporative	DPM	Exhaust TOG	Evaporative TOG	
	Duration (years)				DPM	TOG	TOG				
0	0.25	-0.25 - 0*	2023	10	0.0001	0.0126	0.0182	0.002	0.001	0.0001	0.00
1	1	0 - 1	2023	10	0.0001	0.0126	0.0182	0.023	0.012	0.0010	0.04
2	1	1 - 2	2024	10	0.0001	0.0126	0.0182	0.023	0.012	0.0010	0.04
3	1	2 - 3	2025	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
4	1	3 - 4	2026	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
5	1	4 - 5	2027	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
6	1	5 - 6	2028	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
7	1	6 - 7	2029	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
8	1	7 - 8	2030	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
9	1	8 - 9	2031	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
10	1	9 - 10	2032	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
11	1	10 - 11	2033	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
12	1	11 - 12	2034	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
13	1	12 - 13	2035	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
14	1	13 - 14	2036	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
15	1	14 - 15	2037	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
16	1	15 - 16	2038	3	0.0001	0.0126	0.0182	0.004	0.002	0.0002	0.01
17	1	16-17	2039	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
18	1	17-18	2040	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
19	1	18-19	2041	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
20	1	19-20	2042	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
21	1	20-21	2043	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
22	1	21-22	2044	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
23	1	22-23	2045	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
24	1	23-24	2046	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
25	1	24-25	2047	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
26	1	25-26	2048	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
27	1	26-27	2049	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
28	1	27-28	2050	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
29	1	28-29	2051	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
30	1	29-30	2052	1	0.0001	0.0126	0.0182	0.000	0.000	0.0000	0.001
Total Increased Cancer Risk								0.10	0.054	0.005	0.16

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0000 0.01

3400 Broadway & 3404 Piedmont, Oakland, CA - I-580 Impacts**Maximum DPM Cancer Risk and PM2.5 Calculations From I-580 on Site MEI Impacts at On-Site Residence - 5th Floor 1.5 meter receptor height****Cancer Risk Calculation Method**

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate ($\text{L/kg body weight-day}$)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0035	0.1410	0.1423	0.048	0.011	0.0007	0.06
1	1	0 - 1	2023	10	0.0035	0.1410	0.1423	0.575	0.132	0.0079	0.71
2	1	1 - 2	2024	10	0.0035	0.1410	0.1423	0.575	0.132	0.0079	0.71
3	1	2 - 3	2025	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
4	1	3 - 4	2026	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
5	1	4 - 5	2027	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
6	1	5 - 6	2028	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
7	1	6 - 7	2029	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
8	1	7 - 8	2030	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
9	1	8 - 9	2031	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
10	1	9 - 10	2032	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
11	1	10 - 11	2033	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
12	1	11 - 12	2034	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
13	1	12 - 13	2035	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
14	1	13 - 14	2036	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
15	1	14 - 15	2037	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
16	1	15 - 16	2038	3	0.0035	0.1410	0.1423	0.091	0.021	0.0012	0.11
17	1	16-17	2039	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
18	1	17-18	2040	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
19	1	18-19	2041	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
20	1	19-20	2042	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
21	1	20-21	2043	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
22	1	21-22	2044	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
23	1	22-23	2045	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
24	1	23-24	2046	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
25	1	24-25	2047	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
26	1	25-26	2048	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
27	1	26-27	2049	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
28	1	27-28	2050	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
29	1	28-29	2051	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
30	1	29-30	2052	1	0.0035	0.1410	0.1423	0.010	0.002	0.0001	0.012
Total Increased Cancer Risk								2.61	0.599	0.036	3.24

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0007 0.01

3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Broadway
Maximum DPM Cancer Risk and PM2.5 Calculations From Broadway on Site MEI
Impacts at On-Site Residence - 5th Floor, 1.5 meter receptor height

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: $CPF = \text{Cancer potency factor (mg/kg-day)}^{-1}$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day^{-1})

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0002	0.0107	0.0156	0.002	0.001	0.0001	0.00
1	1	0 - 1	2023	10	0.0002	0.0107	0.0156	0.026	0.010	0.0009	0.04
2	1	1 - 2	2024	10	0.0002	0.0107	0.0156	0.026	0.010	0.0009	0.04
3	1	2 - 3	2025	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
4	1	3 - 4	2026	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
5	1	4 - 5	2027	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
6	1	5 - 6	2028	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
7	1	6 - 7	2029	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
8	1	7 - 8	2030	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
9	1	8 - 9	2031	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
10	1	9 - 10	2032	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
11	1	10 - 11	2033	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
12	1	11 - 12	2034	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
13	1	12 - 13	2035	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
14	1	13 - 14	2036	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
15	1	14 - 15	2037	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
16	1	15 - 16	2038	3	0.0002	0.0107	0.0156	0.004	0.002	0.0001	0.01
17	1	16-17	2039	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
18	1	17-18	2040	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
19	1	18-19	2041	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
20	1	19-20	2042	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
21	1	20-21	2043	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
22	1	21-22	2044	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
23	1	22-23	2045	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
24	1	23-24	2046	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
25	1	24-25	2047	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
26	1	25-26	2048	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
27	1	26-27	2049	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
28	1	27-28	2050	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
29	1	28-29	2051	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
30	1	29-30	2052	1	0.0002	0.0107	0.0156	0.000	0.000	0.0000	0.001
Total Increased Cancer Risk								0.12	0.045	0.004	0.17

* Third trimester of pregnancy

Maximum
 Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
 0.0000 0.01

**3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Piedmont
Maximum DPM Cancer Risk and PM2.5 Calculations From Piedmont on Site MEI
Impacts at On-Site Residence - 5th Floor, 1.5 meter receptor height**

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: $CPF = \text{Cancer potency factor (mg/kg-day)}^{-1}$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day^{-1})

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL		
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor		Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG			
					DPM								
0	0.25	-0.25 - 0*	2023	10	0.0001	0.0073	0.0105	0.001	0.001	0.0000	0.00		
1	1	0 - 1	2023	10	0.0001	0.0073	0.0105	0.015	0.007	0.0006	0.02		
2	1	1 - 2	2024	10	0.0001	0.0073	0.0105	0.015	0.007	0.0006	0.02		
3	1	2 - 3	2025	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
4	1	3 - 4	2026	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
5	1	4 - 5	2027	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
6	1	5 - 6	2028	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
7	1	6 - 7	2029	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
8	1	7 - 8	2030	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
9	1	8 - 9	2031	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
10	1	9 - 10	2032	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
11	1	10 - 11	2033	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
12	1	11 - 12	2034	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
13	1	12 - 13	2035	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
14	1	13 - 14	2036	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
15	1	14 - 15	2037	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
16	1	15 - 16	2038	3	0.0001	0.0073	0.0105	0.002	0.001	0.0001	0.00		
17	1	16-17	2039	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
18	1	17-18	2040	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
19	1	18-19	2041	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
20	1	19-20	2042	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
21	1	20-21	2043	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
22	1	21-22	2044	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
23	1	22-23	2045	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
24	1	23-24	2046	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
25	1	24-25	2047	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
26	1	25-26	2048	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
27	1	26-27	2049	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
28	1	27-28	2050	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
29	1	28-29	2051	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
30	1	29-30	2052	1	0.0001	0.0073	0.0105	0.000	0.000	0.0000	0.000		
Total Increased Cancer Risk								0.07	0.031	0.003	0.10		

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0000 0.01

3400 Broadway & 3404 Piedmont, Oakland, CA - I-580 Impacts**Maximum DPM Cancer Risk and PM2.5 Calculations From I-580 on Site MEI Impacts at On-Site Residence - 6th Floor 1.5 meter receptor height****Cancer Risk Calculation Method**

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0022	0.0908	0.0929	0.030	0.007	0.0004	0.04
1	1	0 - 1	2023	10	0.0022	0.0908	0.0929	0.358	0.085	0.0051	0.45
2	1	1 - 2	2024	10	0.0022	0.0908	0.0929	0.358	0.085	0.0051	0.45
3	1	2 - 3	2025	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
4	1	3 - 4	2026	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
5	1	4 - 5	2027	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
6	1	5 - 6	2028	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
7	1	6 - 7	2029	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
8	1	7 - 8	2030	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
9	1	8 - 9	2031	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
10	1	9 - 10	2032	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
11	1	10 - 11	2033	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
12	1	11 - 12	2034	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
13	1	12 - 13	2035	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
14	1	13 - 14	2036	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
15	1	14 - 15	2037	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
16	1	15 - 16	2038	3	0.0022	0.0908	0.0929	0.056	0.013	0.0008	0.07
17	1	16-17	2039	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
18	1	17-18	2040	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
19	1	18-19	2041	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
20	1	19-20	2042	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
21	1	20-21	2043	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
22	1	21-22	2044	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
23	1	22-23	2045	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
24	1	23-24	2046	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
25	1	24-25	2047	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
26	1	25-26	2048	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
27	1	26-27	2049	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
28	1	27-28	2050	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
29	1	28-29	2051	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
30	1	29-30	2052	1	0.0022	0.0908	0.0929	0.006	0.001	0.0001	0.008
Total Increased Cancer Risk								1.62	0.386	0.023	2.0

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 (µg/m3)
0.0004 0.05

3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Broadway
Maximum DPM Cancer Risk and PM2.5 Calculations From Broadway on Site MEI
Impacts at On-Site Residence - 6th Floor, 1.5 meter receptor height

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: $CPF = \text{Cancer potency factor (mg/kg-day)}^{-1}$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day^{-1})

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0001	0.0065	0.0096	0.001	0.001	0.0000	0.00
1	1	0 - 1	2023	10	0.0001	0.0065	0.0096	0.016	0.006	0.0005	0.02
2	1	1 - 2	2024	10	0.0001	0.0065	0.0096	0.016	0.006	0.0005	0.02
3	1	2 - 3	2025	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
4	1	3 - 4	2026	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
5	1	4 - 5	2027	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
6	1	5 - 6	2028	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
7	1	6 - 7	2029	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
8	1	7 - 8	2030	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
9	1	8 - 9	2031	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
10	1	9 - 10	2032	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
11	1	10 - 11	2033	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
12	1	11 - 12	2034	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
13	1	12 - 13	2035	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
14	1	13 - 14	2036	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
15	1	14 - 15	2037	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
16	1	15 - 16	2038	3	0.0001	0.0065	0.0096	0.003	0.001	0.0001	0.00
17	1	16-17	2039	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
18	1	17-18	2040	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
19	1	18-19	2041	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
20	1	19-20	2042	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
21	1	20-21	2043	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
22	1	21-22	2044	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
23	1	22-23	2045	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
24	1	23-24	2046	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
25	1	24-25	2047	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
26	1	25-26	2048	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
27	1	26-27	2049	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
28	1	27-28	2050	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
29	1	28-29	2051	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
30	1	29-30	2052	1	0.0001	0.0065	0.0096	0.000	0.000	0.0000	0.000
Total Increased Cancer Risk								0.07	0.028	0.002	0.1

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0000 0.01

**3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Piedmont
Maximum DPM Cancer Risk and PM2.5 Calculations From Piedmont on Site MEI
Impacts at On-Site Residence - 6th Floor, 1.5 meter receptor height**

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: $CPF = \text{Cancer potency factor (mg/kg-day)}^{-1}$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day^{-1})

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0001	0.0043	0.0062	0.001	0.000	0.0000	0.00
1	1	0 - 1	2023	10	0.0001	0.0043	0.0062	0.008	0.004	0.0003	0.01
2	1	1 - 2	2024	10	0.0001	0.0043	0.0062	0.008	0.004	0.0003	0.01
3	1	2 - 3	2025	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
4	1	3 - 4	2026	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
5	1	4 - 5	2027	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
6	1	5 - 6	2028	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
7	1	6 - 7	2029	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
8	1	7 - 8	2030	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
9	1	8 - 9	2031	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
10	1	9 - 10	2032	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
11	1	10 - 11	2033	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
12	1	11 - 12	2034	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
13	1	12 - 13	2035	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
14	1	13 - 14	2036	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
15	1	14 - 15	2037	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
16	1	15 - 16	2038	3	0.0001	0.0043	0.0062	0.001	0.001	0.0001	0.00
17	1	16-17	2039	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
18	1	17-18	2040	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
19	1	18-19	2041	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
20	1	19-20	2042	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
21	1	20-21	2043	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
22	1	21-22	2044	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
23	1	22-23	2045	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
24	1	23-24	2046	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
25	1	24-25	2047	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
26	1	25-26	2048	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
27	1	26-27	2049	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
28	1	27-28	2050	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
29	1	28-29	2051	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
30	1	29-30	2052	1	0.0001	0.0043	0.0062	0.000	0.000	0.0000	0.000
Total Increased Cancer Risk								0.04	0.018	0.002	0.1

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0000 0.00

3400 Broadway & 3404 Piedmont, Oakland, CA - I-580 Impacts**Maximum DPM Cancer Risk and PM2.5 Calculations From I-580 on Site MEI Impacts at On-Site Residence - 7th Floor 1.5 meter receptor height****Cancer Risk Calculation Method**

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0015	0.0633	0.0654	0.020	0.005	0.0003	0.03
1	1	0 - 1	2023	10	0.0015	0.0633	0.0654	0.245	0.059	0.0036	0.31
2	1	1 - 2	2024	10	0.0015	0.0633	0.0654	0.245	0.059	0.0036	0.31
3	1	2 - 3	2025	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
4	1	3 - 4	2026	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
5	1	4 - 5	2027	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
6	1	5 - 6	2028	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
7	1	6 - 7	2029	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
8	1	7 - 8	2030	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
9	1	8 - 9	2031	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
10	1	9 - 10	2032	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
11	1	10 - 11	2033	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
12	1	11 - 12	2034	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
13	1	12 - 13	2035	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
14	1	13 - 14	2036	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
15	1	14 - 15	2037	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
16	1	15 - 16	2038	3	0.0015	0.0633	0.0654	0.039	0.009	0.0006	0.05
17	1	16-17	2039	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
18	1	17-18	2040	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
19	1	18-19	2041	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
20	1	19-20	2042	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
21	1	20-21	2043	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
22	1	21-22	2044	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
23	1	22-23	2045	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
24	1	23-24	2046	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
25	1	24-25	2047	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
26	1	25-26	2048	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
27	1	26-27	2049	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
28	1	27-28	2050	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
29	1	28-29	2051	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
30	1	29-30	2052	1	0.0015	0.0633	0.0654	0.004	0.001	0.0001	0.005
Total Increased Cancer Risk								1.11	0.269	0.016	1.4

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 (µg/m3)
0.0003 0.04

3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Broadway
Maximum DPM Cancer Risk and PM2.5 Calculations From Broadway on Site MEI
Impacts at On-Site Residence - 7th Floor, 1.5 meter receptor height

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: $CPF = \text{Cancer potency factor (mg/kg-day)}^{-1}$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day^{-1})

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0001	0.0044	0.0064	0.001	0.000	0.0000	0.00
1	1	0 - 1	2023	10	0.0001	0.0044	0.0064	0.010	0.004	0.0004	0.01
2	1	1 - 2	2024	10	0.0001	0.0044	0.0064	0.010	0.004	0.0004	0.01
3	1	2 - 3	2025	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
4	1	3 - 4	2026	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
5	1	4 - 5	2027	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
6	1	5 - 6	2028	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
7	1	6 - 7	2029	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
8	1	7 - 8	2030	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
9	1	8 - 9	2031	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
10	1	9 - 10	2032	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
11	1	10 - 11	2033	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
12	1	11 - 12	2034	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
13	1	12 - 13	2035	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
14	1	13 - 14	2036	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
15	1	14 - 15	2037	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
16	1	15 - 16	2038	3	0.0001	0.0044	0.0064	0.002	0.001	0.0001	0.00
17	1	16-17	2039	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
18	1	17-18	2040	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
19	1	18-19	2041	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
20	1	19-20	2042	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
21	1	20-21	2043	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
22	1	21-22	2044	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
23	1	22-23	2045	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
24	1	23-24	2046	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
25	1	24-25	2047	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
26	1	25-26	2048	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
27	1	26-27	2049	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
28	1	27-28	2050	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
29	1	28-29	2051	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
30	1	29-30	2052	1	0.0001	0.0044	0.0064	0.000	0.000	0.0000	0.000
Total Increased Cancer Risk								0.04	0.019	0.002	0.1

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0000 0.00

**3400 Broadway & 3404 Piedmont, Oakland, CA - Impacts from Piedmont
Maximum DPM Cancer Risk and PM2.5 Calculations From Piedmont on Site MEI
Impacts at On-Site Residence - 7th Floor, 1.5 meter receptor height**

Cancer Risk Calculation Method

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: $CPF = \text{Cancer potency factor (mg/kg-day)}^{-1}$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air ($\mu\text{g}/\text{m}^3$)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day^{-1})

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.00
1	1	0 - 1	2023	10	0.0000	0.0027	0.0038	0.005	0.002	0.0002	0.01
2	1	1 - 2	2024	10	0.0000	0.0027	0.0038	0.005	0.002	0.0002	0.01
3	1	2 - 3	2025	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
4	1	3 - 4	2026	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
5	1	4 - 5	2027	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
6	1	5 - 6	2028	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
7	1	6 - 7	2029	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
8	1	7 - 8	2030	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
9	1	8 - 9	2031	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
10	1	9 - 10	2032	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
11	1	10 - 11	2033	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
12	1	11 - 12	2034	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
13	1	12 - 13	2035	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
14	1	13 - 14	2036	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
15	1	14 - 15	2037	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
16	1	15 - 16	2038	3	0.0000	0.0027	0.0038	0.001	0.000	0.0000	0.00
17	1	16-17	2039	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
18	1	17-18	2040	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
19	1	18-19	2041	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
20	1	19-20	2042	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
21	1	20-21	2043	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
22	1	21-22	2044	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
23	1	22-23	2045	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
24	1	23-24	2046	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
25	1	24-25	2047	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
26	1	25-26	2048	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
27	1	26-27	2049	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
28	1	27-28	2050	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
29	1	28-29	2051	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
30	1	29-30	2052	1	0.0000	0.0027	0.0038	0.000	0.000	0.0000	0.000
Total Increased Cancer Risk								0.02	0.011	0.001	0.03

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 ($\mu\text{g}/\text{m}^3$)
0.0000 0.00

3400 Broadway & 3404 Piedmont, Oakland, CA
AERMOD Risk Modeling Parameters and Maximum Onsite Concentrations
at Project MEI Receptor - 2nd Floor

Emissions Year 2023

Receptor Information

Number of Receptors 24
 Receptor Height (in m) = 1.5 (6.1m)
 Receptor Distances = 5m

Meteorological Conditions

BAAQMD Oakland Airport Met Data 2013 - 2017
 Land Use Classification urban
 Wind Speed = variable
 Wind Direction = variable

2nd Floor MEI Concentrations from I580

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.01028	0.52147	0.4996

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.29949	0.25936	0.04013

2nd Floor MEI Concentrations from Broadway

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00048	0.06603	0.09676

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.0535	0.04929	0.00421

2nd Floor MEI Concentrations from Piedmont

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.0004	0.05691	0.08225

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.04373	0.04011	0.00362

3400 Broadway & 3404 Piedmont, Oakland, CA
AERMOD Risk Modeling Parameters and Maximum Onsite Concentrations
at Project MEI Receptor - 3rd Floor

Emissions Year 2023

Receptor Information

Number of Receptors 24

Receptor Height (in m) = 1.5 (9.1m)

Receptor Distances = 5m

Meteorological Conditions

BAAQMD Oakland Airport Met Data 2013 - 2017

Land Use Classification urban

Wind Speed = variable

Wind Direction = variable

3rd Floor MEI Concentrations from I580

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00755	0.35153	0.33772

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.20214	0.1751	0.02704

3rd Floor MEI Concentrations from Broadway

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00036	0.03628	0.05317

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.02939	0.02708	0.00231

3rd Floor MEI Concentrations from Piedmont

Meteorological Data Years	2023 Concentrations ($\mu\text{g}/\text{m}^3$)		
	DPM	Exhaust TOG	Evaporative TOG
2013 - 2017	0.00029	0.02592	0.03747

Meteorological Data Years	2023 PM2.5 Concentrations ($\mu\text{g}/\text{m}^3$)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013 - 2017	0.01995	0.0183	0.00165

3400 Broadway & 3404 Piedmont, Oakland, CA - I-580 Impacts**Maximum DPM Cancer Risk and PM2.5 Calculations From I-580 on Site MEI Impacts at On-Site Residence - 2nd Floor, 1.5 meter receptor height****Cancer Risk Calculation Method**

Cancer Risk (per million) = $CPF \times \text{Inhalation Dose} \times ASF \times ED/AT \times FAH \times 1.0E6$

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2023	10	0.0103	0.5215	0.4996	0.140	0.040	0.0023	0.18
1	1	0 - 1	2023	10	0.0103	0.5215	0.4996	1.688	0.489	0.0276	2.21
2	1	1 - 2	2024	10	0.0103	0.5215	0.4996	1.688	0.489	0.0276	2.21
3	1	2 - 3	2025	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
4	1	3 - 4	2026	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
5	1	4 - 5	2027	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
6	1	5 - 6	2028	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
7	1	6 - 7	2029	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
8	1	7 - 8	2030	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
9	1	8 - 9	2031	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
10	1	9 - 10	2032	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
11	1	10 - 11	2033	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
12	1	11 - 12	2034	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
13	1	12 - 13	2035	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
14	1	13 - 14	2036	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
15	1	14 - 15	2037	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
16	1	15 - 16	2038	3	0.0103	0.5215	0.4996	0.266	0.077	0.0043	0.35
17	1	16-17	2039	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
18	1	17-18	2040	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
19	1	18-19	2041	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
20	1	19-20	2042	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
21	1	20-21	2043	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
22	1	21-22	2044	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
23	1	22-23	2045	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
24	1	23-24	2046	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
25	1	24-25	2047	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
26	1	25-26	2048	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
27	1	26-27	2049	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
28	1	27-28	2050	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
29	1	28-29	2051	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
30	1	29-30	2052	1	0.0103	0.5215	0.4996	0.030	0.009	0.0005	0.039
Total Increased Cancer Risk								7.65	2.216	0.125	9.99

* Third trimester of pregnancy

Maximum
Hazard Index Total PM2.5 (µg/m3)
0.0021 0.30

Attachment 5: Stationary Sources

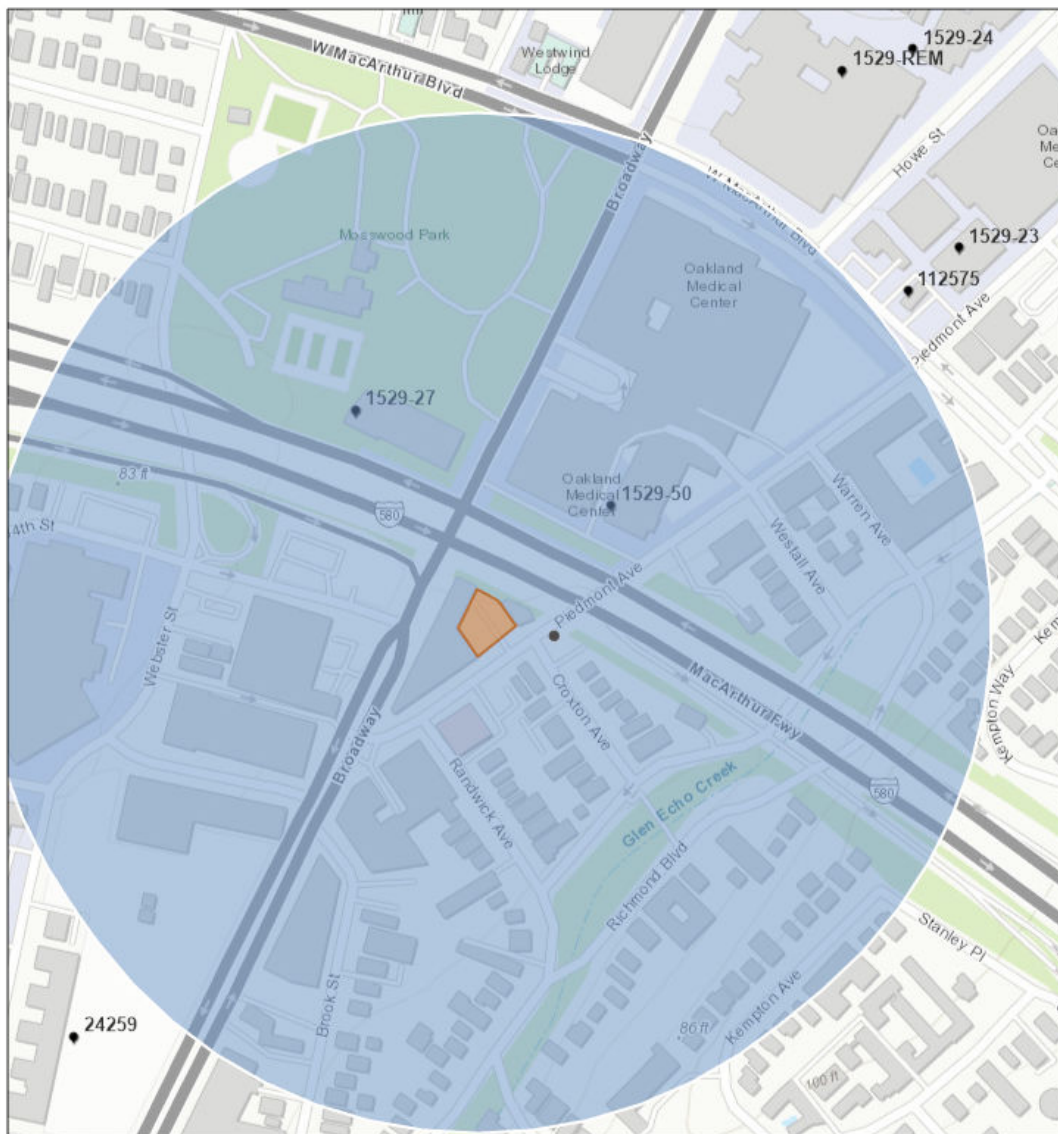


Stationary Source Risk & Hazards Screening Report

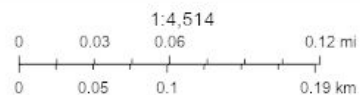
Area of Interest (AOI) Information

Area : 3,529,554.85 ft²

Jun 30 2021 12:23:17 Mountain Daylight Time



• Permitted Facilities 2018



Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDO

Summary

Name	Count	Area(ft ²)	Length(ft)
Permitted Facilities 2018	3	N/A	N/A

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	1529-27	Kaiser Permanente Medical Cent	280 W MacArthur Blvd	Oakland	CA
2	1529-28	Kaiser Permanente Medical Cent	280 W MacArthur Blvd	Oakland	CA
3	1529-50	Kaiser Permanente Medical Cent	280 W MacArthur Blvd	Oakland	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	94611	Santa Clara	5.180	0.010	0.010	Generators	1
2	94611	Santa Clara	5.180	0.010	0.010	Generators	1
3	94611	Santa Clara	1.290	0.000	0.000	Generators	1

Note: The estimated risk and hazard impacts from these sources would be expected to be substantially lower when site specific Health Risk Screening Assessments are conducted.

The screening level map is not recommended for evaluating sensitive land uses such as schools, senior centers, day cares, and health facilities.

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

[Click here for guidance on conducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.](#)

[Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.](#)

Table A: Requester Contact Information

Date of Request	
Contact Name	
Affiliation	
Phone	
Email	
Project Name	3404 Piedmont
Address	
City	Oakland
County	Alameda
Type (residential, commercial, mixed use, industrial, etc.)	Residential
Project Size (# of units or building square feet)	
Comments: Onsite HRA Only	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in **Table A**. Complete forms will not be processed. Please include a project site map.
2. Download and install the free program Google Earth, <http://www.google.com/earth/download/ge/>, and then download the county specific Google Earth stationary source application files from the District's website, <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>. The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.
3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.
4. Identify stationary sources within at least a 1000-foot radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth search box to confirm the source's address location. Please report any mapping errors to the District.
5. List the stationary source information in **Table B** - Stationary Source section only.
6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRS) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRS values are presented, these values have already been modeled and cannot be adjusted further.
7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Table B: Google Earth data											Project Site			
Distance from Receptor (feet) or MEI ¹	Plant No.	Facility Name	Address	Cancer Risk ²	Hazard Risk ²	PM _{2.5} ²	Source No. ³	Type of Source ⁴	Fuel Code ⁵	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
280	1529-50	Kaiser Permanente Medical Center Generator	280 W MacArthur Blvd	1.29	0.00	0		Contact BAAQMD		2018 Dataset	0.28	0.36	0.000	0.000
508	1529-27	Kaiser Permanente Medical Center Generator	280 W MacArthur Blvd	5.18	0.01	0.01		Contact BAAQMD		2018 Dataset	0.12	0.62	0.001	0.0012
508	1529-28	Kaiser Permanente Medical Center Generator	280 W MacArthur Blvd	5.18	0.01	0.01		Contact BAAQMD		2018 Dataset	0.12	0.62	0.0012	0.001

ATTACHMENT F: HISTORIC PROJECT EVALUATION

November 17, 2021

**3400 Broadway/3403 Piedmont Ave., Oakland
Historic Project Evaluation**

Introduction

The intent of this historic project evaluation is to determine whether a proposed project meets applicable historical standards for environmental planning purposes specific to the California Environmental Quality Act (CEQA). Towards that end, this effort addresses a currently proposed project at 3403 Piedmont Ave. with respect to identified historic resources and to specifically determine if the project could have a detrimental effect on identified historic resources

The project site is located one parcel in from the foot of Piedmont Ave., where Piedmont intersects with Broadway in an acute angle variously referred to as a gore or flatiron corner. The subject parcel has two parts, a northern half fronting on Broadway and a southern half fronting on Piedmont. As those two parts square up to their associated frontages, the parcel is crooked at its east-west centerline. Further, the existing building at 3400 Broadway stands in the northern half of the lot whereas the Piedmont Ave. half is an open parking lot.

The project site additionally incorporates a small triangular parcel abutting the eastern side at the Piedmont Ave. front. Its small size and unique shape are a consequence of the elevated MacArthur Freeway that crosses above and directly east of the subject site, which was erected in the early 1960s and which diagonally bisected the building that then stood on that site, so approximately half of that building remains.

The existing 3400 Broadway building, which stands on the northern half of the project site, was designed and constructed in 1916-1917 as a storage warehouse for the Lyon Moving and Storage Co., thus the building's historic name – the Lyon Moving and Storage Co. Warehouse (Richardson and Burrell, architects). While currently referred to as the “Saw Mill Building,” that name was given the building c1979 when the use was converted from storage to furniture manufacturing and sales. The 3400 Broadway building is 5-1/2 stories of concrete frame and slab construction with exterior brick infill walls and a 3-story exposed steel-framed tower atop the roof. The exterior concrete frame has a wide range of integrally cast ornamentation. The tower framing is a remnant of the 3-story, campanile-like tower that was original to the building, yet its exterior construction was removed in the wake of the 1989 Loma Prieta Earthquake. Evidently, at that same time, the original and existing exterior brick was heavily repaired and heavily coated.

The project site does not contain a building that qualifies as an historic resource under CEQA. The small existing building at 3405 Piedmont is, per the City of Oakland Cultural Heritage Survey (OCHS), an F3 rated resource, thus without historic resource potential. The F rating stems from the reality that the former lab building was chopped in half — diagonally — and greatly altered when the freeway was constructed, so it has been “modernized.” And the 3 rating means it does not stand within any potential historic district. Thus, 3405 Piedmont Ave. is not an historic resource.

The existing building at 3400 Broadway is, again per the OCHS, a D rated resource. The D rating identifies the individual resource as having “minor significance” and which rating, as stated, does not reach the threshold for historic resource consideration under CEQA. Additionally, the OCHS rating for 3400 Broadway includes a contingency rating of b+, which indicates that the resource could

achieve that higher rating were it restored, which has not occurred and is not currently proposed, so the individual D rating stands. That rating is additionally justified, as the 3400 Broadway building has experienced a range of substantial alterations, including the removal of its original campanile tower and the extensive repair and coating of all of the original exterior brick masonry. Based on the evidence, neither of these substantive alterations are realistically reversible.

Due to the fact that the building has been so substantially altered, 3400 Broadway has previously and consistently been recorded as National Register (NR) and CR ineligible – including in the City of Oakland's 2014 Broadway-Valdez District Specific Plan. Yet, per the California State Office of Historic Preservation's current *Building Environment Resource Database (BERD)*, a 2019 National Historic Preservation Act Section 106 process for a telecommunications project (with the Federal Communications Commission as the lead agency) recorded the building as NR eligible. However, based on specific information requests, no documentation of that Section 106 process is available via the Northwest Information Center (NWIC) of the California Historical Resources Information System, so that NR eligible recordation appears to be erroneous. Moreover, in addition to each of its prior evaluations, a 2015 FCC Section 106 process listed 3400 Broadway as not NR eligible. And a detailed, 2013 evaluation provided by the NWIC records 3400 Broadway as NR and CR ineligible. Therefore, based on all the available records and evidence, the 3400 Broadway building is not individually NR or CR eligible so is not an individual historic resource under CEQA.

There is also mixed information concerning the inclusion of the 3400 Broadway site and building in an Area of Secondary Importance (ASI), which is a potential historic district referred to as the Upper Broadway Auto Row ASI. Again, the bulk of the evidence confirms that the proposed project and its site are not within that ASI boundary (nor are ASIs or their contributing resources recognized by the City of Oakland as historic resources per CEQA).

Historic resource considerations are therefore limited to the potential effect that the proposed project may have on the directly adjoining historic resource at 3330-3360 Broadway/3301 Piedmont Ave. (an OCHS "B" rated building, thus an historic resource under CEQA).

For reference, the previous 3400 Broadway and 3330-3360 Broadway/3301 Piedmont Ave. historic resource evaluation forms from the OCHS and the NWIC are attached.

Historic Resource Summary

The existing 3330-3360 Broadway/3301 Piedmont Ave. building stands at the gore corner of Broadway and Piedmont with fronts on each and with a prominent flat-faced corner. It is symmetrical about its corner in its southwest-northeast axis. The historic and existing auto showroom building is a tall single story, its exterior walls composed of regularly spaced brick piers infilled with large show windows and spanned by a high brick transom and parapet wall. The Broadway front is eight bays long. A single, narrow bay fronts the building corner and the façade treatment returns around the Piedmont front for three bays before giving way to a long concrete framed and partially infilled wall – with a variety of full height and upper windows and a loading door – under the continuous brick spandrel with a final brick pier at the easternmost corner.

The building's rear (northwest) exterior wall is in two planes, each perpendicular to their respective streets, thus with a fold at the centerline and on axis with the gore corner. The northern angled wall directly abuts and is largely concealed by the existing 3400 Broadway building while the other half

faces the presently open 3403 Piedmont site. The exposed portion of this folded exterior wall is painted brick without any openings or ornamental elements.

Evaluation

The following evaluation addresses a currently proposed project (Sawmill Residences/3403 Piedmont Ave., Oakland, CA; OWOW Design, 28 sheets dated 9/10/2021) and with respect to identified historic resources. The project consists of the proposed construction of a new, multi-story, freestanding building on the vacant, southern half of the project site. That portion of the site formerly housed a 2-story garage building and that was evidently used for parking and loading by the moving and storage companies that occupied the 3400 Broadway building. That former garage structure was removed c1979.

As this historic resource evaluation is for environmental planning purposes specific to CEQA, the Secretary of the Interior's *Standards for the Treatment of Historic Properties (Standards)* are applied in order to determine if the project could have a detrimental effect on identified historic resources.

The proposed project will infill a portion of the project site. A large portion of the new building site will stand in the footprint of the previous building. A smaller portion will require the removal of an existing non-historic building.

The proposed building is independent of the two existing, adjoining buildings that are to remain: 3400 Broadway which, as summarized, is not an historic resource under CEQA; and 3330-3360 Broadway, which is an identified historic resource. No materials, features, etc. of either of those two buildings will be directly affected by the proposed building.

As the project will add new construction directly adjacent to an historic resource (3330-3360 Broadway/3301 Piedmont), the appropriate treatment and evaluation *Standard* is that of *Rehabilitation*. As the proposed project will not change the historic and existing commercial use and will also not destroy or change any of its historic materials, features or spaces, applicable *Standards* for *Rehabilitation* are 9 and 10, as follows:

9. ***New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.***

The proposed project constitutes new construction related to the historic 3330-3360 Broadway/3301 Piedmont Ave. building.

A previous design iteration of the proposed project was reviewed by Oakland Planning, who provided consultation, raised initial concerns re: compatibility of the new construction specific to the subject block, and commented that without improved compatibility, the related new construction could have the potential to substantially impact the historic significance of the adjacent historic building.

Consequently, the proposed project has been revised with substantially increased compatibility within its block and, specifically, relative to the adjoining historic resource. Compatibility treatments include:

- The massing and design of the proposed building's westerly facing wall is similar to the existing westerly wall of the 3400 Broadway building – i.e., similarly monolithic, enframed and light colored – so those paired walls will serve as a balanced backdrop to the gore-corner building at 3330-3360 Broadway/3301 Piedmont Ave.
- The base for the proposed building along the Piedmont Ave. frontage has been designed to relate to the height of the historic 3330-3360 Broadway/3301 Piedmont Ave. building.
- The vertical rhythm of the Piedmont Ave. façade of the proposed new building has also been designed to better relate to historic facades of the area and to the adjacent historic resource in particular.

Overall, the proposed new construction does not affect historic materials, features or spatial relationships that characterize the historic resource or its context. The form and placement of the new work is clearly differentiated and, per the above, deferential to while also clearly compatible with the historic resource and its setting.

With respect to the integrity of the subject resources (based on the aspects of integrity under the *National Register of Historic Places Bulletin 15*):

- The Project will cause no erosion of historic location, setting, feeling or association;
- The Project will also cause no erosion of the integrity of the historic design, materials and workmanship of the historic 3330-3360 Broadway/3301 Piedmont Ave. building.

Consequently, the proposed project meets *Standard 9*.


10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

As it will stand independent of existing buildings, including the historic 3330-3360 Broadway/3301 Piedmont Ave. building, were the proposed new construction removed in the future, the essential forms, elements, materials and spatial relationships of the historic resource and its setting would remain, so the integrity of the historic resource and its environment will not be impaired.

Thus, the proposed project meets *Standard 10*.

In conclusion, the proposed project at 3403 Piedmont Avenue complies with the *Standards for Rehabilitation*.

Signed:



Mark Hulbert
Preservation Architect &
Historic Resources Consultant

attached: State Department of Parks & Recreation (DPR) 523 Forms, 3330-3360 Broadway/3301 Piedmont Ave. and 3400 Broadway

ATTACHMENT G: NORTHWEST INFORMATION CENTER RECORDS AND SACRED LANDS FILES SEARCH RESULTS

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM



ALAMEDA
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DEL NORTE

HUMBOLDT
LAKE
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SAN BENITO

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SANTA CLATA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
<http://www.sonoma.edu/nwic>

July 8, 2021

NWIC File No.: 20-2683

Rebecca Auld
Lamphier-Gregory, Inc.
1944 Embarcadero
Oakland, CA 94606

Re: Record search results for the proposed 3404 Piedmont Avenue Project.

Dear Ms. Rebecca Auld:

Per your request received by our office on the 30th of June, 2021, a rapid response records search was conducted for the above referenced project by reviewing pertinent Northwest Information Center (NWIC) base maps that reference cultural resources records and reports, historic-period maps, and literature for Alameda County. Please note that use of the term cultural resources includes both archaeological resources and historical buildings and/or structures.

As per information provided to this office, the 0.326-acre project site currently is being used as a parking lot for the office tenants of the Sawmill Building at 3400 Broadway, which shares the parcel, as well as a small commercial building at 3404 Piedmont Ave, which would be demolished. The site includes Assessor's Parcel Numbers 009-0732-005-02 and 009-0732-006-00. The project site is within the Broadway Valdez Specific Plan (Specific Plan), and based on the project description, this scope assumes the project is generally consistent with relevant policies and regulations and development density.

The project site would be redeveloped with new residential construction consisting of 73 one- and two-bedroom residential units in an 85-foot, 8-story building, including 65 market-rate and 8 affordable units. Twenty-six parking spaces would be provided in 2-level, on-grade mechanical stackers located in the ground floor of the building and internal courtyard with one additional surface-level ADA parking space provided. In addition to parking, the ground floor will contain resident amenities and a small (382 square feet) café on the Piedmont frontage.

Construction details are not yet final, but construction activities are anticipated to disturb approximately 10,624 sq. ft. No substantial excavation or subsurface floor / parking is proposed and grading will even the generally flat site surface and improve utilities. The existing site is almost fully covered by the existing buildings and asphalt surface parking.

Review of this information indicates that there have been no cultural resource study that covers the 3404 Piedmont Avenue Project area. This 3404 Piedmont Avenue Project area contains no recorded archaeological resources. The State Office of Historic Preservation Built Environment Resources Directory (OHP BERD), which includes listings of the California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and the National Register of Historic Places, lists two recorded built resources within and adjacent to the proposed 3404 Piedmont Avenue Project area. The project area is located within the boundary of the Upper Broadway Auto Row District, Primary # 01-009757 (OTIS # 499846) listed with a 7R, meaning this resource was Identified in a Reconnaissance Level Survey or in an Area of Potential Effect (APE), and not evaluated.

In addition, the project area is located adjacent to the Lyon Storage & Moving Co. Warehouse at 3400 Broadway Primary # 01-000348 (OTIS 488900), that is located within the western portion of APN 009-0732-006-00. This building is listed with a 2S2, meaning this resource has been individually determined eligible for the National Register (NR) by consensus through Section 106 process, and listed in the California Register (CR).

At the time of Euroamerican contact the Native Americans that lived in the area were speakers of the Chochenyo language, part of the Costanoan/Ohlone language family (Levy 1978:485). There are Native American resources in the general area of the proposed 3404 Piedmont Avenue Project area referenced in the ethnographic literature (Levy 1976).

Based on an evaluation of the environmental setting and features associated with known sites, Native American resources in this part of Alameda County have been found in areas marginal to the San Francisco Bay shore, Lake Merritt and Oakland Inner Harbor, as well as inland near other intermittent and perennial watercourses and near areas populated by oak, buckeye, manzanita, and pine, as well as near a variety of plant and animal resources. The 3404 Piedmont Avenue Project area is located within the Latest Pleistocene to Holocene alluvial fan deposits between two creeks. Newer maps indicate the project area is located approximately 145 meters west of Glen Echo Creek, formerly known as Cemetery

Creek. Aerial maps indicate the project area is covered in asphalt and buildings, with trees along the northern boundary. Given the similarity of these environmental factors, there is a moderate potential for unrecorded Native American resources to be within the proposed 3404 Piedmont Avenue Project area.

Review of historical literature and maps indicated the possibility of historic-period activity within the 3404 Piedmont Avenue Project area. Early Oakland Area maps indicate the project area contained two or more dwellings with additional accessory buildings (Oakland Sanborn Vol 2 1903:165). With this in mind, there is a high potential for unrecorded historic-period archaeological resources to be within the proposed 3404 Piedmont Avenue Project area.

The 1959 photo revised 1980 Oakland West USGS 15-minute topographic quadrangle depicts an urban area, indicating one or more buildings or structures within the 3404 Piedmont Avenue Project area. If present, these unrecorded buildings or structures meet the Office of Historic Preservation's minimum age standard that buildings, structures, and objects 45 years or older may be of historical value.

RECOMMENDATIONS:

1) There is a moderate potential of identifying Native American archaeological resources and a high potential of identifying historic-period archaeological resources in the project area. Given the fact that construction details are not yet final, and given the potential for archaeological resources in the proposed 3404 Piedmont Avenue Project area, our usual recommendation would include archival research and a field examination, the proposed project area, however, has been highly developed and is presently covered with asphalt, buildings, or fill that obscures the visibility of original surface soils, which negates the feasibility of an adequate surface inspection.

Field study may include, but is not limited to, hand auger sampling, shovel test units, or geoarchaeological analyses as well as other common methods used to identify the presence of buried archaeological resources. Please refer to the list of consultants who meet the Secretary of Interior's Standards at <http://www.chrisinfo.org>.

2) We recommend the lead agency contact the local Native American tribe(s) regarding traditional, cultural, and religious heritage values. For a complete listing of tribes

in the vicinity of the project, please contact the Native American Heritage Commission at 916/373-3710.

3) The proposed 3404 Piedmont Avenue Project area is located within the boundary of one recorded District; the Upper Broadway Auto Row District, P-01-009757 (OTIS # 499846), is located adjacent to one recorded building; the Lyon Storage & Moving Co. Warehouse at 3400 Broadway, P- 01-000348 (OTIS 488900), both included in the OHP BERD, and may contain unrecorded buildings or structures that meet the minimum age requirement. Therefore, prior to commencement of project activities, it is recommended that this resource be assessed by a professional familiar with the architecture and history of Alameda County. Please refer to the list of consultants who meet the Secretary of Interior's Standards at <http://www.chrisinfo.org>.

4) Review for possible historic-period buildings or structures has included only those sources listed in the attached bibliography and should not be considered comprehensive.

5) If archaeological resources are encountered **during construction**, work should be temporarily halted in the vicinity of the discovered materials and workers should avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. **Project personnel should not collect cultural resources**. Native American resources include chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic-period resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

6) It is recommended that any identified cultural resources be recorded on DPR 523 historic resource recordation forms, available online from the Office of Historic Preservation's website: https://ohp.parks.ca.gov/?page_id=28351

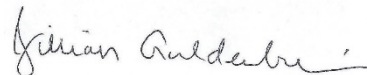
Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the

federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

Thank you for using our services. Please contact this office if you have any questions, (707) 588-8455.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jillian Guldenbrein", with a stylized flourish at the end.

Jillian Guldenbrein
Researcher

LITERATURE REVIEWED

In addition to archaeological maps and site records on file at the Historical Resources Information System, Northwest Information Center, the following literature was reviewed:

Cook, S.F.

1957 *The Aboriginal Population of Alameda and Contra Costa Counties*. University of California Anthropological Records 16(4):131-156. Berkeley and Los Angeles.

Helley, E.J., K.R. Lajoie, W.E. Spangle, and M.L. Blair

1979 *Flatland Deposits of the San Francisco Bay Region - Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning*. Geological Survey Professional Paper 943. United States Geological Survey and Department of Housing and Urban Development.

Kroeber, A.L.

1925 *Handbook of the Indians of California*. Bureau of American Ethnology, Bulletin 78, Smithsonian Institution, Washington, D.C. (Reprint by Dover Publications, Inc., New York, 1976).

Levy, Richard

1978 Costanoan. In *California*, edited by Robert F. Heizer, pp. 485-495. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Milliken, Randall

1995 *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810*. Ballena Press Anthropological Papers No. 43, Menlo Park, CA.

Nelson, N.C.

1909 *Shellmounds of the San Francisco Bay Region*. University of California Publications in American Archaeology and Ethnology 7(4):309-356. (Reprint by Kraus Reprint Corporation, New York, 1964)

Nichols, Donald R., and Nancy A. Wright

1971 Preliminary Map of Historic Margins of Marshland, San Francisco Bay, California. U.S. Geological Survey Open File Map. U.S. Department of the Interior, Geological Survey in cooperation with the U.S. Department of Housing and Urban Development, Washington, D.C.

Sanborn Insurance Maps

1889, 1902, 1903 Oakland. Sanborn Map Publishing Co. Oakland, CA (Hardcopy).

State of California Department of Parks and Recreation

1976 *California Inventory of Historic Resources*. State of California Department of Parks and Recreation, Sacramento.

State of California Office of Historic Preservation **

2020 *Built Environment Resources Directory*. Listing by City (through March 3, 2020). State of California Office of Historic Preservation, Sacramento.

Thompson & West

1878 Official and Historical Atlas Map of Alameda County, California. Thompson & West, Oakland. (Reprint by Valley Publishers, Fresno, 1976)

Wagner, Theodore and George Sandow

1894 Map Showing Portions of Alameda and Contra Costa Counties, City and County of San Francisco, California. (Photo Lith Britton and Rey SF)

****Note that the Office of Historic Preservation's *Historic Properties Directory* includes National Register, State Registered Landmarks, California Points of Historical Interest, and the California Register of Historical Resources as well as Certified Local Government surveys that have undergone Section 106 review.**



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July 22, 2021

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Lamphier-Gregory

Via Email to: rauld@lamphier-gregory.com
Cc to: amahmutsuntribal@gmail.com
canutes@verizon.net
huskanam@gmail.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, 3404 Piedmont Avenue Project, Alameda County

To Ms. Auld:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was positive. Please contact all the Amah Mutsun Tribal Band of Mission San Juan Bautista and the North Valley Yokuts on the attached list for more information.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Sarah.Fonseca@nahc.ac.gov.

Sincerely,



Sarah Fonseca
Cultural Resources Analyst

Attachment

ATTACHMENT H: SUBSURFACE SURVEY REPORT

March 16, 2022

Rebecca Auld
Lamphier-Gregory
4100 Redwood Rd Ste 20A - #601
Oakland, CA 94619

RE: Subsurface Testing and Archival Review for the 3403 Piedmont Avenue Project in Oakland, Alameda County, California

Dear Ms. Auld,

The purpose of this memorandum is to present the findings of the ground penetrating radar (GPR) testing and archival review for the 3403 Piedmont Avenue Project (Project), in the city of Oakland, Alameda County, California. The purpose of the testing was to gather additional information regarding the potential to discover and disturb subsurface cultural or tribal cultural resources within the Project site.

PROJECT DESCRIPTION

The Project is at 3403 Piedmont Avenue and proposes construction of a five-story mixed use building, with a proposed footprint of approximately 7,150 square feet (Figure 1, Figure 2, and Figure 3). The proposed Project will be built on a 14 inches thick mat slab, with deeper footings extending up to 36 inches deep¹. The utilities Joint Trench (JT) location is expected to reach depths of 4 to 8 feet. The elevator pit excavation will reach approximately 5 ft.

SITE SPECIFIC CONTEXT

As part of an environmental impact report for the greater Broadway-Valdez District, the Project site was found to possess moderate potential for prehistoric archaeological resources (ESA 2013). This determination was based on underlying geography of the site which is mapped as Late Pleistocene to Holocene alluvial fan deposits which have high potential to maintain buried occupational and use surfaces (Meyer and Rosenthal 2007). This same analysis also found that the area has moderate potential to contain historic-period archaeological resources if they have been protected from construction and demolition activities by paved surfaces such as parking lots. Such resources may include privies, refuse scatters, and wells that may be present within two feet of the ground surface (ESA 2013).

¹ All depths in this report are measured from the current ground surface.

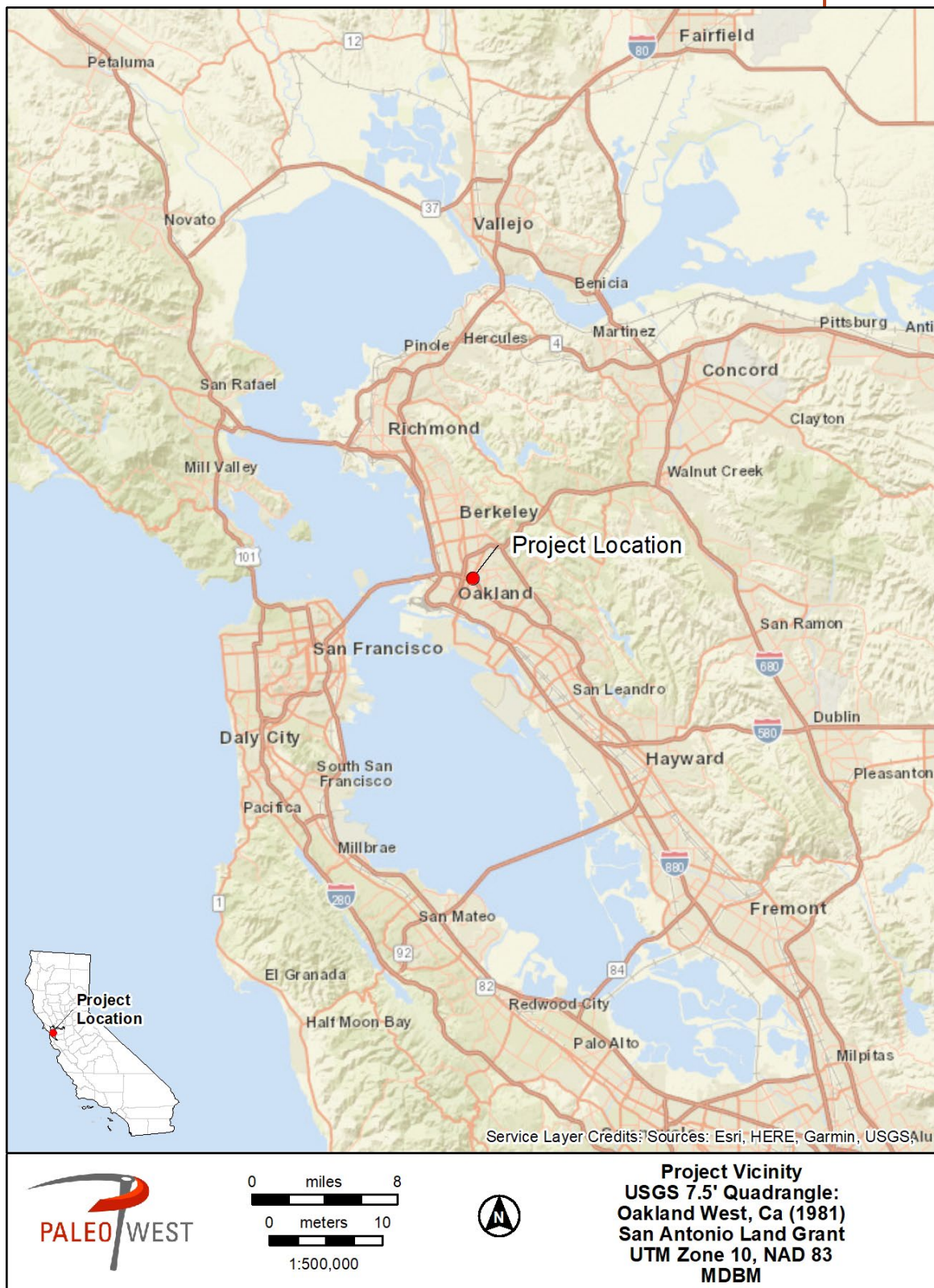


Figure 1: Project location.

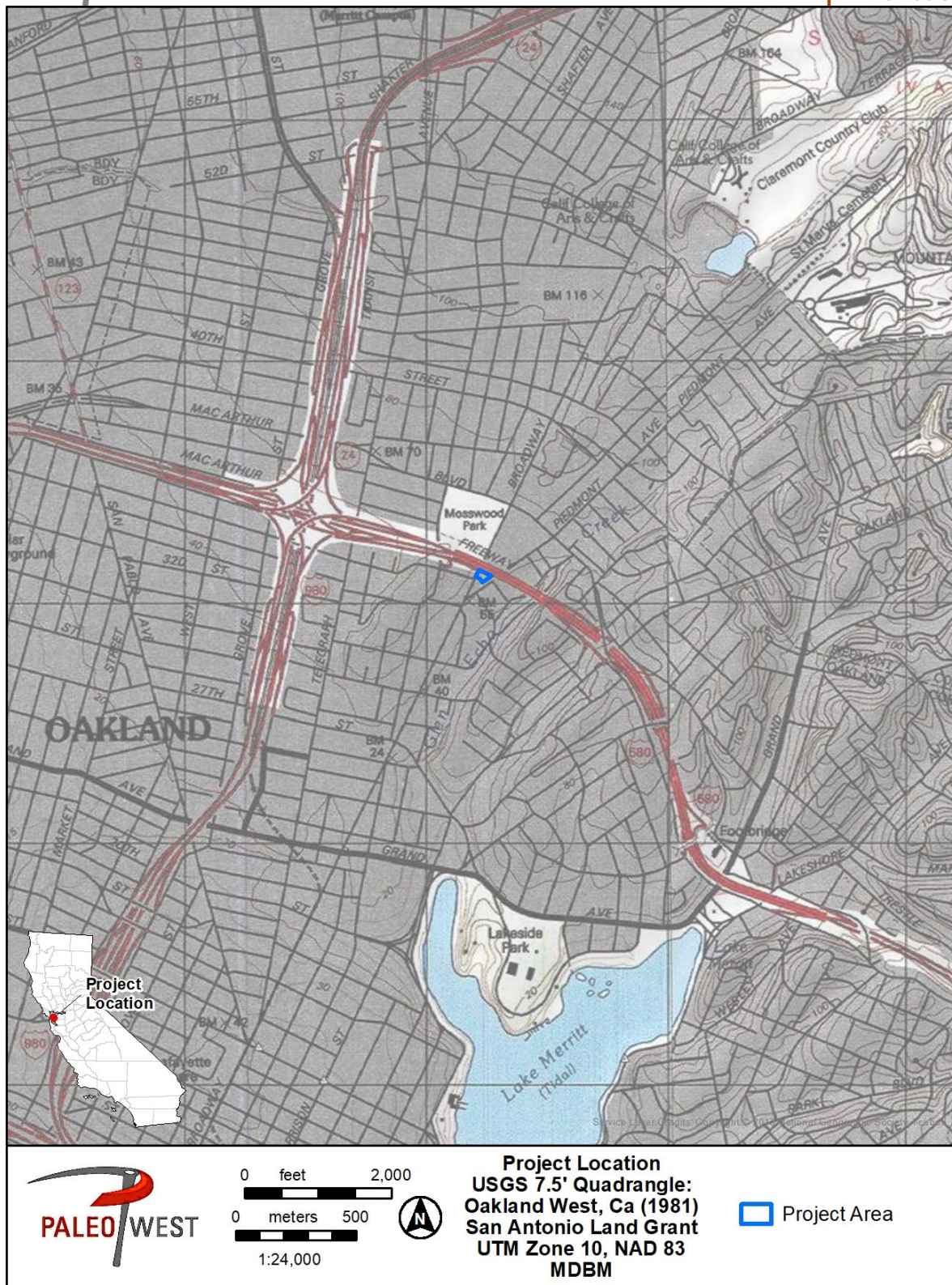


Figure 2: Project area map.

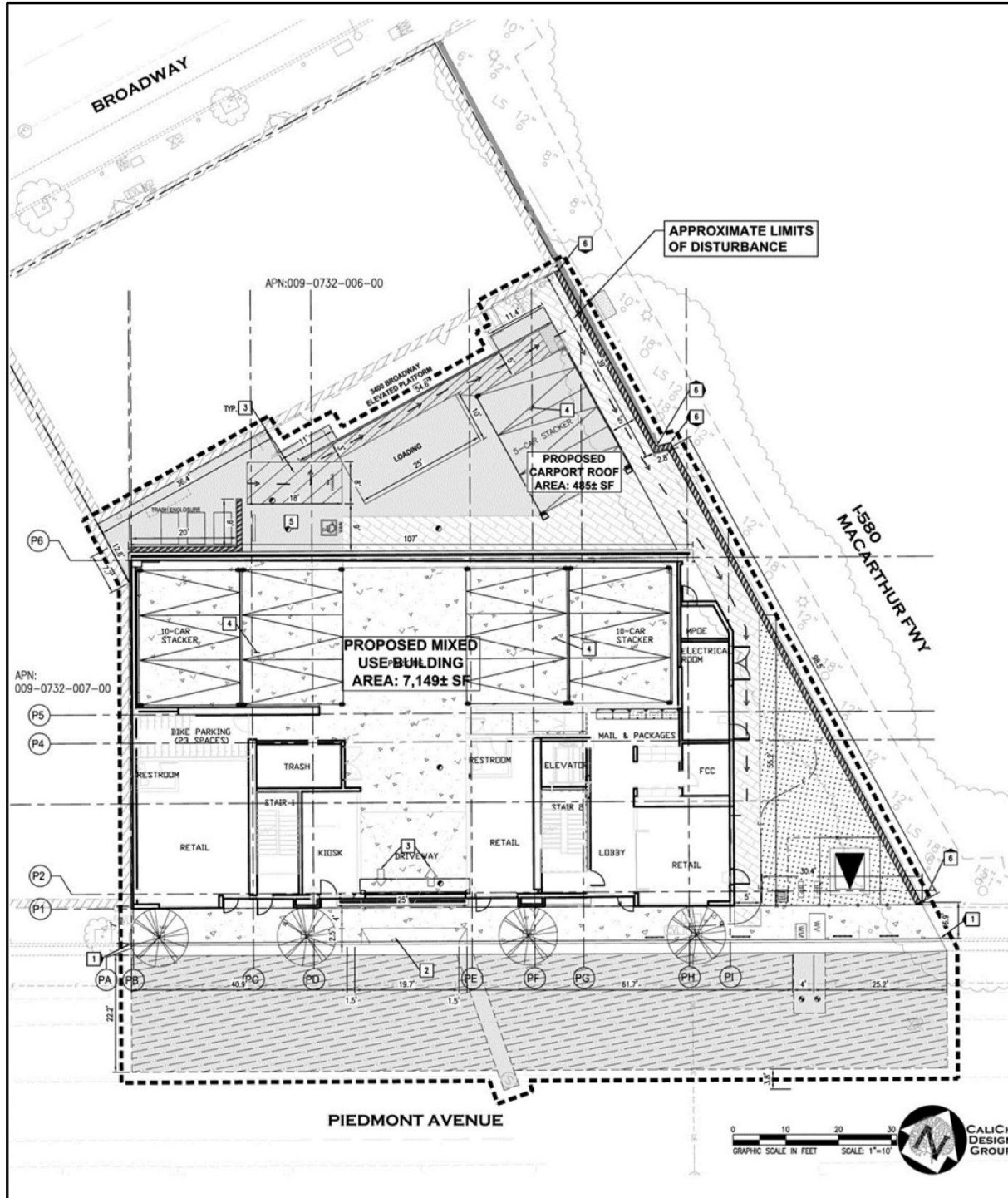


Figure 3: Project development plan.

The Project site and adjacent historic-age buildings are located partially within the Upper Broadway/Auto Row Area of Secondary Importance (ESA 2013). An Area of Secondary Importance is an area or district that is of local interest, but is not eligible for the National Register of Historic Places and is not considered a historical resource under CEQA. This district is characterized by early twentieth century commercial structures associated with the automobile industry. These generally date from the 1910s through the 1940s and include showrooms, garages, and other commercial buildings (ESA 2013). According to the assessment performed for this analysis, none of the buildings on the Project site meet applicable criteria for consideration as a historic resource under CEQA (Hulbert 2021). The immediately adjacent auto dealership at 3330-3360 Broadway was constructed in 1917 and does meet these criteria (Hulbert 2021).

A review of historical maps that depict the Project area, the earliest being from 1895, show the city of Oakland as being well established with most streets already in place (USGS 1895). The Project site at this time appears to have been partially developed with structures shown on the east side of the parcel. A later Sanborn Fire Insurance map from 1903 depicts the Project site as being vacant (Figure 4). By 1911, dwelling units with three associated outbuildings are in the southwestern half of the Project site (Figure 5). By 1946, historical aerial imagery shows the Project site within a dense commercial district, with two structures stretching across the Project site with an interior open space (NETR 1946). A Sanborn map from 1952 shows the Project site nearly completely built up with two large commercial structures with an interior courtyard while the northeast corner overlaps with portion of another commercial structure. These include the Lyon Storage Warehouse (now called the "Saw Mill Building") on the west side of the Project site, and a garage building containing areas for packing and trucks on the east side. A testing lab occupies the northeast corner, and a small outbuilding is in the northern end of the courtyard (Figure 6). Aerial imagery from 1958 shows these structures in place with no major difference from the 1952 map (NETR 1958). However, in 1968 and onward, an overpassing highway (Interstate 580) stripped away most of the structures to the north of the Project site. The buildings in the Project site remain, although the former lab building in the northeast corner was chopped in half diagonally and off-site portions removed (NETR 1968, Hulbert 2021). In 1980 imagery, the structure on the east side of the Project site is absent and a parking lot is in its place, encompassing the inner courtyard as well (NETR 1980).

Today, the Project site contains one small triangular commercial building (3405 Piedmont) in the northeast corner and a five and a half-story Saw Mill Building (3400 Broadway), which houses largely office and assembly uses.

The proposed project would demolish the existing commercial structure at 3405 Piedmont Avenue and surface parking lot on site. The Saw Mill Building would remain.



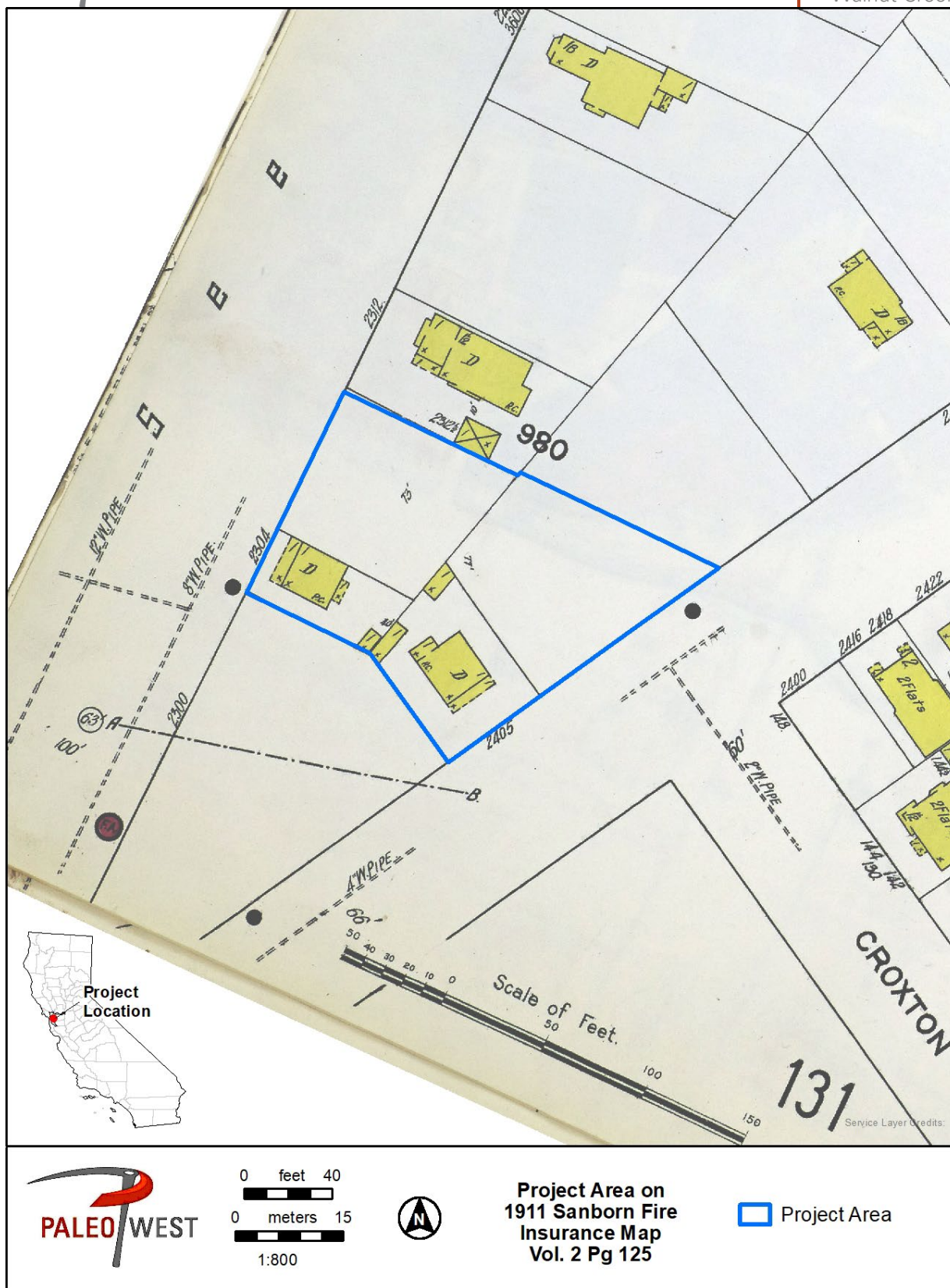


Figure 5. Project site on the 1911 Sanborn map.



Ground penetrating radar (GPR) is a noninvasive way to identify potential subsurface archaeological features. This type of testing uses radio waves to capture images below the surface of the ground without any excavation. GPR sends a signal from a receiver into the ground, the signal bounces off of materials in its path and creates a reading. This reading is then interpreted by experienced technicians to determine what type of material has been located. GPR testing can be used to see over five meters (16 feet) below the surface. For the purpose of this study, the cross sections with the most visibility included those between the surface and down to three meters in depth (9.8 feet), which is beyond the proposed depth of disturbance.

With assistance from PaleoWest, Byram Archaeological Consulting surveyed a total of four GPR grids of varying size over the course of one day's fieldwork to characterize potential buried features and stratigraphy (see project map). The GPR fieldwork was conducted by Scott Byram. Techniques used are described at www.featuresurvey.com, and in Sunseri and Byram (2018), Byram et al (2018), Sanchez et al. (2021) and Conyers (2012). A GSSI SIR4000 GPR instrument was used, along with a 350 MHz digital antenna to allow for maximum resolution at depth. The measured grids were set up with perimeter chalk marks and guide string to allow for parallel, evenly spaced transects. Slice maps were generated for 3 of the 4 grids using GPR Slice software. In some cases transect profile "radargrams" were generated with GPR Viewer software. The entirety of the survey location was paved, leaving zero ground visibility of native soil or any surfaced cultural material.

RESULTS

The following subsurface features were identified through the fieldwork and analysis of the GPR data within the historic context:

Piers/footings: A portion of the pavement within the center of the parking lot, towards the SW fencing/sidewalk, was raised indicating the possibility of piers/footings from the foundation for a building structure. The GPR results in this location of the parking lot show a pattern of concrete foundation footings in a pier formation. These footings are seen in a linear grid at a depth of 0.6 meters (1.9 feet) to 1.6 meters (5.2 feet) below the surface. The piers/footings are likely to be remnant features associated with the demolished garage structure that formerly occupied this location (see Site Specific Context above).

Masonry Features: A small rectilinear (square) feature is present in the northwest section of the site that appears more likely stone than pipe. The segmented nature is transect-parallel in direction, which suggests it was part of a foundation to a wall, possibly brick, block or stone (Figure 7).

A separate rectangular feature appears adjacent to the masonry feature. Given its shape, size and position, this may be part of a house foundation that shares a footprint with the pier-built structure, but may predate it. While the exact provenience cannot be determined, given the characteristics and location proximate to other building foundation remnants, this feature is most likely related to the masonry feature and possibly with the footings.

The masonry features are likely to be remnant features associated with the demolished garage structure and/or dwelling unit that formerly occupied this location (see Site Specific Context above).

Pipe: A long pipe runs along the grid north of the Project area (red line on Figure 7).

Within/near the area with the subsurface concrete footings and piers, the GPR device detected two pits² (Pit 1 and Pit 2).

Pit 1 in the east appears to extend vertically from 0.2 meters (0.65 feet) to 1.5 meters (4.9 feet) below the surface. There is a gap in the shallow surface stratum, indicating a likely association with a surface just below the asphalt. The depth of the pit and its heterogenous contents suggest a filled well or privy feature, possibly associated with the former dwelling unit near this location.

Pit 2 was located at 0.6 meters (1.9 feet) to 1.4 meters (4.6 feet) below the surface and may be associated with undisturbed native soils. Its contents appear more layered than those of pit 1. No obvious metal is present to indicate period of origin, but the location adjacent to a linear feature indicates Pit 2 is most likely related to the pier footing structure.

No other features were identified. The GPR report is provided in Appendix A.

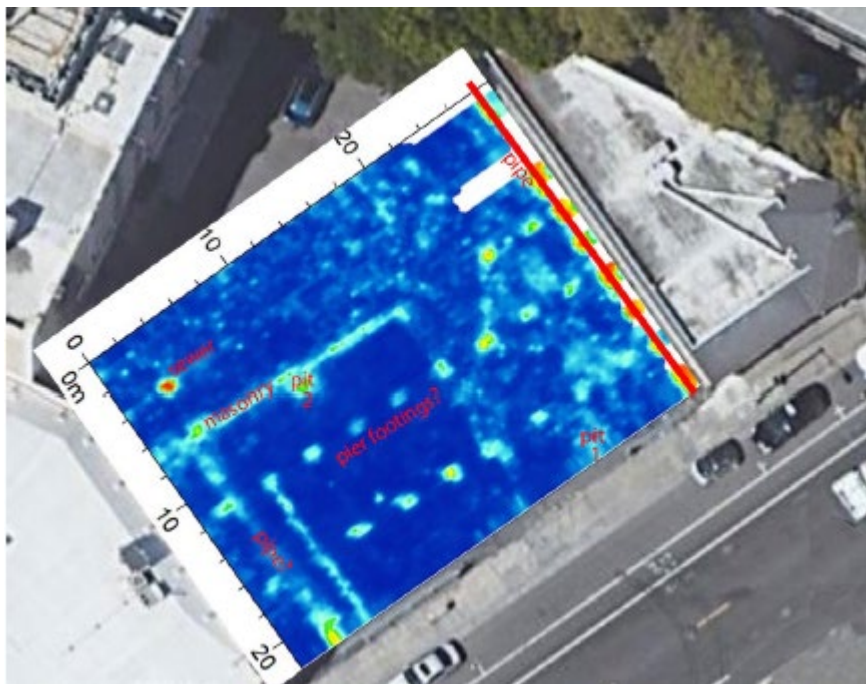


Figure 7: GPR Results

² A "pit" is defined as a non-linear feature that has depth.



Figure 8: GPR results and construction plans.

MANAGEMENT RECOMMENDATIONS

Based on the history of development in the Project area, the entire Project site has been significantly disturbed either from construction or demolition of the area. Given the previous disturbance of this area and results of the GPR analysis, there is a low potential to impact intact historic or prehistoric deposits within the first three to five feet below ground surface. The majority of planned site disturbance (grading, trenching etc) would be within the first five feet below ground surface. Only the utilities Joint Trench could be deeper, at depth up to eight feet.

The GPR investigation identified three features (Pit 1 and 2 and the masonry features) that are most likely historic-age. There were no features identified that are likely to be associated with Native American resources. Due to low number of features and the inclusion of metal and masonry/concrete, these features are not indicative of prehistoric burials, they are more indicative of historic structural remains.

Planned grading and trenching are expected to range in depth from 4-8 feet and could reach deposits potentially bearing subsurface features. The current parking lot on site still retains remnant features associated with the demolished structures (piers/footings and masonry). It is probable that these are limited to debris and partial foundation remnants, which would most likely not be considered significant cultural resources under the California Environmental Quality Act (CEQA). It is assumed that these same types of structural features would be found beneath the extant building.

Based on the results of the GPR testing and archival review, it is unlikely that significant features or artifacts would be encountered during Project construction (Refer to Figure 8). Pits 1 and 2, and the masonry features fall outside of any planned trenching and excavation areas (elevator pit).

The City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards would be applicable. While not anticipated, these measures address unexpected discoveries during construction activities. These are provided in Appendix B.

Sincerely,

PALEOWEST



Christina Alonso, M.A., RPA | Senior Archaeologist

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1895 *San Francisco, California* 30-minute Topographic Quadrangle Map. Reston, VA.

Appendix A: GPR Report

Appendix B: Conditions of Approval

SCA CUL-1: *Archaeological and Paleontological Resources – Discovery During Construction* (#32). Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.

In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.

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

SCA CUL-2: *Human Remains – Discovery During Construction* (#34). 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.